RECIRCULATED
FINAL
ENVIRONMENTAL IMPACT
REPORT

NEWARK AREAS 3 AND 4 SPECIFIC PLAN PROJECT

SCH No. 2007052065

newark
california

JANUARY 2015

RECIRCULATED
FINAL EIR

for the

NEWARK AREAS 3 AND 4 SPECIFIC PLAN PROJECT

State Clearinghouse Number: 2007052065

CITY OF NEWARK

JANUARY 2015

PREFACE

This document, together with the Recirculated Draft Environmental Impact Report (RDEIR), constitutes the Recirculated Final Environmental Impact Report (RFEIR) for the Newark Areas 3 and 4 Specific Plan Project. The Draft EIR was circulated to affected public agencies and interested parties for a 45-day review period from August 5, 2014 to September 18, 2014. This volume consists of comments received by the Lead Agency on the Draft EIR during the public review period, responses to those comments, and revisions to the text of the Draft EIR.

In conformance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, the RFEIR provides objective information regarding the environmental consequences of the proposed project. The RFEIR also examines mitigation measures and alternatives to the project intended to reduce or eliminate significant environmental impacts. The RFEIR is intended to be used by the City and any Responsible Agencies in making decisions regarding the project. The CEQA Guidelines advise that, while the information in the RFEIR does not control the agency's ultimate discretion on the project, the agency must respond to each significant effect identified in the RDEIR by making written findings for each of those significant effects.

According to the State Public Resources Code (Section 21081), no public agency shall approve or carry out a project for which an environmental impact report has been certified which identifies one or more significant effects on the environment that would occur if the project is approved or carried out unless both of the following occur:

(a) The public agency makes one or more of the following findings with respect to each significant effect:

(1) Changes or alterations have been required in, or incorporated into, the project which will mitigate or avoid the significant effect on the environment.

(2) Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by that other agency.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities of highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

(b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

ORGANIZATION OF THE FINAL EIR

This document, which includes responses to comments and text revisions, has been prepared in accordance with Section 15088 of the CEQA Guidelines. The Final EIR included the following sections:

Section 1.0 List of Agencies and Organizations Who Received the Draft EIR
The agencies, organizations, and individuals who received copies of the Draft EIR are listed in this section.

Section 2.0 List of Comment Letters Received on the Draft EIR
This section contains a list of all parties who submitted written comments on the Draft EIR.

Section 3.0 Responses to Comments Received on the Draft EIR
This section contains written comments received on the Draft EIR and the responses to those comments.

Section 4.0 Revisions to the Text of the Draft EIR
This section contains text revisions to the Draft EIR. Text revisions can be made as a result of comments received during the Draft EIR public review process, corrections or clarifications to the text, or to reflect modifications that have been made to the project to reduce impacts.

Section 5.0 Copies of Comment Letters Received on the Draft EIR
This section contains copies of the full comments letters received.

In accordance with CEQA and the CEQA Guidelines, the FEIR will be made available to the public prior to the City's consideration of the Environmental Impact Report. All documents referenced in this FEIR are available for public review in the City of Newark, Community Development Department located at 37101 Newark Boulevard during normal business hours and the Newark Library, a branch of the Alameda County Library located at 6300 Civic Terrace Avenue, on weekdays during normal business hours.

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APPENDICES

Appendices to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs are hereby incorporated by reference and are available at the City of Newark Community Development Department. Below is a list of all the appendices referenced in the 2009 DEIR, 2010 FEIR, and 2014 RDEIR. The appendices listed under the 2015 Recirculated FEIR are attached to this document.

2009 DEIR Appendices

Appendix A	Newark Areas 3 & 4 Specific Plan, September 2009
Appendix B	Transportation Impact Analysis
Appendix C	Air Quality Analysis
Appendix D	Environmental Noise Assessment
Appendix E	Biological Resources Report
Appendix F	Geotechnical Feasibility Evaluation
Appendix G	Hydrology and Water Quality Report
Appendix H	Hazardous Materials Reports
Appendix I	Water Supply Assessment
Appendix J	Notice of Preparation and Response Letters

2010 FEIR Appendices

Appendix A	Newark Areas 3 & 4 Specific Plan, March 2010
Appendix K	Hazardous Materials Users Survey
Appendix L	City of Newark Bay Friendly Landscape Guide

2014 Recirculated DEIR Appendices

Appendix A	Newark Areas 3 & 4 Intersection Level of Service Updates
Appendix B	2014 Air Quality Toxic Air Contaminant Documentation
Appendix C	Biological Mitigation Clarification Memorandum
Appendix D	Newark Area 3 Archaeological Testing Report
Appendix E	Alameda County Water District WSA Validation Confirmation
Appendix F	Newark 1992 General Plan Policies and Project Consistency
Appendix G	Comparison between 2010 EIR and REIR with additions underlined and deletions struck-out
Appendix H	Newark Areas 3 & 4 Specific Plan, March 2010

2015 Recirculated FEIR Appendices

Appendix I	Updated Climate Change Impact Addendum
Appendix J	Newark Areas 3 & 4 Air Pollutant and GHG Emissions Update Using CalEEMod version 2013.2.2

SECTION 1.0 LIST OF AGENCIES, ORGANIZATIONS, AND INDIVIDUALS WHO RECEIVED THE DRAFT EIR

Copies of the Recirculated Draft EIR and/or Notice of Availability for the Recirculated Draft EIR were sent to the following agencies, organizations and individuals:

PUBLIC AGENCIES

Alameda County Department of Environmental Health Services
Alameda County Flood Control District & Water Conservation District
Alameda County Housing Authority
Alameda County Library District
Alameda County Local Agency Formation Commission
Alameda County Mosquito Abatement District
Alameda County Planning Department
Alameda County Resource Conservation District
Alameda County Superintendent of Schools
Alameda County Water District
Altamont Commuter Express/Amtrak
Association of Bay Area Government
Bay Area Air Quality Management District
Bay Area Rapid Transit
California Air Resources Board
California Department of Conservation
California Department of Fish and Wildlife, Region 3
California Department of Food & Agriculture
California Department of Health/Drinking Water
California Department of Housing and Community Development
California Department of Parks and Recreation
California Department of Toxic Substances Control
California Department of Transportation, District 4
California Department of Water Resources
California Highway Patrol
California Integrated Waste Management Board
California Native American Heritage Association
California Office of Emergency Services
California Office of Historic Preservation
California Public Utilities Commission
California Regional Water Quality Control Board, Region 2
California Resources Agency
California State Land Commission
California State Water Resource Control Board
City of Fremont
East Bay Dischargers Authority
East Bay Regional Parks District

Federal Emergency Management Agency
Fremont-Newark Community College District
Metropolitan Transportation Commission
National Marine Fisheries Service
Newark Unified School District
Regional Water Quality Control Board
San Francisco Bay Conservation and Development Commission
San Francisco Public Utilities Commission
San Francisco Water District
San Mateo County Transit District
Union City Sanitary District
Union City Planning Department
United States Army Corps of Engineers
United States Environmental Protection Agency – Region 9
United States Fish and Wildlife Service
Washington Township Hospital District

ORGANIZATIONS, BUSINESSES, AND INDIVIDUALS

Alameda-Contra Costa Medical Association
Alameda County Transportation Commission
Adams Broadwell Joseph & Cardozo
Andrea Heckman
Andy Francis
AT&T
Bay Area Open Space Council – Greenbelt Alliance
Bill McMillin
Bill Sowa
Bob and Eva Perkins
Carin High
Cargill Inc.
Carpenters 46 Counties Conference Board
Catherine Dorman
Christopher Dolan
Citizens Committee to Complete the Refuge
Clyde Morris
Dan and Gaby Ondrasek
Darlene Sponsel
David Jacuzzi
Eileen McDonald
Elmer and Patti Hebert
Evelyn Cormier
Fernando Cuebas
Fitzgerald Abbott & Beardsley LLP
Frank Noto
Friends of Coyote Hills Community
Lippe Gaffney Wagner LLP
Lozeau Drury LLP
MTC
Margaret Lewis
Mari & Wayne Miller
Mark Crutcher
Matthew Jue
Millicent Malliet
Nadja Adolf
Nelson Saufley
Newark Chamber of Commerce
Ohlone Audubon Society
Pat Danielson
Pat Grywczynsk
Patrice Griffith
Paul Clifford
Paul Higgins
Richard Woon
Rick Waters
Robert Nelson
Russell Blowers
Ryan Smith
Save the Bay
Saye Izuta
Schnitzer Steel Industries
Sharlene Mansfield
Shirley and Briane Sisk

Gary and Kimberly Carter
Glen Wickizer
Grassetti Environmental Consulting
Greg Scott
H &V Properties
HMH Engineers
Holland & Knight
Hon. Evelio Grillo
Jack Dane
Jack Lyness
James Dunniway Sr.
Jana Sohale
Janice Schaefer
June Smith
League of Women Voters
Linda Patterson
Sierra Club
Silicon Valley Leadership Group
Stephen Flankes
Stephen Pahl
Steve and Kim Innes
Steve Tao
TD Pugh
Terry Roberts
Thomas Clark
Tony Koep
Tri City Ecology Center
Tri-Cities Recycling and Disposal Facility
Vincent Rivero
Wildscape Engineering Services
William Litzner

SECTION 2.0 LIST OF COMMENT LETTERS RECEIVED ON THE DRAFT EIR

Shown below is a list of comment letters received on the Recirculated Draft EIR. This list also identifies the date of the letter received. Complete copies of all the letters are included in Section 5.0 of this Recirculated Final EIR.

Federal and State Agencies

A.	United States Fish and Wildlife Service	September 19, 2014
B.	California Department of Transportation, District 4	September 18, 2014
C.	San Francisco Bay Conservation and Development Commission	September 18, 2014

Regional and Local Agencies

D.	Alameda County Water District	September 19, 2014

Organizations, Businesses and Individuals

E.	Citizens Committee to Complete the Refuge	September 19, 2014
F.	Friends of Coyote Hills	September 19, 2014
G.	San Francisco Baykeeper	September 19, 2014
H.	Law Offices of Brian Gaffney for Citizens Committee to Complete the Refuge	September 19, 2014
I.	Peter Baye	September 19, 2014
J.	Margaret Lewis	September 19, 2014
K.	Wayne Miller	September 19, 2014
L.	Jana Sokale	September 19, 2014

SECTION 3.0 RESPONSES TO COMMENTS RECEIVED ON THE DRAFT EIR

The following section includes all the comments on the Recirculated Draft EIR that were received by the City of Newark in letters and emails during the 45-day review period. The comments are organized under headings containing the source of the letter and the date submitted. The specific comments from each of the letters or emails are presented as "Comment" with each response to that specific comment directly following. Each of the letters and emails submitted to the City of Newark are attached in their entirety (with any enclosed materials) in Section 5.0 of this document.

CEQA Guidelines Section 15086 requires that a local lead agency consult with and request comments on the Draft EIR prepared for a project of this type from responsible agencies (government agencies that must approve or permit some aspect of the project), trustee agencies for resources affected by the project, adjacent cities and counties, and transportation planning agencies. Section 1.0 of this document lists all of the recipients of the Draft EIR.

Four of the comment letters received are from public agencies, three of whom may be Responsible Agencies under CEQA for the proposed project. The CEQA Guidelines require that:

> A responsible agency or other public agency shall only make substantive comments regarding those activities involved in the project that are within an area of expertise of the agency or which are required to be carried out or approved by the responsible agency. Those comments shall be supported by specific documentation. [§15086(c)]

Regarding mitigation measures identified by commenting public agencies, the CEQA Guidelines state that:

> Prior to the close of the public review period, a responsible agency or trustee agency which has identified what the agency considers to be significant environmental effects shall advise the lead agency of those effects. As to those effects relevant to its decisions, if any, on the project, the responsible or trustee agency shall either submit to the lead agency complete and detailed performance objectives for mitigation measures addressing those effects or refer the lead agency to appropriate, readily available guidelines or reference documents concerning mitigation measures. If the responsible or trustee agency is not aware of mitigation measures that address identified effects, the responsible or trustee agency shall so state. [§15086(d)]

The CEQA Guidelines state that the lead agency shall evaluate comments on the environmental issues received from persons who reviewed the Draft EIR and shall prepare a written response to those comments. The lead agency is also required to provide a written proposed response to a public agency on comments made by that public agency at least 10 days prior to certifying an environmental impact report. This Final EIR contains written responses to all comments made on the Draft EIR received during the advertised 45-day review period. Copies of this Final EIR and/or notices of availability of the Final EIR have been supplied to all persons and agencies that submitted comments.

This following section provides a "MASTER RESPONSE" to the most commonly-raised comments that were received by the Lead Agency on the Recirculated Draft EIR. This master response has been prepared to address the related concerns or issues in a single comprehensive manner allowing reviewers of the Final EIR, including decisions-makers, to derive a complete understanding within context. In the responses to individual comments that follows this section, the individual comments pertaining to these issues are referred back to the master responses. By doing this, the Final EIR avoids repeating responses to the same comments over and over, and the most important issues and questions receive thorough responses in one place in this document.

Five master responses were prepared, (1) to address whether the EIR is programmatic or project-level, (2) to address wetland mitigation, (3) to address BCDC jurisdiction, (4) to address sea level rise, (5) to address the responses to the same comments raised in the 2010 EIR, and (6) to address Area 4 and the US Fish and Wildlife Service's Refuge Boundary Expansion Area.

MASTER COMMENT 1: Several comments raise questions regarding which elements of the project are analyzed at a project level and which elements are receiving programmatic review and may be subject to tiered review.

MASTER RESPONSE 1: The project being analyzed consists of up to 1,260 new residences, an elementary school, park, and recreational facility (currently envisioned to be a golf course) in an area of Newark now known as the Southwest Newark Residential and Recreational Focus Area. At this time, the developer has requested approval of a Specific Plan (Areas 3 and 4), General Plan Map amendment (Area 3), Zoning Code amendment (Area 3), conditional use permit (Area 3) and planned unit development permit (Area 3.) The City and developer have also negotiated a Development Agreement. Other approvals will be sought (including for example, a tentative map and conditional use permits for Area 4), at a later time. At the time of preparation of this analysis, certain elements of the project have been planned in greater detail than others. The elements of the project are presented in table form at pages S-7 through S-10 of the Recirculated Draft EIR (RDEIR) together with an explanation of whether each element is analyzed at a site-specific (generally referred to as a "project" level) level or analyzed more preliminarily as part of a series of actions that are related geographically. In general, the scope, size, architectural style, and lay-out of the approximately 585 residential lots in Area 3 are known with greater certainty than the scope, size, architectural style, and lay-out of the development in Area 4. Additional environmental review for the construction and occupation of 585 dwelling units in Area 3 is thus not currently contemplated (although it could occur if new information emerges or the project or surrounding circumstances change). It is anticipated that additional environmental review may be required for development in Area 4, if applications for those approvals come forward and an analysis shows that there are impacts from the proposal that have not been adequately covered in this REIR. The ultimate determination of whether additional environmental review is required for any element of the project requiring a future discretionary approval will be made at the time the future discretionary approval is presented to the lead agency. Whether an element is viewed more conceptually or more specifically at this time does not turn on whether the City or another agency must issue permits for it. For example, the City will be issuing a number of approvals for development in Area 4. Rather, it turns on the specificity of

information available to the City about changes in in the environment that could result from the developer's proposal.

The REIR provides decision makers with sufficient analysis to intelligently consider the environmental consequences of approving entitlements for all of the elements at their current stage of planning. For public disclosure reasons, the City has chosen to label the REIR as a part program and part project EIR. Although such labeling is not legally required, it is intended to make it clearer to the public which aspects of the project are more conceptual and less detailed at this time based on the stage of development for each project element. The CEQA Guidelines allow a program EIR to be prepared "on a series of actions that can be characterized as one large project and are related either: (1) geographically, (2) as logical parts in the chain of contemplated actions, (3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways." (CEQA Guidelines § 15168(a).) The series of actions analyzed in the REIR are related geographically and would occur in connection with the issuance of the Area 3 and 4 Specific Plan, which establishes criteria for development in the area it covers. Programmatic analysis does not mean that the City failed to analyze all potential environmental impacts of the project; rather, that the level of detail of the environmental analysis corresponds to the level of detail known about the project at this time.

The CEQA Guidelines list advantages that may be provided by preparing a program EIR, including: (1) an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (2) consideration of cumulative impacts that might be slighted in a case-by-case analysis, (3) avoidance of duplicative reconsideration of basic policy considerations, (4) allows the lead agency to consider broad policy alternatives and program wide mitigation measures at an early time when the agency has greater flexibility to deal with basic problems or cumulative impacts, and (5) reduction in paperwork. (CEQA Guidelines § 15168(b).) The programmatic portion of the RDEIR provides some of these advantages. First, it allows the City to consider alternatives to the policies in the proposed Specific Plan for development of Areas 3 and 4 together, which would not be feasible if the City prepared a project-level EIR for the residences in Area 3 alone. Second, the RDEIR provides the City the information it needs to consider the cumulative impacts of the maximum amount of development contemplated by the Specific Plan, which would not be captured by a project-level EIR for residential development in Area 3 alone. Third, it allows the City to consider alternatives to the Specific Plan as a whole rather than individual development elements contemplated by the Specific Plan. Finally, the RDEIR reduces paperwork because any future environmental analysis will be able to tier from it.

The General Plan requires approval of a Specific Plan for development in Areas 3 and 4; the proposed Specific Plan envisions residential development in Areas 3 and 4, a school and park in Area 3, and a recreation facility in Area 4. The Specific Plan and other applications currently pending before the City, including the planned development and conditional use permits for Area 3 contains site-specific detail about the location of the school, park, and residences in Area 3. Accordingly, as to the residences in Area 3 and the location (but not design) of the school and park, this RDEIR is intended to provide site-specific environmental review. In contrast, the specific location and number

of residences, and location and type of recreation facility in Area 4 are only conceptually known. Accordingly, the analysis of these elements is programmatic in nature, and based on the potential environmental impacts of the maximum development permitted by the Specific Plan. Since the exact design of the proposed development in Area 4 (specific location and number of homes and roads, and type of recreational facility) are conceptual at this time, analysis of details about these elements is not possible without speculation. For example, the City cannot analyze the precise impacts to wetlands from construction in Area 4 until it receives an application to develop residences and a golf course or other recreational facility in Area, which would include a site-specific plan for these elements. . Because such details are not now known, the RDEIR assumes that the maximum amount of development contemplated by the Specific Plan will occur (i.e., the RDEIR's analysis is based on filling 85.6 acres of wetlands even though the development of Area 4 may require less fill).

When the City receives detailed applications for development in Area 4, the City would begin its review with an initial study that looks at the potential impacts to all the resources analyzed under CEQA. From this initial study, the City would determine whether the proposal is within the scope of the Specific Plan EIR and would determine the appropriate level of any further environmental review at that time. The City assumes that the Newark Unified School District also would prepare an initial study to begin its environmental review of school construction and operation because that is the course of action recommended by the CEQA Guidelines (see CEQA Guidelines § 15168(c)(1)), but as an independent agency, the Newark Unified School District will make its own decision regarding the need for additional environmental review of the school as designed. The RDEIR also contains information that other agencies may be able to use as they consider whether to grant permits that may be necessary for the applicant to undertake the development envisioned by the Specific Plan. (RDEIR at pg. 4–5.)

As discussed above, the City has prepared a program EIR for certain future actions envisioned by the Specific Plan to study the potential environmental impacts of a decision to approve the Specific Plan and associated entitlements at the earliest possible time, even though it lacks detailed information to provide detailed, site-specific analysis. For the same reason, the City cannot say exactly what type of future environmental review will be required. For example, a future development application to construct residences in Area 4 could require differing amounts of wetland fill, depending on where the houses are located. Prior to seeing the site-specific development application, the City cannot say whether the appropriate future environmental review would be an exemption, addendum, tiered negative declaration, or a full subsequent or supplemental EIR. Nevertheless, the City has committed to preparing an initial study to determine the type of further environmental review for all elements of the Specific Plan analyzed at a programmatic level when it receives a future application for those elements unless it finds that a proposal would be lawfully exempt from CEQA, a determination that itself will be subject to public review.

In sum, the RDEIR contains project-level (site-specific) analysis of residential construction in Area 3 and programmatic analysis of construction in Area 4. Combined, the analysis provides the City with information about the potential environmental impacts of approving the project. Given that the RDEIR is project-level for residential development in Area 3, the City does not anticipate that further environmental review will be required when an applicant applies to construct those residences unless changes or new information suggest the proposal may have new, significant environmental impacts

not disclosed in the RDEIR. (See Pub. Resources Code § 21166.) In contrast, the City anticipates that it and/or another agency will prepare an initial Study to determine what level of additional environmental review may be necessary before approving the construction of a school and park in Area 3 and any construction in Area 4, unless the proposal is determined to be exempt from CEQA. (See CEQA Guidelines § 15168.)

MASTER COMMENT 2: Numerous comments on the RDEIR involve questions on the proposed wetland habitat mitigation approach. Specific questions/comments raised include the following:

1) The Draft EIR does not demonstrate that adequate mitigation is available.
2) The Draft EIR should identify an off-site mitigation site(s).
3) The Draft EIR habitat mitigation quantities do not appear sufficient to compensate for impacts associated with the fill of wetlands in Area 4.
4) Comments related to available habitat mitigation banks.
5) Comments related to feasibility of off-site mitigation.

MASTER RESPONSE 2: The RDEIR states that the Area 4 could involve filling up to 85.6 acres of wetlands. In reality, the ultimate proposed fill value, once a specific proposal to develop the residences allowed by the Specific Plan in Area 4 is designed, could range anywhere from less than an acre up to the maximum value cited in the RDEIR, depending on the size and location of the proposed improvements. The ultimate allowable wetland fill also depends on a wide variety of other factors including availability of on-site uplands for conversion to mitigation wetlands and maintenance as important upland fringe habitat, availability of off-site wetland mitigation lands, including approved mitigation banks, and compensatory mitigation ratios required by federal/state resource/regulatory agencies as part of the Section 404/401 permit process. In short, site planning and the level of fill within wetlands associated with the proposed improvements in Area 4 is dependent upon all of these factors.

The RDEIR presently proposes a combination of farmed wetland enhancement (at 0.5:1) and creation (at 1:1) of new wetlands to replace impacts to wetlands on site, acknowledging that replacement ratios recommended by the resource/regulatory agencies may differ from a combined mitigation value of 1.5:1. Even though the mitigation may be implemented over time, it is anticipated that the mitigation design as provided in a Wetland Mitigation and Monitoring Plan will be presented to the agencies and approved as a single, comprehensive mitigation plan disclosing all impacts that may occur for the entire development. These improvements would occur on site, commensurate with the impact, are anticipated to be fully-functioning wetlands in just a few years, and will be superior to the existing farmed wetlands. All of these factors were considered when developing the proposed mitigation ratio presented in the RDEIR along with a consideration of the current ecological services provided by the potentially affected wetlands, compared to those expected to occur once enhancement and creation measures are implemented. The existing farmed wetlands on site are considered to be relatively low quality in part because the entire property, including the vast majority of wetlands on site, has been maintained in agricultural production for several decades. Thus, despite the geographic location of the property, the lands have not functioned as transition zone habitat for

wildlife for over 70 years. The farmed portions of the property support few if any hydrophytes, are planted to upland wheat or barley in most years, and are routinely disked to control weeds and prepare the lands for planting; in the absence of any other approved land use the property will remain actively farmed and kept in relatively low ecological condition. In sharp contrast, the mitigation areas are fully anticipated to develop into seasonal wetlands, dominated with native hydrophytes, in a very short period of time due to the presence of underlying hydric soils and ample opportunities to supply adequate hydrology for mitigation wetlands.

It is possible that the agencies will prefer that all wetland mitigation be provided at an approved wetland mitigation bank and there is such a bank with a service area that covers the project site. Thus, the current mitigation proposal is to provide wetland mitigation through a combination of on-site enhancement and creation, and purchase of approved mitigation credits at a wetland mitigation bank with a service area that covers the project site, thus eliminating the geographic restriction to finding mitigation lands within 10 miles of Newark Area 4.

MASTER COMMENT 3: Comments were received on the RDEIR regarding the San Francisco Bay Conservation and Development Commission (BCDC) jurisdiction as it relates to the former duck clubs within Area 4.

MASTER RESPONSE 3: Any proposed development will be coordinated with BCDC and impacts to BCDC jurisdictional areas, if any, would not occur without appropriate permits. As described in the RDEIR, two of the past land uses within Area 4 included the Pintail Duck Club (located in the northwestern portion of Area 4) and the Whistling Wings Duck Club (located in the southeastern portion of Area 4). Both of these resources are used by the U.S. Army Corps of Engineers to identify Section 10 jurisdiction under the 1899 Rivers and Harbors Act, and to determine the former historical Bay margin, which is a requirement described in the San Francisco District Regional Conditions to the recent Nationwide Permit program.

BCDC's jurisdiction is established by Government Code section 66610, which states in relevant part "[m]anaged wetlands consisting of all areas which have been diked off from the bay and have been maintained during the three years immediately preceding the effective date of the amendment of this section during the 1969 Regular Session of the Legislature as a duck hunting preserve, game refuge or for agriculture." (See Gov't Code § 66610(d).) The BCDC's San Francisco Bay Plan (Bay Plan) defines "managed wetlands" as "areas of historical marshes that have been diked off from the Bay and are managed for wildlife, primarily waterfowl." Based on Government Code section 66610 and BCDC's definition of "managed wetlands," managed wetlands subject to BCDC jurisdiction must meet the following three components: (1) the area was part of the historical marsh of San Francisco Bay, (2) the area was managed for wildlife, and (3) the area was maintained during the three years immediately preceding November 11, 1969 as a duck hunting preserve, game refuge, or for agriculture.

The area formerly known as the Pintail Duck Club does not meet the first requirement to be "managed wetlands" because it was not part of the historic tidal slough channel network (as shown

on U.S. Geodetic Service Nautical Chart 5522 from 1862) and is outside of the Nichols and Wright Bay Margin (1971).

The area formerly known as the Whistling Wings Duck Club meets the first requirement to be "managed wetlands" because it was part of the historic slough channels and Bay margin, but does not meet the second requirement because it was not consistently managed for wildlife year round. The ponds that were at one time associated with Whistling Wings Duck Club appeared to have been created by excavating relatively shallow depressions and using the excavated material to create short berms surrounding the depressions which were seasonally filled with pumped water (pers comm: Joe Gonzalez, previous farm manager). Thus the water in the ponds was only present for a few months of the year during the duck hunting season (usually October-January). The remainder of the year, the ponded depressions were leveled, disked and planted to agricultural crops like the property surrounding the seasonal depressions. These activities altered site topography and hydrology and were inconsistent with supporting wildlife. That the phrase "areas managed for wildlife" refers to locations that were managed for wildlife year round is supported by the Bay Plan, which provides mapping of managed wetlands around the Bay. According to Plan 7 Map of the Bay Plan, no managed wetlands exist east of Mowry Slough and southeast of Mowry Avenue, which is Newark Area 4 (including the area of the former Whistling Duck Club).

Even during the three years immediately preceding November 11, 1969, recent and historical aerial photographs are inconclusive as to whether the depressions associated with the former Whistling Wings Duck Club were managed for wildlife. This is because the signatures of the depressions can still be seen on recent aerial photographs despite being disked and leveled as part of on-going agricultural activities and do not provide any indication of use on most aerial photos. The most obvious indication of active use of the depressions for duck hunting can be seen in a 1948 aerial photograph (Google Earth), which shows berms and ponded water with small islands clearly indicating Club use that year. In contrast, even though the depressions appear to be present in a January 26, 1964 aerial photograph (i.e. middle of duck hunting season) and some minor ponding appears to be present, there is no clear indication of whether these areas were used for duck hunting (i.e. no duck blind islands can be seen and the area of the depressions only holds a very minor amount of water) or otherwise managed for wildlife.

Based on review of historical marsh and Bay margin maps, BCDC figures and their definition of managed wetlands, it appears that no areas of Area 4 meet BCDC's definition of managed wetlands. The Pintail Duck Club, which currently ponds water year around and attracts a wide variety of water birds, was never part of the historical Bay margin using maps adopted by the U.S. Army Corps of Engineers in defining the extent of their jurisdiction around the Bay. The Whistling Wings Duck Club was within the historical Bay margin but was never used as a year-around area dedicated to wildlife management.

MASTER COMMENT 4: Many comments to the RDEIR involve the question of future sea level rise from global climate change and the vulnerability of the Specific Plan Area to flood hazards that may result by such rises in mean sea level. These comments also questioned if the sea level analysis was still up-to-date since the previous analysis was prepared.

MASTER RESPONSE 4: The previously prepared climate change evaluation was updated and included in Section 4.0 of this document. Overall the conclusions did not change from the previous analysis.

The City acknowledges, and has disclosed in the DEIR and RDEIR, that various sea level rise models have been developed by numerous parties, all with varying ranges of projected temporal sea level rise and varying degrees of uncertainty regarding those ranges. Sea level rise projections have ranged by more than 50 percent between 2004 and 2013, in part because the projections are based on complex, interrelated and uncertain variables. As Lead Agency, the City must weigh the various sea-level rise projections and how uncertain future sea level rise will impact the proposed development against the more certain environmental impacts of placing additional fill within Area 4 now to address that uncertain range of sea level rise.

The RDEIR identified a potential increase in mean sea level between 11 inches and 18 inches (relative to sea level in 2000) by 2050 and an increase in mean sea level between 23 inches and 55 inches by 2100, based on draft guidelines published by the California Climate Action Team (CO-CAT) in 2009. Four years later (in March 2013), the Coastal and Ocean Working Group of CO-CAT updated its guidelines for incorporating sea level rise projections into planning and decision making for projects in California. For areas along California's coast south of Cape Mendocino:

Time Period	**Sea Level Rise (Low Range Estimate)**	**Sea Level Rise (High Range Estimate)**
2000-2030	2 inches	12 inches
2000-2050	5 inches	24 inches
2000-2100	17 inches	66 inches

Given the uncertainty in sea-level rise projections, an estimate of 66 inches of rise by 2100 is as accurate as an estimate of 55 inches of rise, which is also as accurate as an estimate of 17 inches of rise.

The California Climate Change Center "assumes that all tide datums, e.g. mean high tide and flood elevations, will increase by the same amount as mean sea level."[1] Proposed minimum floor elevations provide protection against all of the increased 100-year base flood elevations that result by adding the widely recognized sea level rise estimates, except for high-range Year 2100 estimates, and that protection falls within the USFWS's planning range for Year 2100 eustatic sea level rise. The project will place fill in conformance with City requirements that all residential building pads be placed at a minimum elevation of 11.25 feet NGVD with minimum floor elevations at 11.75 feet NGVD. The current (Year 2000) 100-year stillwater elevation of San Francisco Bay at Mowry Slough is 8 feet NGVD. Thus the minimum floor elevations will be 3.75 feet (45 inches) above the Year 2000 100-year base flood elevations.

[1] Heberger, et al, 2009 "The Impacts of Sea Level Rise on the California Coast. A Paper from [the] California Climate Exchange Center."

Placing an additional 21-24 inches of vertical fill or constructing additional perimeter levees or floodwalls within Area 4 to meet a higher, yet uncertain sea level rise threshold would create significant environmental impacts for reasons described in the DEIR and RDEIR. These include additional truck trips, visual impacts, and the potential to induce additional fill settlement thereby requiring the placement of even more fill in the future. The City has discretion to weigh these impacts against those from future projected sea-level rise. Such weighing is consistent with CO-CAT's recommendation in their March 2013 Guidelines that "ranges of Sea Level Rise (SLR)…[can be used] as a starting place [to] select SLR values based on agency and context-specific considerations of risk tolerance and adaptive capacity." Further, the Guidelines note that if additional protection against actual sea level rise is needed in the future, such protection is more appropriately planned and designed when the level of threat from sea level rise and policy and technical requirements to meet that threat are better established.

MASTER COMMENT 5: Many comments raise issues that either could have been raised during the process leading to the certification of the 2010 EIR or were raised, including comments on safety issues, hazards, transportation, cumulative impact analysis methodology, water quality, hydrology, climate change, visual resources, and the effectiveness of mitigation measures other than those addressing trees and the spread of non-native species.

MASTER RESPONSE 5: As noted in the RDEIR (page 2), the 2010 EIR for the Newark Areas 3 and 4 Specific Plan Project ("2010 EIR") was challenged in a lawsuit, resulting in the need to recirculate a revised EIR addressing three issues: (1) whether the EIR is intended to be a sole-tier or a first-tier EIR, or whether different parts of the EIR are intended to be sole-tier or first-tier in nature, (2) the improper deferral of mitigation of impacts to trees that would be preserved by the project by mitigation measure BIO-11.1; and (3) improper deferral of mitigation of impacts to sensitive habitats and special status species due to the potential spread of non-native plant species on the site in mitigation measure BIO-11.2. The remainder of the 2010 EIR's analysis and conclusions were upheld as complying with CEQA. Accordingly, the City amended the previously circulated and certified EIR to address the court's concerns and, in the process, updated information as needed to reflect today's existing conditions. The remainder of the 2010 EIR is unchanged.

After an EIR has been certified, subjected to litigation, and is recirculated to address specific issues pursuant to a court order, comments that could have been made or pursued regarding the original EIR during the administrative process, but were not are waived and barred by CEQA's statute of limitations, and cannot be raised in court against the recirculated EIR. Because such comments could have, but were not raised during the original administrative proceeding, the City does not have to substantively respond to them in the REIR. Only comments directed at one of the three court-identified issues, or at the updated information, is relevant at this juncture. The following comments are examples of those that fall into this category: A-4, B-7, C-1, C-2, C-3, C-4, C-5, D-3, E-7, E-8, E-13, E-14, E-15, E-16, E-17, E-18, E-19, E-24, E-39, E-55, E-55, E-60, E-61, E-68, E-69, F-2, F-3, G-4, G-8, G-9, G-10, G-11, G-13, G-14, G-15, G-16, G-17, G-18, G-19, G-20, G-21, G-22, G-23, G-25, G-26, G-27, G-28, G-29, G-30, G-31, G-32, G-33, G-34, H-17, H-18, H-19, H-20, H-21, H-23, H-24, H-25, H-27, H-31, H-34, H-38, H-42, H-44, H-48, H-49, H-50, H-53, H-61, H-62, H-63, H-64, H-66, H-69, H-71, H-73, H-76, H-78, I-1, I-2, I-3, I-4, I-5, I-6, I-7, I-8, I-9, I-10, I-11, I-12, I-13, I-15, K-2, K-7, K-8, L-6, L-7, L-8, L-9, L-10, L-11, L-12, L-14, L-15, L-16, L-17. The preceding list

is illustrative and is not exhaustive or exclusive. Even though the City is not required to respond to such comments, the City has nevertheless addressed them in this RFEIR to facilitate information disclosure. By offering a substantive response in the interest of fully informing the public and decision makers, the City does not concede that a legal challenge based on issues that could have been raised against the 2010 EIR can be asserted now against the REIR.

In addition, many comments submitted on the RDEIR raise issues that were raised during the original process, and could have been litigated or were litigated and found unmeritorious. These comments are also barred by CEQA's statute of limitations, as well as the doctrine of res judicata. The following comments are examples of those that fall into this category: A-1, A-3, A-6, E-12, E-20, E-23, E-25, E-26, E-27, E-28, E-29, E-30, E-31, E-32, E-33, E-34, E-35, E-36, E-37, E-38, E-40, E-45, E-46, E-47, E-48, E-49, E-51, E-52, E-56, E-58, E-59, E-62, E-63, E-64, E-65, E-66, E-67, E-70, E-71, E-72, E-73, E-74, E-75, E-76, E-77, E-78, E-79, E-80, E-81, E-82, E-83, E-84, E-85, E-86, E-87, E-88, E-89, E-90, E-91, E-92, E-93, E-94, E-95, E-96, E-97, E-99, E-100, E-101, E-102, E-103, E-104, E-105, E-108, E-109, G-2, G-3, G-5, G-6, G-7, G-12, G-35, G-36, G-37, H-26, H-28, H-29, H-30, H-33, H-36, H-37, H-39, H-40, H-41, H-43, H-46, H-51, H-52, H-54, H-56, H-57, H-70, H-72, H-74, H-75, I-14, L-1, L-2, L-3, L-18. The preceding list is illustrative and is not exhaustive or exclusive. Even though the City is not required to respond to such comments, the City has nevertheless addressed them in this RFEIR to facilitate information disclosure. By offering a substantive response in the interest of fully informing the public and decision makers, the City does not concede that a legal challenge based on issues that were raised and rejected by the court against the 2010 EIR can be asserted again against the REIR.

Finally, as part of their comments on the recirculated EIR, several of the commenters incorporated by reference comments they submitted on the 2010 EIR and requested that the City respond to them. However, where an entire EIR is recirculated, the City is not required to respond to comments received during the earlier comment period but is only required to respond to the new comments. Furthermore, to the extent that the comments raised in the earlier comment period were either not pursued in the litigation or were resolved by that litigation, they are time barred and cannot be raised again under principles of res judicata.

MASTER COMMENT 6: Many comments to the RDEIR raised questions regarding the U.S. Fish & Wildlife Service Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) and what authority the USFWS has over the portions of Area 4 located within the Refuge Boundary Expansion Area for the Refuge approved in 1990.

MASTER RESPONSE 6: The City acknowledges that portions of Area 4 are within the Refuge Boundary Expansion Area (EA) for the Refuge approved by USFWS in 1990. Pre-approval of the lands for addition to the Refuge does not grant the Refuge any jurisdictional authority or signify that the lands will become part of the Refuge. The approved acquisition boundary of the EA totals approximate 24,500 acres on both sides of San Francisco Bay south of the San Mateo-Hayward Bridge. The EA does not impose any restrictions on the use or development of land in its boundaries. Instead, it identifies lands the USFWS could acquire and incorporate into the existing Refuge if it chose to do so.

The map and boundary depicted in the 1990 Environmental Assessment identified the property within the EA boundary, including approximately 320 acres in Area 4, as ***"potential additions"*** to the Refuge. (Emphasis added.) The EA is designated as "potential" because not all of the lands in the EA will be added to the Refuge. In fact, the USFWS has stated that no more than 20,000 acres out of the 24,500 acres identified would be added to the Refuge and the acquisition cost of some of the lands may too high to allow acquisition. Other reasons that not all the land in the EA may be acquired include the lack of funding for acquisition and that private landowners may be unwilling to sell their land. In addition, according to the USFWS, its plans for acquisitions to the Refuge are not intended to preclude lawful, environmentally sound development, as determined by local government. In the 20 years since this EA was identified, the USFWS has not pursued any expansion onto Area 4 lands.

The USFWS completed a Comprehensive Conservation Plan (CCP) for the Don Edwards San Francisco Bay National Wildlife Refuge (NWR), which consists of the entire Refuge including the Boundary Expansion Area, in October 2012. The CCP provides the vision and guidance for the management of Don Edwards San Francisco Bay NWR natural and cultural resources for 15 years. The CCP is a planning document that applies to the Refuge. The CCP shows lands in the EA boundary, but has no applicable restrictions on development in the areas within the EA boundary that are not part of the Refuge. None of the project area, including the land in Area 4 that is in the EA boundary, is owned by the Refuge. The Refuge thus has no regulatory jurisdiction in Area 4. Moreover, even though the CCP is not binding on the project, development of the proposed project is consistent with the CCP. Specifically, much of the land designated for addition to the Refuge is within the 244 acres that comprise Specific Plan Area 4, Sub Area E. These 244 acres are proposed for wetland preservation, wetland creation/enhancement or continued agricultural operations. These uses would be not conflict with the CCP. The remainder of the land in Area 4 that is also in the EA boundary may be developed, but such development is allowed. As noted above, USFWS acknowledged that lawful development is permitted on private property in the EA boundary unless and until it is acquired by the Refuge.

A. RESPONSE TO COMMENTS FROM UNITED STATES FISH AND WILDLIFE SERVICE, SEPTEMBER 19, 2014

COMMENT A-1: The Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) appreciates the opportunity to review the REIR for the Newark Areas 3 and 4 Specific Plan. We reiterate our previous comment that Area 4 should not be developed. The project proposal prescribes costly artificial flood protection that could be more economically created through restoring portions of the project area to its natural wetland habitat, thereby ensuring protection from increasing storm events and sea-level rise as a result of global climate change. Moreover, Area 4 was identified by Congress in 1990 as important wildlife habitat that should be included within the Refuge.

Furthermore, the ponds adjacent to Area 4 are planned for restoration to tidal influence. Area 4 could provide valuable ecotonal habitat transitioning from restored wetlands to upland areas. We would like to reiterate and introduce a number of points as follows.

- The Bayland Ecosystem Habitat Goals Project (1999) estimates indicate a loss of 79 percent of tidal marsh habitat since the 1800s, and only 8 percent of the original pre-historical tidal marshes remain. The project's proposal simply exacerbates those losses of historic tidal marsh. With the anticipated fill of wetlands or other potential impacts to endangered species habitat on the project site, future environmental review should include Endangered Species Act Section 7 consultation with U.S. Fish and Wildlife Service, Endangered Species Program at the Sacramento Fish and Wildlife Office, (916) 414-6600. While the RDEIR considers those wetland areas to be filled as poor or marginal quality due to intensive and ongoing agricultural disturbance, we believe otherwise. Discontinuing these agricultural activities and removing barriers to the natural flow of bay water has high potential of restoring these areas to high quality wetland habitat for endangered species like the salt marsh harvest mouse.

RESPONSE A-1: Please refer to Master Response 6 regarding the issue that portions of Area 4 are within the Refuge Boundary Expansion area for the Refuge approved in 1990.

The City agrees with the commenter that future environmental review for Area 4 will likely require Endangered Species Act Section 7 consultation with U.S. Fish and Wildlife Service.

The City agrees with the commenter that portions of Newark Area 4 have the potential to be restored to higher quality wetlands than currently exists, but opening up the property to "the natural flow of Bay water" would inundate the lands under several feet of water thus requiring import of suitable marsh soils to raise the lands to around the mean high water mark, since the current land surface elevation is far below that of the adjacent marsh along Mowry Slough, as well as construction of a flood protection levee around this part of Area 4.

COMMENT A-2: Area 4 has great potential to provide natural and economical flood protection from sea-level rise, extreme storm events, and 100-year flooding potential. Vermeer and Rahmstorf (Vermeer, M., and S. Ralnnstorf. 2009. Global sea level linked to global temperature. Proceedings of the National Academy of Sciences of the United States of America 106:21527-21532) developed a sea-level rise model projecting increases from 0.75-1.9 meters by 2100. Parris et al. (2012:10) (Parris, A., PG. Bromirski, V. Burkett, D. Cayan, M. Culver, J. Hall, R. Horton, K. Knuuti, R. Moss, J. Obeysekera, A. Ballenger, and J. Weiss. 2012. Global sea level rise scenarios for the US National Climate Assessment. NOAA Technical Memo OAR CPO-I. National Oceanic and Atmospheric Administration, Washington, DC. 37 pp) expressed "very high confidence (>9 in 10 chance) that global mean sea level will rise at least 0.2 meters (8 inches) and no more than 2.0 meters (6.6 feet) by 2100. Based on the U.S. Fish and Wildlife Service report, "Planning for Climate Change on the National Wildlife Refuge System", the Service is directed to explicitly plan for 1-1.5 meter eustatic sea-level rise by the year 2100. We do not believe the fill estimates are sufficient to address these sea-level rise estimates.

RESPONSE A-2: Leaving Area 4 in its existing condition, or restoring portions of the proposed project area to a natural wetland habitat would not necessarily provide, in and of itself, "natural" protection against potential sea level rise or an increase in storm activity should that prove to be a consequence of future climate change. Existing ground elevations within Area 4 are on the order of zero to 16 feet NGVD. Without the existing protective levees, a significant portion of this area would be subject to inundation even by average San Francisco Bay tides.

The City acknowledges that wetland restoration can be a viable means of minimizing the impact of wind generated waves that might combine with storm surge, but as noted in the DEIR and RDEIR, that measure of protection is already provided by the long distance of shallow water associated with the salt ponds located between the open Bay and Area 4. In its proposed post-development condition, Area 4 will continue to provide flood protection against runoff generated from developed and undeveloped areas of the site.

Please refer to Master Response 4.

COMMENT A-3: We do not agree with the REIR's findings that the project is consistent with the intent of our Refuge. While Sub Area E is not proposed for development, it is not specifically proposed for wetland restoration or enhancement. Sub Area C (also within our approved acquisition boundary) is planned for residential development. A third of Sub Area C is considered wetland, and thus has the potential to provide endangered species habitat.

RESPONSE A-3: The RDEIR (pg. 21) describes Sub Area E as approximately 244 acres that is "outside the development envelope and could be utilized for wetland preservation, wetland creation/enhancement or remain unchanged (continued agricultural operations)." The portions of Sub Area C not developed with residential or recreational uses would also be utilized for similar wetland uses. The exact amount and locations of wetlands that would be avoided or impacted would be subject to separate future environmental review, both for the City approvals and any necessary permitting by other agencies. The wetland preservation/enhancement/creation and agricultural use of all of Sub Area E and portions of Sub Area C are generally consistent with the intent of the Refuge.

COMMENT A-4: The wetland mitigation ratio of 1.5:1 is too low, and should be a minimum of 2:1. We believe much of the lands that are currently in agricultural production can be restored to wetland habitat. In addition upland ecotone needs to be considered in wetland mitigation in order to provide refugia during high tide and extreme storm events. It is also not clear how on-site mitigated wetland habitat will be protected in perpetuity. Funding and a long-term plan for these areas need to be clarified. The REIR also noted that these wetland mitigation areas may be transferred to us. This is the first time we have any knowledge of this proposal.

RESPONSE A-4: The provision of upland ecotone has been considered in the wetland mitigation. Each of the ecosystem services, including upland ecotone, will be substantially increased by enhancing some of the low-quality farmed wetlands, and creating new wetlands to high-quality marshes, for two reasons. First, farming practices will cease to occur within the farmed wetlands to be provided as mitigation, and second, some areas that are currently uplands may be converted to wetlands and marshes on site.

The details regarding the funding and conservation mechanism to be used for the on-site mitigated wetland habitat will be identified as a part of the future, project-specific environmental review that is completed for the subdivision and permitting for Area 4 development. The idea that on-site mitigation wetlands could be transferred to the Refuge is not new to the RDEIR; it was also identified in the DEIR. The DEIR (pg. 136) identified that "all created/enhanced habitats will be protected in perpetuity through a conservation easement, deed restriction, conveyance to a qualified land trust or the Refuge, or through equivalent means." Please see Master Response 2, which addresses the mitigation ratio and the restoration of agricultural land to wetland habitat.

COMMENT A-5: With regard to invasive plant species, we recommend that the project incorporate priority invasive plants and management protocols as identified by the California Invasive Plant Council. Control of invasive plant species needs to be conducted and monitored beyond the 3-year timeframe suggested in the REIR.

RESPONSE A-5: The future development of an Invasive Species Management Plan will incorporate and closely follow all applicable weed control measures as identified by the California Invasive Plant Council. For clarification, weed monitoring and control measures are to be conducted for a minimum of three years following grading operations and discontinued only if certain criteria are met, including significant reduction in the initial extent of invasive populations and, after three years of intensive control measures, weeds are shown to be small, stable and not expanding into sensitive habitat areas.

COMMENT A-6: Why were no cumulative biological impacts assessed in the REIR? Thank you for considering our comments. We recommend that you to contact the U.S. Fish and Wildlife Service Endangered Species Division in Sacramento to discuss Section 7 consultation required of any impacts to listed species habitat. Please keep us informed of the EIR process, especially any future opportunities to provide comment. If you have questions regarding our comments, please contact Winnie Chan, refuge planner, at 510-792-0222.

RESPONSE A-6: The Draft REIR (pg. 365) includes an evaluation of cumulative biological impacts, focusing on the projects proposed on large tracts of undeveloped land (Areas 3 & 4 and Dumbarton TOD development in Newark, and the

Warms Springs/South Fremont Community Plan in Fremont). The evaluation included impacts to wetlands, special status species, nesting birds, and wildlife movement. As described in the RDEIR, the mitigation measures identified for the proposed project will render the project's contribution to the cumulative impact less than cumulatively considerable; therefore, it will have a less than significant cumulative impact.

B. RESPONSE TO COMMENTS FROM CALIFORNIA DEPARTMENT OF TRANSPORTATION, SEPTEMBER 18, 2014

COMMENT B-1: Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above: Please refer to our comments on the Notice of Preparation in a letter dated June 6, 2007. We have reviewed the DREIR and have the following comments to offer.

Traffic Impacts
One of Caltrans' ongoing responsibilities is to collaborate with local agencies to avoid, eliminate, or reduce to insignificance potential adverse impacts by local development on State highways. The following are comments on the potential traffic impacts from this project.

1. The Transportation Impact Analysis (TIA), which was completed in 2009, presents two issues: The counts are at least five years old. Traffic patterns have likely changed, so new counts are needed for a valid traffic study. Caltrans recommends the TIA be based on more recent counts for it to be accurate and valid.

The trip generation rates used in TIA are from the 7th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual (Manual). The most recent edition of the Manual is the 9th Edition. Caltrans recommends that the rates used for the TIA be taken from the 9th Edition.

RESPONSE B-1: The commenter requests that new traffic counts be completed for the 2009 TIA to reflect changes to traffic patterns in the project area. As discussed in Section 3.2 Transportation (pg. 73) of the RDEIR, new AM and PM peak hour traffic counts were completed in January and May 2014. The new counts were used as the basis for an updated level of service (LOS) analysis, along with updated lists of approved and pending projects from the cities of Newark and Fremont. The results of an updated analysis of existing, background, and background plus project and cumulative conditions are included in the RDEIR in Sections 3.2 Transportation and 4.2 Cumulative Transportation Impacts. The technical memorandum prepared by Hexagon Transportation Consultants is included as RDEIR Appendix A. A current freeway impact analysis was also completed, using the method prescribed by the Alameda County Congestion Management Program (CMP).

Comparing the trip generation rates of the 7th Edition of the ITE Trip Generation Manual (used in the RDEIR) with the rates in the 9th Edition, the rates for the golf course and elementary school are exactly the same. For the single family residential uses, the 7th Edition rate is 9.57 daily trips per unit and the rate in the 9th Edition is slightly lower, 9.52 trips per unit. Therefore, the older rates result in 63 more trips being evaluated for the project. For this reason, the rates used in the RDEIR are considered adequate for the traffic impact analysis.

COMMENT B-2: 2. A 130,000 square feet office complex was included in the Trip Generation Estimates. Note 2 in Table 5 states, "The office component was included as part of the proposed project to provide a more conservative analysis. However, this office use is an existing land use and not part of the proposed project." Caltrans recommends this statement be further clarified. Why would an existing development that generates around 200 peak hour trips be included in the trip generation estimates and its traffic included in the counts in the proposed project?

RESPONSE B-2: The commenter's statement is correct that the 2009 TIA included 130,000 square feet of re-occupied office space; however, this office use is no longer considered part of the project. The re-occupied office space would have generated 1,431 daily trips, with 202 AM peak hour trips and 194 PM peak hour trips. To be consistent, the RDEIR traffic analysis update used the same trip generation. Therefore, the traffic analysis slightly overestimates the impact of the project.

COMMENT B-3: Lead Agency As the lead agency, the City of Newark (City) is responsible for project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document.

RESPONSE B-3: There is one transportation mitigation measure required of the project due to a project impact at Cherry Street and Mowry Avenue. The intersection would require an additional left turn lane to the westbound Mowry Avenue approach. This improvement would require the intersection be re-aligned on the eastbound and westbound approaches and extensive modifications to the existing traffic signal. Modification of the intersection would be required concurrent with the development of Areas 3 & 4 at the developer's expense. A Mitigation Monitoring and Reporting Plan has been prepared, includes this information, and will be adopted as part of the CEQA certification hearing.

COMMENT B-4: Transportation Management Plan (TMP) If it is determined that traffic restrictions and detours are needed on or affecting State highways, a TMP or construction TIS may be required of the developer for approval by Caltrans prior to construction. Traffic Management Plans must be prepared in accordance with Caltrans' Manual on Uniform Traffic Control Devices. Further information is available for download at the following web address:

http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2012/Part6.pdf.

Please ensure that such plans are also prepared in accordance with the TMP requirements of the corresponding jurisdictions. For further TMP assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579.

RESPONSE B-4: Traffic restrictions and detours affecting State highways are not anticipated for development of Areas 3 and 4; however, if conditions change the developer will obtain the necessary approvals from Caltrans prior to construction.

COMMENT B-5: Vehicle Trip Reduction Caltrans commends the City for its ongoing progress in locating needed housing, jobs and neighborhood services near major mass transit centers, with connecting streets configured to facilitate walking and biking. By doing so, the City promotes mass transit use and reducing regional vehicle miles traveled and traffic impacts on the State highways.

We also commend and encourage the City to continue developing Travel Demand Management (TDM) policies to promote usage of nearby public transit lines reduce vehicle trips on the State Highway System. These policies could include lower parking ratios, car-sharing programs, bicycle parking and showers for residents and employees, and providing transit passes to residents and employees, among others.

RESPONSE B-5: Comment noted. The commenter's concerns will be included in this Recirculated Final EIR and thus will be before the City's decision-makers, the City Council, for their consideration.

COMMENT B-6: Habitat Restoration and Management Project level activities related to habitat restoration and management should be done in coordination with local and regional Habitat Conservation Plans, and with Caltrans where our programs share stewardship responsibilities for habitats, species, and/or migration routes.

RESPONSE B-6: There are no habitat conservation plans or natural community conservation plans applicable to the proposed Specific Plan area.

COMMENT B-7: Sea Level Rise The effects of sea level rise may have impacts on transportation facilities located in the project area. Executive Order (EO) S-13-08 directs State agencies planning construction projects in areas vulnerable to sea level rise to begin planning for potential impacts by considering a range of sea level rise scenarios for the years 2050 and 2100. Higher water levels may increase erosion rates, change environmental characteristics that affect material durability, lead to increased groundwater levels and change sediment movement along shores aid at estuaries and river mouths, as well as affect soil pore pressure at dikes and levees on which transportation facilities are constructed. All these factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans.

RESPONSE B-7: The effects of sea level rise have been addressed in Section 4 Cumulative Impacts of the RDEIR and an updated discussion is included in Master Response 4 and in *Section 4 Revisions to the Text of the RDEIR* of this document. The project does not propose modifications to any State transportation facilities.

COMMENT B-7: Traffic Impact Fees Please identify traffic impact fees to be used for project mitigation. Development plans should require traffic impact fees based on projected traffic and/or based op associated cost estimates for public transportation facilities necessitated by development. Scheduling and costs associated with planned improvements on State ROW should be listed, in addition to identifying viable funding sources correlated to the pace of improvements for roadway improvements, if any.

Should you have any questions regarding this letter, please contact: Brian Brandert of my staff at (510) 286-5505 or brian.brandert@dot.ca.gov.

RESPONSE B-8: There are no required or planned improvements on State rights-of-way as a part of Newark Areas 3 and 4.

C. RESPONSE TO COMMENTS FROM SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION, SEPTEMBER 18, 2014

COMMENT C-1: Thank you for the opportunity to comment on the Recirculated Environmental Impact Report for the Newark Areas 3 & 4 Specific Plan. This letter sets forth the comments of the staff of the BCDC, as distinguished from the Commission itself. The comments set forth below are based on the Commission's enabling legislation, the McAteer-Petris Act (MP A), Cal. Government Code § 66600 et seq., the regulations that the Commission has adopted to implement that law (Cal. Code of Regulations, Title 14, Div. 5), and relevant findings and policies of the Commission's San Francisco Bay Plan (Bay Plan). As a permitting authority along the San Francisco Bay shoreline, the BCDC is responsible for granting or denying permits for any proposed fill (earth or any other substance or material, including pilings or structures placed on pilings, and floating structures moored for extended periods), extraction of materials or change in use of any water, land or structure within the Commission's jurisdiction.

Jurisdiction and Authority. BCDC's jurisdiction over San Francisco Bay extends over Bay tidal areas up to the mean high tide level, including all sloughs, and in marshlands up to five feet above mean sea level; a shoreline band consisting of territory located between the shoreline of the Bay and 100 feet landward and parallel to the shoreline; salt ponds; managed wetlands (areas diked from the Bay and managed as duck clubs); and certain waterways tributary to the Bay, specifically as mentioned in MPA § 66610(e)(1), "Plummer Creek in Alameda County, to the eastern limits of the saltponds ....". In addition to said MPA language staff has determined that the Commission's Bay jurisdiction within the area of the General Plan Tune Up includes "... on Mowry Slough [extending to] culvert at Mowry Avenue bridge crossing" (Inquiry File AL.AA.6516.1 File 5, Lacko, 2004) and "At bend in channel near Plummer Creek" (Inquiry File AL.HY.6801.1 FILE 3, Permit M81-14)

Furthermore, as has been previously noted in other letters to the City of Newark, BCDC maintains it likely has managed wetlands authority in some parts of the project area (the former Pintail and Whistling Wing Duck Clubs).

- Any project proposed within the Commission's managed wetlands jurisdiction must be authorized by the Commission pursuant to a Commission permit, and the Commission will use relevant provisions of the MPA as well as the managed wetlands policy, along with other relevant policies in the Bay Plan, to evaluate the project. The Commission can grant a permit for a project if it finds that the project is either (1) necessary to the health, safety or welfare of the public in the entire Bay Area, or (2) is consistent with the provisions of the MPA and the Bay Plan.

RESPONSE C-1: Please refer to Master Response 3.

COMMENT C-2: Climate Change and Safety of Fills. It appears that some areas within the plan area and along the adjacent shoreline that are within the Commission's jurisdiction may be vulnerable to projected sea level rise. Staff recommends that a robust analysis of the effects of sea level rise based on the latest data from the National Oceanic Atmospheric Administration Coastal Services Center on sea level rise vulnerability be used, and that the latest science-based sea level rise projections for the area be utilized when considering the vulnerability of the project areas to sea level rise.

The Bay Plan policies on the safety of fills state that, "Adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project." Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies on the safety of fills and shoreline protection and it is likely that many of the proposed structures within the Specific Plans would be expected to last until 2100. These policies apply to proposals for fill within the Commission's Managed Wetland jurisdiction.

RESPONSE C-2: Please refer to Master Response 4 regarding sea level rise and Master Response 3 regarding BCDC jurisdiction.

COMMENT C-3: Public Access. Section 66602 of the McAteer-Petris Act states, in part, that "existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided." Furthermore, the McAteer-Petris Act authorizes the placement of fill in the Bay only for water-oriented uses or minor fill for improving shoreline appearance or public access. The MPA, at section 66602.1, also requires that in managed wetlands "in any such areas are authorized to be developed and used for other purposes, the development should provide the maximum public access to the Bay, consistent with the project ..."

Development policies for areas identified in the FEIR that are within BCDC's jurisdiction should be consistent with BCDC's public access requirements and not preclude, "maximum feasible access to

and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline ....and maximum access, consistent with the project" in areas of managed wetlands approved for development.

RESPONSE C-3: Please refer to Master Response 4.

COMMENT C-4: Fill. Section 66605 of the McAteer-Petris Act states that fill in San Francisco Bay should only be authorized when: (1) the public benefits from the fill clearly exceed the public detriment from the loss of water area; (2) no upland alternative location is available for the project purpose; (3) the fill is the minimum amount necessary to achieve the purpose of the fill; (4) the fill will minimize harmful effects to the Bay; and (5) that the fill should be constructed in accordance with sound safety standards. If the proposed project would involve fill in the Bay, the project proponent will need to show that fill associated with the project meets all of the above listed criteria.

RESPONSE C-4: Comment noted. The exact amount of fill required for development in Area 4 will be determined when future discretionary approvals to develop the residences and/or a golf course or other form of recreation in Area 4 are proposed. All future discretionary approvals would be subject to additional environmental review in compliance with CEQA Guidelines Section 15168.

COMMENT C-5: Water Quality. The Bay Plan's policies on water quality state that, "new projects should be sited, designed, constructed and maintained to prevent, or if prevention is infeasible, to minimize the discharge of pollutants to the Bay ...." Additionally, in order to protect the Bay from the water quality impacts of nonpoint source pollution, "new development should be sited and designed consistent with standards in municipal storm water permits and state and regional storm water management guidelines ...To offset the impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation and other appropriate measures should be evaluated and implemented where appropriate ..."

Thank you for your careful consideration of the foregoing comments on the Recirculated Final Environmental Impact Report of Newark Areas 3 and 4 Specific Plan Project. If you have any questions please contact me directly at (415) 352-3667.

RESPONSE C-5: The RDEIR, in Section 3.8, Hydrology, Flooding and Water Quality, evaluates the potential for the Project to impact waters flowing into the San Francisco Bay and imposes mitigation measures to reduce any potential impacts to a less than significant level.

D. RESPONSE TO COMMENTS FROM ALAMEDA COUNTY WATER DISTRICT, SEPTEMBER 19, 2014

COMMENT D-1: The Alameda County Water District (ACWD) wishes to thank you for the opportunity to comment on the "Draft Recirculated Environmental Impact Report for Newark Areas

3 and 4 Specific Plan Project." ACWD has reviewed the Draft Recirculated Environmental Impact Report (REIR) and would appreciate your consideration of the following comments:

1. Utilities and Service Systems - Water Supply:
a. Water Supply Shortage Emergency: The ACWD service area and the State of California are currently experiencing a water supply shortage emergency. ACWD has taken steps to encourage water use reductions throughout the service area. On March 13, 2014, ACWD declared a water shortage emergency and adopted ACWD Ordinance No. 2014-01, imposing broad water use restrictions, water use prohibitions, and other measures, including restrictions on water use for purposes other than domestic use, public health, and fire protection. These restrictions will remain in place through the end of the water shortage emergency. In addition, ACWD may adopt additional water use restrictions or implement other measures should they become necessary.

RESPONSE D-1: The comment is noted. As described in the RDEIR (pg. 312) the project's water supply assessment included provisions for additional water conservation measures imposed by ACWD, as a condition of project approval, in the event of current and future water supply shortages. The RDEIR also includes the option of the project funding off-site water conservation measures sufficient to offset up to 100% of the project water demand. Through these measures, the project would not require water supplies in excess of available existing entitlements and resources. In April 2014, ACWD confirmed that existing and future water supplies were projected to be adequate for the project.

COMMENT D-2: b. Water Supply Assessment: California Water Code Section 10910 (from SB 610) requires a Water Supply Assessment (WSA) for projects with water demands at or exceeding the equivalent of 500 residential units. The WSA evaluates the expected future water demands of the service area, including the expected water demands due to the project development, in comparison to the existing and expected future water supply.

For all developments, ACWD works with the cities in our service area to identify when projects meet this WSA threshold prescribed in the Water Code. Additionally, ACWD reviews all development projects during CEQA (e.g., Draft Mitigated Negative Declarations or Draft Environmental Impact Reports) to compare a project's proposed water demands to ACWD's water demand forecasts.

Because the Newark Areas 3 & 4 project meets this WSA threshold, in 2008 ACWD prepared a WSA for the Newark Areas 3 & 4. As described in the REIR, the WSA was based on water supply and demand assumptions documented in ACWD' 2006-2010 Urban Water Management Plan (UWMP). A key conclusion of the WSA was that: (1) ACWD had incorporated the future water demands for this site into our demand forecasts; and (2) existing and future water supplies were projected to be adequate for the expected growth due to this project. The District-wide water supply and demand assumptions were updated by ACWD in the 2010-2015 UWMP, and based on the 2010-2015 UWMP, in April 2014 ACWD confirmed the validity of the conclusions of the 2008 WSA. However, due to the on-going drought and other factors, ACWD anticipates that the water supply reliability assumptions of its water supply sources may be further revised by the California

Department of Water Resources, San Francisco Public Utilities Commission and ACWD's analyses of local hydrologic conditions. In the event that future analyses by ACWD indicates that projected water supplies are not sufficient to meet the needs of the Area 3 and 4 demands, ACWD may impose conditions that go beyond the water supply and conservation measures identified in the REIR and WSA as a condition of water service.

RESPONSE D-2: The severity of the current drought is acknowledged. Please refer to the response to Comment D-1.

COMMENT D-3: c. Non-Potable Water Supply: On page 305 of the REIR, it is stated that irrigation needs of Areas 3 and 4 will be switched over to reclaimed water service at the time reclaimed water becomes available. It also stated that "potable water and possibly (emphasis added) groundwater from an on site well located within Area 4 will be used for all golf course irrigation and public park needs." In order to reduce demands on the potable water system, the REIR should provide a firm commitment for the use of a non-potable supply (e.g., groundwater) as a source for golf course irrigation and other large landscape demands until such time that reclaimed water becomes available.

RESPONSE D-3: The project commits to using groundwater from an on-site well as a water source other than potable water for golf course irrigation or other large landscape demands until such time that reclaimed water becomes available. The text of the RDEIR has been revised to clarify this issue, as shown in Section 4, *Revisions to the Text of the Draft REIR.*

E. RESPONSE TO COMMENTS FROM CITIZENS COMMITTEE TO COMPLETE THE REFUGE, SEPTEMBER 19, 2014

COMMENT E-1: This responds to the REIR for the proposed specific plan for Areas 3 & 4 in Newark, CA. Areas 3 and 4 comprise approximately 850 acres of land (estimates vary from 850 acres to 856 acres within the REIR and Specific Plan) located at the western edge of the City of Newark and bounded on the north by Mowry Avenue, to the east by Cherry Street, to the south by Stevenson Boulevard, and to the west by Mowry Slough.

The Citizens Committee to Complete the Refuge (CCCR) thanks you for the opportunity to review and comment on the REIR for the Area 3 and 4 Specific Plan Project REIR. Attorney Brian Gaffney, Coastal Ecologist and Botanist Dr. Peter Baye, and Wildlife Biologist Jana Sokale have prepared substantive comments on behalf of CCCR and submitted letters under separate cover. Based upon our review of the REIR we find it contains serious omissions, inaccuracies, and flaws that must be rectified to comply with California Environmental Quality Act (CEQA) requirements. For these reasons, as well as those articulated in the letters submitted by Brian Gaffney, Dr. Peter Baye, and Jana Sokale, Wayne Miller, as well as the letter submitted by San Francisco Baykeeper, and regulatory and resource agencies, we urge the City to correct the fatal flaws of this REIR. These flaws must be rectified and the City must re-circulate a revised document.

RESPONSE E-1: Response to the comment letters listed above are provided in this Final REIR document. The comments did not raise any issues indicating a new significant adverse impact or impact of substantially greater severity than had previously been identified in the RDEIR. Therefore, recirculation of the EIR is not required. Please see Master Response 5.

COMMENT E-2: REIR Purpose: The REIR states, page S-4:
For information purposes, this EIR identifies when the analysis is at a project-level, as it is for many of these approvals, and at a program-level, which it is for certain additional approvals necessary to implement development at a site-specific level, chiefly in Area 4...
...Analysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans, and any required future environmental review can be deferred until such time as the lead agency is presented with a proposal for a more specific improvement.

1. The REIR then provides a table (pages S-7 to S-10) that is supposed to provide clarity as to what components of the proposed development are evaluated at a "project" or "programmatic" level. This table only serves to further confuse the issue. As just one example, and specific to Area 4, the table lists the Specific Plan as being a "discretionary approval included in project level analysis." What does this mean?

RESPONSE E-2: The Specific Plan is a program-level planning document that provides high-level land use guidance for development in Areas 3 and 4. To the extent the Specific Plan itself is part of the "project," this REIR provides sufficient environment review to support its adoption as a project EIR. Refer also to Master Response 1.

COMMENT E-3: 2. How can the Specific Plan, the overarching plan of development for Area 4 (and Area 3), fall under "project level analysis," when analysis of the "physical change in environment," e.g. fill of wetlands within Area 4, falls under the category of "program level analysis?"

RESPONSE E-3: To the extent it is part of the project, the Specific Plan as a document is analyzed at a project level. Certain physical changes to the environment arising from implementation of the Specific Plan are also studied at a project level (chiefly in Area 3). Other physical changes are assessed more conceptually and thus programmatically. As described above in Response E-2, the Specific Plan is the strategy for the overall development of Areas 3 & 4. The RDEIR evaluates the impacts of development commensurate with the level of detail available. The RDEIR describes the maximum acreage of wetlands that could be impacted in Area 4 and how wetland impacts would be mitigated. The Specific Plan is not a project-level development proposal for Area 4, however, and thus does not define the specifics or the layout of land uses in Area 4. When such a proposal for Area 4 is submitted, the City will be able to conduct subsequent, project-level review that would define the

details of any impact further and how the precise project-level impact would be mitigated. Refer also to Master Response 1.

COMMENT E-4: REIR text, page S-4 states:
When, as here, a lead agency anticipates using the tiering process in connection with an EIR for a large-scale planning approval, such as a specific plan, detailed, site-specific information may not be available for all reasonably foreseeable improvements. That is true here for the proposed residential and golf course development in Area 4 as well as for the development of a school in Area 3, the design and size of which is not known at this time. Analysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans, and any required future environmental review can be deferred until such time as the lead agency is presented with a proposal for a more specific improvement. [emphasis added]

This seems to acknowledge that the specific area plan is lacking in specific details for major components of the project. REIR text on page S-5, only further confuses the issue:
With respect to elements evaluated at a project level, it is anticipated that this EIR will be adequate to address the significant environmental impacts of currently pending and future discretionary approvals required for that element to be constructed and operated. [emphasis added]

3. The salient question is, and has always been, not whether the various mentioned discretionary approvals should be considered a "project" under CEQA (§15378), thus requiring environmental review, but whether the REIR actually includes an adequate disclosure of environmental impacts and their review and mitigation within the current process. The public has the right to know what specific elements of the Specific Area Plan will be subject to additional review and analysis, whether additional mitigation measures will be proposed, and whether there will be an opportunity for additional public comment.

RESPONSE E-4: The RDEIR provides a detailed description, both in text and table form, of the project elements that are analyzed at a project level. For elements analyzed at a project level, no additional review is assumed unless there are changes in the proposal or circumstances in which it is proposed. The REIR also provides a detailed description, both in text and table form, of the project elements that are analyzed at a program level. For these elements, additional review and analysis will be conducted as required by CEQA Guideline 15168. Refer also to Master Response 1.

COMMENT E-5: The text of the REIR, page S-10 says specifically:
In Area 4, the EIR provides a programmatic level of analysis of the environmental impacts from the construction and operation of new houses and a golf course, including analysis of impacts on wetlands, burrowing owls, salt marsh harvest mice, wandering shrew, water birds, special status plant species, trees, archeological resources, geotechnical resources related to liquefaction, undocumented fill, differential settlement, and corrosive soils, and potential hazardous materials. Because the analysis is at a programmatic level for Area 4, it is likely that CEQA will require tiering from this

EIR to prepare project-level analysis prior to approving a tentative map for residential development or a use permit for a golf course or other recreational activity in Area 4. [emphasis added]

4. Based upon this statement, it is unclear if the level of analysis for the following environmental impacts is believed to be sufficiently detailed, or whether the City intends to conduct additional environmental review for the following environmental impacts for construction of a school in Area 3, residential development in Area 4, or golf course or some other form of recreation in Area 4:

- aesthetics and visual resources
- air quality
- cultural resources (not archaeological)
- energy
- hydrology, flooding, and water quality
- hazards and hazardous materials
- land use
- noise
- public services
- water supply and utilities and service systems

Please clarify whether the environmental impacts (bulleted above) will be analyzed in more detail in the future? Please also confirm that additional environmental analysis and detailed information will be provided for the issues identified in the paragraph above.

RESPONSE E-5: As described in detail in the RDEIR, when the future discretionary approvals to develop the school in Area 3, residential in Area 4 and a golf course or other form of recreation in Area 4 are proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. At that time, all issues subject to CEQA, including all of the issues defined in the above bulleted list, would be evaluated to determine whether and what level of additional review is necessary.

COMMENT E-6: 5. Page 4 of the REIR states that in addition to construction of the school in Area 3, construction and occupation of new residences in Area 4, and construction and operation of a golf course or other recreational facility in Area 4, the construction of the Stevenson Boulevard overcrossing, the Mowry Avenue EVA access and the relocation of the PG&E transmission lines in Area 4 have been analyzed a the programmatic level. Will additional review provide opportunities for public comment under CEQA?

RESPONSE E-6: Opportunities for public review are part of the CEQA process. As specific proposals come forward that include new residences in Area 4, the overcrossing, the EVA access, and relocation of the PG&E transmission lines, the lead agency for each of those project elements would provide public review and noticing as applicable to the applicable CEQA and project consideration processes.

COMMENT E-7: 6. With regard to the construction and occupation of new residences in Area 4, is the filing of more than one Tentative Tract Map anticipated? Is submission of a Tentative Tract Map the only trigger for additional environmental review of construction and occupation of new residences within Area 4?

RESPONSE E-7: At this time, it is unknown whether one or more Tentative Tract Maps would be proposed for Area 4. As described in the RDEIR, the construction and occupation of residences in Area 4 may require rezoning of Area 4, Planned Unit Development and Conditional Use Permits, permits for filling of jurisdictional wetlands, addition of Area 4 to the Union Sanitary District, a BCDC Shoreline Band Permit, as well as one or more Tentative Maps. Each of these discretionary approvals would be subject to additional environmental review in compliance with CEQA Guidelines Section 15168.

COMMENT E-8: 7. Would additional review be triggered for all parcels proposed for residential development within Area 4, or only for those parcels with wetlands? Will parcels that don't have wetlands but support special status species also receive additional environmental review?

RESPONSE E-8: Please refer to Response E-7.

COMMENT E-9: 8. Please identify if there are triggers for additional CEQA review other than the filing of a Tentative Tract Map, (e.g. Planned Unit Development Permit or Conditional Use Permit) and as important, please indicate whether additional opportunities for public comment under CEQA will be available.

RESPONSE E-9: Please refer to Responses E6 and E-7 as well as the *Project Elements* table in the Summary of RDEIR for a description of discretionary approvals that would be subject to additional environmental review, in compliance with CEQA Guidelines Section 15168.

COMMENT E-10: 9. Please indicate what assurances can be provided to the public, that as project specific information becomes available, the public will be afforded additional opportunities to provide comment under CEQA.

RESPONSE E-10: The tiering process is described in detail in the RDEIR summary, project description, and in the various impact and mitigation discussions. The City of Newark commits to abiding by the CEQA process described in the RDEIR and the CEQA Guidelines, and it is assumed that other agencies using the RDEIR as a program-level CEQA review would abide by legally mandated CEQA noticing and public comment periods.

COMMENT E-10: Introduction: The REIR concisely and adequately describes the requirement of the California Environmental Quality Act (CEQA) to prepare and EIR and the function of an EIR – that it is an "informational document, which will inform public agency decision makers, and the

public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" §15121(a). Also that certain types of "projects" such as those pertaining to the adoption or amendment of a comprehensive zoning ordinance or local general plan, don't require an EIR be as detailed as an EIR on a specific project that might follow §15146 (b). And that:

An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enable them to make a decision which intelligently considers environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good-faith effort at full disclosure. [emphasis added]

The REIR fails to meet these requirements as we will discuss in sections to follow.

Reference Availability:

10. To facilitate public review, and to ensure pertinent information is preserved for future decision-makers, staff, regulatory and resource agencies, and the public, all studies and consultant reports referred to in the REIR and relied upon for the identification of environmental impacts, the analysis of those impacts, and mitigation measures proposed to reduce the adverse effects of those impacts, should be grouped together as appendices and attached to this REIR. The REIR references several reports that were included as appendices to the Draft EIR, but does not incorporate them into the current environmental review document. One has to hunt around the City's website to try to track them down. The following documents/reports are referred to in the REIR and should be incorporated into the appendices of the REIR:

- Appendix A of the DEIR - Newark Areas 3 & 4 Specific Area Plan - shouldn't the REIR instead be referring to Appendix H (of the REIR) instead of referring back to the Specific Plan of the DEIR
- Appendix B of the DEIR - Congestion Management Analysis - also referred to as the Transportation Impact Analysis
- Appendix C of the DEIR - Air Quality Analysis
- Appendix D of the DEIR - Environmental Noise Assessment
- Appendix E of the DEIR - Biological Resources Report
- Appendix F of the DEIR - Geotechnical Feasibility Evaluation
- Appendix G of the DEIR - Hydrology and Water Quality Report
- Appendix H of the DEIR - Hazardous Materials
- Appendix I of the DEIR - Water Supply Assessment
- Appendix J of the DEIR - The NOP and public responses to the NOP

RESPONSE E-11: To prevent confusion, the RDEIR appendices were comprised of new, updated, and supplemented material forming the basis of the RDEIR analyses. The only exception was the Areas 3 & 4 Specific Plan, which was included as RDEIR Appendix H. The RDEIR reference to the Specific Plan

in Appendix A to the DEIR was a typo; it should have referred to RDEIR Appendix H. The Draft RDEIR will be revised to correct the reference. Refer to Section 4.0 *Revisions to the Text of the Recirculated Draft EIR.*

As described in the RDEIR (pg. S-3) and in each separate resource section, information from the appendices to the Draft and Final EIRs is summarized in the REIR and these appendices are available at the City of Newark Community Development Department and on the City's website.

COMMENT E-12: Project Description: Area 3 is approximately 296 acres and the portion of land bounded by Mowry Avenue, Cherry Street, Stevenson Boulevard, and the Union Pacific Railroad tracks. The general plan designation for this portion of the specific plan is Special Business Park, Public Open Space, and Public Institutional (REIR, page 11). The area is zoned Industrial Technology Park and High Technology Park with Open Space/Parks. The current Specific Plan proposal only addresses re-designation of 78 acres located in the southeastern-most corner of the site from Special Industrial to Low-Medium Density Residential. A Planned Unit Development Map would divide the property into 588 parcels, that include 585 residential lots, two open space parcels, and a 9-acre school/park site (located on the northeastern corner of Sub Area A). The proposed overall housing density would be 13.4 dwelling unit per net acre.

Area 4 is approximately 560 acres (552 acres is also used) of land surrounded by Mowry Avenue, the Union Pacific Railroad tracks, Stevenson Boulevard, and Mowry Slough. Area 4 is planned for high-quality low-density residential use (4.2-8.5 units per acre), an 18-hole golf course, and open space. The current land use designation is low-density residential. The current zoning is agricultural except for a small area of General Industrial near the current terminus of Stevenson Blvd. The zoning for Sub Areas B and C would be amended to Residential District R. The Specific Plan proposes up to 316 acres of developed area, including upscale single family detached housing in Sub Areas B and C, a potential golf course or other undefined recreational uses in Sub Areas B and D. Sub Area E (244 acres) is outside of the proposed development envelope and could remain agricultural or be used for wetland preservation and wetland mitigation to off-set the adverse impacts of the proposed development.

Only development envelopes are provided for Sub Areas B, C, and D. The Specific Plan REIR provides no specifics regarding how the Sub Areas might be developed other than Sub Area B is strictly residential, Sub Area C could be both residential and golf course (or some other form of recreational use), and Sub Area D could be used for golf course or an unspecified recreational use, but not residential. The quantity of wetlands that could be filled ranges from 0 to 86 acres. The REIR states, "This EIR will evaluate the full range of potentially impacted/filled wetlands."

Even at a programmatic level, the REIR fails to provide sufficient information to determine, analyze, and propose mitigation for the adverse impacts of the development proposed in Area 4.

11. Even at a programmatic level, the description of anticipated activities is inadequate. Decision-makers, regulatory and resource agencies, and the public, all we are provided are blobs on a map depicting development envelopes., with no hint of how development of the site would proceed, and

therefore, any ability to substantively evaluate the efficacy of any of the mitigation measures proposed in reducing the adverse impacts of the proposed project.

RESPONSE E-12: As described in the RDEIR (pg 4), some elements contemplated in the Specific Plan, particularly in Area 4, are not very detailed, because the project specifics are not available. There is, however, sufficient detail to assess the development at a programmatic level and overall maximum impacts have been identified, including to land uses, densities, access points, biological resources affected, geologic conditions and grading required, flooding, hazardous material issues, traffic, noise conditions, cultural resource impacts, etc. The RDEIR has evaluated those elements at a programmatic level to determine if there may be unmitigable environmental constraints. The RDEIR describes that when future discretionary approvals to develop those elements are proposed, the City of Newark or the appropriate decision-making agency will conduct tiered environmental review, in conformance with CEQA Guidelines section 15168.

COMMENT E-13: 12. How will the development of the site proceed?

RESPONSE E-13: Development of the Areas 3 and 4 Specific Plan would be phased, with grading and construction of project infrastructure completed first. Area 3 development would likely occur prior to Area 4.

COMMENT E-14: 13. Do the landowners/City envision the existing parcels will be subdivided into smaller parcels?

RESPONSE E-14: It is assumed that the existing parcels may be subdivided into smaller parcels as part of future development proposals.

COMMENT E-15: 14. How will grading and filling of the site proceed? Will the entirety of the development envelopes be filled and mass graded, or will this occur in piece-meal fashion?

RESPONSE E-15: Grading and construction of project infrastructure would proceed prior to any residential development, most likely beginning with Area 3. In Area 4, the entirety of the development envelope would most likely be filled and mass-graded as part of the site preparation and infrastructure construction, prior to any residential development.

COMMENT E-16: 15. The project description indicates portions of Sub Areas B, C, and D that are not developed could be retained as open space or used for wetlands mitigation. At what point in time would the decision of what areas will or will not be developed be made, and by whom? The current landowner? New landowners?

RESPONSE E-16: The decision of what portions of Sub Areas B, C, and D will or will not be developed would be proposed by the landowner at the time of a development

proposal, considered by the City, and subject to any applicable regulatory agency permits. As described in the RDEIR (pgs. 173-176) any proposed filling of wetlands in Area 4 will be subject to subsequent environmental review and approval by the U.S. Army Corps of Engineers, as well as other jurisdictional permits of state and federal resource agencies. Some or all of the compensatory mitigation for impacts to wetland habitat, comprised of wetland habitat creation and wetland habitat enhancement, will be located in the undeveloped portions of Sub Areas B, C, and/or D. All created/enhanced habitats will be protected in perpetuity through a conservation easement, deed restriction, conveyance to a qualified land trust or the Refuge, or through equivalent means. The exact details will be developed as part of the future, project-level environment review.

COMMENT E-17: 16. Will it be in phases and if so, will the fill begin at the Union Pacific Railroad tracks and move out towards Mowry Slough as developers purchase the lands?

17. Or will it occur in a more haphazard fashion and is there any possibility the western edges of Sub Area B could be developed prior to Sub Area C being developed? The answers to these questions address the issue of conserving wetlands and habitat. Page 14 of the REIR states, "Planning for the development in Area 4 has been undertaken with the intent of avoiding and minimizing impacts to wetlands to the maximum extent practicable." If this is the case, and if the landowners eventually obtain permits to fill wetlands within Area 4, then the best way to avoid and minimize impacts would be to keep the development envelop very compact, and begin development along the railroad tracks, expanding west from there.

RESPONSE E-17: Grading and construction of project infrastructure would most likely proceed prior to any residential development in Area 4. In Area 4, the development envelope would most likely be created at one time, beginning at the corner near the Stevenson Boulevard overcrossing of the railroad tracks, and moving (north) west from there. The entirety of the development envelope would likely be filled and mass-graded as part of the site preparation and infrastructure construction, prior to any residential development. These details, and project-level analysis of them, will be determined when a proposal to develop Area 4 is received by the City.

COMMENT E-18: 18. Buried on page 148 of the REIR, in the section pertaining to Noise Impacts, is the following description of how development of Area 4 might proceed (not the actual details of where housing and infrastructure would be located, rather how the site would be prepared for construction of residences, etc.):

Development of the Areas 3 and 4 Specific Plan would be phased, with grading and construction of project infrastructure completed first. Residential units and the elementary school at Area 3 would then be constructed. Area 3 development would occur prior to Area 4. Development of Area 4 including the Stevenson Boulevard overcrossing and PG&E tower modifications would proceed prior

to development of the golf course and residential in Area 4. It is unknown at this time which Area 4 development, the golf course or residential units, would be constructed first.

If this description is accurate, it would seem wetland mitigation would be the responsibility of the landowner at the time of the grading, and not individual future landowners as suggested in the Biological Resources discussion of wetland mitigation responsibilities.

RESPONSE E-18: Wetland mitigation would be the responsibility of the landowner/applicant requesting permits for wetland fill (prior to grading).

COMMENT E-19: 19. Please clarify whether the description provided above (from REIR, page 148) is an accurate representation of how the site would be prepared for actual construction of residential development.

RESPONSE E-19: The noted text is an accurate estimation of how the site would be prepared. Refer also to Response E-17.

COMMENT E-20: 2.4.2.1 Area 4 - Vehicular and Pedestrian Access: Additional components of the proposed project include the extension of Stevenson Blvd. onto Area 4 as an elevated roadway to avoid crossing the Union Pacific Railroad tracks at grade. The elevated roadway necessitates modification (elevation) of PG & E towers and lines. An Emergency Vehicle Access (EVA) is proposed just west, and along the railroad tracks on Area 4, crossing Mowry Avenue at grade.

20. In the event of an emergency, will residents of Area 4 have the ability to utilize the EVA to leave the site? If so, how would that be coordinated as a locked gate is proposed to restrict access, to preclude use of the at grade crossing at Mowry Avenue.

RESPONSE E-20: Pedestrians and bicycles could exit the site via the EVA to Mowry Avenue at any time. The gated access point of the EVA would need to be opened for passage by vehicles. The EVA gate would contain a Knox-Box (known officially as the KNOX-BOX Rapid Entry System) a small, wall-mounted safe that holds keys for fire departments, Emergency Medical Services, and police to retrieve in emergency situations. Local fire companies hold master keys to all boxes in their response area, so they can quickly enter a gate or building without having to force entry or find individual keys held in deposit at the station. Emergency personnel would have keys to the locks and could open the gates and direct traffic to the EVA if needed. Such use would be at the discretion of the public safety experts managing the incident.

COMMENT E-21: 2.4.3 - Golf Course - The REIR states, page 21, "The golf course use is analyzed in the respective sections of this EIR including, transportation, air quality, biological resources, hydrology, flooding and water quality, hazardous materials, water supply, utilities and energy. At the time a detailed golf course design is developed, the design will be evaluated by the City as part of the project-specific environmental review, per CEQA Guideline 15168."

21. Please specifically address the question of which, if not all of the impacts listed, will be subject to further agency and public review and comment under CEQA, if and when a detailed golf course design is developed. Further analysis is certainly necessary for all of these impacts once project details are provided.

RESPONSE E-21: At the time the City receives or produces a proposal to construct a golf course, the City would conduct project-specific review of the detailed golf course design will be evaluated for all issues, to determine what additional environmental review is necessary. Pursuant to CEQA Guideline 15168, the City or lead agency would use a checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR. Any required subsequent CEQA review and project consideration by the City would be subject to agency and public review and comment.

COMMENT E-22: 22. There have been opinions expressed by members of the Planning Commission and City Council that a golf course will never be built in Area 4. If this is the case, why is the golf course retained as a project objective? Is the golf course retained only to reject the alternative of No Development in Area 4?

RESPONSE E-22: The Area 4 golf course is a stated objective of the 1992 General Plan's vision of future development in Area 4. In addition, in 1999, the voters chose to retain the General Plan's vision of developing a portion of Area 4 for recreational uses, such as a championship golf course. For these reasons, the Specific Plan retains the objective of providing a golf course in Area 4.

According to the City's current General Plan, if a golf course is developed, it is envisioned as an 18-hole public course. A golf course could provide an amenity that is lacking in Newark today and would round out the range of recreational opportunities available to those who live and work in the City. It could also be an economic development asset that can attract businesses, executive housing, and higher quality retail uses nearby. Ancillary facilities such as a clubhouse, banquet facility, driving range, and maintenance buildings, could potentially complement such a facility. Construction of a golf course is contingent on its fiscal feasibility, market demand, and other factors. In the event a golf course is not developed, another recreational amenity is expected to be provided here.

According to the Specific Plan, Area 4, Sub Area D will remain zoned Agricultural to allow construction of a golf course or other recreational uses in accordance with the Specific Plan. A conditional use permit for the addition of a golf course or other recreational uses would be required. A golf course or facility for other recreational use is in accord with the objectives and purposes of the Agricultural district, because it reserves appropriately located lands for agricultural and natural resource production uses. The golf

course or facility for other recreational use would not be detrimental to the public health, safety or welfare, or materially injurious to properties or improvements in the vicinity because it will be located adjacent to existing residential uses, as well as Ohlone College.

COMMENT E-23: 23. Substantial evidence exists that golf courses in general are not financially sustainable for communities, despite the City's protests that they are. Which again begs the question, why is the City continuing to include the golf course as a project objective.

RESPONSE E-23: The comment does not raise any questions or comments regarding the environmental review of the project. Please refer to Response E-22.

COMMENT E-24: **Audubon Cooperative Sanctuary Program for Golf Courses** - The REIR states the "proposed golf course will adopt the Audubon International Program for golf courses." In a different setting, the possibility exists that we might be supportive of this program, however, it should be made clear that this is not a program sponsored by the National Audubon Society, and Area 4 is NOT an appropriate location for a golf course.

A 2005 study that received a Research Award of Honor from the American Society of Landscape Architects. "Fool's Gold: Audubon International Certification as a Predictor of Foraging Habitat Suitability for Wading Birds, a case study," by Robert G. Collins (http://www.asla.org/awards/2005/students/winner11.html) (attached). The results of this study lead the author to note, "...The results of this study suggest that for Audubon International, and some golf course developments, there is greater value in the perception of the existence of habitat than actually creating quality habitat...It is clear that the Audubon International certification process in no way guarantees equity among their member courses in terms of habitat suitability."

An August 7, 2007, St. Petersburg Times article (attached), "Audubon groups at odds over names, objectives," (http://www.sptimes.com/News/080700/State/Audubon_groups_at_odd.shtml) provides an example of the controversy surrounding Audubon International's use of the name "Audubon." "This Audubon signature certification is being used to justify and allay concerns about environmental misdeeds connected with golf course building," said Brad Cornell of the Collier Audubon Society. "Twin Eagles fits the definition for why we don't want to certify golf courses that are displacing natural resources. . . . It's misleading and disingenuous."

24. Please clarify in the REIR, that the Audubon International Program for golf courses is a completely separate entity from the National Audubon Society. The National Audubon Society issued this statement in 2011 (http://audubonoffloridanews.org/?p=7411)(attached): Audubon receives many calls and letters from people who have confused Audubon with a different organization calling itself Audubon International. Since its inception in 1991, Audubon International, funded in part by the United States Golf Association, has been certifying golf courses that pay an annual membership fee as Audubon Cooperative Sanctuaries. Similar fee-based certifications are available from Audubon International to developers of cemeteries, municipal parks, campgrounds, resorts, stores, industrial facilities, marinas, residential communities and preparatory schools.

Audubon is not associated with Audubon International in any way. Audubon does not certify golf courses, or any other development, as being environmentally sound. Indeed, Audubon very often opposes such development. Furthermore, Audubon sanctuaries are protected natural spaces for public enjoyment. No Audubon sanctuary is certified for development. We ask your cooperation and care in distinguishing between Audubon and Audubon International, and in clarifying that these various certification programs are not endorsed or supported by Audubon.

RESPONSE E-24: As noted in the comment, Audubon International is not affiliated with the National Audubon Society. Audubon International is a not for profit 501(c)(3) environmental education organization based in Troy, New York. Established in 1987, the organization works with communities, developments, resorts and golf courses in 36 countries to plan and implement sustainable natural resource management practices, as well as receive public recognition (through their certification processes) for employing sound environmental stewardshipg.

According to its website, the mission of Audubon International is to deliver high-quality environmental education and facilitate the sustainable management of land, water, wildlife, and other natural resources in all places people live, work, and play. Through education, technical assistance, certification, and recognition, Audubon International facilitates the implementation of environmental management practices that ensure natural resources are sustainably used and conserved. Audubon International has enrolled over 3,000 properties (including golf courses, cemeteries, ski areas, housing developments, hotels, and many others) and communities in its certification programs. It is the first organization to work extensively with the golf industry on sustainability issues, and has a long history of partnering effectively with industry associations such as the United States Golf Association (USGA). The text of the RDEIR has been revised to clarify this issue, as shown in Section 4, Revisions to the Text of the RDEIR, of this document.

COMMENT E-25: **2.4.4.1 Area 3 and 4 Street Standards and Improvements**: Stevenson Boulevard: The information provided in the REIR is inadequate to assess the potential impacts of this component of the Specific Plan on existing hydrology, wetlands, aquatic habitat, and listed species.

25. Will all construction of the proposed flyover fully avoid any impacts to the Pacific Commons/Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) mitigation area immediately southeast of Stevenson Blvd? If not impacts to the biotic resources of this area must be clearly stated and mitigation measures proposed.

RESPONSE E-25: The Refuge mitigation area noted in the comment is outside of the project site and, as such, construction associated with the Stevenson Boulevard

overcrossing will avoid any direct impacts to the area. When the overpass is proposed, it will be evaluated to determine the appropriate level of additional, project-level environmental review. Mitigation measures identified as part of future, overpass-specific environmental review will ensure that indirect impacts to the mitigation area, such as sedimentation or other effects to stormwater runoff are also avoided and/or reduced to a less than significant level to the extent feasible. As currently proposed, no grading will occur within the Refuge property boundaries located at the southeast terminus of Stevenson Boulevard.

COMMENT E-26: 26. What impact will the Stevenson Boulevard flyover have on the existing wetland mitigation site? Mitigation measures must be provided must be provided to protect this site.

RESPONSE E-26: Refer to Response E-25.

COMMENT E-27: 27. The existing wetland mitigation areas on either side of Stevenson Blvd. (to the north and south) must be protected from inadvertent construction impacts. The boundaries of the construction area must be clearly delineated to avoid adverse impacts.

RESPONSE E-27: Refer to Response E-25. Based upon the most recent development plans the mitigation areas located southeast and northwest of the terminus of Stevenson Boulevard will not be affected by improvements associated with the overcrossing. At the time the Stevenson Boulevard overpass is proposed, the limits of permanent and construction disturbance will be determined and mitigation measures will be required to ensure indirect impacts to the mitigation areas on either side of Stevenson Boulevard do not occur. All of this information will be included in the project-specific environmental review prepared for the overpass, in conformance with CEQA Section 15168.

COMMENT E-28: **2.4.5 PG & E Towers and Lines**: Please note if "crane access" is required for the use of a vertical cage or waist cage to raise the 230 kV tower (Number 0/5) adverse impacts to endangered species habitat may occur and consultation with the U.S. Fish and Wildlife Service must occur in advance of any work in the area. In addition, seasonal prohibition of work may be required to avoid "take" of listed species.

RESPONSE E-28: The comment is noted. At the time modifications to the PG&E high-voltage lines and/or towers are proposed, project-specific impacts to biological resources, including endangered species, will be evaluated, mitigation measure to avoid and minimize any impacts not addressed by the RDEIR will be identified, and consultation with regulatory agencies will occur, as necessary. The applicant will consult with the U.S. Fish and Wildlife Service as necessary prior to initiating any activities that could result in the take of federally listed species.

COMMENT E-29: **2.4.8 Grading and Imported Fill**: To raise the proposed development out of the current 100-year flood plain, approximately 56,000 cubic yards of fill will be imported to Area 3, and approximately 2.1 million cubic yards of fill will be required for Area 4.

The EIR does not adequately describe:

28. Where fill will be stockpiled (at a programmatic level a generalized stockpile envelope could suffice).

RESPONSE E-29: Stockpiling of large volumes of soil is not proposed by the project. The text of the RDEIR (pg. 207) has been revised in Section 4.0 of this document, to clarify this issue. The biological resource mitigation measures identified for "stockpiles" are intended for any loose soil, soil that is graded and moved around on the site as well as imported soil. Imported soil is not required for Area 3.

In Area 4, fill will not be stockpiled on the site; rather, it will be spread across site area to be developed, to begin the process of building up the imported soil and allow for settlement of the fill.

COMMENT E-30: 29. Whether New Technology Park Associates will begin stockpiling material immediately (grading permit required),

RESPONSE E-30: Refer to Response E-29 clarifying that major stockpiling of material is not proposed. Soil will be spread across site area to be developed, as it is brought in, to begin settlement. Design-level geotechnical review will be reviewed and approved by the City Public Works Director prior to issuance of a grading permit.

COMMENT E-31: 30. A more definitive period of time the stockpiled material might be stored than "for longer periods of time",

RESPONSE E-31: Refer to Response 29 and 30. Major stockpiling of material is not proposed by the project for either Area 3 or 4.

COMMENT E-32: 31. Whether wetlands fill will be necessary to access the stockpile site(s)

RESPONSE E-32: Refer to Response 29 and 30. Stockpiling of large volumes of material is not proposed by the project for either Area 3 or 4.

COMMENT E-33: 32. Who will be responsible for regularly inspecting the efficacy of mitigation measures to prevent mobilization of stockpiled soils into adjacent (?) wetlands

RESPONSE E-33: Refer to Response 29 and 30. Stockpiling of large volumes of material is not proposed by the project for either Area 3 or 4. Mitigation measures to reduce

construction-related water quality impacts are described in the RDEIR (pg 201). The City, as the lead agency, is responsible for monitoring the efficacy of the mitigation measures.

COMMENT E-34: 33. At what point filled to be stockpiled will be tested for "quality" (this information will need to be made available to the USACE and RWQCB prior to placement in wetlands)?

RESPONSE E-34: Prior to acceptance of any fill to be brought on to the site, documentation as to the source and quality of the fill shall be provided to and approved by the City of Newark. Information provided by the documentation would include the source of the soil and it would be tested for constituents of concern to verify it meets all required standards for residential development. In Area 3, there are no wetlands so the USACE and RWQCB would not have jurisdiction. In Area 4, where the USACE and RWQCB may have jurisdiction, the information would be made available to those agencies.

COMMENT E-35: 34. Potential sources of fill other than those provided previously, as they are likely no longer available (e.g. the Irvington BART station and soil from the undergrounding of the Hetch Hetchy pipeline)

RESPONSE E-35: While those fill sources may no longer be available, there are routinely sources of soil available from excavations throughout the Bay Area. As noted in the comments above, the RDEIR acknowledges that the filling of Area 4 would most likely happen over time. Contrary to the comments, however, the soil would not be stockpiled until the total amount was received; rather, it would most likely be graded and spread across the development portions of Area 4 as it was received, to begin the process of building up the imported soil and allow for settlement of the fill.

COMMENT E-36: 35. If the site is to be filled and graded as individual parcels are sold off, what happens with the remaining fill if all the parcels in Sub Areas B and C of Area 4 aren't developed? Does the fill remain on-site in stockpiles forever or would it eventually be sold? Impacts of removing the fill on the newly developed and surrounding neighborhoods would require environmental review and mitigation measures.

RESPONSE E-36: Refer to Response E-29.

COMMENT E-37: 36. The REIR also fails to give any indication of how introduction of fill to the site might occur. How and where will 100+ trucks/ day access the site?

Answers to these questions inform decision makers and the public about how undeveloped lands may be conserved or fragmented, which in turn influences the viability and value of any mitigation. They also shed light on how cumulative impacts may be identified, analyzed and mitigated.

RESPONSE E-37: As described in the RDEIR (pg 103), nearly all of the (construction) traffic to and from the site would use arterial and collector streets such as Cherry Street, Stevenson Boulevard, and Mowry Avenue. In Area 4, the development envelope would most likely be created at one time, beginning at the corner near the Stevenson Boulevard overcrossing of the railroad tracks, and moving (north) west from there. Fill trucks would access the site via Stevenson Boulevard. Fill will not be stockpiled on the site; rather, it will be spread across the site, to begin the process of building up the imported soil and allow for settlement of the fill. The RDEIR assumes the Area 4 development envelope would be created at one time, and there would not be fragmented undeveloped lands or "cumulative" impacts of the site preparation – it would occur as one planned, evaluated, and implemented effort. If the development proposal for Area 4 is inconsistent with this assumption, that would be considered during the future, project-level environmental review.

COMMENT E-38: 3.1 Land Use 3.1.2.1 San Francisco Bay Trail
It is our understanding that any proposed realignment of the Bay Trail, and in particular, any realignment that involves a loop through Area 4, will require future project level CEQA review.

37. Please clarify whether this understanding is correct.

RESPONSE E-38: That is correct. As described throughout the RDEIR, the future alignment of the Bay Trail in the project area, including any alignments within the Specific Plan area, is not part of the project and would be subject to future environmental review specific to the Bay Trail project.

COMMENT E-39: 38. Please indicate who would be the lead agency for any Bay Trail Realignment CEQA environmental review.

RESPONSE E-39: The lead agency for any Bay Trail Realignment would be the primary agency taking action on the Trail project. Since there is no Bay Trail realignment project currently proposed, it is not known what agency would be the lead agency under CEQA.

COMMENT E-40: 39. We have repeatedly stated any proposal to realign the Bay Trail along the outboard levee of Area 4 should be avoided as it will have significant adverse impacts to biological resources that occur on-site and within the adjacent Mowry Slough.

RESPONSE E-40: The comment is noted. The alignment of the Bay Trail in the project area is not part of the project.

COMMENT E-41: 3.1.3.1 San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan 40. The REIR, page 40, inaccurately describes BCDC's regulatory authority over portions of Area 4. In a letter dated September 27, 2013, sent in response

to the Newark General Plan Update DEIR, in addition to the jurisdiction described in the DEIR, BCDC stated:

The DEIR references the above language but could provide a more accurate characterization of BCDC's managed wetland jurisdiction over a portion of the project area in Focus Area 4, specifically the sites referred to as the Pintail and Whistling Wing Duck Clubs referenced in figure 4.3.1 ("Biological Resources") of the DEIR. Section 66610(d) of the MPA states, in part that "the area of jurisdiction of the San Francisco Bay Conservation and Development Commission includes...Manages wetlands consisting of all areas which have been diked off from the bay and have been maintained during the three years immediately preceding the effective date of the amendment of this section during the 1969 Regular Session of the Legislature as a duck hunting preserve, game refuge or for agriculture." BCDC has considerable evidence gathered by the California Department of Fish and Wildlife that the that the Pintail and Whistling Wings duck clubs were actively used during the three-year period in 1966-1969 referred to in MPA § 66610(d). Based on the information we have, we believe these areas fall under the Commission managed wetlands jurisdiction. This area is now delineated in page 193, figure CS-1 of the Draft General Plan by two dots, one for each club. Figures 4.3-1 and CS-1 of the DEIR should be revised to show the areas that comprise the two clubs and the status of these areas as "managed wetlands" under the MPA.

RESPONSE E-41: Please refer to Master Response 3 on BCDC Jurisdiction.

COMMENT E-42: 41. Please include this text in the REIR discussion of BCDC's regulatory jurisdiction. Also, please include a map as requested by BCDC's comment letter to the GPU DEIR, that depicts BCDC's described jurisdiction and the location of this jurisdiction in relation to Sub Areas B and C (and if appropriate D), so decision-makers, regulatory and resource agencies, and the public may better understand the extent of BCDC's jurisdiction within Area 4.

RESPONSE E-42: Please refer to Master Response 3 on BCDC Jurisdiction. The location of the former duck clubs in relation to Areas 3 and 4 is shown on RDEIR Figure 3.5-1. The final determination of BCDC's jurisdiction would be determined at the time a specific development project is proposed in Area 4.

COMMENT E-43: **Land Use Goals and Policies**: **Policies LU-4.13, 4.14 - Bayfront Identity and View Protection** - It is not evident how the bayfront identity or view protection (Peninsula Hills and San Francisco Bay) will benefit any residents other than those living within Area 4. In fact, views across to the Peninsula Hills will no longer be visible by travelers along Cherry Street, as the views will be blocked by soundwalls and houses.

RESPONSE E-43: The existing development already blocks views westward from Cherry Street. Along the northerly half of the Cherry Street frontage of the project, views westward are blocked by the Ohlone College Campus, an industrial building, and the Fire Station and Silliman Recreation Center. Along the southerly half of the Cherry Street frontage, views of the Bay and the lower portions of the Peninsula Hills are blocked by the industrial park on Stevenson Boulevard, east of the railroad tracks. The RDEIR acknowledges that project

development would substantially change the visual character of the site from flat, open agricultural land to residential development, landscaping and a golf course. The Specific Plan proposes a golf course, open space areas, and recreational facilities along Mowry Slough and near the Bay. The open space areas will encourage public access to the shoreline and enhance views of the Bay and wetlands of Mowry Slough. The proposed park and trail system in Area 4 will provide more people with viewing access to Mowry Slough, the Bay and the Peninsula hills. The Specific Plan includes design guidelines that restrict the height and density of development in Area 3 and 4, which is intended to protect views toward the Bay and the Peninsula Hills.

COMMENT E-44: **Policy LU-7.3 -** It is a contradiction to claim protection of biological resources while proposing development of Area 4. It is unlikely that protection of rare plants and animals (animals) in particular will be able to coexist with development and human activity, particularly, when mitigation measures proposed for prevention of disturbance by domestic and nuisance species are unenforceable (e.g. no outdoor cats will be allowed within the development).

RESPONSE E-44: The proposed improvements have been designed to minimize the interface between project elements and sensitive habitats, especially those that may support special-status wildlife species, and to provide sufficient buffer to minimize disturbance. In addition, the project does not propose construction of formal trails in or adjacent to high-quality sensitive habitats and the RDEIR proposes several mitigation measures to avoid and minimize impacts associated with the golf course and residences. The RDEIR also proposes inclusion of educational signage along levees to inform residents. Through the project design and mitigation measures, enforced by the City, Area 4 will be developed in a manner that protects rare plants and animals and allows these biological resources to exist near human activity. The City has authority to enforce the mitigation measures to prevent disturbance of rare plants and animals from nuisance species under its police powers.

COMMENT E-45: **Transportation Goals and Policies**: **Policy T-2.12 Trails along Railroad and Utilities**. 42. There is a public safety issue of children crossing over an at grade railroad crossing at Mowry Avenue to access the playing fields or recreational facilities of the Silliman Center.

RESPONSE E-45: Soundwalls are proposed along Sub-Areas B and C, between the railroad right-of-way and the proposed development and vandal-resistant fencing is proposed at the edge of the railroad right-of-way along Sub-Area D to Mowry Avenue. These features will prevent children crossing the railroad tracks anywhere other than at the Mowry Avenue crossing. The City will work with the PUC ensure this at-grade crossing is safe.

COMMENT E-46: **Conservation and Sustainability Goals and Policies**: 43. The Specific Plan is in conflict with the City's Open Space and Conservation Goals and Policies. Development of over

half of Area 4 is inconsistent with Goals CS-1 and CS-2. DESFBNRW – has identified most of Area 4 as a Priority 1 acquisition area because of the unique ability of the site to provide endangered species habitat, a diversity of habitats including pickleweed wetlands, seasonal wetlands, open water, transition zone to uplands and uplands. Proximity of the site to the Ohlone College campus provides a unique opportunity to incorporate the site into educational programs.

RESPONSE E-46: The City of Newark General Plan has planned Area 4 for residential use, a golf course, and open space since the mid-1980s. General Plan Goal CS-1 states, "Protect Newark's natural environment, landscape, and physical features, and Goal CS-2 states, "Conserve Newark's wetlands and baylands." As described in the RDEIR (pg. 71) the southern and western portions of Area 4 were included in the approved 1990 Refuge Boundary Expansion. Pre-approval of the lands for addition to the Refuge does not grant the Refuge any jurisdictional authority or signify that the lands become part of the Refuge until they are acquired. The pre-approval was not intended to influence local governmental land use decisions. It should be noted that Area 4 is not the only property included in the approved Refuge acquisition boundary. The approved acquisition boundary totals over 21,000 acres on both sides of San Francisco Bay, south of the San Mateo-Hayward Bridge, including the active salt ponds west and south of Area 4. Much of the land designated for addition to the Refuge is within Specific Plan Sub Area E, 244 acres proposed for wetland preservation, wetland creation/enhancement or continued agricultural operations. For this reason, as well as the measures included in the project to protect wetlands and minimize impacts to special status species, the project is consistent with General Plan Goals CS-1 and CS-2.

COMMENT E-47: 44. Proposed development would severely impact on site resources (human disturbance, use of chemicals, run-off from streets, nuisance species, light pollution, etc.) and resources on adjacent Refuge lands.

RESPONSE E-47: The RDEIR evaluates the overall effects of developing Area 4 at a program level, including effects of human disturbance, stormwater runoff, nuisance species, and light pollution. At the time detailed development plans are proposed, they will be evaluated by the City as part of the project-specific environmental review, per CEQA Guidelines Section 15168.

COMMENT E-48: Goal CS-5 - Reduce Greenhouse Gas Emissions and Planning for Sea Level Rise: 45. This Specific Plan is inconsistent with the 2009 California Climate Adaptation Strategy – it is at best reactive, as opposed to the recommendation:

Consider project alternatives that avoid significant new development in areas that cannot be adequately protected (planning, permitting, development, and building) from flooding, wildfire and erosion due to climate change. The most risk-averse approach for minimizing the adverse effects of sea level rise and storm activities is to carefully consider new development within areas vulnerable to

inundation and erosion. State agencies should generally not plan, develop, or build any new significant structure in a place where that structure will require significant protection from sea level rise, storm surges, or coastal erosion during the expected life of the structure. However, vulnerable shoreline areas containing existing development that have regionally significant economic, cultural, or social value may have to be protected, and in-fill development in these areas may be accommodated. State agencies should incorporate this policy into their decisions and other levels of government are also encouraged to do so. (CS-2; OCR-1 and 2; W-4 and 9; TEI -2 and 7)." [emphasis added]

RESPONSE E-48: The comment is noted and will be taken into account as part of the project consideration. Areas 3 and 4 have been planned for development since 1992 and the Specific Plan ensures that proposed development will be adequately protected from flooding, wildfire, and erosion due to climate change. Please refer to Master Response 4.

COMMENT E-49: 3.1.4 Land Use Impacts: 3.1.4.1 Thresholds of Significance:
For the purposes of this EIR, based upon Appendix G of the CEQA Guidelines, a land use impact is considered significant if the project will:

- conflict with any applicable habitat conservation plan or natural community conservation plan; or
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;

46. The Specific Plan is inconsistent with Public Law 100-56, the recommendations of the Goals Project, and the recommendations of the 2009 California Climate Adaptation Strategy.

Public Law 100-556 the "Land Protection Plan, Potential Additions to San Francisco Bay National Wildlife Refuge, Alameda, San Mateo, and Santa Clara Counties, September 1990." The congressionally approved Refuge Expansion Boundary expressly identified large portions of Area 4 as Priority One for acquisition because of the ability of these lands to provide for the preservation and enhancement of highly significant wildlife habitat and for the protection of waterfowl and sensitive and rare wildlife species, including species known to be threatened with extinction.

The Baylands Ecosystem Habitat Goals Report is described as "The concept to develop regional wetlands goals is recommended by the Governor's "California Wetlands Conservation Policy" and by the Comprehensive Conservation and Management Plan (CCMP) of the U.S. Environmental Protection Agency's San Francisco Estuary Project. It is also supported by most of the agencies and non-governmental groups with major planning, operational, or regulatory interests in Bay Area wetlands."

The Goals Project Report (June 2000) states in the section of "Unique Restoration Opportunities," "…There are opportunities to restore historic tidal marsh/upland transitional habitat and associated vernal pool habitat at the upper ends of Newark, Plummer, Mowry, and Albrae Sloughs." Under the "Recommendations" section the report states, "…Protect and enhance the tidal marsh/upland

transition at the upper end of Mowry Slough and in the area of the Pintail duck club. The report also recommends that tidal influence be restored on this site and that seasonal wetlands be improved.

The 2009 California Climate Change Strategy states:

pg. 51 Wetland habitats from the Sacramento Valley southward to the Salton Sea and the tidal marshes of San Francisco Bay also provide essential wintering habitat for hundreds of thousands of birds as they migrate north and south along the Pacific Flyway.

pg. 52 Moreover, inland migration is frequently hindered by development such as bulkheads, seawalls, roads, and buildings. Continued growth and development in coastal areas will only increase the direct pressure on remaining habitats and make inland migration more difficult. Sea-level rise, especially at the increasing rates projected for the 21st century, may result in the loss of substantial areas of critical habitat for a variety of coastal species.

pg. 74 Habitat Protection – The state should identify priority conservation areas and recommend lands that should be considered for acquisition and preservation. The state should consider prohibiting projects that would place development in undeveloped areas already containing critical habitat, and those containing opportunities for tidal wetland restoration, habitat migration, or buffer zones.

The strategy should likewise encourage projects that protect critical habitats, fish, wildlife and other aquatic organisms and connections between coastal habitats. The state should pursue activities that can increase natural resiliency, such as restoring tidal wetlands, living shoreline, and related habitats; managing sediment for marsh accretion and natural flood protection; and maintaining upland buffer areas around tidal wetlands. For these priory conservation areas, impacts from nearby development should be minimized, such as secondary impacts from impaired water quality or hard protection devices.

RESPONSE E-49: The Specific Plan is not in conflict with any applicable habitat conservation plan or land use plan or policy with jurisdiction over the project. Please refer to Master Response 6 regarding the issue of portions of Area 4 being within the Refuge Boundary Expansion area for the Refuge approved in 1990 (Public Law 100-556). As stated in Master Response 6, the CCP provides the vision and guidance for the management of Don Edwards San Francisco Bay NWR natural and cultural resources for 15 years. The CCP is a planning document for the Refuge and it does not restrict development in Area 4, as the Refuge does not own or have any regulatory jurisdiction in Area 4.

In addition, the proposed development in Area 4 does not conflict with the CCP. Much of the land designated for addition to the Refuge is within Specific Plan Sub Area E, which consists of 244 acres that is proposed for wetland preservation, wetland creation/enhancement or continued agricultural operations. These uses would be consistent with the CCP, as well as the Goals Project Report and Climate Adaptation Strategy.

COMMENT E-50: The proposed development of Area 4 is inconsistent with the recommendation of the Official Final "Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California." This plan was released by Region 9 of the U.S. Fish and Wildlife Service, August 27, 2013, one year prior to the release of the REIR. This comprehensive plan, focuses on the recovery of 17 species of imperiled birds, plants and animals, including the federally-listed, endangered salt marsh harvest mouse, a species that has been recorded as occurring within Area 4. The Recovery Plan is unique in its approach to preserve and recover ecosystem functions (including biodiversity) that benefit a suite imperiled species, rather than focusing on individuals plants, animals or birds. Area 4 has been identified within Segment Q (map attached) of the Recovery Plan and the entire site has been recommended for future ecotone restoration. This Recovery Plan is an important road map for preserving imperiled species that inhabit the edges of the bay and is not even mentioned in the REIR.

47. Please include a description of the "Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California" within the REIR and include a copy of the map indicating the recommendation the entire site for restoration of ecotone restoration.

RESPONSE E-50: As stated in the executive summary of the Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California, the goal of the Plan is "the comprehensive restoration and management of tidal marsh ecosystems". Even though the plan targets several species that occur primarily in tidal marsh habitats, a large part of the focus is placed on surrounding uplands and ecotone areas that are "crucial habitats for many of these species". The Plan identifies recovery units that are identified as important to the long-term recovery of many of the target special-status species; the Plan has identified five recovery units including the Central/South San Francisco Bay, that covers all of the Newark Area 4 project site (identified as Future Ecotone Restoration, Figure III-23, Segment Q), as described by the commenter. The primary action of the Plan is to "acquire existing, historic and restorable tidal marsh habitat to promote recovery of the listed species" with estimated costs of acquiring lands at over $800 million. The Plan lays out recovery strategies, goals and actions proposed to be taken for marsh species recovery which, as the commenter correctly states, are "recommended" actions. The Recovery Plan recognizes that not all lands within the boundaries will be necessary for species recovery and that alternative recovery strategies may become necessary as new scientific information becomes available. In addition, as with all recovery plans, implementation of the Recovery Plan is entirely voluntary, and relies upon the willing participation of our current and future public and private partners to achieve recovery. The City is not currently aware of any negotiations between the current land owners of Newark Area 4 and the Don Edwards San Francisco Bay Wildlife Refuge related to property acquisition. Area 4 Sub Area E consists of 244 acres that is proposed for wetland preservation, wetland creation/enhancement or continued agricultural operations. For those portions of Area 4 proposed for development, implementation of the avoidance and mitigation measures

described in the RDEIR will ensure that impacts to salt marsh harvest mouse and other special status plant and animal species, are less than significant.

COMMENT E-51: 48. The public law, policies, strategies, and recovery plan listed above emphasize the importance of Area 4 from a regional perspective. The mixture of wetlands, aquatic, and other habitats including uplands are important for sustaining current populations of waterfowl and listed and sensitive plant and wildlife species, as well as providing a hedge for these species and habitats in the face of sea level rise.

49. The Land Use Impacts proposed in Area 4 by the Specific Area plan are in conflict with regional, State, federal policies and strategies, and the adverse impacts are significant.

RESPONSE E-51: Refer to Response E-49. Refer to Master Response 4 regarding sea level rise.

COMMENT E-52: **San Francisco Bay Trail:** "The future Specific Plan developer(s) of Area 4 will be required to provide an easement for the Bay Trail to run along the top of the levees that form the western edge of the project, if that ultimately is the preferred alignment. The Specific Plan is consistent with the Bay Trail and does not conflict with efforts to complete the Bay Trail."

50. We have repeatedly requested this alternative route be abandoned. We have done this in writing during the scoping period for the DEIR; we have made these comments publicly during community meetings. This will have a significant adverse impact on Biological Resources e.g. significant increase in human disturbance, noise, nuisance species on listed species and wetlands. Please refer to the discussion of Biological Resources for additional comments. If this alternative is proposed for implementation a "project" level EIR should be required, any necessary "improvements" to the privately owned levees described, and all environmental impacts identified.

RESPONSE E-52: The comment is noted. As described throughout the RDEIR, the project does not propose extension of the Bay Trail throughout the project site. If a Bay Trail alignment is proposed as part future Area 4 project-specific development, it would be subject to tiered environmental review per CEQA Guidelines Section 15168.

COMMENT E-53: **San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan** - 51. Until the extent of BCDC jurisdiction is known, it is premature to make a determination that the proposed development in Area 4 is consistent with the Bay Plan or with the latest Bay Plan Amendments regarding Climate Change and Adaptation.

RESPONSE E-53: Please refer to Master Response 3 on BCDC Jurisdiction.

COMMENT E-54: **3.2 Transportation**: 52. Were vehicle trips associated with the transport of school-aged children to and from school included in the traffic calculations? For all school levels? Were vehicle trips associated with transporting students to school from Area 4 included in the calculations? Were calculations done to account for parents driving their students from the Specific

Plan area to other elementary schools should an elementary school not be constructed in Area 3? This could have a significant impact on congestion on surface streets during the morning commute.

RESPONSE E-54: Vehicle trips associated with the transport of school-aged children to and from school are included as part of all residential trip generation and trip distribution, so they were included in the Area 3 and 4 residential traffic impact assessment. Since the school proposed on Area 3 was not approved or constructed at the time the traffic assessment was completed, it was not assumed to be the school for students residing at the project site.

COMMENT E-55: 53. Why is no analysis of vehicle miles traveled (VMT) included in the analysis of traffic impacts? The only reference the REIR makes to VMT, is that there has been a decline in VMT in the U.S. within the past year likely due rising costs of fuel. Level of Service (LOS) estimates may provide an indication of congestion on roadways, and trip estimates may give an indication of the number of times people are getting into their cars, but these do not provide a complete picture of the traffic impacts of development on the physical environment. With an increased focus on sustainability, reduction of greenhouse gases, conservation of energy, reduction of impacts to air quality, an analysis of VMT must be included in the REIR analysis of traffic impacts.

RESPONSE E-55: Peak hour intersection level of service was the methodology used to calculate traffic impacts of proposed development, consistent with the City's requirements and the existing CEQA Guidelines. VMT was projected and used in the RDEIR calculations of air pollutant emissions, including greenhouse gas emissions and overall energy consumption of the project. This information can be found on page 325 of the RDEIR.

COMMENT E-56: The proposed project is located at the southernmost boundary of the City. The project will introduce 5 million car trips per year. There is no convenient public transportation to Area 4 – Area 4 is at least ½ mile away from an existing bus stop, and close to a mile away from the nearest shops, etc. It is unlikely parents in Area 4 would walk their child to school in Area 3 or to the Silliman Center.

RESPONSE E-56: The comment is noted. There are schools and services in proximity to the project site and pedestrian paths will provide more direct access to the proposed school in Area 3 and the existing high school on Cherry Street, and to the Silliman Center from Area 4. See also Response E-58.

COMMENT E-57: 3.3 Air Quality:

54. The assumptions made when analyzing the impacts of haul trucks bringing fill to the project site are seriously flawed. If it is assumed 2.1 million cubic yards of fill will be delivered to the site with only 100 truck trips per day, then trucks with 20 cy yard capacity, working only 5 days per week would require four years to bring that amount of fill to the site, and that time frame may be conservative if two-feet of freeboard are required to reduce air quality impacts.

RESPONSE E-57: The commenter is correct that it will likely require about 4 years to complete the import of fill. The overall time for full build out is assumed to last for about 5 to 10 years. While construction would probably last longer, a more aggressive schedule was assumed for air quality analysis to avoid under prediction of emissions.

It should also be noted that since the air quality analysis was prepared for the Newark Areas 3 and 4 project, the BAAQMD recommended emissions modeling program used to predict the emissions has changed from the URBEMIS2007 model to the California Emissions Estimator Model (CalEEMod). This analysis in the RDEIR has been updated to reflect the changes in the new modeling data. Refer to *Section 4.0 Revisions to the Text of the RDEIR* of this document for the updated discussion in the RDEIR and updated air quality analysis. The updated model determined that emissions related to construction of the project including the import of fill would no longer be a significant unavoidable impact, but a less than significant impact with mitigation. The updated model also found that the greenhouse gas emissions would no longer be a significant unavoidable impact, but a less than significant impact. All other air quality impact conclusions remain unchanged.

COMMENT E-58: 55. The EIR fails to address the fundamental flaw of the Specific Plan that is locating a large development at the edges of the city, away from city services and amenities, and away from major public transportation hubs. Rather than attempting to reduce vehicle miles traveled a true indicator of public transit-pedestrian-bicycle friendly development, the REIR proposes mitigation measures that either still focus on automobile travel as the main mode of transportation (reducing LOS by widening streets, including dedicated turn lanes, etc.) while proposing public transit mitigation measures that are may not result in reduction in Greenhouse Gas Emissions (GGEs) because they do not provide for actual public transportation, rather the facilities associated with public transit (e.g. bus stop shelters, etc.).

RESPONSE E-58: While the Areas 3 and 4 Specific Plan is located at the west edge of developed Newark, it is not far removed from existing city services and amenities. The middle of Area 4 is closer to downtown Newark than existing residential development at the west end of Thornton Avenue. The middle of the site, Sub Area B of Area 4, is just over one mile from the Silliman Center, the City's primary recreation facility, and the Ohlone College campus. Newark High School is 1.3 miles away and the New Park Mall, a regional shopping center, is 1.7 miles from the middle of Sub Area B. All of these services are within transit-pedestrian-bicycle distance of the site. The paths and trails proposed through the Specific Plan area will shorten the distance residents would need to travel to access these amenities. Additionally, as stated in the RDEIR (pg. 99) existing AC Transit bus routes travel along Mowry Avenue, Cherry/Boyce Street and Stevenson Boulevard in the vicinity or adjacent to the project street frontages. The proposed amenities to provide

a transit/pedestrian/ bicycle-friendly environment and seeking feasible means to bring transit and/or shuttle service to Area 4 are intended to get residents out of their cars, reduce VMT, and reduce GHG emissions. As noted above in Response E-57 and included in *Section 4.0 Revisions to the Text of the RDEIR*, the updated emissions model found that the greenhouse gas emissions would no longer be a significant unavoidable impact, but a less than significant impact.

COMMENT E-59: The Specific Plan shall incorporate the following measures, which would reduce transportation-related emissions. The measures listed in below are expected to include implementation of appropriate TCMs. Incorporation of these measures would reduce the impact to a less-than-significant level.

- Improve existing or construct new bus pullouts and transit stops at convenient locations along Cherry Street and Stevenson Boulevard. Pullouts shall be designed so that normal traffic flow on arterial roadways would not be impeded when buses are pulled over to serve riders. Bus stops shall include shelters, benches and posting of transit information;
- Appropriate bicycle amenities shall be included. This would include bike lane connections throughout the project site. Off-site bicycle lane improvements shall be considered for roadways that would serve the project;
- The City and project proponents shall explore and implement feasible means to bring transit or shuttle service to Area 4; [emphasis added]

56. These mitigation measures, while they may sound good on paper, have little value in reducing the GGEs of the Specific Area plan when it is estimated only 3% of the residents will ride bicycles, and only 12 people from the neighborhoods ride a bus during peak hours, if buses continue to be available. Nor does "exploring" or "implementing feasible" transit or shuttle service to Area 4 ensure this will actually occur.

RESPONSE E-59: Refer to Response E-58. The proposed amenities to provide a pedestrian and bicycle-friendly environment and seeking feasible means to bring transit and/or shuttle service to Area 4 are intended to get residents out of their cars, reduce VMT, and reduce GHG emissions. At the time detailed plans are proposed for Area 4 development, the means of improving transit access to the site will be evaluated as part of the subsequent tiered review under CEQA Section 15168.

COMMENT E-60: 57. Please explain, how on the ground, and not on paper, implementation of these mitigation measures will reduce the GGE contributions of the Specific Area plan to a level that is less than significant.

RESPONSE E-60: As described in the RDEIR (pg. 352-356), the Specific Plan would be designed and constructed pursuant to the City's Green Building and Construction and Demolition Recycling Ordinance, would include provisions for recycled water for all non-potable water needs, would comply with applicable policies in the City's Climate Action Plan, and would include the

provisions described in Response E-58 to improve pedestrian/bicycle and transit modes of travel. See also Response E-57.

COMMENT E-61: **3.3.4.5 Odor -** The REIR states: The Specific Plan would develop new residences in an area that may have noticeable odors. The Specific Plan area, especially Area 4, is located near the east shore of San Francisco Bay. This area contains numerous square miles of tidal wetlands that result in occasional odors. In addition, Cargill operates salt evaporation ponds to the north-northwest of the Specific Plan area. Both the wetlands and the salt evaporation ponds have the potential to cause odors that may affect residences. Naturally decaying organic material, such as algae, produces odors. These odors could be strongest in spring and summer when there is an abundance of algae and winds may blow this decaying material on to dikes. Very low tides during these times could also result in odors from exposing decaying matter to the prevailing winds. However, these types of odors are not likely to result in odor complaints because they will be considered as part of the natural environment by the occupants. As a result, natural odors that are produced by the Bay wetlands would have a less-than-significant impact. **(Less than Significant Impact)**

58. Strong winds can also disturb anaerobic muds on the bottom of salt ponds, the odor of anaerobic mud, and decaying algae can be overwhelming. As noted in the description above, the times when these odors are likely to be strongest coincide when people are more likely to spend time outdoors. It cannot be assumed residents of the development will find odor impacts less than significant, and it represents poor planning to assume these types of odors will not generate complaints.

RESPONSE E-61: As noted in the comment, the RDEIR describes the potential for both Bay wetland and salt pond odors to affect future residents of the Specific Plan. It is assumed that anyone considering a home in the Specific Plan area would be aware of the presence of the Bay and the salt ponds and the proximity of their features would be a consideration in their decision to live there. The Bay and salt ponds are not an identified odor source by the Bay Area Air Quality Management District (BAAQMD), and therefore, BAAQMD has no recommended mitigation measures for such odor sources. Given that the odors are caused by natural sources (i.e., decaying materials, tidal action, and wind) and strong odor events would occur only intermittently, it is not considered a significant impact.

COMMENT E-62: **3.4 Noise:** 59. The REIR fails to identify, analyze or mitigate the impacts of noise or vibration on wildlife. Construction and post- construction activities may "harass" sensitive wildlife species, as well as migratory, and nesting birds by disrupting normal roosting, feeding, breeding, or nesting behaviors. Studies have revealed noise can impact a species ability to communicate with potential mates or can increase an individual's susceptibility to predation. This analysis should be prepared and the results circulated for public review and comment.

RESPONSE E-62: The RDEIR (pg. 200) evaluates the impacts of construction noise and vibration on wildlife. The professional opinion of the consulting biologist is that wildlife using the site is already exposed to intermittent loud noise such

as what occurs when trains pass several times a day. There are also numerous examples of areas around San Francisco Bay where wildlife, particularly water birds have habituated to loud noise and other disturbance. While there may be some reduction in wildlife use of areas very close to construction zones during construction as a result of noise impacts, the biologist concluded that wildlife species would resume their use of these areas following completion of construction.

COMMENT E-63: 60. Vibration – The REIR fails to discuss construction impacts of soil compaction, whether vibration impacts will result from compaction activities, and how adverse impacts of the vibration generated on wildlife will be mitigated.

RESPONSE E-63: Refer to Response E-62, the RDEIR did evaluate the impacts of construction noise and vibration on wildlife and determined the impacts to be temporary and less than significant.

COMMENT E-64: **3.5 Biological Resources:** The Specific Plan states: While the City of Newark General Plan has identified development that is projected to occur within Area 4, this area has also been identified for its ecological value by regional planning efforts. The southern and western portions of Area 4 were included in the approved 1990 Refuge Boundary Expansion area of the Don Edwards San Francisco Bay National Wildlife Refuge (SFBNWR), indicating that these lands were pre-approved for addition to the Refuge in the future. The Baylands Habitat Goals Project (1999) includes recommendations to "protect and enhance the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the (former) Pintail Duck Club." Being situated between existing salt production ponds that were formerly tidal wetlands and vernal pool habitat east of the site, Area 4 provides one of the few places in the South Bay with upland habitat transitioning between tidal wetlands and vernal pools, and the Goals Project identified the site's potential value in providing upland transition zones adjacent to tidal wetlands. Upland habitats provide a buffer or transition area upslope from wetlands and marshes. Where such upland transition zones are located adjacent to tidal marsh, they provide important refugia for tidal marsh species during high tides that inundate most of the marsh plain. Even in nontidal areas, such upland habitat can provide refugia for wetland species during periods of flooding. (Appendix A, pg. 16)

And...The value of Area 4 in providing upland transition zones adjacent to tidal wetlands has also been identified by the Baylands Ecosystem habitat Goals Report (1999), a report of habitat recommendations prepared by the San Francisco Bay Area Wetland Ecosystem Goals Project, a consortium of nine state and federal agencies, including the San Francisco Estuary Institute.

61. We concur with this assessment. Lands such as those identified for acquisition were included within the Refuge Expansion Boundary because of the scarcity of this habitat within the acreage of the original Refuge acquisition and its importance in preserving the biodiversity of the bay ecosystem.

RESPONSE E-64: The City acknowledges that large portions of Newark Area 4 were included in both the proposed Refuge Expansion Boundary and the Recovery Plan for

Tidal Marsh Ecosystems of Northern and Central California. Refer to Master Response 6 regarding the issue of the Refuge Expansion Boundary and Area 4.

COMMENT E-65: 62. The Specific Plan proposal would consume most of the uplands habitat present within Area 4. Depending upon what figures one uses, either the information from the body of the text of the REIR or the information from the Specific Plan there could be approximately only 53.5 acres of uplands habitat remaining if all of Sub Areas B, C, and D are developed. That is a mere 21% of the total undeveloped uplands in Area 4. Wetland creation is proposed in this upland area to off-set the losses of up to 85.6 acres of wetlands/waters habitat. Lastly, the remaining uplands in Area 4 would be located between the levees along Mowry Slough and the wetlands to be preserved and/or the development envelope leaving this area vulnerable to human disturbance, nuisance species, light and noise pollution, etc. thereby reducing its habitat value for species attempting to move upslope away from rising sea levels.

63. Thus, the Specific Plan will not support actions to preserve and maintain the lands of the [Don Edwards] San Francisco Bay National Wildlife Refuge and is in conflict with the Land Use Goals and Policies of the General Plan.

RESPONSE E-65: The project site does not include any lands within the Don Edwards San Francisco Bay National Wildlife Refuge. Refer to Master Response 6 regarding the portions of Newark Area 4 included in the proposed Refuge Expansion Boundary. Mitigation measures are included in the project to ensure that human disturbance, nuisance species, light, noise pollution, etc., do not reduce habitat value of remaining upland habitat for sensitive species (including, but not limited to MM BIO-4.6, MM BIO-4.7, MM BIO-9.1, and MM BIO-9.2). The project's consistency with the Goals and Policies of the 2013 General Plan are described in Table 3.1-1 of the RDEIR (pgs. 51-69).

COMMENT E-66: 64. Land management practices of frequent and ongoing disturbance has resulted in reduced habitat values. This is an artificial condition and habitat values would improve if agricultural habitats in particular seasonal wetlands were not frequently disced.

RESPONSE E-66: We agree that cessation of agricultural activities could improve habitat values within portions of Newark Area 4; however, farming is an allowed use under the City of Newark's zoning for the property and has been on-going since the early part of the 20th century. Further, the existing disced nature of the site represents the baseline conditions under CEQA and thus the baseline against which impacts are assessed.

COMMENT E-67: 65. We also question whether (pg. 120) discing within the past three years of areas that have supported pickleweed cover isn't a violation of the Clean Water Act and Endangered Species Act, as areas that support pickleweed clearly are not in agricultural production and therefore should not qualify for agricultural exemptions. We are also extremely concerned that areas that were

previously dominated by pickleweed but have been disced have been subsequently invaded by Russian thistle.

RESPONSE E-67: At the time that the 6.6-acre muted tidal marsh (located northwest of the AFC&WCD Line D and shown on Figure 3.5-1) was disced, the vegetation consisted of a mixture of tall black mustard, with a relatively sparse understory of pickleweed and Russian thistle, along with extensive areas of bare ground. Over the last few decades this same parcel has been disced on an infrequent basis either as part of weed control (as required by the City) or on-going agricultural activities as conditions allow. The City believes the discing operations complied with all applicable laws. The discing operations did not introduce or exacerbate the extent of Russian thistle on the property.

COMMENT E-68: 3.5.2.4 Jurisdictional Waters of the U.S./Waters of the State
We concur a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers (USACE) will be required for the placement of fill in wetlands/other waters of the U.S. In addition, certification or waiver will be required from the San Francisco Bay Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act.

66. The REIR states "No seasonal wetland, aquatic freshwater marsh, brackish marsh, or detention basin habitat occurs within the 78-acre project footprint of Area 3. Therefore, proposed development in Area 3 will have no impacts to these habitat types." Does this include the wetland mitigation area to the northwest of Stevenson Blvd.?

RESPONSE E-68: Based upon the most recent development plans, the wetland mitigation areas located southeast and northwest of the terminus of Stevenson Boulevard will not be affected by improvements associated with the overcrossing.

COMMENT E-69: What is the source of hydrology for this wetlands mitigation area, and will the hydrological regime of this area be impacted by the development of Area 3?

RESPONSE E-69: According to the project's consulting biologist, the source of hydrology for the wetland mitigation area located northwest of the terminus of Stevenson Boulevard is a combination of excess runoff from storm events and sprinkler irrigation. Newark Area 3 is hydrologically isolated from the adjacent development by the presence of an excavated drainage ditch and a 6-foot tall masonry wall. This area drains to the northwest and any excess runoff enters the Alameda Flood Control channel.

COMMENT E-70: 67. The proposed project is clearly not "water dependent," therefore, under the 404 (b) (1) Guidelines (40 C.F.R. 230.10) the applicants must rebut the presumption that a practicable alternative exists that is less environmentally damaging. The preamble to the Guidelines states that it is the applicant's responsibility to rebut this presumption. The Memorandum of Agreement between EPA and the Corps concerning mitigation under the CWA 404 (b)(1) Guidelines (Mitigation MOA) states:

1. Section 230.10(a) allows permit issuance for only the least environmentally damaging practicable alternative. The thrust of this section on alternatives is avoidance of impacts. Section 230.10(a)(1) requires that to be permittable, an alternative must be the least environmentally damaging practicable alternative (LEDPA). In addition, Section 230.10(a)(3) sets forth rebuttable presumptions that 1) alternatives for non- water dependent activities that do not involve special aquatic sites are available…
2. Minimization. Section 230.10(d) states that appropriate and practicable steps to minimize the adverse impacts will be required through project modifications and permit conditions.

RESPONSE E-70: The City acknowledges that the project will require a Section 404 Permit from the U.S. Army Corps of Engineers for discharge into waters of the U.S. and may involve preparation of a 404(b)(1) Alternatives Analysis, if impacts exceed those generally allowed under an existing Nationwide Permit.

COMMENT E-71: 68. Sequencing requires the applicant must first avoid impacts to wetlands, next minimize those impacts, and only after avoidance and minimization of impacts has occurred, compensate for any unavoidable impacts. However, as wetlands are considered "Special aquatic sites" and it is presumed a less damaging practicable upland alternative to placing fill in wetlands exists.

USACE Permit Authorization: pg. 73 of Appendix E, Biological Resources Technical Report states, "A permit from the USACE (either a Nationwide Permit or an Individual Permit, depending on the impact) will be required from the USACE for any Project-related impacts to jurisdictional Waters of the U.S." [emphasis added]

69. It is unlikely the proposed development project will qualify for nationwide permit authorization. Nationwide permit 29 for Residential Developments is not authorized for use in non-tidal wetlands adjacent to tidal waters.

RESPONSE E-71: The City acknowledges that the federal register language for the current set of Nationwide Permits contains such language. The determination of "adjacency" is made on a case-by-case basis by staff of the Regulatory Branch of the U.S. Army Corps of Engineers and takes into consideration a number of site specific criteria.

COMMENT E-72: 70. Due to the regional environmental importance of Area 4, the complexity of issues that must be balanced (e.g. wetlands vs. uplands, endangered species and their habitats, etc.) it would be appropriate to submit an application to the USACE for the entirety of Area 4. We recognize that phasing will pose a problem, but clearly all of the development within the boundaries of Area 4 is inter-related. Certainly a precedent exists as both the San Francisco and Sacramento Districts have processed Clean Water Act authorizations for specific area plans.

RESPONSE E-72: The City acknowledges that there are several issues to discuss with staff of the Regulatory Branch of the U.S. Army Corps of Engineers regarding the

topics of "single and complete project" and "inter-relatedness and inter-dependency." See also Response E-73.

COMMENT E-73: 71. Piece-mealing of project impacts is prohibited under the Clean Water Act and the National Environmental Policy Act (NEPA). The USACE definition of "Independent utility can be found in the Nationwide Permit definitions, "A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility." All projects within Area 4 will be dependent upon the establishment of a fill pad and utility infrastructure ranging from the establishment of the Stevenson Blvd. flyover to the installation and hook up of the storm drain system, electrical, etc. As such submittal of individual permit applications including nationwide permit authorization requests would be considered piece-mealing and should be prohibited.

72. Similarly it is not possible to determine if adverse impacts to listed species (USFWS) or wetlands and waters (USACE and Environmental Protection Agency – EPA) are adequately mitigated if the review is piece-mealed.

RESPONSE E-73: As the commenter notes, piece-mealing is prohibited by resource agencies. It is anticipated that a single Section 404 permit (Nationwide or Individual), if needed, will be sought for all of Newark Area 4.

COMMENT E-74: 73. Furthermore, due to the regional significance of the site, the large amount of wetlands fill proposed, and the complexity of competing resource needs, it would be appropriate for the Corps to prepare an Environmental Impact Statement (EIS) for the Specific Area plan.

RESPONSE E-74: Whether an EIS or Environmental Assessment is needed for environmental clearance under the National Environmental Protection Act depends on a number of factors that will be taken into consideration by staff of the Regulatory Branch of the U.S. Army Corps of Engineers during pre-permit meetings when a specific proposal for Area 4 is proposed.

COMMENT E-75: **Thresholds of significance**: 74. The Specific Plan conflicts with established regional planning for maintaining habitat diversity as well as recent State strategies for preserving biodiversity in anticipation of sea level rise impacts. The impacts of the Specific Plan on buffer areas adjacent to tidal wetlands, i.e. seasonal wetlands and uplands transition zones and uplands is significant and unmitigated.

RESPONSE E-75: Based on the analysis provided in the RDEIR, the Specific Plan does not conflict with established regional planning or State strategies. Refer to Master Response 3 regarding BCDC jurisdiction on Area 4, Master Response 4 regarding sea level rise, and Master Response 6 regarding portions of Area 4 being within the Refuge Expansion boundary.

COMMENT E-76: The EIR is fatally flawed – Inadequate information provided: Indirect Impacts: Impacts of Alteration of Site Hydrology on Avoided Wetlands and Associated Species
The REIR discusses some impacts to the hydrological regime of the site that might alter the extent and quality of unfilled wetlands. For example, pg. 177 of the REIR states:

The proposed Specific Plan would result in hydrologic alterations within Area 4 that could affect the wetland and marsh habitats on the site. The addition of impervious surfaces through the construction of buildings and roadways and the compaction of soil would result in significant changes in the amount, location, quality, and velocity of stormwater runoff flowing into existing wetland habitats. Stormwater discharged into natural habitats at concentrated levels would increase the likelihood of soil erosion and channelization, and impacts related to water quality. If stormwater runoff is diverted to storm drains, the water level of seasonal wetlands would be reduced and changes in the preserved natural habitats would be substantial. In addition, the construction of the golf course would intercept precipitation, likely decreasing the amount of water entering natural habitats.

75. However, the REIR fails to discuss the impacts of groundwater pumping for the golf course on existing wetlands of high value. Page 11 of Appendix G – Hydrology states:

Recharge of the seasonal wetland and marsh habitats near the Pintail Duck Club from groundwater seeps occurs in mid-to late-summer. Evidence of this recharge from groundwater seeps includes bubbling water and the presence of a greater extent of surface water and hydrophytic vegetation in areas near the former Pintail Duck Club during the late summer months as compared to water levels in the early spring or summer, as observed in the summers of 2006, 2007, and 2008.

And page 14, of that appendix states:

Before reclaimed water is available, the golf course will be irrigated using an existing onsite well with an estimated demand of 490 acre-feet per year. This well will draw from ACWD's managed groundwater resources in the Niles Cone without placing a burden on the District's potable water production facilities. Therefore, the project will have a less-than-significant impact on groundwater supplies or areas of groundwater recharge.

RESPONSE E-76: The RDEIR analyzes potential impacts of development on groundwater support of wetlands and wetland ecosystem services provided to maintain groundwater quality and quantity. Regional groundwater flow patterns from upstream freshwater recharge sources to and from the downstream brackish tidal boundary will not significantly change due to the Specific Plan (RDEIR pgs. 177-179 and 251). Development of Area 4, which would entail an increase in the percentage of impermeable surface, could reduce the volume of base flow and quick return flow (interflow) into the shallow groundwater aquifer, but would increase the amount of surface runoff directly into the wetland areas by a commensurate volumetric amount, because the amount of rainfall is not changed by development. Potential changes in surface water flow to the localized wetlands that will need to be addressed and mitigated

during project design, as subsequently described, are primarily due to the specific locations of storm drain outfalls and distribution of runoff into wetland areas, for which sufficient detailed information is not available at this time.

The shallow groundwater table (seeps) within Area 4, which is also a variable source or sink for the wetlands, is not significantly impacted by proposed development in the global sense because the primary sources of aquifer recharge (local stormwater runoff volume upstream and the salt ponds downstream) are not affected by project development. The City acknowledges that until reclaimed water becomes available, the golf course would rely on local well water and golf course irrigation demands could be different than agricultural demands, depending upon agricultural practices.

As described in detail in the RDEIR, when the future discretionary approvals to develop residential in Area 4 and a golf course or other form of recreation in Area 4 are proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. As part of that review, the project-specific locations of storm drain outfalls and distribution of runoff into wetland areas would be evaluated to ensure the continued health of the wetlands.

COMMENT E-77: 76. The REIR provides no assessment of what if any impacts groundwater pumping will have on Area 4 seasonal wetland and marsh habitats near the Pintail Duck Club.

RESPONSE E-77: Water pumped for the golf course irrigation would come from a very deep underground aquifer, whereas the springs that surface at the adjacent perennial marsh are localized groundwater that occur much closer to the soil surface. Pumping the deeper aquifer would not adversely impact the shallow water bearing zone, because the two zones are not directly connected to each other. For this reason, there would not be a reduction in the wetland acreage from the groundwater pumping.

COMMENT E-78: 77. The REIR must also give some indication of the areal extent of indirect impacts, the number may be conservative, but based upon a "worst case scenario" what is the areal extent of indirect impacts that would require mitigation?

RESPONSE E-78: Refer to Response E-76 and Response E-77. The project, including proposed groundwater pumping, would not result in indirect impacts to wetland resources requiring mitigation.

COMMENT E-79: **Nuisance species**: The REIR provides a section that describes some of the potential impacts of invasive plants species and preserved, created, and enhanced wetlands, but provides no such discussion of nuisance species.

RESPONSE E-79: Potential impacts from nuisance species associated with the proposed residential and golf course uses and increased access to Area 4 are described in the RDEIR (pgs. 180-181, 194-195, 197-199) and mitigation measures are included to minimize impacts to a less than significant level (MM BIO-4.7, MM BIO-9.1, MM BIO-9.2, MM BIO-11).

COMMENT E-80: 78. The REIR admits nuisance species such as domestic pets and feral cats may pose problems for existing wildlife populations, but fails to identify the suite of likely nuisance species or to suggest mitigation measures to reduce their negative impacts on wildlife species in general and listed and sensitive species in particular. For example, the Specific Plan depicts picnic areas overlooking wetlands habitat, but the REIR fails to discuss the attractiveness of trash cans to nuisance species like raccoons, gulls, corvids, etc. or what measures will be implemented to prevent access to garbage, etc.

RESPONSE E-80: The RDEIR specifically identifies several nuisance species (house mice, black rats, Norway rats, and raccoons) in "Impacts to Certain Potentially Breeding Special Status Wildlife Species and Their Habitat" (RDEIR pg 180) and mentions cats and dogs in MM BIO-4.7. The RDEIR addresses the potential effects of "non-native and urban-adapted native" species in MM BIO-4.7. This mitigation measure includes a requirement for the development of a predator management plan and mentions some specific measures that will be included in the plan to avoid attracting nuisance species; these measures do include specific measures to prevent access to food waste.

COMMENT E-81: 79. The REIR mentions a mitigation measure requiring dogs to be on leash along the levees, but does not mention how this issue will be addressed for other areas of the development, nor how it will be enforced.

Page 181 of the REIR states:
Domestic pets, cats in particular, may stray from the project's residential areas and may depredate these potentially breeding special-status species or their nests. Non-native mammals are likely to increase on the project site following development. These species may compete with or prey on some of these special-status species. As discussed below under Impacts to Sensitive Habitats and Species from Recreational Disturbance, golfers and visitors may go beyond established recreational areas and access the ACFC&WCD and Mowry Slough levees which may disturb, crush, or degrade habitat for these species. Planting of trees within the golf course or residential areas will provide additional perches and nesting sites for raptors that may prey on these special- status species.

If on-site mitigation for impacts to wetlands, waterbird foraging habitat, and special-status species habitat is provided per measures to mitigate other project impacts, such mitigation will increase the extent and quality of nesting and/or foraging habitat for these special-status species, restoring the project's adverse effects to some extent.

RESPONSE E-81: RDEIR MM BIO-4.7 indicates that no free-roaming outdoor cats will be permitted in the development. Contrary to the comment, the RDEIR does not specify that dogs are to be on leashes only when on levees; rather, MM BIO-4.7 specifies that off-leash dogs will be prohibited in conservation areas, and MM BIO-9.2's mention of signage requiring that dogs be kept on leashes likewise pertains to all sensitive habitats. There is no ecological need to require dogs to be on leashes in areas of the development away from sensitive habitats and species. As indicated in MM BIO-4.7, the neighborhood association and the City will be responsible for enforcing the no outdoor cats and leash requirements.

COMMENT E-82: 80. There is no mention of specific mitigation measures dealing with feral cats, gulls, corvids, Canada geese on the golf course, etc. Rather the REIR concludes that because additional high quality habitat will be provided through mitigation and enhancement these significant adverse impacts will be less than significant.

See the discussion below regarding compensatory mitigation that explains why such a determination cannot be made.

RESPONSE E-82: Please refer to Response E-80 and E-81, which address the RDEIR's mitigation measures to reduce impacts of nuisance species. Those measures would reduce the potential impacts of feral cats, gulls, and corvids (e.g., by restricting the availability of anthropogenic food resources to those species). Although there are no measures in the RDEIR that specifically address Canada geese as nuisance species on the golf course, the presence of Canada geese does not present a significant biological impact; for example, no sensitive species will be adversely affected by the presence of Canada geese on the golf course.

COMMENT E-83: 81. Please add a section to the REIR identifying nuisance species that are likely to occur and mitigation measures that are enforceable and effective to ensure nuisance will not have a significant adverse impact on wildlife species in general and listed and sensitive species in particular.

RESPONSE E-83: Please refer to Responses E-80, E-81, and E-82, which identify the locations in the RDEIR where nuisance species are discussed and addresses the RDEIR's mitigation measures to reduce impacts of nuisance species.

COMMENT E-84: **Compensatory mitigation – wetlands, waters, species:** Pursuant to §15121(a) and §15146(b) of CEQA, the REIR does not provide decision-makers or the public a clear understanding of the location or acreages of habitat in which compensatory mitigation could be implemented for wetlands and species. Thus decision makers and the public are unable to determine if the mitigation measures purported to reduce significant adverse impacts to a level that is less than significant are realistic and capable of being implemented.

The REIR proposes 1.5:1 replacement of seasonal wetlands that may be created/enhanced on-site, off-site, mitigated through the purchase of mitigation credits, etc.

82. Mitigation ratios cannot be ascertained to be appropriate without understanding the opportunity to evaluate the:

- likelihood of success of implementation (e.g. does sufficient hydrology to maintain the created wetlands without detriment to existing habitats, etc.),
- the landscape context in which the habitat would be created (e.g. for salt marsh harvest mouse habitat is upslope escape habitat available free from human disturbance and nuisance species impacts and in an area that wouldn't make the mouse susceptible to predation?),
- the surrounding land uses (e.g. open space or residential? isolated or corridors available? Etc.)
- nature of habitats that might be converted from one type to another
- proximity of off-site mitigation to project site
- in-kind vs. out-of-kind mitigation
- whether mitigation is being proposed for more than one type of impact in the same area (double-dipping mitigating for more than one impact in the same acreage is not acceptable – e.g. expecting seasonal wetlands to provide 50% burrowing owl foraging habitat)

RESPONSE E-84: The proposed mitigation ratio takes into consideration the existing functions and values of wetlands that may be affected on site, and compares those to the anticipated increase in functions and values from proposed replacement wetlands to arrive at the ratio of 1.5:1. Two other important factors were assessed when arriving at a suitable mitigation ratio including timing of implementation (it is anticipated that mitigation will be implemented concurrent with site grading) and proximity of mitigation wetlands to impacted wetlands (i.e. on site). As described in the RDEIR, a detailed mitigation plan will be prepared, submitted to, and approved, by the staff of the City of Newark, prior to initiation of grading within wetlands. The RDEIR describes the necessary components of such a plan should mitigation be provided on site; an alternative form of mitigation, off-site, is also described should on site mitigation not meet all of the project needs.

Additionally, as part of the Section 404 permit process with the U.S. Army Corps of Engineers, a Wetland Mitigation Plan, prepared to current specifications, must be prepared and approved by that federal agency as well as the Regional Water Quality Control Board as part of the Section 401 Water Quality Certification, and the City acknowledges that the replacement ratio recommended by these agencies may differ than what is presented in the RDEIR. This Plan will discuss each of the factors listed above, among many others, in great detail in additional technical studies. It is important to point out that the project cannot and will not be approved by any of the agencies (City, USACE, RWQCB) listed above unless there is a feasible mitigation plan which combines on-site and off-site elements, to fully compensate for all project impacts to wetlands.

COMMENT E-85: 83. The REIR should clearly indicate the area and acreage available in which to create wetland habitat, where wetland enhancement might occur on-site given the current development envelopes, and how indirect impacts would be prevented from degrading the value of the mitigation creation and enhancement activities. Based on calculations from information provided in Appendix H, Part 1 and from the Specific Plan, it appears the amount of uplands available in which wetlands and sensitive species (e.g. burrowing owl) mitigation could occur would be approximately 53.5 to 59 acres.

RESPONSE E-85: Please refer to Master Response 2 regarding Wetland Mitigation.

COMMENT E-86: 84. Clearly this is not enough area in which to create 1.5:1 mitigation for loss of wetlands. The REIR must provide more definitive and realistic mitigation measures, given the "worst case scenario" of up to 85.6 acres of wetlands fill and a currently unknown figure of indirect impacts:

- how much mitigation can occur on-site,
- where will it be located on-site (Mitigation squeezed between the development envelope and the outboard Mowry Slough levee may not provide adequate escape habitat for the salt marsh harvest mouse, may become inundated over time, may be subject to constant disturbance, etc.)
- how much will need to occur off-site,

RESPONSE E-86: Please refer to Master Response 2 regarding Wetland Mitigation.

COMMENT E-87: • does land that could be acquired to mitigate the impacts of Specific Plan implementation actually exist within 10 miles of the project site along the eastern shoreline? It is our impression that most of the land from San Leandro down to Alviso are in some form of public ownershipg. Thus is this even a viable mitigation measure?

- Where would mitigation credits be purchased and for what habitat and species?

RESPONSE E-87: Insofar as the various state and federal agencies have relatively recently approved the use of the San Francisco Bay Wetland Mitigation Bank (Newark Area 4 is located within the approved bank service area) and the USACE has recently published mitigation guidance indicating a preference for applicants to use mitigation banks, the text of the RDEIR will be modified to state that the off-site component of the wetland mitigation will occur on lands located within 10 air miles of the current project site and will be located along the eastern shore of south San Francisco Bay within the same geographic watershed, or as otherwise approved by the USACE and RWQCB. The revised text is shown in Section 4 of this Final RDEIR.

COMMENT E-88: 85. These are issues that are critical in determining the efficacy, long-term viability, and feasibility of the proposed mitigation measures in actually lowering the significant impacts of the project to levels that are less than significant. Without this information the REIR cannot assert the adverse biological impacts are less than significant.

RESPONSE E-88: Please refer to Master Response 2 regarding Wetland Mitigation.

COMMENT E-89: Proposed mitigation measures are unenforceable or ineffective:
Page 181 of the REIR states: Maintenance activities around the golf course and residential areas, or golfers and residents, who enter natural areas, may unintentionally disturb or destroy nests. Although the project does not include the establishment or improvement of any formal trails along Mowry Slough, the number of people and domestic animals expected to access the levee along Mowry Slough will be greater following project development, subjecting pairs of these species nesting along Mowry Slough to more disturbance.

And
The REIR mentions that implementation of the Specific Plan may result in more people accessing the levees and walking their dogs in these areas, more specifically that levee users may "bring dogs to these areas that may harass or prey on sensitive bird and mammal species." (pg.194)

The REIR proposes mitigation measures as follows:

> Incorporation of the following measures will reduce special status species and sensitive habitat impacts to a less than significant level:
>
> MM BIO-9.1: As the design of the golf course progresses disturbance by golfers of adjacent sensitive habitats and species shall be minimized. For example, high-use areas such as tees and greens shall be set back from the edge of the golf course, and broad rough/out-of-bounds areas shall occur along the interface between the golf course and sensitive habitats.
>
> MM BIO-9.2: On the golf course, areas that are "out of bounds" (which will include the artificial burrowing owl burrow complexes and all natural areas that are not directly filled during golf course construction) shall be clearly marked as such, explaining the importance of preserving the ecological integrity of the adjacent natural areas. Signs will be erected along the ACFC&WCD levees and along Mowry Slough describing the ecological value of adjacent wetland areas and instructing users to stay on the ACFC&WCD levee tops, stay out of sensitive habitats, and keep dogs on leashes. (Less Than Significant Impact with Mitigation)

86. Human disturbance of nesting birds can result in abandonment of nests and chicks, resulting in decreased reproductive success (Rodgers and Smith 1995, Carney and Sydeman 1999, USFWS 2001, Ruhlen and others 2003, Lafferty and others 2006). Disturbance can also lead to decreased abundance or behavioral alteration of non- breeding birds (Burger and Gochfeld 1991, Schummer and Eddleman 2000, Lafferty 2001, Burger and others 2004).

RESPONSE E-89: The comment states that mitigation measures are unenforceable or ineffective, then lists the measures from the RDEIR, but there is no evidence or discussion in this comment describing why the measures are unenforceable or ineffective. It is the professional opinion of the consulting biologist and the City that the measures will be enforced and are effective.

COMMENT E-90: 87. Signage has been demonstrated to be completely ineffectual in reducing trespass into areas supporting populations of sensitive or listed species. Recent studies by USGS

scientist Kevin Lafferty at the Coal Oil Point U.S. Reserve in Santa Barbara (2005 Final Report on the Western Snowy Plovers; Restoration of breeding by snowy plovers following protection from disturbance, Biodiversity and Conservation 92006) 15:2217-2230) concerning human impacts to shorebirds on a beach showed that after a year of very adequate signage there was no improvement in the public's adherence to staying out of restricted areas. However, once a steward/docent program was in place on the beach, the public's compliance with restricted zones increased exponentially.

RESPONSE E-90: The consulting project biologist and the City disagree that signage is ineffective as a means to reduce human access into sensitive habitat areas. The Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (U.S. Fish and Wildlife Service 2007) contains the following statement: "Directional signs (regarding closed areas, nesting sites, etc.) also are used within western snowy plover habitats and near protective fencing to alert the public and other beach users of the sensitivity of western snowy plover nesting and wintering areas." This Recovery Plan (in Appendix C) cites "65 locations where exclusionary signs are in place or recommended to achieve management goals". Snowy plovers are particularly susceptible to human disturbance because most of them nest on beaches, where human recreational use is high; in contrast, the desire by humans to access muddy marshes and other sensitive habitats around the Newark Areas 3 and 4 Specific Plan site is expected to be low.

COMMENT E-91: 88. While a docent program may not be possible, monitoring of public compliance with signage and an enforcement program must be implemented.

89. Refuge staff have extensive experience with the issue of people along levee trails failing to comply with leash requirements. At Bair Island signage was posted regarding leash laws and the consequences should dog walkers fail to comply. A required % of compliance was posted, in addition volunteers provided information, consequences of non-compliance was advertised – no dogs allowed, and non-compliance was monitored. In the end, even with an extension of the monitoring period, the public failed to comply with the leash requirement, and dog walking may be prohibited once trails are reopened to the public (currently shut down for restoration work).

RESPONSE E-91: As indicated in MM BIO-4.7, the neighborhood association and the City will be responsible for enforcing leash requirements. Signage, coupled with enforcement, is expected to reduce impacts by humans with off-leash dogs.

COMMENT E-92: 90. Unless some regular enforcement program is funded and implemented on a regular and frequent basis, access to the Mowry Slough levees should be prohibited.

RESPONSE E-92: The comment is noted. Please refer to the Response E-91.

COMMENT E-93: 91. Similarly, unless an enforcement program is funded and implemented for sensitive habitat areas on the golf course and elsewhere in the development, a determination cannot

be made that the impacts of human disturbance have been reduced to less than significant levels cannot be made.

RESPONSE E-93: Please refer to the Responses to E-90 and E-91.

COMMENT E-94: 3.5 Biological Resources additional comments: 92. Mitigation measures for nesting peregrine falcons, raptors, loggerhead shrike, tri-colored blackbirds and bats do not provide for replacement of lost nesting/maternity roost habitat.

RESPONSE E-94: As indicated in the RDEIR, peregrine falcons do not currently nest in the Specific Plan area, and if they were to do so in the future, they would nest only on electrical towers. The Project will not result in the loss of any such tower nesting habitat. Similarly, tricolored blackbirds do not currently nest in the Plan area, and the Project would not impact the extensive emergent marsh on the site, which is the only location where the species could potentially nest in the future. Suitable roosting habitat for bats is no longer present on the site, as buildings are no longer present, and loggerhead shrike nesting habitat will continue to be present wherever trees or shrubs are located adjacent to extensive open space, such as the areas that will be avoided or restored. A variety of raptors may nest on the site as well, following development; many red-tailed hawks, red-shouldered hawks, and Cooper's hawks in the San Francisco Bay area tolerate high levels of human activities and nest in ornamental trees, and red-tailed hawks may nest on electrical towers as well. For all these reasons, no mitigation for lost nesting or roosting habitat of these species is necessary.

COMMENT E-95: 93. Buffer zones around sensitive species should be reviewed and approved by the California Department of Fish and Game (CDFG) and USFWS.

RESPONSE E-95: The buffer zones around burrowing owl burrows and peregrine falcon nests are the buffers that the California Department of Fish and Wildlife typically recommends. The 400-foot buffer around tricolored blackbird colonies (in the unlikely event that the species nests on the site) is actually greater than the 250-foot buffer required around such colonies for the nearby Santa Clara Valley Habitat Plan. As a result, no further review of buffers specified in the RDEIR by wildlife agencies is necessary or proposed.

COMMENT E-96: 94. Environmentally Sensitive Area and exclusion fencing for the salt marsh harvest mouse and salt marsh wandering shrew should include installed and inspected daily by a qualified mammalogist. Use of weed whackers should be prohibited in areas where hand removal of vegetation is required … hand removal…

RESPONSE E-96: RDEIR Mitigation Measures BIO-8.1 through BIO-8.4 detail the measures that would be implemented to minimize impacts to individual salt marsh harvest mice and salt marsh wandering shrews. Among these measures is the

requirement that a qualified biologist be present during installation of the barrier. This biologist would be also be present during removal of any vegetation that may support salt marsh harvest mice and clearing and grubbing near the exclusion fence. After vegetation around the fence is cleared, it is unlikely that harvest mice would be present near the fence, because they rarely stray from dense vegetation. As a result, daily inspection by a qualified mammologist would not be necessary, although the fencing will be maintained during construction. Weed whackers are appropriate for removal of vegetation in potential salt marsh harvest mouse habitat, because a qualified biologist will be present to ensure that the vegetation removal is not done in such a way that could result in the loss of individuals.

COMMENT E-97: 95. Mitigation ratios will be determined during Section 7 consultation (Biological Opinion process) with the USFWS for impacts to habitat of salt marsh harvest mouse and salt marsh wandering shrew. The mitigation and monitoring plan will require the approval of the USFWS, CDFG, USACE, and RWQCB.

RESPONSE E-97: The comment is noted. The RDEIR Mitigation measures MM BIO 8.1- MM BIO-8.4 are consistent with the comment.

COMMENT E-98: 96. If trucks must cross wetland areas, measures must be taken to reduce soil compaction, and before and after topography should be provided to the USACE and RWQCB to ensure flow of water across the landscape is not adversely impacted.

RESPONSE E-98: The comment is noted. RDEIR MM BIO-12.1 and MM BIO-12.2 describe how construction and soil-disturbing activities shall not occur immediately adjacent to any wetlands that are to be avoided or affect water quality. That would include trucks crossing the wetland areas.

COMMENT E-99: 97. No night lighting should occur during construction.

RESPONSE E-99: The comment is noted. No nighttime construction is proposed.

COMMENT E-100: 98. pg. 177 – Who will bear the responsibility of enforcing MM-BIO2.1 AND MM-BIO-2.2 to ensure stockpile soils do not migrate into adjacent wetland areas? Inspections of the stockpile mitigation measures should be conducted on a daily basis and should be monitored during and after rain events to ensure they are effective.

RESPONSE E-100: Refer to Response E-29. Monitoring of construction period stormwater control measures and Best Management Practices (RDEIR MM BIO-12.1 and MM BIO-12.2) will be the combined responsibility of the project applicant, through construction bid documents, and City staff.

COMMENT E-101: 3.7 Geology and Soils: 3.8 HYDROLOGY, Flooding, and Water Quality: Also under this section is the statement: "Acceptance and maintenance/access easements

along levees and/or permit to move tide gate(s)," by Alameda County Flood Control and Water Conservation District (ACFC&WCD).

99. What levees does this statement refer to? All levees both internal to the project site and along Mowry Slough? Please clarify what is meant by this statement. Who would be performing the "maintenance," what tide gates are being referred to, and who would be responsible for moving them? It is our understanding that an agreement was reached between the owners of one of the parcels (Peery and Arrillaga) and the State of California and State Lands Commission in 1994 regarding the ownership of the tidal lands immediately adjacent to their property, whereupon Peery and Arrillaga quit claimed all their right, title, and interest in the waterways and lands lying westerly of the outer toe of the existing levee adjacent to Mowry Slough. In return, the State granted specific easements for drainage (this does not remove the requirement for CWA authorization) in very specific locations. If tide gates are to be moved outside the areas defined in the 1994 agreement, permits may be required from State Lands Commission.

RESPONSE E-101: Currently, some of the levees within the Specific Plan area are privately owned. The privately owned levees would not necessarily be transferred to the ACFC&WCD. They are not certified or utilized for flood control. There is a potential for levees to be transferred to the ACFC&WCD in the future, but this is subject to further discussions and permits from various agencies. Future design may require adjustments to the tide gates and any modifications would require approval and coordination with the ACFC&WCD. The moving of tide gates is not covered at a project level, since it is not currently proposed and would be part of Area 4, if necessary. The text of the RDEIR has been revised to clarify this issue. Please refer to Section 4.0 of this document, *Revisions to the Text of the RDEIR*.

COMMENT E-102: **3.10 Aesthetics and Visual Resources**: 100. The REIR fails to address the impacts of light pollution on wildlife species – the only mention of the biotic habitat is "No night lighting would be directed towards the undisturbed wetland areas." This single sentence fails to acknowledge significant levels of light pollution will be introduced by the neighborhoods, development infrastructure, and golf course facilities to an area that currently has low levels of artificial light.

101. Light pollution is documented to have serious adverse impacts for a wide range of wildlife ranging from invertebrates to mammals. It disrupts migratory patterns, foraging capabilities, predation, nesting, breeding, etc. (Longcore and Rich, "Ecological Light Pollution" Front Ecol Environ 2004, 2(4): 191-198). Longcore and Rich report the findings of Buchanan (1998 "Low-illumination prey detection by squirrel treefrogs," J Herpetology 32: 270-74) in which three different species of amphibians forage at different illumination intensities. As an example the squirrel treefrog (Hyla squirrela) forages only between 10-5 lux and 10-3 lux under natural conditions, while the western toad (Bufo boreas) only forages at illuminations between 10-1 and 10-5 lux.

102. Evidence suggests light pollution affects the choice of nesting sites in the black-tailed godwit, with choice locations being the farther away from roadway lighting (De Molenaar et al 2000, in

Longcore and Rich). Buchanan found frogs he was studying stopped their mating calls when the lights of a nearby stadium were turned on.

103. Sufficient evidence exists that demonstrates artificial lights have adverse impacts on wildlife. The REIR must estimate the increase in light levels that could occur as a result of the Specific Area Plan and propose mitigation measures that will reduce adverse impacts to on-site and adjacent wildlife populations.

RESPONSE E-102: Night lighting can have adverse impacts on wildlife; therefore, the project was proposed to avoid impacts to wildlife from night lighting. The RDEIR states that lighting fixtures would be directed downward to avoid spillover into adjacent areas, in accordance with City guidelines, including 2013 General Plan Policy LU-4.7 (RDEIR pg 295). Additionally no night lighting would be directed toward undisturbed wetland areas. RDEIR AM VIS-1.1 includes other measures to further minimize lighting of areas beyond those intended to be lit. These are the most effective measures to minimize potential adverse effects of night lighting on sensitive resources, and implementation of these measures will adequately reduce potential effects of night lighting on biological resources.

COMMENT E-103: 104. The assessment of visual and aesthetic resources impacts fails to assess the impacts to the viewshed that will be experienced by pedestrians, bicyclists, and drivers along Cherry Street. While existing development does partially block some of the views, the installation of sound barriers along Cherry Street will prohibit any remaining views across the bay.

RESPONSE E-103: Refer to Response E-43 regarding the change in views from Cherry Street.

COMMENT E-104: **4.0 Cumulative Impacts:** 105. The EIR should analyze the cumulative impacts of the loss of upper tidal marsh habitat, transition zones, and uplands in proximity to the bay on the federally listed species and special status species that have been identified on the site or immediately adjacent to the site (e.g. salt marsh harvest mouse, burrowing owl). Note this comment from the South Bay Salt Pond Restoration Project FEIS:

The land within the Authorized Expansion Boundary reflects the diversity of wildlife habitats that could be restored to tidal wetlands, brackish marsh, managed ponds, seasonal wetlands, vernal pools, grasslands, riparian, freshwater marshes and adjacent uplands…
… Some lands outside the SBSP Restoration Project Area are more suitable for certain types of restoration than lands within the Project Area…
… Some of these privately owned lands also provide opportunities to restore locally rare habitats (e.g., riparian, seasonal wetlands, former duck clubs) that are limited when considering only the lands within the Project Area. [emphasis added]

RESPONSE E-104: Cumulative impacts to biological resources have been discussed in the RDEIR (pgs 365-366).

COMMENT E-105: 5.1 Alternatives Analysis: 106. The REIR states the "primary objective of the Areas 3 and 4 Specific Plan is to provide low density residential, a golf course, and/or recreational facilities, and land for a school for the current and future residents of Newark." And identifies the following specific project objectives:

- Through a General Plan amendment allow residential uses;
- Provide up to 1,260 units of low density residential uses (4.2 – 8.5 units per acre) in Areas 3 and 4;
- Provide high quality residential uses including a mix of executive housing types;
- Provide up to 189 below market rate housing units that are within the 1,260 total residential units;
- Provide land for an up to 600-student elementary school in Area 3 to serve both the Specific Plan development and neighboring residential;
- Provide vehicle access to Area 4 via a railroad overcrossing at Stevenson Boulevard;
- Provide and contribute toward community recreational facilities;
- Provide land for a golf course available to the public.
- If a golf course is found unfeasible, then another recreation use that is acceptable to the City shall be provided as a condition of development. (emphasis added)

The alternatives considered by the City include:

1. a "No Project Alternative" in which current conditions continue,
2. a "No Project Alternative" [perhaps more appropriately titled "Implementation of the Current General Plan"?] in which the existing General Plan would be implemented,
3. a "No Development in Area 4 and Higher Density Area 3 Alternative," in which an elementary school with a 600- student capacity and 1260 homes would be built within the 77-78 acres described in this DEIR,
4. a "Reduced Housing Alternative" in which the development of Area 3 would proceed as proposed in this DEIR, but no housing would be constructed in Area 4 – only a 120-acre golf course would be constructed designed to minimize impacts to wetlands,
5. a "No Golf Course Alternative" in which everything would be developed as proposed in this DEIR except that a passive park would replace the golf course and housing would not be condensed to minimize wetland fill and impacts to wildlife resources, but would remain as depicted,
6. and the "Location (Area 2) Alternative" that would presumably provide 1260 housing units but no golf course?

We support Alternative 3. This alternative avoids development of Area 4 would result in a significant reduction in adverse environmental impacts.

RESPONSE E-105: The comment is noted.

COMMENT E-106: In addition, an alternative that does not develop Area 4 is superior due to:

- the recognized resource value of the site for restoration and preservation as ecotone habitat,
- the recommendation of the California Climate Change Adaptation Strategy that areas such as Area 4 (not specifically identified) be protected for species migration, flood protection, etc. as sea level rises,

- the unique mosaic of a variety of wetlands and uplands that exists on the site
- the relative isolation of the site from existing services (promoting the use of personal cars rather than alternative modes of transportation)
- and the repeated recommendations from resource and regulatory agencies that Area 4 be preserved,

RESPONSE E-106: The comment is noted.

COMMENT E-107: As stated earlier in our comment letter, we question the continued inclusion of a golf course in the project objectives. We have heard from members of the Planning Commission and City Council that they don't believe a golf course will ever be constructed in Area 4. Substantive evidence exists that golf courses increasingly are not financially sustainable. We must conclude then, the only reason to continue to include a golf course as a project objective is to provide rationale to reject the No Development of Area 4 Alternative.

RESPONSE E-107: The comment is noted. The RDEIR analyzes the proposed project, of which the golf course is a stated part. The RDEIR also includes the option of an alternative recreational use in Area 4 (Sub Areas C and D).

COMMENT E-108: As indicated in the comments provided above, as well as those submitted by Brian Gaffney, Dr. Peter Baye, Jana Sokale, Wayne Miller, San Francisco Baykeeper and resource and regulatory agencies, it is evident the REIR fails to adequately identify, analyze and propose mitigation for significant adverse impacts to the physical environment that would result from implementation of this specific area plan. It is impossible even at a programmatic level to analyze the extent of impacts to biological resources due to the lack of information provided (e.g. impacts to groundwater systems, ability to implement wetlands mitigation, how the site will be developed - i.e. mass filling and grading or piece-meal construction, etc.). It is evident the biological mitigation measures that have been proposed will not reduce the impacts of the project to a level that is less than significant.

RESPONSE E-108: The RDEIR includes sufficient information and analysis for program level review of Area 4 development and project level review of the residential use of Area 3 (the specific project elements noted in the RDEIR Summary Table on pgs S-7 through S-10). Refer also to Master Response 1 regarding the program and project-level review of the RDEIR. The City has reviewed all of the comments received and responses have been provided in this document. No comment raised any new impact or impact of substantially greater severity than already addressed in the RDEIR.

COMMENT E-109: In addition to the comments provided in this letter, we are attaching and ask that the City enter into the record for the REIR and respond to, a CCCR comment letter dated June 24, 2010, regarding the 2010 Areas 3 and 4 Specific Area Plan FEIR as the comments submitted remain valid. We also request you enter into the record and respond to comments submitted by CCCR in response to the Newark GPT DEIR, dated September 27, 2013 pertaining to golf course feasibility.

The flaws of the REIR need to be rectified and the document recirculated for public review and comment.

RESPONSE E-109: The comments on the DEIR were responded to in the FEIR. With the exception of three issues that are addressed by this RDEIR, the other issues were upheld by the court or are barred by the doctrine of res judicata. (See Master Response 5.) The City need not address issues raised in 2010 that were previously addressed and adjudicated to be compliant with CEQA. Regarding golf course feasibility, see Response E-22.

F. RESPONSE TO COMMENTS FROM FRIENDS OF COYOTE HILLS, SEPTEMBER 19, 2014

COMMENT F-1: The Friends of Coyote Hills is an environmentally focused group serving the Tri-Cities area. We are dedicated to the conservation and preservation of open space and the plant and wildlife habitats it supports, and to engaging public involvement with local and regional environmental issues through community outreach, education, collaborative efforts, and advocacy. Our group views the development of Area 4 development problematic on several fronts:

The potential of bankrupting the City of Newark

As evidenced by recent events across the country, the mistake of developing lands like Area 4 has the potential to bankrupt a city like Newark. Recent examples in the United States have shown that, if cities approve housing in an area likely for flooding, that city could be forced to pick up the tab. For example, in October 2013, floods occurred in an Austin neighborhood. Five people died. More than 500 homes suffered moderate to severe damage. Frustrated victims stormed Austin City Hall. According to Austin's KEYE-TV website, the group of homeowners (wanted) "additional buyouts" of their homes – at the city's expense. Since 1999, the City of Austin has re-purchased 323 homes in these neighborhoods at a total cost of approximately $36.5 million. After the March, 2013 floods, an additional 116 homes were added to the list. The tab grew to $55.5 million.

Can't happen here? This plan could be identical to what is being proposed in Newark, CA. Newark wants to construct more than 1,260 homes on former diked baylands and meadows that are only 0 to 11' over sea level. The land is bordered by Mowry Slough and Line D at the interface between tidal flows and creek flows. This area is most apt to flood in the event of high tides and storm surges today and will be the first lands subject to sea level rise. Concerns about sea level rise and increasing storm surges have been met with "experts" stating that the "solution" is to transport 2.1 million cubic yards of dirt to elevate the Newark site. (That is more than 100 dump truck round trips daily along city streets, seven days a week, 365 days a year, for at least two years).

But what if the "experts" calculations are wrong and an Austin scenario happens here?

California's Department of Water Resources has increased forecasted sea level rise predictions to 55" by the end of the century. The Bay Conservation and Development Commission agree: predicting 16

inches of sea level rise at mid-century and 55 inches by 2099. Recently, a May 13th Argus Headline stated:
*"**Key Antarctic sheet irreversibly collapsing; scientists predicting faster increase in sea level rise." The article says** "(we) see eventually 4 feet of sea level rise from the melt. But it could trigger neighboring ice sheet loss that could mean a total of 10 to 12 feet of sea level rise, the study in 'Science' said."*

The occurrence of floods is the most frequent among all natural disasters globally. In 2010 alone, 178 million people were affected by floods (globally). The total losses in exceptional years exceed $40 billion.

1. *Has Newark considered the ramifications of having to reimburse those homeowners if the Austin scenario plays out in Area 4?*
2. *Newark's discretionary development approvals may put lives and property at risk. What amount can the city afford to reimburse before going bankrupt?*

The Loss of Newark's Protection from Flooding
Let's set aside the costs to replace these future homes (and lives). Newark's wetlands are natural buffers for the thousands of Newark's current residents who are at risk from water damage and injury. One of the best solutions is a healthy marsh separating the Bay from your house. **Tidal marsh and wetland habitat absorbs excess water from high tides and storm surges.**

If you cement over this protection, the water will find its way to your door. We must act now to protect and restore the Bay's wetlands to protect our homes and businesses from flooding. We need to face the fact that these places protect the houses already built and NEVER should development be permitted next to our Bay waters.

To quote a recent article in the (Menlo Park) Almanac:
"… The threat (of flooding) is not necessarily decades away, (said Maximilian Auffhammer, the UC Berkeley professor of environmental economics). Higher sea levels amplify the flooding potential of severe storms, as Hurricane Sandy demonstrated on the East Coast. Changes at the local level such as allowing homeowners to elevate their homes and rezoning areas vulnerable to extreme weather events are worthy of consideration, he said."

Wetlands, and their ability to absorb floodwater and wave energy, are crucial, said Mr. Goldzband (Larry Goldzband, the current BCDC executive director) and Mr. (Will) Travis, his predecessor at BCDC. 'Wetlands are about as close to magic as you're ever going to get when you're dealing with flooding,' Mr. Travis said. 'The wider the wetland is at the front, the lower the levee can be at the back.'

Supervisor (Dave) Pine said. "What has been a 100-year (flood) event could easily become a 10- or 20- or 30-year event. I think we need to start moving, like the Dutch, towards a longer time horizon."

3. *If sea levels rise, these land's flora and fauna natural retreat to "higher ground" very slowly. Has this been considered?*

4. *With all of the evidence of flooding throughout the country (and the world), why are Newark's leaders considering paving over the only protection Newark has to prevent a major flood to its current residents – its wetlands?*

RESPONSE F-1: The comment is noted and will be taken into account as part of the project consideration. Areas 3 and 4 have been planned for development since 1992 and the Specific Plan ensures that proposed development will be adequately protected from flooding due to climate change. An updated assessment of the potential for sea level rise to affect the project and the proposed adaptation strategy is provided in Master Response 4.

COMMENT F-2: **Traffic** Newark's former mayor Dave Smith signed on to the U.S. Mayors Climate Protection Agreement. The agreement's goal is to conserve the nation's energy and reduce the greenhouse gas emissions that threaten our planet. Participating mayors make several commitments to greenhouse gas reduction in their own communities, the first of which is to take action in "anti-sprawl land-use policies."

The most important step a community can make to reduce greenhouse gases is the reduction of sprawl and the creation of transit-oriented development. We have no option but to get in our cars, pollute our air and crawl to work paying whatever price per gallon the oil companies wish to charge us. This is the legacy that our forefathers left us. But developments like those proposed for Area 4 places houses on the outer fringes of our cities and place huge developments in areas away from rapid transit. People who buy million-dollar houses will not ride buses. They will get in their cars and pollute our air. Newark is ignoring the cries on these legitimate concerns, and enthusiastically promoting the addition of over 1200 houses in Area 3 on Cherry Street and Area 4 west of the Union Pacific Railroad tracks. The proposed Areas 3 and 4 Specific Plan project would generate 14,970 daily vehicle trips (1,429 project trips occurring during the AM peak hour and 1,676 project trips occurring during the PM peak hour) to our already congested roadways and freeways.

The Area 3 and 4 developments do not reduce emissions and traffic efficiency – but increases both. This development was conceived 40 years ago when Bay Area cities were sprawling outward with little concern for smart growth. Forty years ago, we did not have the traffic we have today. Forty years ago, the term telecommuting did not exist and few of us knew what global warming meant and what we were doing to increase it.

Smith pledged to support anti-sprawl land-use policies. ***Has Newark turned its back on this pledge?*** These houses are slated to be built on the farthest reaches of the city. This support cannot wait until after developments have been constructed. To quote Tom Cochran, executive director of U.S. Conference of Mayors: "The emerging threat of global climate change, due largely to widespread fossil fuel use, has made it clear that business as usual, as far as energy use is concerned, is not sustainable."

5. *Newark has pledged to be a part of the United States' Mayors Climate Protection Agreement. The agreement's goal is to conserve the nation's energy and reduce the greenhouse gas emissions that threaten our planet. Participating mayors make several commitments to greenhouse gas reduction in their own communities, the first of which is to take action in "anti-*

sprawl land-use policies." The development of Area 4 is placed on the outermost reaches of the city. Is Newark's current leadership reneging on this promise?

RESPONSE F-2: The City does not consider the proposed Specific Plan development, including Area 4, to be sprawl. The City notes that development of Areas 3 and 4 constitutes infill development that is close to jobs, transportation facilities, and infrastructure. Area 4 is approximately 1.4 miles from Interstate 880, within the vicinity of three bus routes, and is walking distance to the Silliman Recreation Center. Regionally speaking, Newark and the project area are within 15 miles of the job centers of Fremont, Milpitas, North San Jose, Hayward, and Palo Alto.

COMMENT F-3: The Friends of Coyote Hills are against any development of the Area 4 lands. There is now precedence that this project puts the City of Newark at high financial risk if the facts are ignored and construction takes place. This area is incredibly unique as it contains a blend of uplands and wetlands; it has been recommended for preservation by the Bay Goals project and the Tidal Marsh Ecosystem Recovery Plan. And most important to your residents and businesses, these lands protect your citizens and businesses from catastrophic floods that other areas of the country have and are experiencing. The Friends of Coyote Hills request that you encourage contribution of lands to the USFWS so this treasure can be preserved and restored for all Newark residents.

RESPONSE F-3: Comment noted. The commenter's concerns will be included in this Recirculated Final EIR and thus will be before the City's decision-makers, the City Council, for their consideration.

G. RESPONSE TO COMMENTS FROM SAN FRANCISCO BAYKEEPER, SEPTEMBER 19, 2014

COMMENT G-1: On behalf of San Francisco Baykeeper and our over 3,000 members who use and enjoy the environmental, recreational, and aesthetic qualities of San Francisco Bay and its surrounding tributaries and ecosystems, we submit these comments in strong opposition to the proposed project, and the Recirculated Draft Environmental Impact Report ("DEIR") prepared for the project.

A. <u>The RDEIR Piecemeals and Segments its Project Versus Program Level Review.</u>

The RDEIR's categorization of itself at once as a project EIR and a program EIR is inaccurate, misleading, and must be revised to advance informed public decision-making. While the RDEIR states that it is not required to delineate which sections provide project-level review and which sections provide program-level review, the RDEIR nevertheless does purport to do so. (RDEIR S-6 to S-10.) To the extent that the RDEIR's assertions are inaccurate, they must be challenged and revised now lest the public risk losing the right to challenge such conclusions forever more. (See Pub. Resource Code § 21167.2 [an EIR not legally challenged "shall be conclusively presumed to comply with [CEQA]"].) Therefore, even if not required to articulate which approvals have been

reviewed at a project versus program level, because the RDEIR has done so here, such conclusions must be revised or challenged if inaccurate, incomplete, vague, or misleading.

The RDEIR erroneously segregates future project approvals as being covered by project-level or program-level environmental review in this RDEIR, even where the future approvals would cover the same activities. (footnote: Note, however, that no draft or proposed Development Agreement has been including among the RDEIR appendices or otherwise among the documents for review on the City's website, precluding any actual review of whether its impacts have indeed been reviewed at a project-level as the RDEIR claims.) Indeed, the most common determinative factor the RDEIR appears to apply in making this distinction is whether the approval will be rendered by the City or by another agency: most future approvals the City must render are considered to have already received project-level review, while most all future approvals to be rendered by independent agencies have purportedly only received program-level review. (RDEIR S-7 to S-10.) This type of deferral of environmental review to independent agencies is impermissible. CEQA requires the lead agency to evaluate the whole of the project, which includes all future project approvals; environmental review on an approval-by-approval basis is not allowed.

RESPONSE G-1: Please refer to Master Response 1.

COMMENT G-2: B. The RDEIR Readily Rejects Feasible Alternatives That Would Avoid Wetland Fill. The RDEIR's evaluation of the "No Development in Area 4 and Higher Density in Area 3 Alternative" simply perpetuates the poor land use practices that have resulted in sprawl and habitat conversion throughout the region in decades past. The RDEIR discounts this Alternative by noting that it would not meet project objectives to establish a new golf course, as well as "executive house types." (RDEIR 374.) The RDEIR's preference for executive residences over existing wetlands is poor public policy, and fails to adhere to CEQA's purpose "to afford the fullest possible protection to the environment." (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal,* (1988) 47 Cal.3d 376, 390.) An alternative should not be rejected under these circumstances. CEQA requires that alternatives be considered "even if these alternatives would impede to some degree the attainment of the project objectives" (CEQA Guidelines § 15126.6(b)), and should only be rejected for a "failure to meet most of the basic project objectives" (CEQA Guidelines 15126.6(c)). This alternative meets eight out of ten project objectives, and should not be rejected from consideration. (RDEIR 36.)

RESPONSE G-2: The commenter states that the No Development in Area 4 and Higher Density in Area 3 Alternative was rejected because it did not meet the project objectives. The RDEIR did not reject this alternative for further consideration, as it was selected as one of the Environmentally Superior Alternatives. In accordance with CEQA Guidelines 15126.6(c), the RDEIR, explained that the Alternative did not meet one of the main project objectives and the General Plan goals of providing housing and a golf course/open space in Area 4. This alternative would also be inconsistent with the General Plan's vision for the size and scale of development in Area 3. It will be up to the City Council to accept or reject the Alternatives when it reviews the project on the merits and makes findings.

COMMENT G-3: C. The Mitigation of Wetland Loss is Inadequate.
The RDEIR proposes numerous inadequate mitigation measures to reduce the impact of the permanent fill of at least 86 acres of wetlands. Unfortunately, the RDEIR's proposal to create 1 acre of new wetland for each acre lost, plus enhance 0.5 acres of existing habitat for each acre lost, will not actually mitigate the proposed loss of wetlands.

First, the notion that "enhancing" existing wetland habitat can be considered to offset the loss of other existing wetlands is wrong. Enhancing existing wetlands habitat will only generate that benefit between the existing benefits the wetlands provide, to that which they will provide with the so-called "enhancements." In other words, the total loss of an existing wetland acre is not equivalent to the partial improvement of an existing wetland acre. Moreover, the RDEIR fails to disclose exactly what the existing condition of the wetlands to be enhanced are. Could such enhancements actually be to the detriment of any established communities there?

RESPONSE G-3: Please refer to Master Response 2.

COMMENT G-4: What existing forces are preventing this wetland area from "enhancing" itself, and what guarantees will be in place that those forces do not degrade the habitat once-enhanced?

RESPONSE G-4: The existing wetland areas that are proposed for enhancement are currently farmed and have been since the turn of the 20th century. On a regular basis such "farmed wetlands" are disked and planted to agricultural crops, and such farming practices may also include applicant of herbicides to control weed infestations. These agricultural activities may deter establishment of some wetland plant species on the actively farmed wetland areas on Newark Area 4. Agricultural activities will not be conducted within areas proposed for mitigation. All created/enhanced habitats will be protected in perpetuity through a conservation easement and annual monitoring of the mitigation sites will be completed to determine if the project has achieved its quantitative performance and final success criteria for the mitigation obligation.

COMMENT G-5: In the end, any "enhancement" area cannot be said to be new entirely new wetland habitat, and therefore does not offset the complete fill of any wetland acre at a 1:1 ratio. By deferring the precise location and composition of wetland mitigation areas to some unknown future review of development applications, potentially for multiple pieces of the whole of the project, the RDEIR risks fragmenting its wetland mitigation projects in a way that fails to provide the level of environmental benefit that the in-tact wetlands provide now. Because the fill and permanent loss of at least 86 acres of wetlands is foreseeable now, a cohesive and comprehensive plan must also be considered now.

RESPONSE G-5: Please refer to Master Response 2.

COMMENT G-6: For wetland mitigation banking to work, the RDEIR must show that wetlands created or acquired will provide at least the same value as the wetlands lost, but no such information is provided. For example, any species habitat destroyed by the project must be offset by the wetland mitigation parcels, but the RDEIR does not demonstrate that any new wetland mitigation area can be put in place where such impacted species already reside.

RESPONSE G-6: Please refer to Master Response 2 regarding Wetland Mitigation. For any impacts to special-status species habitat, such as the salt marsh harvest mouse, the RDEIR describes that mitigation will be provided on the project site through creation of new habitat. Such species mitigation areas will be placed near or adjacent to existing occupied habitat. Because many actively farmed areas occur directly adjacent to species habitat, sufficient locations occur to provide mitigation for these impacts.

COMMENT G-7: Also, the present wetlands provide water quality benefits by filtering surface runoff from the urban environment, but the RDEIR does not show that any new, enhanced, or off-site wetlands will necessarily provide the same benefit. The RDEIR provides that, for wetland mitigation areas, "[t]hese off-site locations shall currently support wetlands of sufficient quantity and quality to satisfy mitigation requirements," but the RDEIR fails to provide any discussion of what those mitigation requirements might be. To these ends, a survey of available mitigation banks and parcels in the region should be included in the RDEIR to determine the feasibility of wetland mitigation.

RESPONSE G-7: For clarification, the vast majority of existing wetlands within Newark Area 4 are actively farmed and are situated well away from any urban environments that might provide water quality benefits. The presence of the Union Pacific Railroad between the property and the urban areas located northeast of Cherry Street prevents any surface runoff from entering the project site. For clarification, the mitigation requirements mentioned in the RDEIR are referring to the needed acreage which depends on the level of impact, which won't be known until a specific development proposal is developed. Currently, a single wetland mitigation bank, the San Francisco Wetland Mitigation Bank, has been approved for use by the various state and federal agencies; the service area for this bank includes the current project site.

COMMENT G-8: The RDEIR repeatedly provides reasons to believe that the ultimate success of wetland mitigation is in question. As a result, it is imperative that any wetland mitigation projects be completed and their success assured *prior* to filling in of any existing wetlands. The RDEIR instead proposes that the Project and its mitigation measures commence simultaneously. This inevitably places the impact before the mitigation, as the impact will be felt immediately, while the mitigation measure will take an unknown length of time to developg. Therefore, the mitigation measures do not ensure actual offset of the project's impacts.

RESPONSE G-8: To be clear, based on a detailed review of the site's topographic, hydrologic and edaphic characteristics, gathered over the course of several years on site,

the likelihood of success of any mitigation wetlands is high. The current mitigation ratio was specifically proposed taking into consideration the temporal loss between the time of impacts and implementation of the wetland mitigation measures. Insofar as the vast majority of potentially impacted wetlands on site are disked and planted on an annual basis, as part of on-going farming practices, the actual time it takes to replace existing functions and values of those farmed wetlands will be relatively brief, possibly as short as a single growing season.

COMMENT G-9: For example, the RDEIR provides for 5 years of monitoring to determine whether wetland mitigation measures have been successful. The reason for this timeframe is unclear. The RDEIR states that if success criteria are not met within 5 years "actions shall be required and monitoring will continue until the final success criteria have been achieved." This undefined and illusory deadline provides further rationale for requiring all mitigation measures to achieve total, if not at least some modicum of, success prior to beginning project construction.

RESPONSE G-9: The monitoring period is implemented to ensure success of the plantings within wetland areas, to implement any needed supplemental irrigation, weed and rodent control, etc., during the plant establishment period. Should success criteria not be met, generally a variety of corrective, adaptive management measures would be implemented, such as a change in the hydrologic setting, which triggers additional monitoring during the plant establishment period.

COMMENT G-10: The RDEIR fails to provide enough information to determine the impacts of the massive fill and grading proposed on seeps that occur on the site. One of the largest aquatic features is a seep that sustains a large body of open water that supports resident and migratory waterbirds. The RDEIR does not specific what impacts the project will have on the continued flow of this and other seeps.

RESPONSE G-10: Please refer to Response E-76.

COMMENT G-11: Mitigation measure BIO-2.3 is also inadequate, purporting to "prevent any significant decrease in the amount of water entering preserved wetland habitats in Area 4 during the winter months." The measure simply requires that native grass species shall be used in the proposed golf course," stating that "[a] species list for use on the golf course (including outside of the turf area) shall be developed by a qualified biologist in concert with golf course designers and approved by the City of Newark." (RDEIR 178.) But nothing in the mitigation measure requires any consideration of, or provides any performance standards to determine whether, any native species selected will actually prevent any significant decrease in water entering wetlands in winter months.

RESPONSE G-11: The combination of MM BIO-2.1 through MM BIO-2.5 (including MM BIO-2.3) collectively minimize alterations to the existing wetland hydrology.

COMMENT G-12: The RDEIR completely fails to consider the loss of wetlands in a cumulative

impacts context (RDEIR S-67 to S-71), even though historic wetland loss in and around San Francisco Bay is well over 90%. The last remaining wetlands, therefore, are of the upmost importance. The RDEIR's 1.5 mitigation rate for new and enhanced wetlands fails to adequately overcome the loss of existing wetlands when considered from a historical perspective. The RDEIR does not clearly justify how a mitigation rate of 1.5 will offset the cumulative impact of loss of wetlands in the Bay.

RESPONSE G-12: Under CEQA, mitigation of cumulative impacts is to address the project's incremental contribution to the impact; mitigation for the historical loss of wetlands in the Bay Area cannot be imposed on a single property.

COMMENT G-13: D. Evaluation and Mitigation of Water Quality Impacts are Inadequate. The RDEIR relies heavily on the San Francisco Bay Municipal Regional Stormwater NPDES permit to avoid or mitigate project impacts to water quality, but the RDEIR fails to demonstrate that the project will comply with all NPDES permit requirements. First, the RDEIR fails to disclose what municipal controls can be put in place over any given development project to this end. The regional stormwater permit requires that "[a]t a minimum each Permittee shall [h]ave adequate legal authority to implement all requirements of Provision C.3." Cities and counties typically have met this requirement though the adoption of a stormwater ordinance, or through incorporation into their general plan. Here, the RDEIR fails to indicate, in its regulatory setting section, what the City's general plan or municipal ordinances require. Therefore, there is no assurance that the City has adequate legal authority to require compliance with the regional municipal stormwater permit.

RESPONSE G-13: Compliance with the Municipal Regional Stormwater NPDES permit is an explicitly stated mitigation measure (MM HYD-1.1, RDEIR pg. S-54). Development projects will be required to comply with applicable RWQCB NPDES permit requirements in place at the time of project approval. The City of Newark and County of Alameda have jurisdictional authority to enforce NPDES permit compliance. The City Code of Ordinances Section 8.36 requires dischargers to comply with the applicable NPDES permit for the activity. Similarly, the Alameda County Code of Ordinances Section 13.08 dictates compliance with NPDES permits for stormwater and non-stormwater discharges to the County system and to waters of the United States. The RDEIR references compliance with the municipal stormwater permit in lieu of recommending potentially different mitigation measures because the permit is subject to regular revision and may contain additional or different mitigation requirements at the time of actual construction.

COMMENT G-14: Indeed, elsewhere the RDEIR states that "[a]ll public landscaping areas within the Specific Plan shall follow the City of Newark's Bay Friendly Landscape Guide. Future homeowners associations or similar entity shall be encouraged to incorporate as many bay friendly landscape practices as appropriate and feasible." It would be equally feasible to require subdivisions and commercial development to implement these same standards.

RESPONSE G-14: Commercial developments and subdivisions will be required to comply with the Municipal Regional NPDES Permit for new construction. The permit requires the implementation of pollutant source controls including "Landscaping that minimizes irrigation and runoff, promotes surface infiltration, minimizes the use of pesticides and fertilizers, and incorporates other appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping."[2]

COMMENT G-15: In addition, the stormwater permit's c.3 provisions require permittees to "[e]valuate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA." Here, however, the RDEIR fails to actually evaluate potential pollutant concentrations and loads in stormwater discharges from the built project, instead, in a circular fashion, relying wholly on the stormwater permit itself to mitigate such impacts. The RDEIR states, in its entirety:

Proposed projects within the Specific Plan Area would be required to comply with water quality standards as administered through the NPDES permit. Developers would be required to take enforceable measures that would reduce potential impacts from pollutants and sedimentation in stormwater runoff. Assuming compliance with these required measures, development under the Specific Plan would not violate any RWQCB water quality standards.
(Less than Significant Impact)

(RDEIR 251.) Simply relying on the regional stormwater permit to mitigate project impacts cannot be the type of CEQA review the regional stormwater permit contemplated. Instead, the RDEIR must undertake a meaningful evaluation of (1) pollution generating activities within the project area, (2) pathways for such pollution to become entrained in stormwater, (3) types and concentrations of such contaminants, (4) beneficial uses of receiving water bodies impacted by this new pollution load, and (5) effectiveness of mitigation measures and alternatives to reduce or avoid these impacts.

RESPONSE G-15: The City has discretion to select the requirements of the Municipal Regional Permit as its threshold for significant impacts to water quality. Section C.3 of the regional stormwater permit requires an evaluation of items (1)-(5) listed above for the detailed design of each new development, and its requirements are specific to the post-construction activities and land use expected on-site. The Municipal Regional Permit requires projects to implement low impact development (LID) source controls, site design and treatment measures to treat all stormwater leaving the developed site(s) for the design storm event. This permit regime takes into account pollution generation, the pathways for pollutants, the types and concentrations of likely contamination, the beneficial uses of receiving waters, and the effectiveness of the permit requirements.

The Areas 3 and 4 development will consist of a combination of residential, recreational and institutional (school) land uses. The pollutants resulting

[2] Municipal Regional Stormwater Permit NPDES No. CAS612008 Provision C.3.c.i.(1)(d).

from these uses will be managed through the LID measures required by the permit to reduce both soluble and insoluble stormwater runoff pollutant discharges. Current best management practices include the use of rainwater harvesting, infiltration and/or bio-retention to treat stormwater pollutants. These treatment measures are considered best available technology and adequate treatment for the type of post-construction activities expected on-site. In addition to these known treatment technologies, the Municipal Regional Permit will be continuously updated to reflect the most current stormwater treatment technologies. Project development will be required to adhere to the latest permit requirements.

As described in detail in the RDEIR, when the future discretionary approvals to develop the school in Area 3, residential in Area 4 and a golf course or other form of recreation in Area 4 are proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. At that time, all issues subject to CEQA would be evaluated to determine what level of additional review is necessary.

COMMENT G-16: The RDEIR asserts that the project will be required to implement the regional stormwater permit's c.3 provision requiring low-impact development to the maximum extent practicable. However, the permit's c.3 provision provides numerous compliance routes, and may be misinterpreted by the City. For example, the RDEIR requires that "BMPs shall be designed in accordance with engineering criteria in the California Stormwater BMP Handbook for New and Redevelopment (California Storm Water Quality Association, 2003, California Storm Water Best Management Practice Handbook – New Development and Redevelopment)," but this handbook predates adoption of the San Francisco Bay Municipal Regional Stormwater Permit by six years, and is now 11 years old. A more relevant guidance document that should be adhered to in a revised EIR would be the Governor's Office of Planning and Research: "Technical Advisory, CEQA and Low Impact Development Stormwater Design: Preserving Stormwater Quality and Stream Integrity Through California Environmental Quality Act (CEQA) Review."[3]

RESPONSE G-16: The City acknowledges that a number of C.3 provision compliance routes are available, and will evaluate the efficacy of proposed compliance when more detailed project plans are developed. The focus of the current, and presumably future, Municipal Regional NPDES Permit is on low impact development design solutions. Adhering to the permit requirements will result in an LID solution. The City also acknowledges that proscribing one particular best management practice handbook may not be the most appropriate mitigation measure, noting that MM HYD-1.3 allows for the use of other accepted guidelines and best management practices for C.3 compliance. Alameda Clean Water Program produces a C.3 Technical

[3] http://opr.ca.gov/docs/Technical_Advisory_LID.pdf

Guidance Manual (2013) which provides guidance to C.3 compliance which, similar to the Governor's Technical Advisory, emphasizes and requires LID solutions to post-construction stormwater treatment.

COMMENT G-17: Moreover, the RDEIR must clarify that the whole of the project will be considered to be a "regulated project" for purposes of the c.3 provision: the City may not piecemeal or segregate distinct phases or areas of the project for purposes of determining c.3 compliance. Clarifying this point is especially important given the complicated and opaque program/project division the RDEIR has created for the whole of this project.

RESPONSE G-17: The current threshold for being a regulated project under C.3 is minimal (10,000 square feet of new impermeable surface for most developments and 5,000 square feet for some special land uses), such that any development within Areas 3 or 4 will undoubtedly be a regulated project under C.3. Additionally, the permit requires treatment of subdivisions per section C.3.b.ii.(2). Possible piecemealing to skirt C.3 compliance is not an issue.

COMMENT G-18: The RDEIR requires that "[t]he stormwater at the outlets leaving the site shall be sampled on a first flush basis, once a year for the lifetime of the project." (RDEIR 253.) This should require sampling of the first flush of the season to capture the most acute pollution impacts. Moreover, the monitoring plan fails to call for sampling of any metal constituents, such as copper, lead, or zinc, or bacteria, all of which are commonly found in municipal stormwater and should be sampled.

RESPONSE G-18: The RDEIR monitoring plan sampling on a first flush basis means first flush of the season. The RDEIR monitoring plan concentrates on constituents most likely to be present in golf course runoff, but has been modified to sample for metals typically found in urban runoff as well. Refer to Section 4.0 Revision to the Text of the Draft EIR.

The most likely constituents/potential pollutants for a sampling program are the ones anticipated from the land-use, and those for which the Bay is considered impaired (chlordane, DDT, dieldrin, dioxin, furan, invasive species, mercury, PCBs and trash) based on the USEPA 303(d) list. The City has chosen to respond to this comment even though the comment is outside the scope of this RDEIR. See Master Response 5.

COMMENT G-19: The RDEIR requires that, "[t]o prevent potential runoff of chemicals, the application of fertilizers, herbicides, and pesticides shall be avoided during periods of expected rainfall and immediately prior to schedule golf course irrigation." (RDEIR 253.) But this does not suffice to ensure that pesticides will not contaminate stormwater discharges in any significant amounts. For example, applications immediately prior to storm events could foreseeably contaminate stormwater discharges; as could any significant, cumulative buildup of pesticides and pesticide waste during the dry season. The RDEIR has not evaluated these impacts. To mitigate potentially significant impacts from pesticide contamination, the RDEIR should require the

implementation of integrated pest management ("IPM") throughout the project site. (The University of California, Davis program provides a good example of effective IPM: http://www.ipm.ucdavis.edu/) Any argument that the City does not have authority to regulate pesticide applications does not necessarily mean that the City may not require alternative approaches to pest prevention and management. The requirement that all development projects shall implement "outreach regarding appropriate fertilizer and pesticide use practices" is vague and wholly insufficient, as is the requirement that "[t]he design and maintenance documents shall include measures to limit vector concerns, especially with respect to control of mosquitoes." (RDEIR 254.) To ensure water quality impacts are minimized, the City must provide specific performance criteria for residents and commercial and industrial development to meet, and should require implementation of modern IPM techniques throughout the project.

RESPONSE G-19: The RDEIR has addressed the control of surface runoff within Areas 3 and 4 through irrigation management, bio-retention and other pollution mitigation measures (See BIO-2, MM BIO-13.1 and MM HYD-1.1-1.4), including the potential for fertilizers, herbicides, and pesticides from the golf course to migrate to the groundwater and enter wetlands through runoff.

The City acknowledges that the golf course would be considered "self-treating" by NPDES Municipal Regional Permit standards. Self-treating areas, as explained the Alameda County C.3 Technical Guidance Manual (2013), are permitted because "infiltration and natural processes that occur in these areas remove pollutants from stormwater" (BASMAA, 2003). It is widely accepted in the Bay Area that landscaped areas, with appropriate fertilization, pesticide and irrigation controls, are capable of treating the "first flush" of stormwater run-off which contains the highest level of pollutants through infiltration into the top soil and through plant uptake.

The creation of impervious surfaces within the golf course and all other development types will require the installation of treatment measures such as bioretention. Bioretention has total nitrogen removal efficiencies ranging from 55 percent to 65 percent, and up to 80 percent to 92 percent with the inclusion of an anaerobic denitrification layer, (placing the perforated underdrain at the top of the rock section as depicted in the AC C.3 Technical Guidance Figure 6-5), in addition to the hydraulic retention time in the soil media.

COMMENT G-20: E. <u>The Proposed Project Fails to Incorporate Sea Level Rise Adaptation Principles.</u> The RDEIR purports to avoid the foreseeable impacts that would occur as a result of placing new development along the shoreline in an area likely to be impacted by projected sea level rise, by simply building the development at a higher elevation, or, in the alternative, constructing a sea wall. (RDEIR 361.) First, it should be noted that, the uncertainty the RDEIR posits as to whether a sea wall would be required, or would be built, does not support the kind of informed decision-making CEQA requires. These questions leave open the possibility of significant impacts to water quality, habitat, flooding, and greenhouse gas emissions, to identify just a few causes for

concern.

RESPONSE G-20: Please refer to Master Response 4.

COMMENT G-21: In addition, the RDEIR fails entirely to evaluate any adaptation measures that could support development in a lower impact way than filling wetlands to above future sea level heights, or through construction of a sea wall. Part of the RDEIR's avoidance of the topic may be its erroneous conclusion that BCDC jurisdiction over the project is very limited, or, at best, should be determined by BCDC at the appropriate time (see *infra*, section H). Aside from the fact that the RDEIR should undertake a more complete evaluation of BCDC jurisdiction and consistency with its policies, CEQA still requires the RDEIR to evaluate and disclose these significant impacts, and implement feasible mitigation measures and alternatives.

RESPONSE G-21: BCDC jurisdiction and potential changes in that jurisdiction due to rising mean higher high water is a legal issue not pertinent to this discussion of environmental impacts. If additional protection against actual sea level rise that meets or exceeds the high range estimates proves to be needed in the future, such protection can be provided in addition to the elevated fill.

Such additional protection, if proven to be needed, whether in the form of an earthen levee, structural floodwall or another protective element which may be regional in nature, is more appropriately planned and designed when the level of threat from sea level rise and policy requirements to meet that threat are better established. This is consistent with informed decision making. The potential need for such adaptation has been disclosed. Future decision-makers will be presented with a suite of alternative impacts to evaluate against laws in place at that time.

If needed in the future, the adaptive measures that may be taken within developed buffers or setback areas are not likely to pose significant environmental impacts. But there is no way to evaluate the impacts of such future action without undue speculation, as the requirements for such adaptive measures and the best available technology are not now known or able to be projected with any certainty. This adaptive approach to deal with potential sea level rise is similar to the approach taken at Treasure Island, by the City of Mountain View, and other Bayfront entities affected by sea level rise.

Please also refer to Master Response 3.

COMMENT G-22: Moreover, the RDEIR should consider the feasibility of commonly accepted adaptation strategies such as:

- develop strategic property acquisition programs to discourage development in hazard-prone areas;
- encourage relocation;

- allow inland migration of coastal habitats;
- discourage placement of shoreline armoring and encourage alternatives; and,
- encourage sustainable forms of development (such as clustered or higher density development in low-risk areas). (See, e.g., http://www.cacoastkeeper.org/document/adapting-to-sea-level-rise:-a-guide-for-california%27s-coastal- communities.pdf)

The RDEIR provides no meaningful analysis of these or other climate adaptation strategies.

RESPONSE G-22: These concepts essentially represent alternatives to the proposed project, not environmental impacts or mitigation measures. The aforementioned adaptation strategies are reflected in the No Area 4 Development Alternative.

COMMENT G-23: While the RDEIR does include a No Area 4 Development alternative that would avoid most development in sea-level-rise prone areas, it dismisses this alternative as inadequate for its lack of executive estates. The RDEIR must be revised and recirculated to include a climate change adaptation strategy consistent with state and regional policies.

RESPONSE G-23: Consistent with the 2009 California Climate Adaptation Strategy, the RDEIR evaluates a project alternative that avoids new development in areas that cannot be protected from future flooding due to climate change. It is the No Development in Area 4 and Higher Density Area 3 Alternative (RDEIR pg. 373).

It should be noted that the CEQA process is not considered the mechanism for implementing the 2009 California Climate Adaptation Strategy. The California Natural Resources Agency, in their Final Statement of Reasons for Regulatory Action, Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions pursuant to SB97 (December 2009), described the relationship between the CEQA Guidelines and the California Climate Adaptation Strategy (Adaptation Strategy). They stated how there were key differences between the Adaptation Strategy and CEQA.

> "First, the Adaptation Strategy is a policy statement that contains recommendations; it is not a binding regulatory document. Second, the Adaptation Strategy focuses on how the State can plan for the effects of climate change. CEQA's focus, on the other hand, is the analysis of a particular project's greenhouse gas emissions on the environment and mitigation if impacts from those emissions are significant. Given these differences, CEQA should not be viewed as a tool to implement the Adaptation Strategy; rather, as indicated in the Strategy's key recommendations, advanced programmatic planning is the primary method to implement the Adaptation Strategies."

COMMENT G-24: F. The RDEIR's Water Supply Assessment Must be Updated.
The RDEIR relies on the November, 2008, Alameda County Water District, "Water Supply Assessment for Newark Areas 3 & 4 Specific Plan EIR Project" to support its conclusion that the project would not result in any significant impact to groundwater or surface water supplies. The RDEIR states that since 2008, "[t]here have been no changes to existing conditions or the regulatory environment that would result in a new impact related to water supply or utilities, or an impact of substantially greater severity than was previously identified in the EIR." (RDEIR 301.) In fact, California is now in its third year of one of the worst droughts in the State's history. In April of this year, the California Department of Water Resources issued a 178 page "Central Valley Project and State Water Project Drought Operations Plan and Operational Forecast April 1, 2014 through November 15, 2014," outlining countless operational shortages and constraints. (http://www.water.ca.gov/waterconditions/docs/2014-Operations-Plan.pdf) Similarly, the California Resources Agency published, earlier this year, a new "California Water Action Plan." (http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf) The RDEIR cannot simply rely on pre-drought State Water Project supplies with no further review or discussion of potential impacts. Indeed, in light of the extreme water shortages faced throughout the state, any new demand on already strained supplies must be considered to be a significant impact.

RESPONSE G-24: ACWD confirmed the accuracy of its existing Water Supply Assessment (see Comment D) Please refer to Response D-1.

COMMENT G-25: G. The RDEIR's Biological Impact Mitigation Measures are Impermissibly Vague and Deferred. The RDEIR fails to adequately mitigation impact BIO-10, which states that the proposed project would "indirectly" impact large numbers of foraging and roosting waterbirds, including species protected by the Migratory Bird Treaty Act in the wetland portions of the site. (RDEIR 194.) First, it is unclear why the RDEIR refers to this impact as "indirect," when the project's direct impacts on habitat will affect these bird species.

RESPONSE G-25: This impact is considered indirect because it pertains to the potential disturbance of waterbirds using unimpacted perennial wetlands over the long term, as a result of disturbance associated with nearby development and recreational use of levee trails. There will be very little direct impact to waterbirds from the project, as the very limited areas of seasonal wetlands to be impacted have been heavily disturbed by long-term cultivation, and they are not heavily used by waterbirds, as indicated in the RDEIR.

BIO-10 adequately mitigates the impact. The wetlands that will not be filled will retain use by waterbirds. The new wetlands created as mitigation for this impact would be located at least 300 feet from any development to minimize indirect impacts of disturbance on waterbirds. These wetlands would be created to compensate for the loss of use of wetlands that will not be filled, and thus, the extent of wetlands available for use by waterbirds on the site will increase as a result of this mitigation measure. Therefore, the creation of new wetlands as required by this measure will provide additional waterbird

habitat that will support sufficient numbers of waterbirds to reduce this impact to a less-than-significant level.

COMMENT G-26: Second, mitigation measure BIO-10.1 contains numerous flaws: enhanced or newly created habitat is required at a 0.5:1 ratio, which still results in a 50% loss, and, falls short for each of the reasons the wetland mitigation measures, above, are inadequate.

RESPONSE G-26: The commenter misunderstood mitigation measure BIO-10.1. This measure requires the creation of 9 acres of new wetlands to offset the loss of use of 18 acres of perennial wetlands that would not be filled, and thus would not be lost. Therefore, where 18 acres of perennial wetlands currently exist, mitigation measures BIO-10.1 would result in the presence of 27 acres of perennial wetlands to offset the effects of disturbance on waterbirds using the former Pintail Duck Club. Because the mitigation wetlands would be located at least 300 feet from areas of disturbance, they, in conjunction with the wetlands that would remain unfilled on the site, would support sufficient waterbird abundance to reduce the impact to waterbirds to a less-than-significant level.

COMMENT G-27: Moreover, the mitigation measure actually allows the wetland mitigation parcels to credit for bird habitat mitigation, despite the RDEIR failing to show that the bird habitat impacted is wholly coextensive with the wetlands lost.

RESPONSE G-27: The bird habitat impacted is not wholly coextensive with the wetlands lost; as clarified in responses to comments G-25 and G-26, the mitigation wetlands required by mitigation measure BIO-10 are required for indirect impacts to wetlands that will not be filled. They are intended to replace the anticipated reduction in use of wetlands that will not be filled. If the wetlands created or restored as mitigation for lost jurisdictional wetland habitat meet the criteria for suitable waterbird habitat outlined in mitigation measure BIO-10, then it is appropriate to allow the same wetlands to compensate for both impacts, as their mitigation serves different purposes. If the same mitigation wetlands meet the criteria for compensatory jurisdictional wetlands, and they are perennial or near-perennial with a variety of water depths and they thus provide habitat to support waterbirds, then impacts to both jurisdictional wetlands and waterbirds will have been reduced to less-than-significant levels.

COMMENT G-28: Further, development of this mitigation measure is illegally deferred, requiring that "[a] mitigation plan shall be developed that outlines the proposed wetland creation/enhancement for indirect impacts to waterbird use of wetlands on the site. It will include a plan showing the target mitigation activities and a monitoring and reporting plan with success criteria. The plan shall include a recommended timeline for mitigation activities." (RDEIR 196.) Deferral to a future plan is only appropriate where the EIR provides clear guidelines and performance criteria that must be met. Here, the RDEIR simply defers creation of those criteria to

the future plan itself.

RESPONSE G-28: Mitigation measure BIO-10.1 has been revised as follows to specify the performance criteria:

A mitigation plan shall be developed that outlines the proposed wetland creation/enhancement for indirect impacts to waterbird use of wetlands on the site. It will include a plan showing the target mitigation activities and a monitoring and reporting plan with success criteria. Success criteria will include verification that the as-built condition includes at least 9 acres of habitat with a variety of water depths, ranging from very shallow water or exposed mud to water up to 2-4 feet deep, and that this habitat includes some areas that contain ponded water for at least 10 months of the year. The plan shall include a recommended timeline for mitigation activities.

COMMENT G-29: Mitigation measure BIO-4.7 relies on private enforcement to curtail introduction of predator species, including pets. This is insufficient to guarantee the proposed mitigation measures will be effective. In essence, the RDEIR proposes that the very sources of introduction or support for new predator species will be required to police themselves, which would be entirely unlikely as it would require private, third-party rights of action against a household or neighborhood association not in compliance with these mitigation measures.

RESPONSE G-29: Measure BIO-4.7 does not rely entirely on private enforcement; as stated in this measure, both the neighborhood association and the City will be responsible for enforcing the program. Please also refer to the Response E-80.

COMMENT G-30: H. The RDEIR Fails to Evaluate Consistency with Applicable Regional Plans or the Public Trust Doctrine. The majority of Area 4 lies within the Refuge expansion boundary, and should be preserved and protected to this end. Similarly, the Bay Goals project recommended preservation and enhancement of these lands, and the Tidal Marsh Ecosystem Recovery Plan recommended the entirety of Area 4 be restored to transition habitat. The RDEIR fails to evaluate consistency with these plans.

RESPONSE G-30: The Bay Goals project's recommended use of these lands and the Tidal Marsh Ecosystem Recovery Plan are not regional plans that govern the use of Newark Areas 3 and 4. They recommend possible uses of these lands for conservation purposes, if the lands were acquired by entities involved in conservation activities, but they have no regulatory authority or land use planning authority over these lands, nor are they binding in any way. Please also refer to the Responses E-49 and E-50. The commenter does not elaborate on how the project could be inconsistent with the public trust doctrine, which precludes private ownership of tidal and submerged lands.

COMMENT G-31: The RDEIR also acknowledges that the project must be reviewed for

consistency with the Bay Conservation and Development Commission's ("BCDC") Bay Plan, but fails to evaluate this, despite numerous likely inconsistencies with the Bay Plan. For example, BCDC's Bay Plan states:

Maintain Wildlife Refuges in Diked Historic Baylands. Prime wildlife refuges in diked-off areas around the Bay should be maintained and several major additions should be made to the existing refuge system. (Bay Plan at 4.)

. . .

The discharge of pollutants from urban areas can be controlled during site planning, construction, and post-construction. New development can be sited and designed to: (1) prevent pollutants from reaching waterways; (2) reduce impervious surfaces and maximize permeability; (3) protect important natural areas such as wetlands and riparian habitats; (4) minimize land disturbance to reduce erosion; and (5) minimize disturbance of natural drainage features and vegetation to reduce excessive sedimentation. (Bay Plan at 18.)

It is hard to see how the proposed project, on its face, could be consistent with these policies. Indeed, the RDEIR itself is unclear even to the extent to which it believes the project area will be subject to BCDC review and approval. The Bay Plan is clear that all diked marshes that once were part of San Francisco Bay remain under BCDC jurisdiction. (Bay Plan at 5.)

RESPONSE G-31: Any development of areas under BCDC jurisdiction, if any, would require permitting from BCDC. Please also refer to Master Response 3 regarding the BCDC jurisdiction. The extent of BCDC jurisdiction (if any) over the project is a legal issue beyond the scope of CEQA.

COMMENT G-32: Similarly, marshes and wetlands that were once regularly inundated by the tides are protected by the Public Trust Doctrine, which requires that any permitted use of a trust resource either (1) results in the improvement of the public interest, or (2) will occur without detriment to the public interest in the lands and waters. (See *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 455-456.) Clearly the proposed project would not benefit any traditional public trust use, and would seriously impair trust resources by filling in existing wetlands. The RDEIR has simply failed to take any Public Trust implications into account.

Instead, the RDEIR repeatedly elevates promoting the goals of the City's General Plan above these extremely important regional and state plans and policies. The RDEIR must be revised to consider the broader implications of the project.

RESPONSE G-32: The areas that may be filled are not public lands (they have been in private ownership for over a century), not navigable waterways, not tidelands, do not support fishing, and no evidence exists that Area 3 or 4 was even submerged under the Bay or subject to tidal action. Therefore, the public trust doctrine has no application. Further the project would not appropriate water in a manner that would be harmful to the public trust. Any change in use of jurisdictional wetlands, Waters of the US and/or State and areas that are habitat for endangered animals would be subject to appropriate permitting

with associated mitigation and thus would not conflict with the public use doctrine. See Response H-21.

COMMENT G-33: I. The RDEIR Inadequately Evaluates Exposure to Hazardous Materials. One unaddressed source of potentially adverse human health impacts is the use of utility poles treated with pentachlorophenol. These utility poles have been documented to drip dioxins and other carcinogenic materials into the surrounding environment, including human contact, resulting in likely violations of the federal Resource Conservation and Recovery Act, and substantial endangerment to public and environmental health. (See Attachments 1 and 2) These chemicals should also be evaluated for their potential to become entrained and discharge in stormwater runoff. The RDEIR should evaluate this exposure risk, and feasible mitigation measures and alternatives such as the use of composite, recycled material poles, buried utility lines, or other measures.

RESPONSE G-33: The overhead electric lines with wood poles will be undergrounded as a part of the future development in Area 4. MM-HAZ-4.1 outlines how prior to any ground disturbance and grading, the Area 4 will be further evaluated to with oversight and approval from the City, Department of Toxic Substances Control (DTSC) and/or the Alameda County Water District. Imported fill is also planned for this area, which would further avoid the possibility of contamination.

COMMENT G-34: Elsewhere, the RDEIR requires the project area to be surveyed for potential surface or subsurface contamination that could become exposed through development, or that otherwise may adversely affect the built-out project. However, the RDEIR should conduct this investigation now. The RDEIR has a duty to perform a reasonable investigation into the existing environmental conditions of the project area, yet here, that evaluation is wholly deferred to an unknown later date. This deferral could result in serious human health hazards to future project occupants, as is evidenced by the recent citizen lawsuit filed against the City for similar circumstances. (See Attachment 3)

RESPONSE G-34: Section 3.9 of RDEIR evaluates the hazardous materials impacts that may result from development of the proposed Areas 3 and 4 Specific Plan. This section was based upon various Phase I Environmental Site Assessments, a Screening Level Hazardous Materials Reviews and a Soil, Soil Gas and Groundwater Quality Evaluation. At no location within the project site were uses proposed that were determined to be incompatible with the level of contamination present, given the level of effectiveness of remediation options presented for the hazardous materials known to be present on the site. As described in the RDEIR, at the time a project-specific development is proposed, further technical studies will be completed as needed, specific to the location and proposed use. As part of that work, soil and groundwater testing will be completed and the best remediation approach will be defined and presented to the City and DTSC as part of possible future environmental review documents. DTSC will have the opportunity to review and comment

on the proposed remediation method, prior to taking any action in considering the remediation plan.

COMMENT G-35: J. Greenhouse Gas Mitigation Measures are Unduly Vague.
While conceding that the project will have the significant and unavoidable effect of worsening global climate change, the RDEIR offers the wholly misleading mitigation measure that "[a]ll residential subdivisions and new commercial buildings within the Specific Plan shall incorporate as many green practices as appropriate and feasible in buildings and structures constructed subject to approval of the City of Newark." (RDEIR 325.) Unfortunately, it is entirely unclear which practices are "appropriate" and "feasible." This section must be rewritten with an earnest attempt at evaluating greenhouse gas emission alternatives and mitigation measures, and the resulting benefits of each.

RESPONSE G-35: The commenter expresses concern that Mitigation Measure C-GCC-4.1 fails to specify which green practices are "appropriate and feasible."

The commenter is directed to page 354 of the RDEIR which list the green practices that will be implemented through the Specific Plan. These measures will all reduce the project's GHG emissions, either directly or indirectly. For instance, the RDEIR states that all development will be required to "comply with the City of Newark Green Building and Construction and Demolition Recycling Ordinance." (RDEIR pg. 354.) Further, the Specific Plan includes an extensive list of Water Conservation Standards which will require "all residential and non-residential development within Areas 3 and 4" to be "development with the latest technology in water efficient plumbing fixtures and irrigation systems." (Id.) The RDEIR also includes a detailed list of just some these systems, such as "high efficiency (1.3 gallons per flush or less) and dual flush toilets," and "air cooled ice machines." (Id.) Further measures aimed at reducing the project's GHG emissions must be implemented within the Specific Plan as appropriate and feasible. These measures are included in Avoidance Measure C-GCC-4.1, which include specific green practices that have been determined appropriate and feasible for implementation as part of the Specific Plan.
Additional measures which will further reduce GHG emissions associated with the project are contained in the RDEIR's Energy Section, specifically Mitigation Measures ENR-1.1 to 1.4.

It should be noted that since the greenhouse gas emissions analysis was prepared for the Newark Areas 3 and 4 project, the BAAQMD recommended emissions modeling program used to predict the emissions has changed from the URBEMIS2007 model to the California Emissions Estimator Model (CalEEMod). This analysis in the RDEIR has been updated to reflect the changes in the new modeling data. Refer to *Section 4.0 Revisions to the Text of the RDEIR* of this document for the updated discussion in the RDEIR and updated greenhouse gas emissions analysis. The updated model determined

that the greenhouse gas emissions would no longer be a significant unavoidable impact, but a less than significant impact. Section 4.0, *Revisions to the Text of the RDEIR*, includes the new air quality analysis.

COMMENT G-36: K. The RDEIR Illegally Defers Air Quality Impact Mitigation Measures. The RDEIR improperly relies on numerous illegally deferred mitigation measures to lessen the Project's significant air quality impacts:

- Improve existing or construct new bus pullouts and transit stops at convenient locations along Cherry Street and Stevenson Boulevard. (RDEIR 119.)
  - Where will this occur? Are "convenient" locations available?
- Appropriate bicycle amenities shall be included. This would include bike lane connections throughout the project site. Off-site bicycle lane improvements shall be considered for roadways that would serve the project. (RDEIR 119.)
  - What standards guide whether bicycle amenities are "appropriate"? Will appropriate locations be available? Off-site improvements will merely be "considered," and this fails to provide any binding commitment to implement this mitigation measure, nor any proffered criteria by which to projects will be "considered."
  - The City and project proponents shall explore and implement feasible means to bring transit or shuttle service to Area 4. (RDEIR 119.)
  - This measure fails to provide guiding criteria or a binding commitment.
- Consider providing pedestrian signs and signalization to make a pedestrian friendly environment. (RDEIR 119.)
  - This measure fails to provide guiding criteria or a binding commitment.

RESPONSE G-36: The proposed amenities will provide a pedestrian and bicycle-friendly environment, seeking feasible means to bring transit and/or shuttle service to Area 4, will also reduce vehicle miles traveled, and reduce GHG emissions. At the time detailed plans are proposed for Area 4 development, the means of improving transit access to the site will be further evaluated.

COMMENT G-37: The DEIR considers Impact AIR-2, ROG and NOx emissions, to be significant and unavoidable. What mitigation measures or alternatives were considered to avoid this significant impact?

RESPONSE G-37: As described in the RDEIR, the project's operational ROG emissions are produced largely by consumer products; that is, products that the general public purchases, including solvents, paints, cleaners, cosmetic products, landscaping products (e.g. fertilizers) and automotive products. These types of emissions increase with the rate of population increase and there are no methods available to the City to mitigate these emissions. The California Air Resources Board has authority to regulate these statewide through regulations imposed on manufacturers, but the City does not have authority to limit its residents' use of legal consumer products. The No Project and the Reduced Housing Alternatives would each serve to reduce the ROG and NOx

generated at the site, since they would accommodate a reduced population, compared to the project.

Emissions of NOx are generated by vehicle traffic, natural gas consumption, use of landscape equipment, consumer products, architectural coatings, and wood burning. The BAAQMD has recently adopted new rules prohibiting any new wood burning stoves and wood burning fireplaces, which is a measure that will reduce NOx emissions.

Vehicle emissions produce ROG and NOx. Vehicle emission rates for ROG and NOx are currently decreasing with each year and are projected to decrease substantially between 2010 and 2020, as older, more polluting vehicles are retired from the roadways. The mitigation measures identified in the RDEIR to reduce vehicle trips (MM AIR-1.1) would reduce NOx and ROG. But even with mitigation, ROG and NOX impacts from all sources combined would remain significant. Therefore, the RDEIR concluded that they were significant and unavoidable. The No Project and Reduced Housing Alternatives, with fewer residences than the project, would reduce vehicle trips and associated air pollutants, like NOx and ROG.

COMMENT G-38: Conclusion For each of the reasons stated above, we request that the RDEIR be revised to facilitate informed public decision-making and environmental policy, and to better reduce or avoid the project potentially significant impacts to wetlands, water quality, and water resources.

RESPONSE G-39: Refer to Responses G-1 through G-38. The commenter's concerns will be included in this Recirculated Final EIR and will be before the City's decision-makers, the City Council, for their consideration.

H. RESPONSE TO COMMENTS FROM LAW OFFICES OF BRIAN GAFFNEY FOR CITIZENS TO COMPLETE THE REFUGE, SEPTEMBER 19, 2014

COMMENT H-1: This office represents Citizens Committee to Complete the Refuge and its members in regards to the City of Newark's proposed Draft Recirculated EIR for the Newark Areas 3 and 4 Specific Plan Project. ("REIR"). Attached hereto please find detailed comments from this office about how the REIR violates CEQA.

In addition, please find attached (A) May 28, 2010 comments from Grassetti Environmental Consulting, (B) June 10, 2010 comments of the San Francisco Bay Regional Water Quality Control Board, and (C) Wildscape Engineering Services – each of which is still relevant to this REIR and which the City should provide responses to at this time.

Because the REIR is fundamentally and basically inadequate, meaningful public review and comment are precluded. Once the REIR is fixed it must be recirculated for public review and

comment. Prior to the City Council's decision, if ever, that the REIR complies with CEQA and therefore may be certified, no action in furtherance of the Project should be permitted.

I. Program or Project Level of Analysis.

In Citizens Committee to Complete the Refuge v City of Newark, Alameda Superior Case # RG10530015, the trial court was concerned with

(1) the 2010 EIR's clarity in stating whether the agency intends the EIR is complete by itself or anticipates further tiered environmental review affects the adequacy of the EIR as a disclosure document;
(2) an EIR's timing, purpose, nature, and other circumstances affect the level of scrutiny the court will require when evaluating compliance with CEQA; and
(3) an EIR's scope and specificity will affect a future agency decision whether future yet- to-be-defined actions were covered by the EIR and whether the agency can, or is permitted to, conduct supplemental environmental review.

The trial court found the proposed project is in the nature of a "program EIR" in that it concerns planning and zoning and does not describe the demolition or construction of specific buildings or infrastructure.

The trial court noted that the 2010 EIR stated that "[a]s explained on pages 2 – 3 of the [2010] Draft EIR, when future discretionary approvals related to the Project are sought from the City (as well as from any responsible agency) the City will consider whether there is a need for additional environmental review pursuant to CEQA Guidelines Section 15162."

The trial court found that "the EIR fails to meet its purpose as a disclosure document because it does not clearly state whether the City intends the EIR to be a sole-tier EIR or anticipates further tiered environmental review. The trial court held that "the public is entitled to be informed whether the approving agency considers the EIR to be a sole-tier document and does not anticipate any further environmental review absent a significant change (Pub. Res. Code § 21166; 14 CCR 15162) or considers an EIR to be a first-tier document regarding a "policy, plan, program, or ordinance" where the agency anticipates subsequent review (Pub. Res. Code §§ 21093, 21094; 14 CCR 15152, 15153)." The trial court held that "informed public discussion and analysis requires that the approving agency indicate whether it anticipates future environmental review." (Statement of Decision, pg. 24)

1. The REIR equivocates on whether the City anticipates further environmental review, or if this REIR will be the sole-tier of environmental review.

RESPONSE H-1: The commenter requests that the following comment letters be responded to as part of this Final EIR: May 28, 2010 Grassetti Environmental Consulting comment letter, June 25, 2010 San Francisco Bay Regional Water Quality Control Board (RWQCB) comment letter, and January 19, 2010 Wildscape Engineering Services comment letter. The May 28, 2010 Grassetti Environmental Consulting comment letter and the June 25, 2010 RWQCB letter were responded to as part of the June 25, 2010 City Council Staff

Report. The January 19, 2010 Wildscape Engineering Services comment letter was responded to the in the April 2010 Newark Areas 3 and 4 Final EIR.

The commenter is confusing the meaning under CEQA of a Program Level document. Please refer to Master Response 1 for clarification. The commenter states that the "REIR equivocates on whether the City anticipates further environmental review, or if this REIR will be the sole-tier environmental review" based on the REIR's explanation of how the City will determine whether additional environmental review will be required for elements evaluated at a programmatic level (for an explanation of which elements are evaluated at a programmatic level, refer to Master Response 1). Specifically, the REIR states that the City will comply with the requirements in CEQA Guideline section 15168, which sets forth the requirements to determine whether future review is required after preparation of a program EIR. CEQA Guideline section 15168 states in relevant part:

> (c) Use With Later Activities. Subsequent activities in the program must be examined in the light of the program EIR to determine whether an additional environmental document must be prepared.
>
> (1) If a later activity would have effects that were not examined in the program EIR, a new initial study would need to be prepared leading to either an EIR or a negative declaration.
>
> (2) If the agency finds that pursuant to Section 15162, no new effects could occur or no new mitigation measures would be required, the agency can approve the activity as being within the scope of the project covered by the program EIR, and no new environmental document would be required.
>
> (3) An agency shall incorporate feasible mitigation measures and alternatives developed in the program EIR into subsequent actions in the program.
>
> (4) Where the subsequent activities involve site specific operations, the agency should use a written checklist or similar device to document the evaluation of the site and the activity to determine whether the environmental effects of the operation were covered in the program EIR.
>
> (5) A program EIR will be most helpful in dealing with subsequent activities if it deals with the effects of the program as specifically and comprehensively as possible. With a good and detailed analysis of the program, many subsequent activities could be found to be within the scope of the project described in the program EIR, and no further environmental documents would be required.

Under CEQA Guideline 15168(c)(2), the City must make a determination under CEQA Guideline 15162 whether the proposed future activity would have new environmental effects or would require new mitigation measures. CEQA Guideline 15162 states in relevant part:

> (a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:
>
> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:
>
> (A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;
>
> (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
>
> (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
>
> (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The above language mirrors and expands on the language in Public Resources section 21166. Read together, CEQA Guideline 15168 and 15162 indicate that if a future project is within the scope of the impacts analyzed in a program EIR, no further environmental review is required, and an agency's decision not to undertake further environmental review, if challenged, would

be reviewed by a court for substantial evidence. (See *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.Appg.4th 1036, 1050–51 ["For purposes of the standard of review, the same substantial evidence standard applies to subsequent environmental review for a project reviewed in a program EIR or a project EIR."].) Accordingly, the RDEIR's statement that it would evaluate future applications based on the criteria in CEQA Guideline 15168 is not an equivocation, as it correctly states CEQA's requirements.

COMMENT H-2: The REIR states that "for elements evaluated at a program level, it is anticipated that the City and other responsible agencies will apply the tiering criteria of CEQA Guidelines section 15168, which includes a consideration of the factors under Section 21166 to determine whether and what level of additional environmental analysis is required." (REIR, pg. S-5). However, Public Resources Code section 21166 only requires preparation of a subsequent or supplemental EIR when either:

(a) substantial changes are proposed in the project which will require major revisions of the EIR.
(b) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the EIR.
(c) new information, which was not known and could not have been known at the time the EIR was certified as complete, becomes available.

2. Clarify what is meant by evaluation "at a program level" at REIR pg. S-5. How would this analysis have been different if evaluated at a project level?

RESPONSE H-2: The commenter is confusing the meaning under CEQA of a Program Level document. Please refer to Master Response 1 for clarification. The commenter asks how the analysis would have been different if certain activities contemplated by the Specific Plan, such as development in Area 4, were analyzed at a project level rather than program level. A program and project EIR must meet the same content requirements, which are "discussed in Article 9 beginning with Section 15120," and thus the contents of the EIR would not differ. (See Friends of Mammoth v. Town of Mammoth Lakes Redevelopment Agency (2000) 82 Cal.Appg.4th 511, 533.) But a Project EIR generally contains more detail than a Program EIR because more detail is known about the proposal being analyzed. (See Citizens for a Sustainable Treasure Island v. City and County of San Francisco (2014) 227 Cal.Appg.4th 1036, 1048 ["The level of specificity of an EIR is determined by the nature of the project."].) For example, when the City receives a detailed proposal to develop Area 4 that includes the exact number of homes, type of recreation facility, placement of roads, the area and location of fill (if any), and other details not now known, the City will be able to consider those details in its analysis of that proposal's potential environmental impacts.

COMMENT H-3: 3. The REIR also states that "[a]nalysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans." (REIR, pg. S-4)

4. Clarify if there will be further environmental review for the school in Area 3, the residential development in Area 4, and the golf course development in Area 4.

RESPONSE H-3: The commenter correctly notes the Project does not include detailed information about the design of the school that may be constructed in Area 3 or the residences and recreational facility that may be developed in Area 4.

Commenter seeks more information about future environmental review. The City (or School District) will conduct future environmental review once design details about a school or development (residential or recreational) in Area 4 is known in accordance with CEQA Guideline section 15168 and Government Code section 65457. Please refer to Master Response 1 and Response H-1 above and Response H-14 below for more detail.

COMMENT H-4: 5. Explain what is meant by "analysis of impacts at a programmatic level" of the impacts from the construction and operation of an elementary school in Area 3. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-4: Commenter asks what analysis regarding the construction and operation of a school in Area 3 has been omitted from the RDEIR. The RDEIR analyzes the impacts related to locating an approximately 20,000 square-foot, 600-student elementary school in Area 3 and analyzes impacts of construction and operation based on what is typical for a school. The RDEIR does not analyze impacts that could stem from design details that are now unknown, including the school's construction schedule, architectural detail, or playfield locations in relation to residences. These additional design details may (or may not) give rise to new environmental impacts that cannot be known at this time.

COMMENT H-5: 6. Explain what is meant by the "programmatic level of analysis" of the environmental impacts from the construction of new houses in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-5: Commenter asks what is meant by the "programmatic level of analysis" of the environmental impacts from the construction of new houses in Area 4. The RDEIR analyzes the potential impacts of building the maximum number of houses allowed under the Specific Plan in Area 4, assuming that 85.6 acres of wetland fill would be required to do so. The RDEIR also evaluates, at a level appropriate to what is now known, potential impacts to buried cultural resources, hydrology and drainage, and impacts to other biological resources, noise and air quality, and hazardous materials. No known information has been omitted. The RDEIR does not analyze potential impacts deriving from

details not now known, such as specific number of houses, the layout of the roads in Area 4 or exact amount of wetland fill, if any, that would be needed. Before such houses could be built, the City would have to issue additional discretionary approvals, including an approval of a tentative map. When the City receives a proposal to construct houses in Area 4, it will analyze the potential environmental impacts of that proposal in accordance with the requirements of CEQA Guideline 15168 and Government Code section 65457. Please refer to Master Response 1 and Response H-1 above and Response H-14 below for more detail.

COMMENT H-6: 7. Explain what is meant by the "programmatic level of analysis" of the environmental impacts from the construction and operation of a golf course in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-6: No known information has been omitted. Commenter asks what is meant by the "programmatic level of analysis" of the environmental impacts from the construction and operation of a golf course in Area 4. The RDEIR analyzes the potential impacts of building and operating an approximately 120-acre, 18-hole golf course in subarea C of Area 4, although the Specific Plan also would allow a different type of recreational facility in that location. The potential environmental impact of the golf course use is analyzed in the respective sections of the RDEIR, including transportation, air quality, biological resources, hydrology, flooding and water quality, hazardous materials, water supply, utilities, and energy. The RDEIR does not analyze environmental impacts arising from details not now known, such as the specific site plan for a regular or championship course, exact amenities and features, hours of operation, lay-out, or landscape design of a golf course or other recreational facility. Before a golf course or other recreational facility could be built, the City would have to review additional applications and issue additional discretionary approvals, including an approval of a conditional use permit. When the City receives a proposal to construct a specific recreational facility in Area 4, it will analyze the potential environmental impacts of that proposal in accordance with the requirements of CEQA Guideline 15168. Please refer to Master Response 1 and response H-1 above for more detail.

COMMENT H-7: 3. Clarify what analysis has been deferred from this REIR. The REIR states that analysis of "detailed, site-specific information can be deferred until such time as the lead agency prepares a future environmental document in connection with a proposal of a more limited geographic scale or more specific improvement." (REIR, pg. 3)

RESPONSE H-7: No known information has been omitted. The REIR does not include an environmental analysis of project details that are not now proposed or known, including the proposed placement and exact number of homes in Area 4 (a maximum number is assumed), the operational characteristics of the possible

recreational facility in Area 4, and the design/lay-out of a school that may be proposed in Area 3. When these elements of the project are proposed for construction, applications can be reviewed that include these details, as would be necessary before the City or School District would permit construction. The City or School District will analyze the details in accordance with CEQA Guideline 15168 and, for the residences in Area 4, Government Code section 65457. Please refer to Master Response 1 and Response H-1 above and Response H-14 below for more detail.

COMMENT H-8: 4. Explain what is meant by evaluation "at a programmatic level" of construction of the Stevenson Boulevard railroad crossing. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-8: No known information has been omitted. The RDEIR analyzes the potential impacts of constructing the Stevenson Boulevard railroad crossing based on the details presented in Sections 2.4.2.1 and 2.4.4 of the RDEIR, which reflects the information in the Specific Plan. Since the final design of the railroad crossing is not known, the RDEIR does not analyze the final design. When the City receives a proposal for the final design, it will analyze it in accordance with CEQA Guideline 15168. Please refer to Master Response 1 and response H-1 above for more detail.

COMMENT H-9: 5. Explain what is meant by evaluation "at a programmatic level" of construction of the Mowry Avenue EVA access. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-9: No known information has been omitted. The RDEIR analyzes the potential impacts of the Mowry Avenue EVA and multi-use trail as it is described in Section 2.4.6 of the RDEIR, which reflects the information in the Specific Plan. This description is not based on a final design, which when proposed, will be analyzed in accordance with CEQA Guideline 15168. Please refer to Master Response 1 and response H-1 above for more detail.

COMMENT H-10: 6. Explain what is meant by evaluation "at a programmatic level" of relocation of PG&E transmission lines in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

RESPONSE H-10: No known information has been omitted. The RDEIR analyzes the changes to the PG&E towers and lines described in Section 2.4.5 of the RDEIR, which reflects the information in the Specific Plan. This description is not based on a final design, which when proposed, will be analyzed in accordance with CEQA Guideline 15168. Please refer to Master Response 1 and Response H-1 above for more detail.

COMMENT H-11: 7. Explain how the REIR's programmatic analysis of the Area 3 construction/occupation of an elementary school and three-acre joint-use park has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

RESPONSE H-11: Please refer to Master Response 1.

COMMENT H-12: 8. Explain how the REIR's programmatic analysis of the construction/occupation of residential units in Area 4 has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

RESPONSE H-12: Please refer to Master Response 1.

COMMENT H-13: 9. Explain how the REIR's programmatic analysis of the development/use of a public golf course or other recreational facility in Area 4 has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

RESPONSE H-13: Please refer to Master Response 1.

COMMENT H-14: 10. The trial court's Statement of Decision held that the 2010 EIR violated CEQA as the 2010 EIR did not specify if further environmental review was forthcoming. Does the City intend to invoke Government section 65457 to prevent further environmental review of residential development in Sub Areas A, B, and C?

RESPONSE H-14: Commenter asks whether the City plans to rely on Government Code section 65457 when it receives applications to construct residences in certain subareas of Areas 3 and 4. This question is unrelated to the environmental analysis in the RDEIR. Government Code section 65457 exempts residential development projects found to be consistent with a specific plan for which an environmental impact report has been certified from further analysis under CEQA. The analysis of the residential development allowed in Area 3 is site-specific, so the City will not rely on the exemption in Government Code 65457. Regarding Area 4, the City will make the determination of the applicability of this section when it receives a development proposal for residences there. This question is unrelated to the environmental analysis in the RDEIR. For public disclosure purposes, the public should be advised that Government Code section 65457 exists to encourage the construction of housing and that future residential development contemplated by the Specific Plan may qualify for the CEQA exemption provided by that law. There will be opportunities for the public to review, comment on and challenge any future determination the City makes with respect to the applicability of this section.

COMMENT H-15: 11. The REIR fails to include project-level analysis of the Alameda County Flood Control and Water Conservation District accepting maintenance/access easements along levees and/or approving permits to add/replace a flapgate at the Line D outfall in Area 3. The REIR, at section 1.3.1.3 "Program-Level Analysis in the Recirculated EIR," states that Newark anticipates "the need for subsequent environmental review" for the Alameda County Flood Control and Water Conservation District's acceptance of maintenance/access easements along levees and/or permit to add outfall(s) in Area 4. This contrasts with the REIR's claim that Newark "intends this Recirculated EIR to adequately address the environmental impacts that could result from the Alameda County Flood Control and Water Conservation District (ACFC&WCD) accepting maintenance/access easements along levees and/or approving permits to add/replace a flapgate at the Line D outfall in Area 3." (REIR pg. 4.) The REIR summary also shows this project approval as subject to "project level" analysis in both Area 3 and in Area 4. (REIR ppg. S-7 & S-8)

RESPONSE H-15: Since issuance of the RDEIR, it was determined that no new flapgates will be required for Area 3; therefore, no environmental review is necessary. The RDEIR contains a more conceptual analysis of development in Area 4, including the Alameda County Flood Control and Water Conservation District's acceptance of maintenance/access easements along levees and/or approval of permits to add outfalls in Area 4, because less detail is known about development in Area 4 than Area 3. (See RDEIR, Section 1.3.1.3 at pg. 5.) In response to this comment, the chart on pages S-8 and S-9 will be revised to clarify that the potential impacts of the Alameda County Flood Control and Water Conservation District's acceptance of maintenance/access easements along levees and/or approval of permits to add outfalls in Area 4 are analyzed at a programmatic level.

COMMENT H-16: 12. The Draft REIR is confusing and contradictory regarding the REIR's level of analysis of Newark's acceptance of park improvements and maintenance Agreement. The improvements and agreement are listed in the summary as subject to program level analysis. (REIR, pg. S-8) However, REIR section 1.3.1.3 which details the program-level analysis in the Recirculated EIR does not mention Newark's acceptance of park improvements and maintenance agreement as subject to a program level analysis.

RESPONSE H-16: Commenter correctly notes that Section 1.3.1.3 does not include discussion of the City's acceptance of park improvement and maintenance agreement for a park in Area 3. The Draft RDEIR will be revised in response to this comment. Refer to Section 4.0 *Revisions to the Text of the RDEIR*.

COMMENT H-17: **II. The REIR Does Not Properly Analyze Land Use Impacts**
1. The REIR considers an impact significant if the project will conflict with existing zoning for agricultural use. (REIR pg. 49) "The existing zoning designation for Area 4 [is] predominantly Agricultural (A)." (Footnote*:* (471.5 acres are agricultural; 53% of project area. (REIR, pg. 154) Most of the land within Areas 3 and 4 has been subject to long-term, dryland farming for 20 years, and in some areas outside of the historic duck club complexes south of the agricultural road, for as much as 100 years. When the duck clubs were closed in the 1970s and 1980s, dryland farming began across the most of Area 4 (outside of the former Pintail Duck Club area which remains perennially wet) and Area 3. (REIR pg. 156, fn 45)) (REIR pg. 21, 49, 70) Sub Areas B, C and D in Area 4 will be rezoned pursuant to the project. (REIR, ppg. 21, 70) Yet, the EIR fails to analyze land use impacts related to this conflict with existing zoning.

RESPONSE H-17: The RDEIR analyzes the land use impact from the loss of agricultural potential on the site (pg. 72) and the impact was determined to be less than significant. Since 1992, the City's General Plan has planned low-density residential, golf course and open space uses on Area 4, with the condition that the City prepare a Specific Plan before such development could occur. Until the time the Specific Plan were adopted and implemented, the Area 4 zoning would remain (predominantly) Agricultural. As described in the REIR, the impact is less than significant due to the history of the planned development of Area 4, the fact that the site is not currently under Williamson Act, and the site is not designated Prime Farmland, Unique Farmland, or Farmland or Statewide importance, the loss of this land for agriculture is not considered significant. Furthermore, it is possible that in the future undeveloped wetland areas could continue to be farmed as a part of the Specific Plan development. For these reasons, the loss of agricultural potential and related land use impact from the loss is considered a less than significant impact.

COMMENT H-18: 2. The REIR considers an impact significant if the project will conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Despite this threshold, the REIR fails to analyze if the project will cross this threshold.

RESPONSE H-18: The threshold of significance noted in the comment is incomplete. The actual wording is, "conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. The RDEIR (pgs 49-72) does analyze if the project will cross this threshold, evaluating the project's conformance with the MTC Plan Bay Area, Newark General Plan policies and zoning, and the BCDC Bay Plan. For all of these plans, the project was found to generally conform and, therefore, had a less than significant impact. Refer to Master Response 3 regarding BCDC jurisdiction of the project site.

COMMENT H-19: Elsewhere the RDEIR identifies the US Fish & Wildlife Service, the National Marine Fisheries Service, the Army Corps, the Regional Water Board, the California Department of Fish & Wildlife, and BCDC as agencies with jurisdiction over the project. Since LAFCO and Union Sanitary District are identified as agencies which the project will need to apply for Union Sanitary District Service Area permits, and Alameda County Flood Control and Water Conservation District will consider maintenance/access easements and/or permits to add outfall(s), these agencies have jurisdiction as well. There is no land use impact analysis of whether the project will "conflict with any applicable land use plan, policy, or regulation" for each of the above agencies. (Footnote*:* Nor does the REIR properly analyze whether the project will result in significant water quality impacts as the REIR excludes analysis of whether the project will Regional Water Quality Control Board (RWQCB) water quality objectives (REIR, pg. 244))

RESPONSE H-19: Refer to Response H-18. It is acknowledged that the project will require various permits and approvals from the agencies noted in the comment and, therefore, will need to abide by the rules and policies of the agency in order to obtain the permits. For most of the approvals noted, future tiered, project-specific CEQA review will describe how the project will meet the requirements of the permit(s). With regards to the Alameda County Flood Control and Water Conservation District, the project will abide by all applicable ordinances. With regards to the RWQCB, RDEIR MM HYD-1.1, MM HYD-1.2, MM HYD-1.3 and MM HYD-1.4 describe how the project will meet water quality objectives.

COMMENT H-20: 3. The REIR fails to analyze project conflicts with BCDC's Bay Plan. Even if subject to program level of review, the REIR is required to analyze reasonably foreseeable potential conflicts. The project is reasonably likely to include a golf course; this is not so speculative that the REIR can avoid any analysis of this potential conflict.

RESPONSE H-20: The RDEIR describes the BCDC Bay Plan (pgs 40-41, and 71) and how it relates to the project. Master Response 3 of this document provides a detailed evaluation of whether portions of Area 4 are within BCDC jurisdiction. Regardless, the RDEIR acknowledges that any impacts to BCDC jurisdiction Shoreline Band lands would require a permit from BCDC. By adhering to the

permit requirements, the project would conform to BCDC policies and would not result in a land use impact.

COMMENT H-21: 4. Further, neither the REIR's land use section or biological section analyze whether the project impacts will impact beneficial uses in Area 4, including but not limited to estuarine habitat; preservation of rare and endangered species; contact water recreation; non-contact water recreation; shellfish harvesting.

RESPONSE H-21: Refer to Master Response 2 regarding the project's impacts to wetlands and how they would be mitigated to preserve beneficial uses. With regards to the RWQCB objectives for ground and surface water quality, RDEIR MM HYD-1.1, MM HYD-1.2, MM HYD-1.3 and MM HYD-1.4 describe how the project will meet water quality objectives. There is no contact or non-contact water recreation or shellfish harvesting on the site.

COMMENT H-22: 5. The REIR fails to determine consistency with Newark General Plan Policy HW-5.3 remediation of soil and groundwater contamination. (REIR, pg. 69)

RESPONSE H-22: The policy calls for remediation of soil and groundwater contamination to a level that is consistent with the proposed land uses, which is exactly what is stated in the consistency evaluation (RDEIR pg. 69). The project is consistent with this policy.

COMMENT H-23: 6. The REIR improperly defers formulation of mitigation measures as the REIR vaguely states that "Hazardous materials in soil in Area 3 and 4 will be remediated to levels appropriate for the proposed residential and elementary school use," without defining the standard to be utilized. The remediation plan shall be developed after project approval.

RESPONSE H-23: The commenter is incorrect and is referred to the RDEIR (pgs 271-275). The RDEIR (MM HAZ-1.1) describes that the Remediation Plan for Area 3 residential shall be developed and approved by the City, ACWD, and DTSC prior to issuance of grading permits, and describes several possible options for mitigation of the residual organochlorine pesticides. The selection of the most appropriate method would be completed with the oversight of the City and the regulatory agency, in this case, DTSC. For cleanup of the school site, DTSC would be responsible for overseeing the assessment and cleanup of hazardous materials. For the Area 4 residential areas, the additional testing and development of remediation method(s) noted in MM HAZ-3.1 shall be completed as part of the future, project-specific review. The RDEIR adequately describes the areas where additional testing is needed, the appropriate oversight agencies, and the level of clean-up required.

COMMENT H-24: 7. The REIR states that "[i]n terms of the cumulative analysis, land use compatibility can be divided into short-term and long-term impacts," but the REIR fails to discuss

long term cumulative land use impacts. (REIR, pg. 330) This is troubling as the REIR warns that cumulative land use impacts could be substantial. (REIR pg. 329)

RESPONSE H-24: The RDEIR (pg. 330) describes how short-term compatibility impacts occur during construction and primarily affect sensitive uses near the construction sites. The on-going impacts are considered long-term impacts. The RDEIR states that all of the projects listed in the cumulative analysis would be required to implement General Plan policies and conform to residential and commercial design guidelines that are intended to minimize land use conflicts. Development in accordance with the City's General Plan, Zoning and Grading Ordinances, and adopted design guidelines will reduce the likelihood that the project considered in this cumulative analysis would result in a significant (long-term) cumulative land use compatibility impact. The proposed combined projects would not contribute to a significant cumulative land use compatibility impact.

COMMENT H-25: 8. While claiming that the thresholds of significance used in analyses of cumulative impacts are the same as those listed in Section 3 (REIR pg. 329) the REIR fails to identify or discuss the thresholds at REIR section 3.1.4.1. Thus, there is no consideration of whether the proposed project in combination with past, present and reasonably foreseeable projects will either (A) conflict with existing zoning for agricultural use, or (B) conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

RESPONSE H-25: Refer to Master Response 5 and Response H-24. The RDEIR (pg. 331) does describe the cumulative loss of agricultural lands. The commenter has not listed the specific plan, policies, and agencies the commenter thinks will result in land use conflicts and thus a more specific response is not possible.

COMMENT H-26: 9. The REIR's analysis of cumulative impacts is flawed. The REIR states that under CEQA an EIR should discuss cumulative impacts and consider them significant when the project's contribution is "cumulatively considerable." (REIR pg. 328) Then, the REIR asserts, the analysis must determine what the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by Section 15065(a)(3) of the CEQA Guidelines. (REIR, pg. 328-329)

CEQA does not limit discussion of cumulative impacts to where the project's "contribution" is cumulatively considerable. Instead, CEQA states that an EIR shall discuss cumulative impacts of a project when the project's "incremental effect" is "cumulatively considerable," as defined in section 15065(a)(3). (CEQA Guideline 15130) An agency shall find that a project may have a significant effect on the environment where the project has possible environmental effects that are "individually limited" but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (CEQA Guideline 15065)

Separately, an EIR may determine that a project's "contribution" to a "significant cumulative impact" will be rendered less than cumulatively considerable and thus is not significant IF the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact, and the agency identifies facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

The REIR's flawed approach to analysis of cumulative impacts leads to a flawed analysis of both cumulative land use and cumulative biological impacts.

RESPONSE H-26: The RDEIR correctly evaluates the cumulative impacts of the project and other past, present and probable future projects. CEQA Guidelines 15130(a)(2) states, "When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR." The RDEIR does that for land use, transportation, air quality, global climate change, noise, biological resources, cultural resources, hydrology and water quality, visual resources and energy (pg. 328-368). The RDEIR also describes how the mitigation measures included in the project will reduce the project's contribution to the cumulative impacts to a less than cumulatively considerable contribution. Note that the cumulative analysis uses "incremental effect" and "contribution" interchangeably.

With regards to the RDEIR's analysis of cumulative impacts to biological resources, this comment was raised in arguments against the original Draft EIR and the Court found that the EIR adequately explained the cumulative biological impacts in both the "Environmental Setting, Impacts, and Mitigation" section captioned "Biological Resources," in the cumulative impacts section captioned "Biological Resources" and in the appendix Biological Resources report. Also refer to Master Response 5.

COMMENT H-27: III. <u>The REIR Improperly Analyzes Traffic Impacts.</u>

1. The REIR fails to analyze if project site access and circulation impacts will be significant or adverse prior to application of proposed mitigations (REIR, ppg. 100-01) This despite stating (REIR pg. 101) that incorporation of measures into circulation plans are need to ensure less than significant impacts to site access and circulation.

RESPONSE H-27: The measures described on RDEIR (pg. 100) are measures included in the Specific Plan. They are not mitigation measures for an identified impact. For this reason, the project would result in a less than significant impact related to site access and circulation.

COMMENT H-28: 2. The REIR impermissibly fails to compare project traffic impacts to existing conditions. (See REIR pg. 73, § 3.2 Transportation) Project impacts were evaluated in the REIR by

comparison to "background conditions," where "background conditions" are not existing traffic levels but the levels of "existing traffic volumes" plus "approved development-generated traffic volumes." "Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved but not yet constructed developments in the vicinity of the project site." The REIR determines project impacts by comparison to existing traffic plus the projects listed in Table 1 at REIR, Appendix A. Many of these projects are not currently operating, and thus cannot constitute existing conditions.

By exclusively employing an analytic baseline of future conditions to assess likely traffic impacts, the EIR fails to disclose the project's effects on existing environmental conditions in the project area. (Neighbors for Smart Rail v. Exposition Metro Line Construction Authority (2013) 57 Cal.4th 439.) Further, the EIR does not attempt to show that an existing conditions baseline can be abandoned because it would be clearly misleading or without informational value to EIR users. (Id. at 457.) "The public and decision makers are entitled to the most accurate information on project impacts practically possible, and the choice of a baseline must reflect that goal." (Id. at 455.)

RESPONSE H-28: This comment regarding an improper use of baseline was raised in arguments against the original Draft EIR and the Court found substantial evidence supports the City's development and use of the four separate baselines for examining traffic impacts: 1) existing, 2) background, 3) project (background plus project) and 4) cumulative. The commenter has also misrepresented the findings of the cited CEQA caselaw *Neighbors for Smart Rail v. Exposition Metro Line Construction Authority (*2013) 57 Cal.4th 439. The court found that a lead agency *has* discretion to measure a project's impacts against a baseline of environmental conditions that are anticipated to exist in the future. In fact, "existing conditions" can include "environmental conditions that will exist when the project begins operations." "Existing conditions" is not limited to conditions existing as of the notice of preparation of the EIR or the beginning of CEQA review. In the case of the RDEIR traffic analysis, the background conditions include projects that will likely be constructed and operational prior to when the project begins operation. Furthermore, the RDEIR also includes the intersection LOS under existing conditions, so the reader can see how the intersections will change over time, including with and without the project.

CEQA Guidelines Section 15125 (a) states that the existing environmental setting will normally constitute the baseline physical conditions against which the impacts of a project are to be evaluated. The courts have held that a Lead Agency has the discretion to use an alternate baseline, as long as the exercise of discretion is supported by substantial evidence. For the analysis of traffic impacts, the City of Newark uses an alternate baseline, the rationale for which is described in the following paragraphs. (CEQA Guidelines Section 15125 (a).)

The methodology requires recent intersection counts and identifies a process for updating roadway traffic counts. It also defines and formalizes the inclusion of "background" information in the calculation of traffic impacts. In part because of the rapid growth and constantly changing physical conditions in the Bay Area, it is not unusual for traffic conditions to change between the time a CEQA document is prepared and the point in time when the project is fully implemented. The traffic methodology therefore includes provision for incorporating the traffic from approved projects (projects that have completed their own CEQA review and require no new discretionary action to be implemented or occupied) to be added to existing conditions, creating the baseline against which the impacts of a new project's traffic will be calculated. The methodology also allows traffic from an existing vacant building or complex to be calculated and included in background conditions.

The purpose of identifying a background condition for calculating impacts is to ensure that all possible care is taken to identify the actual capacity of the roadways that will be available to accommodate any newly proposed development project. This methodology also more accurately characterizes the real world conditions under which the newly proposed project would be implemented, should it be approved. It also may conservatively overestimate the impacts if the project if background traffic is in fact less than anticipated at the time of project implementation.

COMMENT H-29: 3. The REIR fails to analyze construction traffic impacts on the existing environment. The REIR only analyzes truck traffic impacts by comparison by project operational traffic. (REIR pg.102) This error precludes public and agency understanding of the impacts of the project, and what mitigations and alternatives should be considered.

RESPONSE H-29: Construction traffic is described in the REIR (pgs. 102-103). Even when several hundred daily heavy vehicle trips are occurring at the project site, the impact on roadway operations of truck traffic would be considerably less than the amount of traffic generated by the project once occupied. For this reason, construction traffic was determined to result in a less than significant traffic impact. See also Master Response 5.

COMMENT H-30: 4. The EIR utilizes an impermissible ratio approach in comparing cumulative traffic impacts to cumulative conditions without all other projects except this project. By utilizing this impermissible approach for its LOS or worse threshold, the REIR avoids concluding that cumulative traffic impacts are significant using "worse than LOS D" at least 4 intersections, including (1) Cherry & Thornton pg.m.; (2) Ardenwood Blvd and SR 84 WB Ramps a.m., (3) Newark Blvd and SR 84 EB Ramps pg.m., and (4) Grimmer Blvd and Auto Mall Pkwy pg.m. See Table 4.2-1.1.

RESPONSE H-30: This comment regarding the use of a "ratio approach" was raised in arguments against the original Draft EIR and the Court found that the City's

thresholds of significance for cumulative impacts were adequate. The RDEIR defines the threshold of significance as… "a project would result in a significant adverse impact on traffic conditions at a signalized intersection in the City of Fremont or City of Newark if for either peak hour:

- The level of service at the intersection degrades from an acceptable LOS D or better under cumulative without project conditions to an unacceptable LOS E or F under cumulative with project conditions; or
- The level of service at the intersection is an unacceptable LOS under cumulative without project conditions and the addition of project trips causes the average delay at the intersection to increase by four (4) or more seconds."

The RDEIR has again used this same approach.

COMMENT H-31: 5. Likewise, using the threshold of delay increase of 4 seconds or more, the REIR never compares "cumulative with project" to existing conditions.

RESPONSE H-31: Refer to Response H-30.

COMMENT H-32: 6. The REIR fails to analyze either project specific or cumulative traffic impacts at unsignalized intersections, despite that this analysis was feasible as indicated by its inclusion and disclosure to the public in the 2010 EIR.

RESPONSE H-32: As described in the RDEIR (pg. 335), unsignalized intersections were not included in the RDEIR LOS update, because the City focused on evaluating intersections that may result in new traffic impacts. Unlike signalized intersections, which typically represent constraint points for a roadway network, unsignalized intersections rarely limit the potential capacity of a roadway. Additionally, the City of Newark does not have formal adopted criteria for analyzing impacts to unsignalized intersections. This is common for many jurisdictions, because signalized intersections typically limit the overall capacity of a roadway.

COMMENT H-33: IV. <u>The REIR Fails to Properly Analyze Air Quality Impacts.</u>

1. The REIR vaguely concludes emissions of ROG, NOx and PM10 are significant (REIR, pg. 122-123), but fails to determine how adverse the impacts will be, thus not meeting CEQA's informational disclosure requirement and precluding formulation of feasible potential mitigation measures.

RESPONSE H-33: The RDEIR analyzed Air Quality Impacts consistent with the methodology and thresholds of significance of the Bay Area Air Quality Management District. The RDEIR (pgs. 123-124) also describes the health effects of the

air quality impact. It concludes that the project would not result in a project specific adverse health impact due to air quality impacts.

COMMENT H-34: 2. The REIR states that the REIR's air quality analysis was completed "in the same manner as the traffic report." This raises the possibility that the traffic report's failure to compare the project impacts to existing conditions also affects the air quality analysis. Please explain.

RESPONSE H-34: Refer to Response H-28.

COMMENT H-35: 3. The REIR claims that PM10 emissions would be reduced to less than significant levels with the mitigation measures listed for MM AIR-1.1, but fails to provide any explanation as to how it reached this conclusion.

RESPONSE H-35: Since the air quality analysis was prepared for the Newark Areas 3 and 4 project, the BAAQMD recommended emissions modeling program used to predict project operation and construction emissions has changed from the URBEMIS2007 model to the California Emissions Estimator Model (CalEEMod).[4] The analysis in the RDEIR has been updated to reflect the changes in the new modeling data. The updated modeling determined that average daily operational emissions of PM_{10}, 61.1 pounds per day, would not exceed the BAAQMD threshold of significance of 82 pounds per day. Therefore, the project would result in a less than significant air quality impact for PM_{10} based on the BAAQMD thresholds, on which the City may, in its discretion, rely. Refer to Section 4.0 Revisions to the Text of the RDEIR of this document for the updated discussion in the RDEIR and updated air quality analysis.

COMMENT H-36: 4. The REIR impermissibly fails to identify or consider any mitigation measure for significant Impact AIR-2, operational ROG and NOx emissions, simply concluding that there are no other reasonable and feasible mitigation measures that would reduce emissions. (REIR, pg.123)

RESPONSE H-36: Refer to Response H-35. The updated modeling using the CalEEMod program results in the project's operational air pollutant emissions still being significant and unavoidable for ROG and NOx. While reductions for project features promoting reduced energy use, water use, and reductions in vehicle trips were incorporated in the mitigated model run, the results still exceeded the BAAQMD thresholds of significance. Operational emission of these pollutants, especially ROG, are largely from use of consumer products, including solvents, paints, cleaners, cosmetic products, fertilizers, and automotive products rather than construction impacts. These types of

[4] The analysis was not changed in the circulated draft REIR, because consultation with the project air quality consultant determined that the URBEMIS2007 model provided more conservative results than the CalEEMod model.

emissions increase with the rate of population increase and there are no feasible methods available for this project to mitigate these emissions.

COMMENT H-37: 5A. The REIR fails to identify or consider any mitigation measures for significant Impact AIR-3, daily emissions for NOx and ROG which would exceed the BAAQMD significance threshold of 54 pounds per day. MM AIR-3.1 only states that "the project proponent and the City cannot control emissions from independent trucks used to haul fill material, therefore, there are no mitigation measures to reduce this impact, and it would remain significant and unavoidable." This approach violates CEQA as it ignores that the REIR will be used by other agencies for consideration of environmental impacts.

RESPONSE H-37: Refer to Response H-35. With the updated CalEEMod modeling for construction emissions, construction emissions of ROG, PM10 and PM2.5 were below the BAAQMD thresholds of significance. Average daily emissions of NOx were reduced to a less than significant level with the incorporation of mitigation measures. In order to reduce the construction emissions of NOx below the threshold, emissions would have to be reduced by 33 percent. This could be achieved by requiring that mobile construction equipment larger than 50 horsepower and operating on the site for more than 2 days continuously, meet U.S. EPA Tier 3 standards for NOx, and portable equipment operating on the site for more than 2 days continuously, meet U.S. EPA Tier 4 standards for NOx. These mitigation measures have been included in the project, as shows in the text revisions in Section 4.0 of this document.

COMMENT H-38: 5B. The REIR does not explain why the City or other agencies cannot condition fill importation on use of adequate air quality mitigation measures.

RESPONSE H-38: Refer to Response H-35 and H-37. The project would result in less than significant construction emissions with the inclusion of the identified mitigation measures.

COMMENT H-39: 5C. The REIR fails to proffer substantial evidence to support its findings that the City cannot control emissions from independent trucks and thus no mitigation measures exist to reduce this impact.

RESPONSE H-39: Refer to Response H-35 and H-37. The project would result in less than significant construction emissions with the inclusion of the identified mitigation measures.

COMMENT H-40: 5D. Here, as the lead agency, the City may impose conditions or enter into an agreement with the developer of the project to ensure that feasible mitigation measures be put into effect during construction of the project. Payment of fees and/or the purchase of offsets constitute a feasible mitigation measure when linked to a specific mitigation program. Another feasible

mitigation measure that would both minimize and reduce air quality impacts related to construction activities would be the re-design of the project plan to lessen the amount of fill required.

RESPONSE H-40: Refer to Response H-35 and H-37. The project would result in less than significant construction emissions with the inclusion of the identified mitigation measures.

COMMENT H-41: 5E. Moreover, the REIR completely failed to consider implementation of off-site mitigation measures that the City could undertake to mitigate air quality impacts of construction-related emissions (e.g., adopting an incentive program for sustainable transportation in the City of Newark or paying for retrofitting or elimination of other emission sources).

RESPONSE H-41: Refer to Response H-35 and H-37. The project would result in less than significant construction emissions with the inclusion of the identified mitigation measures.

COMMENT H-42: 6. REIR section 3.3.4.5 acknowledges that there will be odors from construction phase diesel emissions. The REIR states that these odors will not be significant - simply because the REIR claims that the impacts will be "temporary." Short term impacts are not per se insignificant under CEQA, and therefore the REIR's approach is procedurally flawed.

RESPONSE H-42: The comment does not accurately reflect the text of the RDEIR. The threshold of significance for odor is if the project would, "create or expose a substantial number of people to objectionable odors." The RDEIR states that during construction, the various diesel powered vehicles and equipment in use onsite would create localized odors. These odors would be temporary and not likely to be noticeable for extended periods of time much beyond the project's site boundaries. The determination that the impact is less than significant is based on two factors: 1) the temporary nature of the odor, and 2) the odors would not likely be noticeable for extended periods of time much beyond the project's site boundaries, which will not include substantive sensitive receptors until after construction. For these two reasons, project construction would not expose substantial number of people to objectionable odors and the impact is less than significant.

COMMENT H-43: 7. The REIR fails to evaluate cumulative air quality impacts at section 4.3 under each of the air quality thresholds of significance at section 3.3.4.1.

RESPONSE H-43: As described in the RDEIR, using the methodology and thresholds of significance of the BAAQMD, if a project is determined to have individually significant regional air quality impacts, it is also considered to have a significant cumulative impact.

COMMENT H-44: 8. The REIR determines that the proposed project, in combination with other projects, would result in a significant regional air quality impact (Impact C-AIR-3), but impermissibly fails to identify or discuss any potential mitigation measures. (REIR pg. 340)

RESPONSE H-44: Refer to Response H-35 and H-36.

COMMENT H-45: V. The REIR Fails to Properly Analyze Biological Impacts

Biological Environmental Setting

1. The REIR provides contradictory information regarding whether there are no ordinance trees present in Area 3, or whether no ordinance trees in Area 3 will be retained by the Project. REIR section 3.5.2.8 states that there are no trees (other than street-side landscape trees) "present" on Area 3, but doesn't disclose if the present Area 3 landscape trees are of the size requiring ordinance protection, or how many protected trees exist on Area 3. Further confusing the issue of impacts from tree removal and ordinance conflict, REIR section 3.5.3.5 states that there are no trees on Area 3 proposed to be "retained" by the Specific Plan, other than the street trees along Cherry Street and Stevenson Boulevard.

Biological Impacts

1. The analysis of tree preservation and transplanting should not be deferred until the time of project development, but should be analyzed in this REIR. REIR section 3.5.3.5 states that "Possibilities for tree preservation and suitability of transplanting appropriate trees will be considered at the time of development and shall be based upon tree sizes, health, structure, locations, and species."

2. The REIR changes the disclosure from the 2010 REIR. The 2010 REIR disclosed that "several" ordinance size trees located within "both Areas 3 and 4" will require removal. Now, the REIR (at pg. 171**)** states that only a "few" protected trees will be affected, and that these affected trees are only in Area 4. The REIR does not explain the reason for either of these two changes. On what basis were these two changes made?

3. For Area 4, the REIR does not disclose the "reasonably foreseeable" number of trees to be removed.

4. The REIR's biological thresholds of significance states that an impact will be considered significant if the project will conflict with any local ordinance protecting biological resources, such as a tree preservation policy or ordinance. (REIR, section 3.5.3.1) The REIR has not disclosed the number and location of protected trees (trunk diameter of six inches measured at four feet above ground level) that will removed, and thus does not analyze how adverse impacts will be.

6. The REIR does not disclose how adverse impacts will be to retained trees in Area 3. The REIR does not disclose for Area 3 the number, age, size, condition, and species of the trees to be removed, despite revealing (REIR p 229) that construction activities could damage retained trees in Area 3 along Cherry Street and Stevenson Boulevard.

RESPONSE H-45: Please refer to Figure 1.4-3 of the REIR, the aerial photograph. As you can see on the aerial photograph, there are no trees within the Area 3 Sub-Area A, ordinance size or otherwise. There are street trees planted along Cherry Street and Stevenson Boulevard, some of which may be ordinance size, along the edges of Area 3, Sub-Area A. The project does not propose removal of any of the street trees.

There are trees on Area 4, some of which may be removed by the project, a fact disclosed and analyzed for significance in this document. At the time a project-level site plan is proposed on Area 4, the tiered CEQA review will include a formal tree survey and determination of a more accurate count of the trees to be removed by the project and whether or not they are ordinance size. As described in the REIR (MM BIO-14.1-14.4) removed trees would be replaced at a minimum 3:1 ratio and ordinance size trees would require a tree removal permit. With implementation of the mitigation measures, the loss of trees would be less than significant. The REIR provides very detailed mitigation measures to prevent impacts to all trees to remain on the site, including street trees (MM-BIO-15.1). Through these measures, the impacts to trees to remain would be less than significant.

COMMENT H-46: 7. The REIR at section 4.6 fails to analyze cumulative biological resources pursuant to the thresholds of significance identified at section 3.5.3.1.

8. The REIR does not include any meaningful discussion of cumulative biological resources impacts. The REIR identifies 15 project-specific significant biological impacts (Impacts BIO-1 through BIO-15), yet the REIR does not even attempt to consider each of these impacts as part of the cumulative biological impact analysis. Instead, the REIR only vaguely states that other projects may impact "some" of the biological resources that will be impacted by the Areas 3 and 4 Specific Plan.

9. CEQA's cumulative analysis procedure require that minimized impacts must be considered in the context of similarly "minimized" impacts of "other closely related past, present, and reasonably foreseeable probable future projects" in order to assess whether the aggregated cumulative "change in the environment" may be significant. The REIR fails to follow this required procedure, particularly where it writes off any potential cumulatively considerable impact by characterizing impacts as "negligible" or "minimal."

RESPONSE H-46: The RDEIR (pg. 365) includes an evaluation of cumulative biological impacts, focusing on the projects proposed on large tracts of undeveloped land (Areas 3 & 4 and Dumbarton TOD development in Newark, and the Warms Springs/South Fremont Community Plan, and for Fremont). The evaluation included impacts to wetlands, special status species, nesting birds, and wildlife movement. As described in the RDEIR, the mitigation measures identified for the proposed project will render the project's contribution to the cumulative impact less than cumulatively considerable; therefore, it will have a less than significant cumulative impact. A similar comment was raised in

arguments against the original Draft EIR and the Court found that the EIR adequately explained the cumulative biological impacts in both the "Environmental Setting, Impacts, and Mitigation" section captioned "Biological Resources," in the cumulative impacts section captioned "Biological Resources" and in the appendix Biological Resources report.

COMMENT H-47: 10. The REIR's analysis of indirect biological impacts is hampered because in "Area 3, only the northeastern corner (area proposed for development) was included in the biological analysis for the project." (REIR pg. 154)

RESPONSE H-47: For clarification, the existing conditions of all of Newark Area 3, relative to biological resources, is described in the DEIR. Much of Area 3 is developed with the Silliman Center, Ohlone College, and the campus industrial park on Stevenson Boulevard. This developed habitat is described in the REIR (pg. 157-158). The entire area proposed for development, Sub-Area A, was analyzed for potential impacts to biological resources, even though it supports a mixture of non-native annual grasses and forbs. This property does not support sensitive habitats or special-status species that might be indirectly affected by development, and the areas in Area 3 outside the portion proposed for development are developed and have no sensitive habitats or special-status species that might be indirectly affected by development.

COMMENT H-48: <u>Biological Mitigation Measures</u>
10. MM BIO-14.1 states that implementation of the Specific Plan shall incorporate preservation of existing trees with emphasis on ordinance-size or larger native species and in good or better condition, to the maximum extent practicable, to the satisfaction of the City's Community Development Director. This measure impermissibly defers formulation of mitigation. The REIR does not include a performance standard the Development Director will utilize, or how maximum extent practicable will be determined, or whether incorporation of preservation will mean actual preservation of all existing trees or some fraction of existing trees.

RESPONSE H-48: The intent of MM BIO-14.1 is to ensure that priority be given to avoidance of ordinance-sized and larger native trees, as specific designs for residential portions of the project are advanced, taking into consideration all of the various constraints associated with site design and that such avoidance be demonstrated to the satisfaction of the Community Development Director. Insofar as the vast majority, if not all, trees on site are non-native eucalyptus and palm trees, and as such they do not represent important botanical resources or habitat for wildlife species, the number of trees to be preserved was not quantified since it has been concluded that it is not necessary to preserve any of the trees to avoid significant biological impacts. Refer also to Response H-45.

COMMENT H-49: 11. MM BIO-14.2 states that in locations where preservation of existing trees is not feasible due to site constraints, trees to be removed by the project shall be replaced at a 3:1 ratio unless the City's Community Development Director determines that a higher ratio is required. Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees. The REIR does not state the standard to be used to determine if preservation is infeasible.

12. The REIR does not why trees greater than 18" require a permit where the Newark Tree ordinance requires a permit for the removal or relocation of any tree with a trunk diameter of 6 inches or greater measured at four feet above ground level.

RESPONSE H-49: The term "infeasible" when used in this context means, tree preservation is incapable of being accomplished because the location of the tree conflicts with a particular critical element of the site plan, generally infrastructure. We appreciate the clarification regarding the tree ordinance, any tree with a diameter of 6 inches or greater will require a tree removal permit. The text of the REIR, in Section 4 of this document, has been revised to include this clarification.

COMMENT H-50: 13. MM BIO-14.3 does not state what performance criteria shall be used to determine the species and number of trees to be planted.

RESPONSE H-50: MM BIO-14.3 is part of mitigation measure that has four interrelated parts. MM BIO-14.2 provides the replacement ratio to be used to determine the number of trees to be planted. BIO-14.1 requires the species to be native to this part of the San Francisco Bay area.

COMMENT H-51: 14. The REIR (pg. 172) states that mitigation ratios for impacts to sensitive habitats are based on those required or commonly required under applicable policies, laws, and regulations. Please identify each such policy, law and regulation for each impact.

RESPONSE H-51: This information is provided in the regulatory setting section of the RDEIR (pgs. 150-153).

COMMENT H-52: 15. The REIR fails to include any discussion of the feasibility of prohibiting free-roaming outdoor cats in MM BIO-4.7.

RESPONSE H-52: The prohibition on free-roaming outdoor cats, as described in MM BIO-4.7, will be enforced by a neighborhood association established for any new residential areas, and by the City. This prohibition will be part of a larger predator management program that, collectively, will reduce potential impacts on sensitive wildlife from nuisance species to less-than-significant levels. Because the neighborhood association will be responsible for disseminating information on the prohibition of free-roaming outdoor cats and enforcing this prohibition, and the City (through enforcement of

compliance with the MMRP) will also have enforcement authority on the Project, the City believes that this measure is feasible.

COMMENT H-53: 16. The REIR fails to explain the contradiction between MM BIO-8.3 requirement that "any individuals already in the impact areas shall be salvaged and translocated to the exterior of the construction exclusion area" and yet same mitigation statement that "we are not proposing to require trapping and relocation."

RESPONSE H-53: As discussed in MM BIO-8.3, trapping of salt marsh harvest mice for the purpose of relocation is not proposed because the expected sparse nature of this species' populations in impact areas would necessitate considerable trapping effort to catch even a few individuals. As a result, monitoring of construction activities that could result in impacts to individuals, by a qualified biologist, will be performed to identify any individuals that might be present in construction areas. If any such individuals are detected during construction, and the USFWS and CDFW approve of the relocation, then those individuals will be relocated to avoid injury or mortality. Such capture and relocation would occur by hand, rather than through trapping.

COMMENT H-54: 17. The REIR violates CEQA by concluding without meaningful discussion that implementation of unspecified mitigation measures will "adequately mitigate" cumulative biological impacts.

RESPONSE H-54: The comment misrepresents the text of the RDEIR. The RDEIR (pg. 365) states, "The mitigation measures prescribed for all of these impacts *(referring to impacts described previously in the paragraph)* will, however, adequately mitigate the project's contribution to these cumulative impacts to a less than cumulatively considerable contribution." This paragraph refers to mitigation measures BIO-1.1 through BIO-15.

COMMENT H-55: 18. The REIR fails to properly analyze potentially significant impacts of MM BIO 11.1 which includes application of herbicides. Elsewhere the REIR acknowledges that construction- phase pollutants that could contribute to the degradation of surface-water quality include pesticides and herbicides, and that this construction phase impact is significant. This analysis of Impact HYD-2 and the mitigations are limited to the construction phase. There is no analysis of the impacts of MM BIO 1.1 as required by CEQA, including which herbicides will be used, the volume of herbicides to be used and which will run-off and the likely impacts.

RESPONSE H-55: The measures described in MM BIO-11.1 to prevent the spread of non-native, invasive plant species during construction,, including possible use of herbicides, will be applied in compliance with all state and federal laws and regulations, in consultation with a Pest Control Advisor, by a Licensed Qualified Applicator in consultation with City of Newark-approved wildlife biologists or plant ecologists in sensitive habitats. These requirements ensure

that the risk to non-target species in minimized and would not result in impacts beyond those caused by the project and analyzed in the RDEIR.

COMMENT H-56: 19. The REIR fails to cite to substantial evidence to support mitigations, including but not limited to MM BIO-1.2A's creation of "high quality wetland and aquatic habitat within Area 4 within upland habitat" and "enhancement of existing seasonal wetland habitat that is currently within agricultural production." The REIR fails to supply any evidence demonstrating that the proposed creation of wetland habitat within the upland portion of Area 4 and in portions of Area 4 currently in agricultural production (which both have divergent characteristics from the tidal marsh transitional portions of Area 4), will minimize the adverse impacts of filling the "tidal/marsh upland transition" wetlands.

RESPONSE H-56: Please refer to Master Response 2.

COMMENT H-57: 20. The REIR fails to specify the on-site location where wetland mitigation will occur, but instead improperly defers that determination.

RESPONSE H-57: Please refer to Master Response 2 regarding Wetland Mitigation.

COMMENT H-58: Mitigation for Long-Term Survival of Remaining Trees

In *Citizens Committee to Complete the Refuge v City of Newark*, Alameda Superior Court Case # RG10530015, the trial court's statement of decision held that the Newark Areas 3 and 4 Specific Plan Project Environmental Impact Report (hereinafter "2010 EIR") improperly deferred mitigation of impacts to trees. The court found that the 2010 EIR's tree mitigation plan did not identify any "specific performance criteria." That plan failed to address the threats to the long-term survival of remaining trees from restrictions on sunlight and root growth, and/or altering groundwater conditions.

The REIR discloses that "the potential for preserved trees to continue to grow and thrive could be affected by the new more intense development. This intense development could adversely affect the long-term survival of trees to remain by restricting sunlight and root growth, and/or altering groundwater conditions." The REIR thus concludes that "Impact BIO-15: The health of the trees to be preserved could be significantly impacted in the short-term by construction activities and in the long-term due to the proposed Specific Plan development."

The REIR is different than the 2010 EIR, as Mitigation BIO-15.1 now details that the Tree Preservation Plan will include:

- Tree Protection Zones
- Protection of Tree Root Systems
- Installation of Wood Bark Mulch
- Installation and Maintain of Protection Zone Fencing
- Pruning Tree Roots and Crowns Only as Necessary, and
- Irrigation of Trees within the Protective Zone

Further, the REIR claims that Tree Protection Zone shall: (1) ensure that no structures or buildings, that might restrict sunlight relative to the existing condition, will be constructed in close proximity to the trees; and (2) that no improvements are constructed on the ground around the tree within the Tree Protection Zone.

Pursuant to new Mitigation BIO-15.2, the Mitigation BIO-15.1 Tree Preservation Plan measures may be determined not to be feasible and thus the remaining trees will not be preserved.

1. The REIR fails to disclose what criteria will be used to determine such "infeasibility," and thus avoidance of the Mitigation BIO-15.1 Tree Preservation Plan.
2. In addition, the REIR does not analyze whether the significant impact will still be lessened to insignificant - if BIO-15.2 tree replacement substitutes for BIO-15.1 tree preservation.

RESPONSE H-58: Please see Responses H-45, H-48, and H-49. With implementation of the mitigation, the impact will be reduced to less than significant.

COMMENT H-59: Mitigation of Impacts to Sensitive Habitats and Special Status Species from Invasive Species. In *Citizens Committee to Complete the Refuge v City of Newark*, Alameda Superior Case # RG10530015, the trial court's statement of decision held that the 2010 EIR improperly deferred mitigation of impacts to sensitive habitats and special status species. (Statement of Decision, pg. 15) The court found that Mitigation Measure BIO-11.1 was not at issue, but "MM BIO-11.2 states generalized performance criteria for the anticipated Invasive Species Management Plan and that the as yet undeveloped management plan 'will contain details regarding ... success criteria.' The court found that the City improperly deferred mitigation of impacts to sensitive habitats.

1. The 2010 EIR concludes that incorporation of mitigation measures (MM BIO-11.1 and MM BIO-11.2) would reduce native plant and wildlife species impacts to a less than significant level. The REIR includes only one mitigation measure, a new BIO-11.1. REIR mitigation measure BIO-11.1 does not include "removal concentrations of invasive species" which was considered and adopted in the 2010 EIR and approvals. The REIR does not explain why this previous mitigation measure was eliminated. (REIR pg. 221)

RESPONSE H-59: The language was changed from "remove concentrations of invasive species" to "reduce the presence and spread of non-native, invasive species" which has the same meaning in the context of this mitigation measure. In addition, MM BIO-11.1 has nine separate prescribed items which includes activities previously described for MM BIO-11.2, but in greater detail.

COMMENT H-60: 2. The REIR does not explain how impacts to sensitive and special status species will be less-than-significant given that "removal concentrations of invasive species" is no longer a mitigation measure. (REIR pg. 221)

RESPONSE H-60: Please refer to Response H-59.

COMMENT H-61: 3. The REIR does not disclose what the "Best Management Practices" to be applied to all upland areas to be graded. (REIR pg. 221)

4. The REIR does not disclose what criteria the City of Newark will use in reviewing and approving weed control methodologies. (REIR pg. 221)

5. The REIR does not disclose the manual and mechanical methods to be used, or what criteria will guide when manual and mechanical methods are used rather than herbicide application. (REIR pg. 221)

RESPONSE H-61: The comment references RDEIR page 221, which has text concerning cultural resources and is not about weed control. This response assumes the commenter intended to comment on the weed control measures on pages 197 to 198, and not cultural resources. The term "Best Management Practices" is used to refer to implementation of widely available and commonly acceptable practices that are used and approved by local, state and federal agencies with jurisdiction over water quality. Common reference materials for BMP manuals include documents prepared by the California Invasive Plant Council and U.S. Department of Agriculture. The City will review and approve weed control methodologies based upon professional recommendations of the consulting biologists and the criteria that the approved weed control method must be one that aims to avoid "any adverse impacts to special-status species in the area" (RDEIR at pg. 198). The criteria used to guide the decision whether to use manual and mechanical methods rather than herbicide application will include the location of the weeds to sensitive habitats (100 feet) and the recommendation of the approved biologist or ecologist, which is required when weed treatments are needed in sensitive habitats.

COMMENT H-62: 6. The REIR does not disclose what impacts may result from planned spraying of pesticides.

RESPONSE H-62: Please refer to Response H-55.

COMMENT H-63: 7. The REIR does not disclose the timing of the weed control treatments. The REIR does not disclose how will the City determine that weeds are about to encroach into adjacent areas from shoots. (REIR pg. 222)

RESPONSE H-63: Please refer to Response H-55.

COMMENT H-64: 8. Once grading ceases, monitoring of weeds will cease outside sensitive habitats. (REIR pg. 222) The REIR does not disclose the location of these area "outside of sensitive habitats" or why weed monitoring will cease at this time.

9. The REIR does not disclose how the City will determine that weeds are about to encroach into adjacent areas from shoots without post-grading monitoring of areas "outside of sensitive habitats."

10. Under the REIR, weed control measures will not be implemented in sensitive habitats in any monitoring year that the size of weed populations within sensitive habitats have expanded less than 20% from the baseline. (REIR pg. 222) Is this intended to be a success criteria?

11. Further, the REIR does not specify if the 20% increase will be measured as a gross of all weed populations or if 20% will be determined by increase in individual plant species - i.e. if there is a 20% increase in fennel in a particular year, but overall the weed population increase in sensitive habitats was only 18% would weed control measures be implemented.

12. The REIR does not disclose why no control measures will be implemented where there is a 19% increase in weed expansion in sensitive habitats.

13. The REIR does not disclose the success criteria for treatment of weed populations in areas to be developed which do not qualify as sensitive habitat.

RESPONSE H-64: Non-sensitive habitat locations within the development will consist of roadways, parking lots, and maintained landscaped areas. Once developed, weed control is conducted as a part of regular maintenance of these locations that is overseen by the City and no additional weed monitoring provision would be needed.

For clarification, it is almost impossible to completely eradicate all weed stands on a site and it is more common that weed populations exist at some low level over time. Based on qualitative field observations in similar habitats, it is the consulting biologist's assessment that weed populations, in terms of aerial extent, can expand or decline by a few percent up to around 10% or 15% each year, as a result of annual variations in climatic conditions (differences in amount and distribution of rain, differences in soil and air temperatures). This is not seen as an abnormal change in the size of the population and many weed stands will remain long term at these basal levels. Relatively minor fluctuations in percent cover like this do not warrant any remedial actions to be taken but do justify continued monitoring of the population size. On the other hand, relatively large increases much above 10% or 15% generally indicate an expansion of the weed population responding to some change in land management or more dramatic changes in climatic conditions (3-years of successive drought) and indicate a potential increasing trend in the size of the population. When the population exceeds this basal threshold, remedial weed control actions are warranted.

As stated in the RDEIR, once grading ceases, invasive plant populations within all sensitive habitats will be mapped. When the size of existing invasive species populations expands by 20%, additional weed control measures are triggered; as such, this value is a threshold for remedial actions and is not a success criteria. Success criteria are sustained levels at or below

20% during the proposed monitoring period. The 20% value is absolute cover of any specific invasive species and additional weed control measures would be implemented for that specific plant. All locations within the development will consist of roadways, parking lots, and maintained landscaped areas. Weed control will be conducted as a part of regular maintenance of these locations and is enforced by the City.

COMMENT H-65: 14. Environmental setting. The REIR does not disclose the size and location of invasive plants species. The public is referred to Table 5 of the Draft EIR Appendix E. That document is not provided as an attachment or referenced in the REIR references at the end of the REIR. If that information exists elsewhere, it should be included in this REIR; the public should not have to ferret out the environmental setting.

RESPONSE H-65: As noted in RDEIR MM BIO-11.1, the first task of the mitigation measure is to map invasive plant populations within all sensitive habitats (i.e., wetlands) in Area 4. At that time, the extent and location of invasive plant populations will be quantified. DEIR Appendix E included a list of invasive plant species observed on the site and is incorporated by reference and available at the City Community Development Department and on the City's website.

COMMENT H-66: 15. The REIR does not disclose if "fill" material required to elevate building sites will be subject to weed evaluation and/or treatment prior to fill placement on the project site. This disclosure is important as the Specific Plan discloses that:

- importation of fill material can cause the spread of invasive non-native plant species, of particular concern being fennel, pampas grass, perennial pepperweed, and smallflower tamarisk;
- ground disturbance associated with construction would create vast new areas suitable for recruitment of these non-native species (e.g., along the fill embankments), many of which form dense, monotypic stands, eliminating any natural habitat that the area previously supported;
- expansion of these invasive plant populations on the site will also increase the seed bank on the site allowing spread to unimpacted natural habitats on the site;
- in Areas 3 and 4, fill material for the proposed residential construction may contain seed from nonnative plant species not already found on the site, and site grading will likely spread non-native, invasive plant species imported in fill or already present on the site.

RESPONSE H-66: Mitigation measure B10-11.1 requires that "all gravel and fill material shall be certified weed free."

COMMENT H-67: VI. <u>The REIR's Analysis of Impacts from Greenhouse Gas Emissions Is Inadequate.</u>

1. Since Newark considered the 2010 REIR the CEQA Guidelines have changed to add 14 CCR § 15064.4 - Determining the Significance of Impacts from Greenhouse Gas Emissions. The REIR does not even mention this CEQA Guideline.

RESPONSE H-67: Refer to Response H-35. Using the updated CalEEMod Model, the greenhouse gas emissions of the project would be below the BAAQMD thresholds of significance and, therefore, a less than significant impact. The analysis is consistent with the noted CEQA Guidelines section and the thresholds of significance used in the analysis are current, using the thresholds adopted by BAAQMD in May 2011 in BAAQMD's CEQA Air Quality Guidelines for the San Francisco Bay Area Air Basin that are in common use today (2014).

COMMENT H-68: 2. The REIR identifies four "major" greenhouse gases: carbon dioxide, methane, nitrous oxide, and fluorinated gases. (REIR, pg. 341) The REIR acknowledges project emissions of methane and nitrous oxide, and that these emissions are more potent greenhouse gas emissions.[5] Yet, the REIR fails to calculate emissions from either methane or nitrous oxide. (REIR, pg. 352) These omissions violate CEQA Guideline 15064.4, subd. (a) which requires that Newark make a good faith effort to describe, calculate or estimate the amount of greenhouse gas emissions resulting from this project. These omissions also violate CEQA Guideline 15064.4, subd. (b) which requires that Newark consider the extent to which the project may increase greenhouse gas emissions as compared to the existing environmental setting.

RESPONSE H-68: As described in the RDEIR (pg. 352) CO2 is the primary GHG emitted by a project such as the proposed Specific Plan. Although there are emissions of methane and nitrous oxide, which are more potent GHGs, their emissions are very small compared to CO2 (i.e., less than three percent equivalent CO2). For this reason, these emissions are not calculated. Refer to Section 4.0 of this document. Refer also to Response H-35. Using the updated CalEEMod Model, the GHG emissions of the project would be below the BAAQMD thresholds of significance and, therefore, a less than significant impact.

COMMENT H-69: 3. The REIR fails to provide substantial evidence to support its conclusion that no mitigation measures will reduce the significant unavoidable impacts of the Project on global climate change.

RESPONSE H-69: The commenter is incorrect. Refer to Response H-35 and H-67.

COMMENT H-70: VII. <u>The REIR's Hydrology and Water Quality Impacts is Flawed.</u>

1. The REIR does not explain how it can conclude the project would not create or contribute runoff water that would exceed the capacity of <u>existing</u> stormwater drainage systems given that both Area 3 and Area 4 will be drained via new underground storm drain lines.

RESPONSE H-70: The commenter is mistaken. This is fully explained in the DEIR (Appendix G, Impact HYDRO-4, pgs. 16-17). Adequate storm drain utility systems for the sites will be designed as part of the development of Areas 3 and 4. The

[5] Methane has a global warming potential 23 times that of carbon dioxide, while nitrous oxide is 296 times that of the same amount of carbon dioxide.

DEIR evaluates the capacity of existing stormwater drainage systems to which the newly designed Area 3 and Area 4 systems will discharge. The DEIR finds no increase in the total 100-year discharge in the existing ACFCWCD Line D downstream from the Area 3 outfall, and in the absence of 100-year spill from Line D in its existing condition, the project would not contribute runoff that would exceed the capacity of the existing tailwater system. Development in Area 4 would not impact flooding in the area or downstream of the area since the flood zone represents 100-year tide elevation in San Francisco Bay and there is no "capacity" associated with San Francisco Bay as such. Augmented flows from increased impervious areas are released directly to the Bay and do not affect Bay tides.

COMMENT H-71: 2. The REIR fails to disclose outfall locations, despite acknowledging (at pg. 177) that erosion or channelization may occur if outfalls and transition culverts are not correctly placed. Thus, a full analysis of erosion impacts is thwarted.

RESPONSE H-71: As discussed in the RDEIR (pgs. 3-5), at the time the EIR was prepared, some elements contemplated by the Specific Plan, including specific outfall locations for storm drainage for Area 4, were not sufficiently detailed for this type of analysis. (Note that Area 3 will not require outfall locations.) The RDEIR evaluates such elements at a programmatic level to ascertain whether there are unmitigable environmental constraints, but the City acknowledges that insufficient information is available to determine whether additional environmental impacts could be revealed as more is known about these project details. As described in detail in the RDEIR, when development in Area 4 is proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. At that time, all issues subject to CEQA would be evaluated to determine what level of additional review is necessary.

COMMENT H-72: 3. The REIR discussion of cumulative hydrology and water quality impacts fails to analyze such impacts under the criteria at REIR section 3.8.3.1.

RESPONSE H-72: The commenter is in error. The DEIR discusses cumulative hydrology and water quality impacts (pg. 25-26), by analyzing impacts under the criteria at RDEIR Section 3.8.3.1 and notes that the watershed upstream of Area 3 is already completely urbanized and Area 4 is within a closed hydrologic system that outfalls directly to San Francisco Bay.

COMMENT H-73: 4. With respect to cumulative hydrology and water quality impacts in Area 4, the EIR impermissibly presumes, without analysis or evidence, that as long as every project complies with City, State and federal regulations and implements mitigations similar to the proposed Project, there will be no significant cumulative hydrologic and water quality impacts.

RESPONSE H-73: A cumulative impact related to hydrology would be an impact caused by the project that, when added to impacts of related past, present, and probably future projects, would rise to the level of significance. In assuming the significance of this impact, the City is entitled to reasonably assume that other projects and other jurisdictions will adhere to City, state and federal regulations designed to minimize hydrologic impacts of development projects. The Project applicant has no direct control over the future implementation of mitigation measures for other projects within the watershed, and it is reasonably foreseeable that they will comply with the law.

COMMENT H-74: VIII. The REIR's Analysis of Visual Impacts is Inadequate

1. The REIR fails to analyze any potential mitigation measures for significant Impact VIS-1. The REIR impermissibly avoids this CEQA requirement and summarily states that "There are no feasible mitigation measures that would mitigate for the significant change in visual character, which would result from the development of Area 4. (Significant Unavoidable Impact)."

RESPONSE H-74: As described in the RDEIR (pg. 294), development of the proposed Specific Plan will substantially alter the existing visual character of Area 4. The proposed raising of elevation, and the addition of residences, streets, landscaping, and golf course will all change the visual character of Area 4. It is a subjective decision whether the proposed development would degrade the site's visual character; however the extent of the change is sufficient enough to consider it a significant visual impact. While the project would conform to General Plan policies regarding visual character, reduce light and glare, and adhere to the City's and Specific Plan design guidelines, no measures would change the fact that the visual character would be substantially changed by the project. For this reason, the RDEIR found the impact to be significant and unavoidable.

COMMENT H-75: 2. The REIR fails to adequately analyze potential mitigation measures for significant cumulative visual impacts. The REIR concludes under Impact C-VIS-5 that the cumulative projects would result in cumulatively significant visual and aesthetic impacts, and the proposed Specific Plan project would make a cumulatively considerable contribution towards this cumulative impact. The EIR mentions parks and open space areas, use of architectural features in building designs, and the installation of landscaping, but fails to discuss any of these measures as required by CEQA. Instead, the REIR summarily concludes that such significant impacts are simply unavoidable.

3. The REIR fails to provide substantial evidence to support its conclusion that no mitigation measures will reduce the above identified significant unavoidable impacts.

RESPONSE H-75: Refer to Response H-74. As described in the RDEIR (pg. 367) the cumulative projects are estimated to alter the visual character of 1,000 acres

of space that is visually open. For the reasons described in Response H-74, this change in visual character is considered a significant and unavoidable cumulative impact.

COMMENT H-76: IX. Additional Unlawful Deferral of Mitigation Measure Formulation
Formulation of mitigation measures may not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. (CEQA Guideline 15162.4) "An agency violates CEQA by deferring the formulation of mitigation measures without committing to specific performance criteria for judging the efficacy of the future mitigation measures." (POET, LLC v. California Air Resources Board (2013) 218 Cal.Appg.4th 681, 698-99.)

1. The REIR violates CEQA as measures AM ENR-1.1, MM C-GCC-4.1, Land Use, and Cumulative Land Use each defer formulation of mitigation measures without performance standards by vaguely stating that "as many green practices as appropriate and feasible" will be incorporated.

RESPONSE H-76: The RDEIR (pgs. 323-325, and 356-357) includes lists of measures to save energy and water that would be incorporated into future development projects of the Specific Plan. Efficiency criteria was included in the discussion, including design and construction that meet current Title 24 requirements. Through those measures, the project would not result in a wasteful use of energy and would reduce GHG emissions. The RDEIR found that the project would result in a less than significant cumulative land use impact, so no mitigation measures were identified or required.

COMMENT H-77: X. The Project Description is Vague and Confusing

1. The REIR vaguely claims that "additional detail has been provided with respect to the location of approximately 600 residential lots in Area 3. (REIR, pg. 2) Clarify what additional detail is provided in the REIR regarding these residential lots.

RESPONSE H-77: The RDEIR includes a site-specific development plan for Area 3, Sub-Area A (Figure 2.4-1A) that shows the location of all residential lots, as well as the street system. The RDEIR also includes information regarding the various lot sizes proposed, and the front, rear and side yard setbacks. The RDEIR also includes figures showing the architectural design themes and siting templates for the various proposed lot sizes (Figures 2.4-1B-2.4-E).

COMMENT H-78: 2. The REIR is vague and confusing regarding technical characteristics and permits/approvals by the Alameda County Flood Control and Water Conservation District (ACFC). The REIR claims that since the 2010 EIR was certified, there have been no significant changes to the project description. (REIR, pg. 2) The 2010 EIR referenced the ACFC acceptance of maintenance/access easements along levees and/or permit in order to "move tide gate(s)." In contrast the REIR does not reference moving tide gates. Instead, the REIR refers to adding or

replacing a flapgate at the Line D outfall in Area 3, and adding outfalls in Area 4. (REIR ppg. 4-5, also ppg. S-7 to S-8). Further, there is no analysis in the REIR of the impacts of adding/replacing a flapgate in Area 3, and adding outfalls in Area 4.

RESPONSE H-78: The terms tide gate and flapgate refer to the same object, a flap covering of the outfall of a drainage channel that is intended to keep the incoming tide from moving up the drainage channel. Since issuance of the RDEIR, it was determined that no new tide/flapgates will be required for Area 3. Proposed new storm outfalls within the raised portions of Area 4 were shown on Figure 2.4-5 of the original Draft EIR. The Draft EIR and RDEIR both describe under Section 2.4.9.2., *Drainage Plan*, and "All residential development within Area 4 will drain via new underground storm drain lines to various points along the perimeter of the development envelope where outfalls will be constructed." The RDEIR noted them in the text of the necessary approvals from the ACFC&WCD. The future project-specific Area 4 development analysis will include a detailed evaluation of the proposed storm drain system, including outfalls.

COMMENT H-79: XI. Documents Not Made Available to the Public

On September 19, 2014, a member of Citizens went to the Newark Community Development Department (see Attachment D hereto), and requested to review the "Appendices to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs" which the REIR claims are available at the City of Newark Community Development Department. (REIR, pg. S-3) Only, Appendix A was available in Newark as of this date.

Thus, the public does not have access to (1) a traffic impact analysis claimed to exist at Appendix B of the Draft EIR (REIR, ppg. 73 & S-73); (2) air quality studies claimed to exist at Appendix C of the Draft EIR (REIR, pg. 104); (3) noise assessments claimed to exist at Appendix D of the Draft EIR (REIR, pg. 135); (4) a site-specific biological report claimed to exist at Appendix E of the Draft EIR (REIR, ppg. 150& 172); (5) a geotechnical feasibility evaluation claimed to exist at Appendix F of the Draft EIR (REIR, pg. 223); (6) a hydrology and water quality impact analysis claimed to exist at Appendix G of the Draft EIR (REIR, pg. 237); (7) Conceptual Land Use Plans, Hazardous Materials Review, Phase I Environmental Site Assessments, and a Preliminary Soil, Soil Gas, and Ground Water Quality Evaluation claimed to exist at Appendix H of the Draft EIR (REIR, pg. 258), and (8) a Water Supply Assessment claimed to exist at Appendix I of the Draft EIR (REIR, pg. 302) Thus, any incorporation by reference of these unavailable appendices is invalid.

RESPONSE H-79: The documents referenced in the REIR are on file at the Community Development Department. At the time the person made their request, the City staff person on duty that day did not know where the appendices were filed and thus could not locate them. In fact, the appendices were and are in the Planning Department, and staff has been reminded of their location. The City also notes that the appendices are and were available online on the City's website. The appropriate contact person's, Terrence Grindall, phone number

and Email was provided on the Notice of Availability and on the City's website. Mr. Grindall was not contacted for this information at any time.

I. RESPONSE TO COMMENTS FROM PETER BAYE, SEPTEMBER 19, 2014

COMMENT I-1: Please consider the following comments on portions of the Recirculated Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan, and corresponding portions of the EIR and its appendices, regarding impacts and mitigation related to wetlands and wetland hydrology, including groundwater. I am a professional ecologist specializing in management, conservation planning, and restoration of coastal ecosystems, particularly wetlands of the San Francisco Estuary and California coast. My comments reflect my independent professional opinion. They are submitted in behalf of the Citizen's Committee to Complete the Refuge. An abbreviated statement of my qualifications to comment as a wetland expert is attached. My conclusions and recommendations close each section of the comment letter.

My comments analyze groundwater-related impacts to wetlands and wetland mitigation feasibility, and wetland mitigation feasibility and adequacy overall. The first section of my comments (1.1) integrates the various 'existing conditions' and impact statements of the EIR and REIR and its appendices, and the second (1.2) critically re-analyzes wetland impacts and mitigation related to them. The final (2.0) section integrates all wetland mitigation issues in terms of adequacy and feasibility, and consistency of assumptions or statements in the EIR and REIR.

1.0 Wetlands and Groundwater Hydrology impacts
1.1. The EIR describes existing conditions of wetlands hydrologically connected and supported by groundwater over the entire Area 4, especially near the proposed golf course and Pintail Duck Club.

Consistent with the EIR's Appendix G (Hydrology), the EIR's Appendix E clearly identifies in general terms the importance and wide distribution of shallow groundwater influence on the wetlands of Area 4, in addition to the influence of direct rainfall and surface runoff on the site's wetland hydrology. Groundwater is identified as one of the three *primary* sources of hydrology acting on the site, indicating the significance of this hydrologic support of wetland functions.

pg. 8. The site is fairly mesic, and especially in portions of Area 4 closer to San Francisco Bay, wetland hydrology is influenced by high groundwater tables and muted tidal fluctuation as well as runoff from precipitation.

pg. 11. There are three primary sources of hydrology acting on the site, including incidental rainfall, groundwater table fed by springs, and lateral seeps.

Appendix E describes the strongest (perennial) groundwater influence on wetland hydrology in and bordering the Pintail Duck Club, but it also identifies widespread significant contribution of shallow groundwater to wetland hydrology of shallow depressions elsewhere on the site, particularly east and south of the proposed golf course. It even concludes that groundwater influence in some areas exceeds that of runoff or rainfall.

pg. 11 …the presence of surface and subsurface water deriving from underground seeps appears to influence seasonal wetland habitat within Area 4 east and south of the proposed golf course. The remaining areas on the site are influenced by a combination of these hydrologic features.

pg. 92 …habitats adjacent to the golf course are fed by groundwater rather than surface runoff.

pg. 92 …particularly in the summer…the only existing sources of water are the freshwater seeps (groundwater) located in the central portion of Area 4…

pg. 93 …areas near the golf course are supported by groundwater seeps…

Appendix E also describes the widespread shallow lateral subsurface flow of water from farmed (disced) wetland depressions as sufficient to drain them by ditch pumping, again confirming the widespread (not just local) influence of lateral subsurface flows through soils (in this case, shallowest soil groundwater).

pg. 11 ….The depressional wetlands filled with subsurface flow within disked soils also allows water to move generally towards the pump mentioned previously, draining the site slowly.

The description of "agricultural field" vegetation (farmed wetlands) on pg. 18 of Appendix E confirms that influence of groundwater connectivity with the site's wetlands also extends over the allegedly "low quality" wetland in terms of wildlife habitat.

pg. 18. Sources of hydrology are numerous and varied throughout Area 4, with some areas that are influenced by freshwater seeps or saline groundwater, as well as other depressional areas which accumulate surface precipitation.

The Appendix G description of hydrology states that groundwater is shallow and exposed at the surface throughout Area 4, and shallow groundwater is connected subsurface to the ditches that are pumped to drain the site.

pg. 19 The groundwater table is shallow and exposed at the ground surface in locations throughout Area 4.

pg. 22 It may even be determined that the increase in ditch inundation could benefit groundwater saturation and potentially the quality of nearby groundwater driven wetlands and that the pump outflows should not be increased.

Appendix G affirms that the golf and residential development types differ in their relative influence on surface and subsurface hydrology: residential development has relatively more hydrologic impact on *surface* water hydrology (storm runoff), and golf development has relatively more potential hydrologic impact on *groundwater*:

pg. 6…Sub-Area C may develop as residential units and/or golf course. If the entire sub area

develops as residential, there may be more potential impact to stormwater runoff; whereas if the entire sub area is a golf course, there may be more impact in terms of short-term on-site groundwater use and therefore groundwater hydrology.

1.2. Both the EIR and REIR fail to analyze any potential impacts of development on groundwater support of wetlands, and wetland ecosystem services provided to maintain groundwater quality.

Despite affirming the substantial influence of groundwater on wetlands of Area 4 (Appendices E and G, cited above), and despite explicit statements that golf development in particular may impact groundwater hydrology (pg. 6, Appendix G), both the EIR and REIR fail to analyze any potential impacts of Area 4 development on groundwater support of wetlands hydrology in undeveloped areas that may include the projects wetland compensatory mitigation.

RESPONSE I-1: The DEIR and REIR do analyze potential impacts of development on groundwater support of wetlands and wetland ecosystem services provided to maintain groundwater quality, as well as potential Area 4 development. See REIR pg. 177-180 and DEIR pg. 136-140, as well as DEIR Appendix E.

Regional groundwater flow patterns from upstream freshwater recharge sources to and from the downstream brackish tidal boundary will not significantly change due to the development of Area 4. The development of Area 3 will not have any significant impact on groundwater flows to wetlands in Area 4 and none are suggested to occur by the commenter. Development of Area 4, which would entail an increase in the percentage of impermeable surface, could reduce the volume of base flow and quick return flow (interflow) into the shallow groundwater aquifer, but would increase the amount of surface runoff directly into the wetland areas by a commensurate volumetric amount, because the amount of rainfall is not changed by development. Potential changes in surface water flow to the localized wetlands that will need to be addressed and mitigated during project design as subsequently described, are primarily due to the specific locations of storm drain outfalls and distribution of runoff into wetland areas. Detailed information about the location of this flow in relation to the wetlands in Area 4 is not available at this time.

As described in detail in the RDEIR, when the future discretionary approvals to develop the school in Area 3, residential in Area 4 and a golf course or other form of recreation in Area 4 are proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. At that time, all issues subject to CEQA would be evaluated to determine what level of additional review is necessary.

COMMENT I-2: The EIR's Appendix G addresses only groundwater in terms of quantity (use,

depletion of supply), but omits analysis of water quality impacts associated groundwater flows between the golf course and wetlands. Appendix G, pg. 22 states that it performs no analysis of water quality impacts of the golf course based only on runoff.

RESPONSE I-2: The commenter is correct that Appendix G of the RDEIR addresses groundwater in terms of quantity. Water quality impacts from runoff are addressed in Section 3.8.3.9 of the RDEIR (pg. 251-256).

COMMENT I-3: pg. 22 Proposed golf course development has not been analyzed in numeric detail since the Alameda County Drainage Manual indicates identical runoff coefficient values for both undeveloped land and golf courses, and there would be no change in runoff volumes due to development.

RESPONSE I-3: The comment is an excerpt from the DEIR Hydrology and Water Quality report and does not raise any questions or comments regarding the environmental review or impacts of the project.

COMMENT I-4: But without explanation, Appendix G (and the EIR and REIR) also omit any analysis of water quality impacts of golf course development on shallow groundwater, *despite the assertion of Appendix E that groundwater in the vicinity of the golf course is substantial* (ppg. 11, 92-93), and the assertion of Appendix G (pg. 6) that golf course development is more likely to influence *groundwater* hydrology than residential development (pg. 6).

The most likely types of potentially significant groundwater quality impacts from golf development on wetlands would be nutrient pollution (particularly soluble, highly mobile nitrates, regardless of the form of nitrogen directly applied to turfgrass) and herbicide pollution. Appendix E (pg. 6) states that rates of nitrogen applications for golf turfgrass areas would occur in the range of 2-3 lbs/1000 square feet (per year?...ambiguously stated), but fails to analyze or estimate the proportion of that nitrogen load that is assimilated by turfgrass, and the proportion that is exported to runoff or groundwater infiltration. Nitrate loading of shallow groundwater may occur from leaching of turfgrass fertilizers during the winter rainfall season, when accumulated applied nitrogen fertilizer in soil (remaining after turfgrass uptake) is transformed by microbial action to nitrate, and is transported by infiltration (winter rainfall) to shallow groundwater. Residual herbicide is potentially transported to groundwater by the same process. The EIR fails to disclose or analyze the types of herbicides or the rates of application conventionally used to maintain golf turf free of broadleaf weeds.

The EIR and REIR also fail to identify any thresholds for significance for nitrate pollution of wetlands potentially affected by golf-polluted groundwater (either in terms of eutrophication or amphibian larvae populations). Nitrates and herbicides can impact the development and mortality of amphibian tadpoles and cause or significantly contribute to amphibian declines (Hecnar, S.J. 1995. Env. Tox. & Chem. 12:2131-2137; Griffis-Kyle, K.E., 2007 Aquat Ecol 41:119–127; Griffis-Kyle and Ritchie 2007, Oecologia 152:633–642) in seasonal wetlands of Area 4 connected by groundwater to proposed golf development. Even trace amounts of the surfactants (additives) in herbicide formulations approved for use in non-wetlands (but which may be transported

hydrologically from uplands to wetlands through groundwater or runoff) may significantly i m p a c t sensitive amphibian populations. (Relyea, R. A. (2005) *Ecol Applic 15*(2), 618-627). The EIR and REIR fail to assess such potentially significant ecological impacts to amphibians that are not themselves "special status" species but may be seasonally significant for the ecology of the wetland complex. Pacific tree frogs and western tadpoles are described as "likely" to occur on the site's wetlands (Appendix E pg. 27), and they are likely to have an ecologically significant role in seasonal wetland ecosystems of the site. For example, abundant amphibian larvae may be important seasonal grazers of algae (water quality function), and provide an important prey base for wading birds (present foraging on the site's wetlands; REIR pg. 158, EIR Appendix G ppg. 27, 62) and other wildlife, including garter snakes. Potentially significant population-level and community-level ecological impacts of fertilizer (nitrate) and herbicide/surfactant contaminant impacts to amphibians are not addressed or mitigated in the EIR or REIR.

RESPONSE I-4: The REIR has generally addressed the potential impacts related to long-term water quality impacts on common and special status species, including amphibians, and the control of golf course surface runoff through irrigation management, bio-retention and other pollution mitigation measures (See BIO-2, MM BIO-13.1 and MM HYD-1.1-1.4). These measures would address pollution from nitrates, herbicides and other pollutants. All such potential impacts will be subject to future, project-specific review of the golf course when the information required for the analysis is available. Impacts to California tiger salamanders were assessed in the EIR. There is no record of California tiger salamanders on site, none were observed during surveys, and none are expected to occur on site. Herbicides will not be used in or near (with 100 feet) wetland habitats.

The City acknowledges that the golf course would be considered "self-treating" by NPDES Municipal Regional Permit standards. Self-treating areas, as explained the Alameda County C.3 Technical Guidance Manual (2013), are permitted because "infiltration and natural processes that occur in these areas remove pollutants from stormwater" (BASMAA, 2003). It is widely accepted in the Bay Area that landscaped areas, with appropriate fertilization, pesticide and irrigation controls, are capable of treating the "first flush" of stormwater run-off which contains the highest level of pollutants through infiltration into the top soil and through plant uptake.

The creation of impervious surfaces within the golf course and all other development types will require the installation of treatment measures such as bioretention. Bioretention has total nitrogen removal efficiencies ranging from 55 percent to 65 percent, and up to 80 percent to 92 percent with the inclusion of an anaerobic denitrification layer, (placing the perforated underdrain at the top of the rock section as depicted in the AC C.3 Technical Guidance Figure 6-5), in addition to the hydraulic retention time in the soil media.

COMMENT I-5: The EIR and REIR also fail to analyze potential impacts of development on groundwater flow patterns or rates that supply down-gradient wetlands of Area 4. There is no analysis of the degree to which placement of pad fills or surcharged fills to compact soils (engineering clay soils to prevent subsidence after fill addition). The REIR (pg. 231) confirms that the magnitude and extent of fill placement to mitigate subsidence (and cause potential soil compaction-induced impacts to groundwater flow rates and patterns) is not yet analyzed, and is deferred to subsequent development projects:

Imported soil placed to raise site grades in Area 4 *will cause the ground surface to settle significantly over a period of 30 to 50 years*. The total settlement *will need to be accounted for* in the design of finished surface grades for roadways, utilities including PG&E tower modifications, and building pads. Therefore, the total quantity of imported fill will be greater than anticipated to account for long-term ground subsidence and to maintain site elevations above flood levels. The current estimated fill for Area 4 *totals 2.1 million cubic yards*. This estimate *cannot account for long-term settlement* because the timing of import is undetermined at this time. The exact amount of fill will be dependent on the rate of import and the amount of fill brought in over a period of time because the *settlement could be accelerated* and more or less dirt could be needed. [REIR pg. 231.]

Based upon the grading plans, the project proposes pl*acement of 10 to 14 feet of fill on the residential area of Area 4*, to raise planned improvements above flood elevation. [REIR pg. 233]

RESPONSE I-5: The information that is now known is addressed in the RDEIR. The most significant potential impact from Area 4 development on wetland hydrology is changes in the patterns of local surface runoff that feed the down-gradient wetlands as disclosed in the RDEIR. These changes will be further evaluated, when detailed storm drainage plans for Area 4 are proposed.

As described in detail in the RDEIR, when the future discretionary approvals to develop the school in Area 3, residential in Area 4 and a golf course or other form of recreation in Area 4 are proposed, the City of Newark or the appropriate decision-making agency would evaluate the proposal, in light of the RDEIR and in compliance with CEQA Guidelines Section 15168, to determine the level of tiered review required. At that time, all issues subject to CEQA would be evaluated to determine what level of additional review is necessary.

The shallow groundwater table within Area 4, which is also a variable source or sink for the wetlands, is not significantly impacted by proposed development in the global sense because the primary sources of aquifer recharge (local stormwater runoff volume upstream and the salt ponds downstream) are not affected. The City acknowledges that until reclaimed water becomes available, the golf course would rely on local well water and golf course irrigation demands could be different than agricultural demands, depending upon agricultural practices. Local groundwater gradients are not affected by fill placement and soil improvements other than as described and

mitigated in GEO-1 and GEO-7. The long-term consolidation settlement due to the areal fill placement is anticipated to occur in the moderately compressible, saturated, very low permeability clays and silts, and not in the sands, which are the permeable and water transmitting layers. The long-term settlement was accounted for in the RDEIR.

COMMENT I-6: Geotechnical mitigation measures for subsidence (settlement) clearly confirm the lack of any EIR or REIR analysis of potential fill settlement and clay compression impacts on shallow groundwater (deferred to subsequent individual project studies; all such analysis is explicitly deferred, and wetland groundwater impacts is not included in the scope of deferred studies. Nor is wetland hydrology expertise or agencies proposed in the review of such deferred studies. Wetland hydrology impacts are not considered at all in context of settlement mitigation or anywhere else in the EIR or REIR. Mitigation for geotechnical impacts, such as options to mitigate by *surcharging* soils (compressing soil rapidly with oversize heavy fill before placement of final fill volumes) or *wick drains* (direct removal of shallow groundwater in upper 20 ft; direct potential significant impact to wetland groundwater sources) have potential significant impacts to wetland hydrology that are nowhere analyzed or mitigated in the EIR or REIR, and not even deferred to subsequent studies, but merely to "coordination" with Alameda County Water District, which d*oes not manage groundwater for wetland hydrology, does not have wetland ecology expertise, or enforceable criteria for wetland groundwater hydrology protection* (not their mandate):

MM GEO-1.1: Prior to issuance of grading permits, *construction-level study will be required* to characterize the lot-specific lateral extent and magnitude of potential liquefaction- induced settlement for design of new structures and improvements within Areas 3 and 4. The project geotechnical engineer *shall coordinate with ACWD prior* to beginning any soil improvement measures to ensure impacts on groundwater resources are minimized. The results of the investigation shall be submitted to the Director of Public Works for review and approval. Structures will need to be supported on rigid foundations designed to tolerate the anticipated total and differential settlements….

MM GEO-1.1: Prior to issuance of grading permits, *construction-level study will be required to characterize* the lot-specific lateral extent and magnitude of potential liquefaction- induced *settlement* for design of new structures and improvements within Areas 3 and 4. The project geotechnical engineer prior to beginning any soil improvement measures to ensure impacts on groundwater resources are minimized. The results of the investigation shall be submitted to the Director of Public Works for review and approval. Structures will need to be supported on rigid foundations designed to tolerate the anticipated total and differential settlements. …Ground improvement techniques could also be used to mitigate liquefaction-induced differential settlement.

- *Wick drains* shall be confined within the *compressible clay zone (upper 20 feet of soil profile*). Additional subsurface exploration during the design-level geotechnical investigation shall confirm the depth of the compressible soil zone.

- *Wick drains* shall extend no further than 10 feet from the top of slope of the planned areal fill. This will provide at least 5 feet of soil between final grade and the tops of the wick

drains, which would be installed prior to areal fill placement. This will reduce the potential for surface water to access the wick drains.

- Horizontal strip drains that are placed at the surface to collect water from the wick drains shall be connected to solid pipes that extended beyond the toe of the areal fill slopes. The horizontal strip drain/solid pipe transitions shall be at the outer row of wick drains. At the completion of the surcharge program, the solid pipes shall be grouted in place to abandon them. The settlement mitigation approach shall be reviewed and approved by the Director of Public Works, prior to issuance of grading and building permits and the process for implementation of the settlement mitigation will be included on all construction bid documents.

RESPONSE I-6: As the comment notes, wick drains are installed only in the compressible clay zone. Wick drains are designed to create closely-spaced artificial vertical drainage paths to which the pore water in saturated clays can flow to the ground surface, thus decreasing the consolidation time (for the clay) to a matter of months. As described in the Response to I-7, relieving pore pressure in the clay will not affect groundwater flow in the shallow water-bearing (permeable) zone that may supply the wetlands. In fact, installing wick drains into that water-bearing zone would be completely counter-productive, as this would increase the pore pressures in the clay. This counterproductive action would be the only way that wick drains could affect groundwater flow and wetlands. Since this action is not proposed, it is not analyzed. The long-term consolidation settlement due to the areal fill placement is anticipated to occur in the moderately compressible, saturated, very low permeability clays and silts, and not in the sands, which are the permeable and water transmitting layers.

COMMENT I-7: Compaction of clay subsoils is likely to reduce saturated hydraulic conductivity of shallow groundwater. It is precisely shallow groundwater (not deeper aquifers) that directly underlie and seep to Area 4 wetlands, as shown in Appendix G Figure 6. Alteration of groundwater flow patterns in developed, filled portions of Area 4 to reduce subsidence impacts to less-than-significant levels may cause significant wetland hydrology impacts, causing some groundwater-dependent perennial wetlands to suffer reduced subsurface inflows (drier), or causing other seasonal wetlands to become wetter and more perennial. Changes in groundwater discharge patterns in Area 4 wetlands retained as mitigation may impair long-term wetland functions, and may develop gradually and long after the (perfunctory, ineffective) 5 year monitoring period for mitigation wetlands proposed in BIO MM-1.2A.

RESPONSE I-7: As noted in the above responses, the long-term consolidation settlement due to the areal fill placement is anticipated to occur in the moderately compressible, saturated, very low permeability clays and silts, and not in the sands, which are the permeable and water transmitting layers. The compaction of clay subsoils will not reduce saturated hydraulic conductivity of shallow groundwater. First, hydraulic conductivity is an intrinsic property

related only to the type of material, not its thickness. Second, compression of clay strata will reduce the thickness of those strata, but will not reduce the thickness of the shallow water-bearing (permeable) formation(s). The flow of water through granular media is governed by Darcy's Law:

$$Q = K\frac{\partial h}{\partial l}A$$

where Q is flow (gpd), K is the hydraulic conductivity (gpd/ft^2), $\frac{\partial h}{\partial l}$ is the hydraulic gradient (ft/ft) and A is the flow area (ft^2). The placement of fill and the installation of wick drains are anticipated to change the thickness of clay layers and thus will reduce flow area (A). Since hydraulic conductivity and the hydraulic gradient are not affected by fill placement, Q is reduced, but only in the clay layers. The permeable water-bearing layer(s) thickness does not change, the flow area does not change, and the discharge of groundwater does not change.

Furthermore, the hydraulic conductivity of the compressible silts and clays is one to ten orders of magnitude (10 times to 10 billion times) less than the hydraulic conductivity of the largely incompressible sands and sandy gravel deposits that make up the shallow water-bearing zone. In terms of groundwater flow, the clays do not produce significant flow, and the reduction in flow area of clay due to compression has no significant impact on flow to wetlands.

Typical hydraulic conductivity values[6] in gpd/ft^2:

silts and clays	5×10^{-5} to 1
sands and gravels	10 to 10^6

For these reasons, compaction of clay soils from fill would not reduce saturated hydraulic conductivity of shallow groundwater in a manner that could significantly impact wetland hydrology.

COMMENT I-8: None of the mitigation measures proposed in BIO-2.3 or 2.4 (REIR mitigation measures aimed at controlling nuisance flows rather than surface water or groundwater pollution of wetlands) restrict application rates or timing of herbicides, and none contain enforceable, feasible mitigation restricting the type, rate of application, or seasonal timing of nitrogen fertilizers. The component of MM BIO 2.4 to implement "University of California Integrated Pest Management Plan recommendations to maximize irrigation efficiency" merely states "do not overfertilize", which is vague, generic, and unenforceable, lacking any measurable criterion or monitoring of nitrate concentrations in winter or spring when rainfall-driven leaching of nitrates is most likely to occur. Thus, the EIR and REIR mitigation measures fail to reduce potential

[6] Freeze, R. Allan., and John A. Cherry. *Groundwater*. Englewood Cliffs, NJ: Prentice-Hall, 1979, pg. 29.

significant indirect impacts of golf fertilizer and herbicide contamination of groundwater and surface water that may affect adjacent wetlands.

RESPONSE I-8: The DEIR and REIR has generally addressed the control of golf course surface runoff through irrigation management, bio-retention and other pollution mitigation measures (See BIO-2, MM BIO-13.1 and MM HYD-1.1-1.4). These measures would address pollution from nitrates, herbicides and other pollutants. All impacts related to herbicide use in Area 4 will be subject to future, project-specific review.

The golf course would be considered "self-treating" by NPDES Municipal Regional Permit standards. Self-treating areas, as explained the Alameda County C.3 Technical Guidance Manual (2013), are permitted because "infiltration and natural processes that occur in these areas remove pollutants from stormwater" (BASMAA, 2003). It is widely accepted in the Bay Area that landscaped areas, with appropriate fertilization, pesticide and irrigation controls, are capable of treating the "first flush" of stormwater run-off which contains the highest level of pollutants through infiltration into the top soil and through plant uptake.

The creation of impervious surfaces within the golf course and all other development types will require the installation of treatment measures such as bioretention. Bioretention has total nitrogen removal efficiencies ranging from 55 percent to 65 percent, and up to 80 percent to 92 percent with the inclusion of an anaerobic denitrification layer, (placing the perforated underdrain at the top of the rock section as depicted in the AC C.3 Technical Guidance Figure 6-5), in addition to the hydraulic retention time in the soil media. Such treatment measures will reduce biological impacts from fertilizers to less-than-significant levels.

COMMENT I-9: Similarly, the mitigation measures of BIO-2.1 address only stormwater runoff and point discharge or drainage impacts of development on wetlands, limited entirely to surface hydrology. This is n o t consistent with the EIR/REIR's acknowledgement of the substantial influence ("primary"; pg. 11 Appendix E) of groundwater hydrology on Area 4 wetlands. It indicates an unexplained omission of all hydrology impacts of development on either excessive local augmentation of shallow groundwater (especially near the golf course), pollution of shallow groundwater (again, especially near the golf course), or interference with rates or patterns of groundwater flows to wetlands due to site development (e.g. compaction and reduction of saturated hydraulic conductivity of underlying substrates below surcharged pad fills; installation of subsurface drains, etc.).

RESPONSE I-9: Please refer to Response I-8.

COMMENT I-10: The EIR and REIR also fail to identify the potential significant impacts of the project on important wetland biogeochemical processes that beneficially reduce nutrient

pollution of groundwater. The EIR and REIR assess wetland losses and impacts only in terms of "habitat" and "habitat quality" (for wildlife or plants). The wording of Impact BIO-1 identifies wetland impacts only as wetland "habitat" impacts, to the exclusion of all other wetland ecosystem service impacts. The EIR/REIR neglects wetland ecosystem services such as microbial-mediated nutrient transformations and degradation of contaminants or pesticides. This is inconsistent with the EIR's threshold of significance for "substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act". Section 404 wetland impacts are defined by EPA regulations (40 CFR Section 230) to include not only fish and wildlife habitat, but equally important ecosystem service capacity to "assimilate nutrients, purify water… productivity, stability…." Wetlands with purportedly low "habitat quality" (arbitrarily evaluated solely in terms of habitat, not other wetland ecosystem services) may provide significant water quality functions, including denitrification, immobilization and sequestration of excessive nutrients or contaminant loads, and carbon sequestration in wetland soils.

RESPONSE I-10: The RDEIR acknowledges that these ecosystem services may be impacted along with wetland habitats within the project footprint in Area 4. However, in its present state, the low-quality wetlands are prevented from providing some of the functions and values noted because of the nature of the various agricultural practices that have been on-going since at least the turn of the century. Each of the ecosystem services described by the commenter will be substantially increased by enhancing some of the low-quality farmed wetlands, and creating new wetlands, to high-quality marshes for two reasons: (1) farming practices will cease to occur within the farmed wetlands to be provided as mitigation and (2), some areas that are currently uplands may be converted to wetlands on site.

COMMENT I-11: The EIR and REIR provide no reasonable explanation for the failure to assess potential significant impacts to these scientifically accepted important wetland ecosystem services, particularly to the very extensive farmed wetlands (purportedly "low quality" in terms of habitat). The large area and soil volume, and extensive potential groundwater interaction of the farmed wetlands provides a reasonable presumption that they have significant potential to perform important biogeochemical functions at a large scale, and that their outright elimination is a potentially significant impact to water quality. Indeed, the statements that shallow groundwater from the site's depressional wetlands is drained subsurface by pumps to ditches connected to San Francisco Bay (Appendices E pg.11 Appendix G pg. 22), suggest potential on-site wetland water quality impact connections that may reach off-site to the San Francisco Estuary.

Conclusions regarding wetland groundwater impacts: The EIR and REIR arbitrarily analyze only surface water impacts to wetlands even though they confirm that active subsurface hydrology – groundwater flow and surface seeps – are among "primary" wetland hydrology sources. The EIR and REIR fail to analyze or mitigate potentially significant impacts to quality and quantity of groundwater supplies to the site's wetlands (which may include potential on-site wetland mitigation). Related mitigation measures that may affect surface runoff water quality are inadequate mitigation for groundwater impacts.

RESPONSE I-11: Refer to Response I-10. Potentially significant impacts to the wetland and source groundwater (from both saline and fresh sources) are addressed by the following sections in the RDEIR and their associated technical appendices: "Impacts of Alteration of Site Hydrology on Avoided Wetlands and Associated Species" (pg. 177-179); "Impacts of Freshwater Inputs on Salt March Habitat and Associated Species" (pg. 179-180); and "Groundwater" (pg. 243). The RDEIR identifies the following significant environmental impacts related to groundwater flow and their mitigation: BIO-2, BIO-3, GEO-1, GEO-3 and GEO-7.

COMMENT I-12: 2. The compensatory wetland mitigation measures are fundamentally inadequate, infeasible, impermissibly deferred in planning, and laden with unreasonable and contradictory assumptions.

The purely programmatic, formulaic wetland mitigation proposal is not commensurate with the specificity of the fill/development envelope and project types (residential and/or golf course development) proposed. Both the U.S. Fish and Wildlife Service (USFWS) and Regional Water Quality Control Board (RWQCB) correctly identify fundamental flaws in the mitigation proposal, which are not addressed in the RDEIR, which basically reiterates and reformats the original EIR proposal without adding needed specificity and substantial evidence or planning content to address fundamental type, location, landscape position, hydrologic and soil suitability, and long- term management of wetland restoration and enhancement actions, sufficient for objective assessment of their feasibility and enforceability. Several probably fatal flaws are inherent in the vague and mostly deferred wetland mitigation planning.

RESPONSE I-12: Please refer to Master Response 2.

COMMENT I-13: 2.1. The proposed off-site compensatory mitigation component basically fails to mitigate the type (long-term transition zone for the foreseeably rising estuarine wetlands), landscape setting, of the most significant wetland functions (ecosystem services) of existing wetlands in the long-term, and arbitrarily considers only wetland "habitat" functions. The EIR acknowledges the existing conditions of unique wetland ecosystem functions inherent in the landscape position of Area 4 wetlands in the geomorphically embedded "transition zone" between the San Francisco Estuary and terrestrial habitats:

Being situated between existing salt production ponds that were formerly tidal wetlands and vernal pool habitat east of the site, Area 4 provides one of few areas in the South Bay with upland habitat transitioning between tidal wetlands and vernal pools, and the Goals Project identified the site's potential value in providing upland transition zones adjacent to tidal wetlands. [Appendix E pg. 233]

The USFWS and RWQCB EIR comments concur with the importance of this setting-dependent wetland value, and the long-term ecosystem services it provides. But the EIR and REIR wetland mitigation fail to compensate for the magnitude of estuary-upland transition zone wetland loss, and reduce wetland value to generic "habitat" without the primary context of wetland ecosystem setting

in the landscape. It then devalues the "quality" of wetland solely in terms of "low quality habitat" out of context with landscape position, wetland sustainability, and long-term sea level rise. The EIR and REIR fail to provide any reasonable explanation for why only wetland "habitat" quality is analyzed, but not other wetland services related to the admittedly important long-term transition zone. The wetland mitigation plans fail to compensate for potentially significant losses of important non-habitat wetland functions, such as shallow groundwater quality improvement (e.g., denitrification, sequestration or transformation of contaminants).

In fact, it is not physically possible to compensate off-site for the magnitude of lost wetland transition zone space caused by development of Area 4, as these resource agencies affirmed; this type of undeveloped wetland transition zone function (whether "degraded" in terms of short-term wildlife "habitat quality" or not) is extremely scarce regionally (see 2.2. below). That is why RWQCB urged the City to consider alternative wetland mitigation banking land uses for Area 4. The REIR persists in failing to mitigate the loss of this wetland transition zone habitat type and function, either in programmatic criteria or identification of potentially adequate and available off-site locations. The burden of demonstrating at least potential feasibility and availability of off-site compensatory wetland mitigation remains.

RESPONSE I-13: Please refer to Response I-10 and Master Response 2.

COMMENT I-14: 2.2. Off-site compensatory mitigation areas are not available within the geographic area specified by mitigation criteria. The USFWS and RWQCB comments on the EIR both correctly affirmed that off-site compensatory mitigation is *not available* within the geographic area required by MM BIO 1.2. The mitigation criteria cannot be met, and so off-site compensatory mitigation meeting this criterion is not feasible or enforceable. Thus, any significant wetland impacts that cannot be mitigated on-site are unmitigated. The REIR fails to substantively analyze or correct this basic defect; the mitigation for wetlands essentially makes false options for off-site mitigation it can't possibly obtain, which places all the burden on wetland mitigation on on-site mitigation options. As shown above (2.1), on-site mitigation is not feasible, either.

RESPONSE I-14: Please refer to Master Response 2.

COMMENT I-15: 2.3. The explicit hydrological assumptions of long-term on-site wetland mitigation sustainability related to direct and indirect effects of sea level rise are unreasonable, unexplained, and incorrect. The feasibility of on-site wetland "enhancement" proposed as mitigation depends on some extravagant and unjustified assumptions regarding the sustainability of wetland hydrology in relation to sea level rise. These assumptions are *inconsistent* with the REIR's claims about flood control capacity and sustainability of Mowry levees.

We assume that impacts to biological resources in the Project vicinity due to rising sea level related to global warming will not substantially affect this biological resource impact analysis as the existing outboard levee and pumps that are currently in use to drain the site will continue to be managed to maintain current hydrological conditions within the Project areas. For example, any Project features, including any required mitigation, in the southeastern part of Area 4 will still require pumping to move water into Mowry Slough, whether under existing conditions or under

conditions of higher sea levels. If necessary, *pumping capacity will be adjusted to maintain suitable hydrologic conditions to maintain existing and mitigation wetlands as designed*. If any levee improvements are required in the future to offset sea level rise, the environmental effects of those improvements will be determined separately (i.e., for that specific levee improvement project). [Appendix E, pg. 78]

First, these assumptions about foreseeable levee maintenance and sustainability of function are inconsistent with the REIR geotechnical impact assessment of Mowry levees, which clearly states that they have *never been evaluated and would need to be if relied on for any flood protection* (regardless of the purpose of flood protection). The REIR, however, fails to consider the fact that the entire on-site wetland mitigation is predicated on the assumption that these levees are not only feasible to maintain and function in perpetuity, but that the wetland mitigation as proposed depends on their flood protection. The levee flood protection feasibility question (along with further studies) is dismissed because the residential development does not depend on them, leaving the wetland mitigation hydrologic feasibility ignored entirely, just like the geotechnical impacts of subsidence mitigation on wetland groundwater hydrology.

In addition, the long-term stability of the [Mowry] levees *has never been evaluated*… Area 4 development will not depend upon the levees to provide flood control. Since the Area 4 development will not rely on the levees for flood control and protection, no further evaluation of the levees is necessary for implementation of development in Area 4. ….Since the Area 4 development will not rely on the levees for flood control and protection, no further evaluation of the levees is necessary for implementation of development in Area 4….If these levees were to be relied upon for flood protection, additional studies would need to be completed to characterize the levee materials, analyze the existing static and seismic stability, and determine possible stabilization alternatives if mitigation is required. As noted above, the Specific Plan does not rely up the levees for flood protection. [REIR pg. 233]

Second, the untenable assumptions about sea level rise having no long-term foreseeable adverse effect on wetland hydrology if levees and pumps are maintained is not justified, and is not a reasonable interpretation of groundwater hydrology bordering estuaries affected by pumping. Rising sea levels influence groundwater elevations upslope. Increasing pumping to lower freshwater (terrestrial) groundwater elevations within gradients adjacent to a salt water estuary predictably would cause highly significant salinity intrusion. This is not analyzed either in the "assumptions" discussion of Appendix E on pg. 78, or anywhere else in the EIR or REIR. Salinity intrusion and progressive salinization (or hypersalinization) of mitigation wetlands is a foreseeable significant impact of long-term maintenance of wetland mitigation relying on ever- increasing pumping to compensate for ever-increasing reverse groundwater gradients due to sea level rise. In addition, these assumptions are inconsistent with the EIR and REIR deferred analysis (failure to analyze in relation to wetland mitigation) of geotechnical settlement mitigation and groundwater (see 1.2 above).

Thus, the entire on-site wetland mitigation proposal depends on fundamentally flawed and unanalyzed assumptions about groundwater hydrology and levee maintenance. There is no feasible long-term maintenance option for the types of on-site wetlands proposed in their current location,

as sea level rises. Sea level rise will drive groundwater changes and levee flooding (overtopping, breaching) that must either (a) submerged the low elevation wetlands in their current locations, or (b) require progressive increases in pumping to offset overtopping and rising groundwater, causing instead salinity intrusion that would risk generating hypersaline (non-target, not meeting wetland objectives) wetlands or non-wetland "other waters" or special aquatic sites like salt pans and nontidal salt ponds. This is consistent with the essential nature of the Area 4 wetlands as transition zones. The wetland gradient naturally should shift position upslope with sea level rise. Forcing it to stay in place and in kind (for static mitigation) is simply infeasible during accelerated sea level rise, even if levee maintenance or upgrades were feasible.

Conclusions regarding wetland mitigation feasibility and adequacy to reduce impacts to less-than-significant levels: The REIR and EIR propose wetland mitigation that cannot meet its own geographic criteria for off-site compensatory mitigation, making all wetland mitigation depend on the feasibility and adequacy of on-site mitigation. The on-site mitigation depends on false assumptions about wetland sustainability, contradicting the REIR's claims about levee maintenance feasibility, and failing to address salinity intrusion impacts of pumping that it proposes to maintain wetland hydrology. Furthermore, the on-site wetland hydrology feasibility fails to account for development and geotechnical mitigation impacts on "primary" groundwater sources for on-site wetlands. Overall, the wetland mitigation proposed is vague, unreasonably deferred, infeasible as proposed even programmatically, contradictory with the rest of the EIR/REIR, and inadequate on its own terms. As urged by resource agency comments, a specific (conceptual level at least) wetland mitigation plan specifying location, type, hydrologic feasibility, long-term maintenance and sustainability, and management would be minimally required for adequate mitigation. My professional opinion, based on decades of knowledge and work on San Francisco Bay area wetlands, concurs with that of USFWS and RWQCB in this case: wetland mitigation as proposed is basically inadequate, and wetland mitigation banking should be evaluated instead of development with compensatory mitigation that isn't feasible.

RESPONSE I-15: Please refer to Master Response 2 and 4.

J. RESPONSE TO COMMENTS FROM MARGARET LEWIS, SEPTEMBER 19, 2014

COMMENT J-1: The REIR at pdf pg. 5 states that "Appendices to the Newarks Areas 3 & 4 Specific Plan Draft and Final EIRs are hereby incorporated by reference and are available at the City of Newark Community Development Department. Today I went to the Newark Community Development Department, and the only appendix to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs that was available was Appendix A.

The city employee working the counter searched the filing cabinet and all she could find was Appendix A. She said the other appendices were available on the city web site.

Therefore I conclude that the other appendices are not available at the Community Development Department and the statement in the REIR that they are available is incorrect.

RESPONSE J-1: The documents referenced in the RDEIR are on file at the Community Development Department. Unfortunately, at the time you made your request, the City staff person did not know where there were filed and the City regrets this error. The statement made in the REIR is correct. As noted, these documents are available on the City's website.

K. RESPONSE TO COMMENTS FROM WAYNE MILLER, SEPTEMBER 19, 2014

COMMENT K-1: A. SUMMARY: Critical Concerns: Quotations in the 2014 REIR (EIR in the Rears) on the sources of climate change and sea level rise and their impacts on the proposed development in Area 4 are already outdated. The REIR does not incorporate into their plans to account for accelerating changes that are continuously raising the bar on the forecasts and projections of climate change and sea level rise. The acceleration of changing impacts from self-feeding activities, alone, are expected to increase the magnitude of risk from their effects on developments near sea level, even by 2050, and increasing far beyond that date. The REIR report admitted that acceleration is likely, despite uncertainty in forecasts. However, the worst is likely to come, based on global trends and lack of corrective action in a cooperative and timely manner. Newark's environmental documents also have been criticized by various governmental agencies having jurisdiction, and by consultants and the public, to name a few. Permits have been withheld to date. Legal issues with CEQA law also are being continuously challenged for corrective action against the numerous faults within the EIRs, including General plan updates and other related City plans.

Despite references to certain current data, the City does not incorporate acceptable corrective measures, only to confuse and complicate issues, with forward and reverse arguments and dates that incorrectly tier from one document to the other. Attempts are made to appear in compliance, but input from the public, consultants, agencies, CEQA law representatives, and State and federal environmental regulations and policies continue to severely expose the faults.

Science-based Impacts: Current scientific reports present other forces of nature as having additional and accelerating impacts to climate change and sea level rise, not previously included in EIRs. Greenhouse gas emissions tend to be emphasized in forecasts, primarily from the large increase in CO2 from fossil fuels that produced an anthropogenic increase in temperatures during this industrial revolution. But arguments in the REIR must emphasize other factors, and that temperature is only one part of the contribution to climate change and sea level rise, despite its prevailing emphasis. Other forces that are surfacing are contributing significantly to accelerating climate change and sea level rise. Only some of those forces and expected impacts are presented herein, due to the voluminous literature and global concerns voiced by many scientists and their research organizations. Significant impacts from these contributions also need to be incorporated when evaluating environmental concerns.

B. REIR REFERENCES:
The REIR discussions regarding climate change and sea level rise quote data that historically has been conservative, but those concerns have been increasing in impact as current data surfaces. The projections in the REIR include citations from a number of sources, mostly with outdated estimates,

also referenced in a complex mix of reports and data, appearing disorganized and disconnected. The confusing order also incorporates quotes with more current dates that are actually using calculations and data in reverse order, in order to select for older dated information to appear to be current, thus confounding the reader.

Some examples in the 2014 REIR, with references and dates:

NOAA (2001); (2) IPCC (Intergovernmental Panel on Climate Change) projection for Table 4.4-1 (2007); (3) ASCE (2007); (4) USACE (2009); (5) BCDC from the Pacific Institute for CCCC (2009), but based on an empirical formula developed in 2007 that only relates global mean sea level rise to global mean surface air temperatures – therefore a limited physical relationship, mainly accounting for temperature; (6) BCDC projection in 2011, developed by the California Climate Action Team (CAT) in 2010, but produced from IPCC (2007) data and old methods of limited data and calculations; and
(7) only tidal gauge measurements to produce the low end projections, with intermediate and high end estimates developed from a NRC report in 1987, that was utilized and modified to produce the IPCC projections (2007). The methods from the 1987 report and the IPCC projections of 2007 were conservative methods argued in the REIR for Newark, providing a sea level rise of only 1.4 feet in 2050 and 4.6 feet in 2100. As cited in reports, discussed below, the IPCC even admitted that their data was too conservative, as influenced by governments, climate deniers and corporate media.

The REIR report states: "Table 4.4-2 identifies the range of sea level rise potential for the City of Newark, assuming adaption of the Presidio gauge for the local historic sea level trend and construction of a given forecast in 2010". The table projects a USACE method of the high of 1.4 feet for 2050 and 4.6 feet (55 inches) for 2100. Some recent reports for California forecast sea level rise north of Cape Mendocino, with highs of 1.57 feet in 2050 and 4.69 feet for 2100; south of Cape Mendocino (towards Bay Area) forecasts highs up to 2.0 ft for 2050 and 5.48 ft (66 inches) for 2100.

A BCDC projection, as far back as 2010, forecasts the high of 5.75 ft (69 inches), as it attempted to adjust to an uncertainty as you forecast further into the future. Unfortunately, these projections were derived from the older IPCC greenhouse gas emission scenarios and used by CAT. Furthermore, greenhouse gas emissions are only one part of the contribution to climate change. The likelihood of increasing concentrations of greenhouse gasses are potentially greater, while global corrective action still appears to diminish. In addition, as referenced later, melting of Greenland and Antarctic ice sheets are not well reflected in current sea level rise projections, but are known to have a profound effect on sea level rise. Therefore, due to newer data, uncertainty prevails, yielding a higher level of potential inundation.

As stated in the REIR, "an extreme storm surge equal to the extreme mean sea level rise would create a storm surge water surface elevation of 12.1 feet, which would inundate the minimum project elevation of 11.25 feet by 10.2 inches". *Furthermore, "the **weight** of additional fill accelerates ground settlement", which you must know has occurred in similar with terrain close to shorelines in the East Bay, e.g. Union City, Hayward, etc., and along the West Bay where similar developments already exist and new ones are being futilely attempted*

Increasing the fill to higher amounts such as 14 feet only attempts to raise an island or peninsula-type development above a surrounding flood zone--in an effort to circumvent the effects of near-term climate change and sea level rise. However, the underlying fill is on soft ground near sea level, with the influence of wetlands and marshes, and numerous other hydrologic forces that were not stressed in the Specific Plans or the EIRs. Environmental impacts to Area 4: 1. Eventually, the area will become inundated through erosion of the underlying fill, due to the upsurge imposed by rising water-soil saturation levels as the shoreline permeates into the soil and ground water from sea level rise; 2. Lifting pressure, absorption and desorption, and permeation from water tables forces water upward into soils through rising and encroaching seas--thus inducing a settling, sinking effect, or subsidence, with potential flooding of the housing that rests upon the fill; 3. Liquefaction zones, coupled with earthquakes, will exacerbate the saturation, settling and stratification of soils, whether compacted or not; 4. Contamination of ground water from salt intrusion into surrounding geological structures can fracture and destabilize the soil strata; and 5. Over-pumping, whether drilling for water or from efforts to remove contaminants, can draw more salt water into collapsing areas near sea level, also further contaminating ground water.

Levees and hard structures are not acceptable as long-term protective methods because of the hydrologic forces impacting shorelines and adjacent soils, as described above.

Protective levees and hard in-ground barriers, as suggested but not planned in the EIRs, already have been shown to be unsuccessful in protecting against these hydrologic process in vulnerable soils, even without significant impacts of sea level rise, e.g. Foster City, San Mateo, Redwood City and various other vulnerable parts of the globe.

The City of Newark must realize and incorporate these described [significant forces of impacts] when planning, and avoid ignoring the issue of their known existence. Knowing this alone would inspire questions and hesitance from anyone in purchasing land and housing in that area of Newark.

Susceptibility to these described natural forces compounds the impacts and risk to life from earthquakes and settling, exacerbated by floods from storm surge and sea level rise. *Do you realize that the proposed project, its spurious agreement and the evolution of its flawed environmental documents will eventually establish a scourge and a legacy of culpability for the City of Newark, the land owners and the developers?*

C. NEED FOR CURRENT SCIENCE-BASED DATA

REIR calculations and projections historically tend to utilize limited methods of evaluation, where many have produced outdated results, by omitting more recent scientific techniques to obtain additional reliable data that can affect the calculations. Overall, more recent and credible scientific methods are being used by climate scientists for updates, which present an ominous scenario for near-future climate change, concomitant with sea level rise and inundation at various parts of the globe.

Scientists and development projects such as those in Area 4 in Newark must answer the question: *"Why does the 2014 REIR not take into account most current data and projections to realistically demonstrate their impact, whether or not they expect that because the projections are beyond the*

2010 EIR they should be rejected? Does this truthful realism not show the impact of risk from the development? The EIRs and REIRs have often discounted public input of peer-reviewed science, but the City utilizes [current] peer-reviewed science (when selectively convenient, of course) to support their goals of development, while omitting the best environmental alternative, completely.

RESPONSE K-1: Please refer to Master Response 4.

COMMENT K-2: D. PROTECTION OF NEW DEVELOPMENTS, OR THE ALTERNATIVE
The California Climate Adaptation Strategy (CCAS) realizes that the high financial, ecological, social and cultural costs of protecting everything may prove to be impossible. In the future, protection of everything may be both futile and environmentally destructive. The strategy discourages planning, development and building any NEW significant structures in places where that structure will require significant protection from sea-level rise, storm surges, or coastal erosion during the expected life of the structure.

Area 4 inherently includes these vulnerabilities for limited adaptation. The REIR even admits a regional area-wide adaptive strategy against sea level rise, which might include an earthen levee or structural floodwall.

Do you realize that responses from the City of Newark consistently state that protection is not their problem, that it is a regional problem, contrary to adaptation strategy policies? Consequently, the imposition of risk is thrust upon the new property owners, despite short-term protections of fill for the sake of sprawl into low lying exterior areas of Newark, far from transportation and with much uncertainty for its future existence.

As stated in the REIR: "If the "high" sea level rise scenario proves to be true, adaptive strategies to improve flood protection (for example levees or floodwalls) may prove to be necessary in the future". *Based on these statements, how does the REIR expect that there will be economic incentive or even feasibility to protect with levees or by other means?* Or, as stated in California Adaptation Strategy reports, abandonment may be required during the life of the project, since sea level rise is expected to accelerate. *Do you not agree that developments typically exist beyond the calculated life of a project?*

Certainly you must agree that most developments rebuild and repair beyond your 50 year previously projected life of project, in order to continue their survival in lands where space is limited, such as in the Bay Area and throughout the world? Do you realize that projects in BCDC jurisdiction must be consistent with the Bay Plan and are expected to last until 2100? (See BCDC comments below)

RESPONSE K-2: Please refer to Master Response 4.

COMMENT K-3: E. BCDC COMMENTS: BCDC describes the need for shoreline protection if flooding is a potential risk. The REIR quotes BCDC's October 2011 Bay Plan Amendments for evaluation of each project on a case by case basis, generally discouraging developments in low-lying areas that can be inundated by floods or sea level rise. A number of sequential letters, up to 2014, from BCDC evaluated the specific case of the environmental documents for Area 4, and have a

number of concerns for agency reviews and permits: 1. BCDC (letter of September 27, 2013) to Newark regarding environmental impacts to Area 4:

"BCDC grants or denies permits for fill in any water, land or structure within their jurisdiction. Areas diked off from the Bay are also inclusive, such as Area 4 with managed duck clubs, specifically cites the Pintail and Whistling Wings Duck Clubs. Consistent with the MPA wetland policies, the purpose is to restore to tidal or subtidal habitat…for benefit of multiple species…with surface area retained to include a variety of subtidal and wetland habitat types including diked areas managed for wildlife or restoration of managed wetlands to tidal action". Therefore, these are managed wetlands under the BCDC umbrella. BCDC policy also states: "To address the regional adverse impacts of climate change, undeveloped areas that are both vulnerable to future flooding and currently sustain significant habitats or species, or possess conditions that make the areas especially suitable for ecosystem enhancement, should be given special consideration for preservation and habitat enhancement and should be encouraged to be used for those purposes. Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies….structures within the Specific Plan would be expected to last until 2100."

The EIR could consider the use of open space as a flood zone buffer area. Realize that open space wetlands and marsh accretion have been reported as preferential and natural buffering towards flooding and for simultaneous habitat enhancement, instead of planning for special fill of wetlands, flood walls or levees.

Do you acknowledge that BCDC and the MPA should be addressed as having [correctly] incorporating these jurisdictions and policies in your REIR, including your prior EIRs and General Plans as well?

In the REIR statement, you claim that the BCDC Bay Plan Amendment (2011)…encourages development in low-lying areas…However, in this specific case, a contradiction is that Area 4 tends to be preferentially viewed by BCDC as an area that should be managed for wildlife and for restoration, with managed wetlands restored to tidal action. Flood protection with wetlands and habitat restoration is clearly preferential. Apparently, the REIR did not adequately analyze the conditions of Area 4, without bias. The area is unique for restoration, but vulnerable to environmental destruction if filled for the sake of developments, especially a golf course. *Please consider the policy of "no wetland loss" from environmental policies of jurisdictional agencies, especially when there is little or no local or outside mitigation areas available that could be effective to compensate for wetland and habitat losses in Area 4.*

RESPONSE K-3: Please refer to Master Response 3. The September 27, 2013 letter referenced in the comment was responded to as part of the Newark General Plan TuneUp FEIR.

COMMENT K-4: 2. BCDC (letter of April 18, 2014) to Newark regarding environmental impacts to developments in Area 4. (Reiterates much of the same concerns from BCDC in their letter of September 27, 2013): "Climate Change and Safety of Fills. Staff recommends that a robust analysis of the effects of sea level rise based on the latest data from the National Oceanic

Atmospheric Administration (NOAA) Coastal Services Center on sea level rise vulnerability be used, and that the latest science-based sea level rise projections for the area be utilized when considering the vulnerability of the project areas to sea level rise".

The latest science-based sea level rise projections for the area have not been effectively utilized in the 2014 REIR, as demonstrated by the outdated citations. More current science-based reports that are surfacing in the literature are revealing collective forces that are additive and are accelerating impacts. There is no reason to avoid this contribution to near-future sea level rise, which, for some reason, is avoided in the REIR. Examples of some science-based reports are described later.
"Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies on the safety of fills and shoreline protection, and it is likely that many of the proposed structures within the Specific Plans would be expected to last until 2100".

As stated previously, the Area 4 development proposed is expected to have a life of 50 years, which will not last to 2100 as ascribed to BCDC's expectations.

According to BCDC, a condition for fill in the San Francisco Bay, from Section 66605 of the McAteer-Petris Act, states that "no upland alternative location is available for the project purpose that the fill should be constructed in accordance with sound safety standards, and the fill will minimize harmful effects to the Bay such as discharge of pollutants." *According to developable lands in Newark, do you agree in addressing the goals of the REIR in that there are many appropriate locations for housing, near transportation, in vacant lands within the city, to accommodate true infill in safer, more protected areas that are not vulnerable and also do not require excessive land fill? In addition, please realize that the intentions of the REIR in Area 4 development will result in imposing harmful effects to the Bay because of its close proximity to the Bay, with runoff, erosion, and discharge of pollutants into wetlands and the Bay – followed by destruction of habitat for wildlife and shorebirds that cannot be reversed.*

RESPONSE K-4: Please refer to Master Responses 3 and 4.

COMMENT K-5: F. SAN FRANCISCO BAY REGIONAL WATER QUALITY BOARD:
A series of responses from the Water Board (2010 to 2013, possibly in 2014 as well) has criticized the impact of developments in Areas 2, 3 and 4 in Newark's proposed developments and EIRs.

1. SF Water Board Letter of February 13, 2013:

The letter from the Water Board of February 13, 2013 critiques the General Plan Tune Upg. As stated, "The project could cause substantial impacts to jurisdictional waters that the Regional Water Board is charged with protecting pursuant to State and federal laws and regulations." As stated, "Areas 3 and 4 focus on fill of up to 85.6 acres of wetland/marsh/aquatic habitat." "The California Wetlands Conservation Policy and Senate Concurrent Resolution No. 28 require no net loss and a long-term net gain in the quantity, quality, and permanence of wetlands in California, including SF Bay region". "Avoiding and minimizing fill should be the project alternatives, including smaller

projects than those proposed."

The Water Board states that "it does not incorporate alternatives that provide for significant avoidance of fill of waters of the State." Alternative analyses such as these "are not acceptable to the Corps or the Water Board." *Do you realize that Waters of the State includes isolated wetlands, subject to the Water Board's jurisdiction, as well as water discharge requirements?*

A number of alternatives to the proposed development were presented by the Water Board, such as wider buffers between wetlands and development, smaller sites, higher densities, reduced fill, etc. On-site and off-site mitigation was not justified. The proposals were not consistent with the State's "no net loss" policy. "No net loss can only be achieved through avoidance of habitats or the successful creation of new habitats." The Water Board noted that "the ration of 1.5:1 is far too low for a mitigation measure that relies on preservation, for no net loss of habitat, since preserved habitats are already in existence."

As stated, "Area 4 represents a rare opportunity to restore this complex of habitats in a continuum with the Bay, provide connectivity with the Refuge, and provide an area for tidal marsh species to transgress (move up slope) in response to sea level rise." "The USFWS, BCDC and the Water Board have all expressed strong reservations about the fill of wetlands in Area 4."

Recent evidence demonstrated that wetland preservation and marsh accretion for long-term flood protection and sea level rise is a more desirable alternative, also realized and implemented in other countries. The Water Board was also concerned about "cumulative impacts on the use of waters and wetlands as wildlife habitat, including for rare, threatened, and endangered species" – as they have been previously found and reported in the area. The Water Board proposed that "Area 4 should be used as a mitigation ban."

Furthermore, the USFWS has included Area 4 in its acquisition boundary, due to its value to the Refuge in providing connectivity, preservation, restoration and long-term resilience to the area. *Consequently, how do you expect to down-size or eliminate this development in Area 4 in order meet these proposals and criteria of the various agencies? Or, better yet, why does the City of Newark avoid that environmental option by flippantly using the illogical excuse that this option simply does not meet the desired alternative of their development plan, against the environmentally preferable alterative? Are you aware that the Area 4 Specific Plan, which is tiered backwards to fallaciously incorporate itself into the General Plan Tune Up, is even contrary to CEQA law and to regulations and policies in agency reviews of Area 4?*

1. SF Water Board Letter of December 9, 2013:

The Water Board previously criticized the developments of Areas 3 and 4, as well as Area 2, and again the Board has reiterated and strengthened its concerns to the City of Newark. The Board provided statements criticizing the proposed Specific Plan developments of Areas 3 and 4 – unlikely granting permits due to the flaws inherently incorporated into the Plan by the City of Newark. In other words, the Specific Plan has ignored the needed corrections, and the REIR does not correct these flaws, but only contains some generic references, as in the prior EIRs.

For example, the Water Board cited some important concerns that are summarized:

a. "It appears that the Specific Plans for the Area 3 and 4 are directing project proponents to develop project proposals that have very low likelihoods of being authorized by the Corps or the Regional Water Board."

b. "The Regional Water Board has consistently noted in its CEQA comment letters that the amount of fill in the preferred alternatives in the Specific Plans for the TOD and Area 3 and 4 is not considered to be consistent with existing State laws and regulations."

c. "Even if federal and State agencies were to approve of the proposed amount of fill, the Specific Plan EIRs referenced in the FEIR have not established the existence of sufficient mitigation for these impacts**.**"

d. "The Regional Water Board has consistently pointed out the flaws in the proposed mitigation in those EIRs, and no commenting federal or State agency with jurisdiction over waters or wetlands has indicated approval of the proposed mitigation measures."

e. "Finally, we would like to reiterate that the City of Newark should not assume that the resource agencies will be able to permit the fill of the wetlands at Area 4. Since Area 4 is one of the largest remaining areas of open space along the Baylands, provides habitat for endangered species, and is adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge, impacts to Area 4 will be regionally significant, and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Regional Water Board is **not likely to authorize fill of wetlands** at Area 4, unless mitigation is demonstrably capable of providing equal habitat benefit for listed species."

f. "The Regional Water Board continues to encourage the City of Newark to consider the potential use of Area 4 as a mitigation bank. There are significantly fewer regulatory and physical barriers to creating a mitigation bank at Area 4 than there are to placing fill in Area 4 and seeking to create adequate mitigation for that fill."

RESPONSE K-5: Please refer to Master Response 2. Both of the letters referenced in this comment were responded to as part of the Newark General Plan TuneUp FEIR.

COMMENT K-6: G. MORE RECENT CONTRIBUTIONS FROM OTHER SOURCES OF SCIENTIFIC DATA: Scientific results from peer-reviewed science articles, news releases, UN Climate Change, National Academy of Sciences, Paris Climate Summit meetings, and numerous reports from many other countries have revealed more recent 2014 contributions towards climate science. More current data is continuously evolving and reveals more ominous predications and projections that demonstrate an accelerating pace of climate change and climate disruption.

Based on the changes occurring already throughout the world, from the effects of climate disruption on land, ocean and the atmosphere, economies and resources are being continuously disrupted as population expands and attempts to search and migrate into more desirable areas—hence, global disruption of human populations. Our lack of addressing or correcting our global anthropogenic contributions to date, and that even stopping our contribution completely would still be difficult to implement.

1. IPCC 2013, AR5 REPORTS: The outdated 2007 IPCC report has been reported to be influenced by the climate deniers, political pressure and other sources, in order to provide conservative estimates of impacts of climate change and sea level rise. The AR5, 2013 assessment still focuses on much uncertainty and still appears to be reticent to include a variety of other impacts that can accelerate climate change and sea level rise.

Citations of IPCC impacts are mostly out of date since there is a long time lapse between collection and evaluating data and reporting it for 2013. Most data appears to stop at 2010, with some at 2012, although it is often a confusing mix of information, where it is difficult to determine the exact dates associated with much of the reporting.

The IPCC reports tend to forecast on global mean impacts such as sea level rise. Calculations using a mean tends to be conservative and are not specific for California shorelines such as that of Area 4. Mean values tend to lower expectations of true effects on specific shoreline areas. Many other sources of science-based reports are more revealing and more current as they immediately become exposed to the public. Other current reports take into account a variety of cumulative impacts that emphasize future climate change and sea level rise.

Despite lack of more current data, including absence of incorporating the effects of other forces of nature, AR5 2013 at least provided some important findings illustrating the acceleration of climate change, in comparison to the 2007 IPCC release used in the Newark EIRs.

IPCC 2013 Publication: Climate Change. The Physical Science Basis, Summary of Policymakers:

a. Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

b. Ocean warming dominates the increase in energy stored in the climate system, accounting for more than 90% of the energy accumulated between 1971 and 2010 (*high confidence*).

c. Cryosphere: Over the last two decades, the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink almost worldwide, and Arctic sea ice and Northern Hemisphere spring snow cover have continued to decrease in extent (*high confidence*).

d. Carbon and Other Biogeochemical Cycles: Carbon dioxide concentrations have increased by

40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification.

e. Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.

f. Human influence on the climate system is clear. This is evident from the increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and understanding of the climate system.

g. Observational and model studies of temperature change, climate feedbacks and changes in the Earth's energy budget together provide confidence in the magnitude of global warming in response to past and future forcing.

h. Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since AR4. It is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century.

i. Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions.

j. The global ocean will continue to warm during the 21st century. Heat will penetrate from the surface to the deep ocean and affect ocean circulation.

k. Global surface temperature change for the end of the 21st century is *likely* to exceed 1.5°C relative to 1850 to 1900 for RCP8.5 scenarios (2081-2100), and *likely* to exceed 2°C. Warming will continue beyond 2100. Plots of a 1%/yr CO2 contribution showed cumulative total anthropogenic CO2 emissions producing temperature anomaly of about 4.5C for 2100. It is virtually certain that global mean sea level rise will continue beyond 2100, with sea level rise due to thermal expansion to continue for many centuries**.**

l. It is *very likely* that the Arctic sea ice cover will continue to shrink and thin and that Northern Hemisphere spring snow cover will decrease during the 21st century as global mean surface temperature rises. Global glacier volume will further decrease.

m. Global mean sea level will continue to rise during the 21st century. Under all RCP scenarios, the rate of sea level rise will *very likely* exceed that observed during 1971 to 2010 due to increased ocean warming and increased loss of mass from glaciers and ice sheets.

n. Climate change will affect carbon cycle processes in a way that will exacerbate the increase

of CO2 in the atmosphere (*high confidence*). Further uptake of carbon by the ocean will increase ocean acidification.

o. Cumulative emissions of CO2 largely determine global mean surface warming by the late 21st century and beyond. Most aspects of climate change will persist for many centuries even if emissions of CO2 are stopped. This represents a substantial multi-century climate change commitment created by past, present and future emissions of CO2.

p. Additional calculations were made with updated atmospheric chemistry data and using the RCP prescribed emissions of the chemically reactive gases (CH4, N2O, HFCs, NOx, CO, NMVOC). These simulations enable investigation of uncertainties related to carbon cycle feedbacks and atmospheric chemistry. (Note: These gases, although currently smaller than CO2 contribution, are considerably more effective in increasing atmospheric heating. Emissions of these gases may increase from a variety of sources, including melting of permafrost and warming ocean bottoms.)

Technical References for 2013 IPCC Specific Effects of Climate Change IPCC 2013 Publication: Technical Summary:

a. Glacial/Ice Sheets: There is very high confidence that, during the last decade, the largest contributions to global glacier ice loss were from glaciers in Alaska, the Canadian Arctic, the periphery of the Greenland ice sheet, the Southern Andes and the Asian mountains. Together these areas account for more than 80% of the total ice loss. There is high confidence that current glacier extents are out of balance with current climatic conditions, indicating that glaciers will continue to shrink in the future even without further temperature increase. There is very high confidence that the Greenland ice sheet has lost ice during the last two decades.

b. Changes in Sea Level: The primary contributions to changes in the volume of water in the ocean are the expansion of the ocean water as it warms and the trans- fer to the ocean of water currently stored on land, particularly from glaciers and ice sheets. Water impoundment in reservoirs and ground water depletion (and its subsequent runoff to the ocean) also affect sea level. Change in sea level relative to the land (relative sea level) can be significantly different from the global mean sea level (GMSL) change because of changes in the distribution of water in the ocean, vertical movement of the land and changes in the Earth's gravitational field.

c. Methane: The concentration of CH4 has increased by a factor of 2.5 since pre- industrial times.

d. Nitrogen Oxides: Since pre-industrial times, the concentration of N2O in the atmosphere has increased by a factor of 1.2.

e. Oxygen: High agreement among analyses provides medium confidence that oxygen concentrations have decreased in the open ocean thermocline in many ocean regions since the 1960s. The general decline is consistent with the expectation that warming-induced stratification leads to a decrease in the supply of oxygen to the thermocline from near surface waters, that

warmer waters can hold less oxygen and that changes in wind-driven circulation affect oxygen concentrations.

f. Acidification of Oceans: Oceanic uptake of anthropogenic CO2 results in gradual acidification of the ocean. The pH of ocean surface water has decreased by 0.1 since the beginning of the industrial era (high confidence), corresponding to a 26% increase in hydrogen ion concentration.

g. Cryosphere: The reductions in Arctic sea ice extent and NH snow cover extent and widespread glacier retreat and increased surface melt of Greenland are all evidence of systematic changes in the cryosphere. All of these changes in the cryosphere have been linked to anthropogenic forcings.

h. Thresholds for sea level rise of 7 meters (22 feet) and 2C temperature rise: The available evidence indicates that global warming beyond a threshold would lead to the near-complete loss of the Greenland ice sheet over a millennium or longer, causing a global mean sea level rise of approximately 7 meters. Studies with fixed present-day ice sheet topography indicate that the threshold is greater than 2°C but less than 4°C (*medium confidence*) of global mean surface temperature rise above pre-industrial.

i. Projected Long-term Changes in the Ocean: Over the course of the 21st century, the global ocean will warm in all RCP scenarios – throughout the globe.

j. Sea Level Extremes: In the future it is *very likely* that there will be a significant increase in the occurrence of sea level extremes and similarly to past observations, this increase will primarily be the result of an increase in mean sea level.

2. 2013 IPCC REPORT: PEER-REVIEWED SCIENTIFIC AND PUBLIC COMMENTS:
In 2013: "The IPCC has moved in the right direction this time by at least trying to account for the key contribution to sea level rise from melting ice sheets**",** director of Pennsylvania State University's Earth System Science Center Michael Mann told The Huffington Post in an emailed statement, explaining that it was ignored in the previous IPCC report from 2007**.** "However, the projections they provide are still overly conservative, with an upper limit of roughly one meter by 2100, when there is published work that suggests the possibility of as much as two meters (six feet) sea level rise by 2100," he added. "This fits a pattern of the IPCC tending to err on the side of conservative, in part--I believe---because of fear of being attacked by the climate change denial machine."

Describing the IPCC's projections, Climate Progress' Joe Romm wrote, "Like every IPCC report, it is **an** instantly out-of-date snapshot that lowballs future warming because it continues to ignore large parts of the recent literature and omit what it can't model." (Other scientific projections indicate that **six feet in 2100 is insignificant** if ice sheets slide off the terrain that supports them, into the ocean, leading to ocean water displacement--far greater than effect of melt on floating Arctic icebergs).

The IPCC even acknowledges governments influenced their projections, and they still persist. For

example, a more current IPCC projection (September, 2013) only presents a 10-32-inch rise in sea level, which had to be upgraded from the prior 7-23 inches. The report predicts global temperatures could reach 0.5-8.6F, *leading to possible catastrophic changes to climate, and above all, to warming oceans*. The higher numbers are more likely, due to lack of agreements between governments: Only the lowest scenario, which was based on major cuts in CO2 emissions and is considered unlikely, came in below limit that countries have set as their target in the climate talks to avoid the worst impacts of warming (3.6F) before the industrial revolution. At this point, emissions keep rising mainly due to rapid growth in China and other emerging economies. But those nations say rich countries should take the lead on emissions cuts because they've pumped carbon into the atmosphere for longer."

Therefore, we have circular arguments of blame, and no government wants to put environment before economy, hence higher limits of sea level rise and climate temperatures are likely to occur. The IPCC still errs on the conservative and does not take into account other forces of climate change. IPCC projections become a moving target, as they will be forced to at least consider the impact of the accelerating expansion of economics from the uncorrected growth of human population and lack of corrective action.

3. NATIONAL ACADEMY OF SCIENCES, 2013: CLIMATE CHANGE, EVIDENCE OF CAUSES (OVERVIEW FROM THE ROYAL SOCIETY AND THE US NATIONAL ACADEMY OF SCIENCES): "Taken together, all model projections indicate that Earth will continue to warm considerably more over the next few decades to centuries. If there were no technological or policy changes to reduce emission trends from their current trajectory, then further warming of 2.6 to 4.8C (4.7 to 8.6F) in addition to that which has already occurred would be expected during the 21st century (2100 projection)." The effect of temperatures at a 2C increase is consistently reported as a tipping point, where at the pace of human contribution, climate change will accelerate and expose the environment into irreversible catastrophic events.

4. GREENLAND AND ANTARCTICA'S ACCELERATING ICE LOSS (DATA FROM CRYOSAT SATELLITE), BY ROBERT MCSWEENEY, AUGUST 25, 2014.
"The researchers used data from the European Space Agency's CryoSat -- a **satellite** that passes over the earth at 700km above the surface and measures the thickness of polar ice. The satellite was launched in 2010 and has been collecting data on sea ice and ice sheets ever since. By comparing data with other satellite missions, scientists can see how quickly the ice sheets are changing.

A series of satellite maps published to date show Greenland and Antarctica are losing more ice than at any time since satellite records began. Scientists found the two vast ice sheets are losing a total of 500 cubic kilometers of ice per year, contributing to rising global sea levels.

The study, just published in the journal The Cryosphere, reveals that since 2009, the volume of ice loss has tripled in West Antarctica and more than doubled in Greenland. This is the highest rate of ice loss since satellite records began 20 years ago.

Regional differences: Their satellite maps show that Greenland is losing around three times more ice than Antarctica, including thinning of the entire western ice sheet and further losses in the southeast

and northwest ice sheets. In Antarctica, the maps show thinning of the West Antarctic Ice Sheet and the Peninsula. East Antarctica shows some increases in thickness, though this doesn't outweigh the losses elsewhere**. Overall, more ice is being lost than gained**."

5. EARTH INSIGHT--IN THE GUARDIAN, MARCH 2014:
March 2014: The paper by James Hansen, a frequent contributor to the science, confirms the "crossing of the tipping point into catastrophic climate change". "Other recent scientific studies show the current global emissions trajectory could within three years guarantee a 2C rise in global temperatures, in turn triggering irreversible and dangerous amplifying feedbacks. Conventional models suggest that 1.5C is just 10-30 years away". The implication is that policymakers are riding blind—we do not really know how close we are to a tipping point into catastrophe."

6. URGENT CLIMATE MEETING OF SEPTEMBER 21, 2014 (MOST RECENT) AND NEXT YEAR'S PARIS CLIMATE SUMMIT:
Opportunities are to be presented for implementing mitigation and program changes to climate impacts. The need is to rectify the impacts of tipping points, the feedback loops, where climate change feeds back on itself and causes rapidly accelerating, catastrophic consequences. Temperature changes alone are indicating this potential.

7. ACCELERATING CHANGES AND TIPPING POINTS:
In the case of planetary climate, there are cumulative forces that can interact and can be self-feeding when a tipping point is past. *You must contemplate on the meaning of tipping points, which are feedback loops when climate change and disruption of the planet feeds back on itself causing rapidly accelerating, catastrophic consequences.* Unfortunately, most people interpret change as velocity or constant change, as opposed to acceleration, which is mathematically a rate change on velocity, or an exponential or logarithmic function when it applies to increasing changes in climate. Accelerating factors that include all significant existing and future forces of nature, as well as those that are continuously being pulled into action, have clearly not been taken into account in calculating all impacts, as the REIR must incorporate. Those forces need to be utilized, in particular with the IPCC predictions that are outdated when published, as they do not factor all significant forces into the equation, thus producing very conservative forecasts.

8. GLOBAL TEMPERATURE RISE AND IMPACT ON PLANT SPECIES AND GREENHOUSE GASSES:
"The length of the dry season in the southern Amazon is the most important climate condition controlling the rain forest. Scientists think that a longer dry season will stress trees, raising the risk of wildfires and forest dieback. If the dry season is too long, the rain forest will not survive. The Amazon rain forest's dry season lasts three weeks longer than it did 30 years ago, and the likely culprit is global warming, a new study finds. The new findings forecast a more parched future for the Amazon rain forest than the recent climate report released by the Intergovernmental Panel on Climate Change (IPCC), the study authors said. The IPCC models predict the Amazon dry season will last 3 to 10 days longer by 2100. This means the IPCC models likely underestimate future predictions of rain forest climate change effects, the researchers concluded at the University of Texas at Austin's Jackson School of Geosciences. The climate models used by the IPCC do a poor job representing these processes."

The IPCC is immediately outdated on these issues, as usual. Normally there are extensive and significant contributions to CO2 absorption by the rain forest during respiration and growth. Loss of those forests could result in less greenhouse gas absorption (CO2), thus accelerating warming climate and even faster loss of the forests. In addition, if drought is severe enough, the loss of rainforest could cause the release of large volumes of the greenhouse gas, carbon dioxide, into the atmosphere, as life cycles could be disrupted to reverse normal trends from CO2 absorption into CO2 release to the atmosphere. Simultaneous to this reversal of trend is the loss of oxygen production during respiration of forests, exacerbated by oxygen uptake and oxidative decay of biomass, followed by more intense losses from drought and wildfires. The impact could cause an accelerated reversal of normal life cycles and disrupt plant and animal communities in world forests and especially in one of the regions of highest biodiversity in the world. The result would add a significant increase in global air, land and ocean temperatures, with sea level rise and potential inundation of shoreline developments.

9. GRAVITATIONAL INFLUENCE—PEER-REVIEWED SCIENCE:
a. Gravity/Mass and Sea Level Rise.
Normally there is gravitational pull that tends to raise sea level near large masses of ice and land. However, warming climate and warming oceans are causing break-up and melt of large masses of ice. As the ice melts and is lost, gravitational influence is diminished and oceans tend to move outward and change circulation patterns. The result is added ocean volume, temperature changes and thermal expansion in areas away from the dwindling ice. A larger contribution to sea level rise becomes evident in other areas of the planet. Some areas may counterbalance this effect to some extent, depending on global location, land-based connections, and the retention or extent of loss of ice mass.

From: "The Sea-Level Fingerprint of West Antarctic Collapse" (as far back as 6 February 2009) *Science* 323 (5915), 753: They reported that the impact of glacial melting would not be distributed evenly around the world, because each glacier's individual gravitational pull affects the sea level nearby. The article showed illustrations for the melting of the West Antarctic Ice Sheet. Sites in the Northern

Hemisphere showed sea levels rise more than the worldwide average. Equations included a shift of the earth's axis of rotation and other geological changes that would follow the glacial melt. The graphs show an even bleaker situation for the United States, where the new distribution of sea-level rise indicates factors of multiplication and a significant percentage difference against the worldwide average.

b. Gravity--Findings in *Nature Geoscience*.
"The ice sheets covering Antarctica and Greenland contain about 99.5 per cent of the Earth's glacier ice which would raise global sea level by some 63 meters if it were to melt completely. The ice sheets are the largest potential source of future sea level rise – and they also possess the largest uncertainty over their future behavior. Since 2002, the satellites of the Gravity Recovery and Climate Experiment (GRACE) detect tiny variations in Earth's gravity field resulting from changes in mass distribution, including movement of ice into the oceans. Using these changes in gravity, the state of the ice sheets

can be monitored at monthly intervals."

"Dr. Bert Wouters, currently a visiting researcher at the University of Colorado, said: In the course of the mission, it has become apparent that ice sheets are losing substantial amounts of ice – about 300 billion tonnes each year – and that the rate at which these losses occurs is increasing. Compared to the first few years of the GRACE mission, the ice sheets' contribution to sea level rise has almost doubled in recent years."

Note that the reported 63-meter rise in sea level is about 205 feet.

10. LEARNING EXPERIENCES FROM THE DUTCH IN THE NETHERLANDS:
Reports from the Netherlands: Moving developments up and away mimics the California Adaptation Strategy of 2009.

Regarding comments about the interrelationship of flooding, climate change, sea level rise, and the learning experiences of the Dutch over the years:

a. http://e360.yale.edu/feature/to_control_floods_the_dutch_turn_to_nature_for_inspiration/2621/
"The new Dutch technology has promise, and flood management agencies in the U.S. are keeping an eye on it, said Jason Needham, a consequence specialist with the U.S. Army Corps of Engineers' Risk-management Center in Davis, Calif., who recently spent a year in the Netherlands on a staff-exchange program. But sophisticated devices like Smart Dikes are expensive, and haven't yet proven their worth, he said. As for natural defenses, Needham said the concepts are good, and '**everyone agrees our wetlands need to be restored**.'"

"The two countries have different approaches to flood control, Needham acknowledged, with the Dutch focusing mainly on prevention, while Americans emphasize emergency preparedness and recovery. In the face of an uncertain future climate, however, the objectives are now converging. The goal, as Needham puts it, is "how to get people safer without putting a big wall up there."

b. http://www.nytimes.com/2013/02/17/arts/design/flood-control-in-the-netherlands- now allows-sea-water-in.html?_r=0

"And now the evidence is leading them to undertake what may seem, at first blush, a counterintuitive approach, a kind of about-face: The Dutch are starting to let the water in. They are contriving to live with nature, rather than fight (what will inevitably be, they have come to realize) a losing battle."

"Why? The reality of rising seas and rivers leaves no choice. Sea barriers sufficed half a century ago; but they're disruptive to the ecology and are built only so high, while the waters keep rising. American officials who now tout sea gates as the one- stop-shopping solution to protect Lower Manhattan should take notice. In lieu of flood control the new philosophy in the Netherlands is controlled flooding."

"Governor Cuomo's plan would turn properties in Queens, Brooklyn and Staten Island into parks, bird sanctuaries and dunes that could act as buffer zones for inland development. The idea is to give

homeowners an incentive (perhaps up to $300,000) to move voluntarily out of areas where, in hindsight, single-family houses shouldn't have been built in the first place. The Dutch have pursued a more aggressive and complex relocation strategy".

The Dutch have discovered through long experience indicated in the California Adaptation Strategy of 2009: Best alternative is to move developments up and away from hazard areas when economics and environment dictates…not to develop new structures that are at risk in vulnerable areas from hazards such as flooding and sea level rise. *Why does Newark not incorporate these impacts and risks, and follow science regarding protective measures with wetland management?*

c. Even the popular Scientific American and National Geographic (Sept 2013 and Oct. 2013) have been continuously publishing numerous, extensive maps and articles on the impact of global climate change and sea level rise).

For example:
As far back as 2008: Scientific American. The Unquiet Ice, Feb. 2008 (extensive article addressing many sources): "Loss of [land-based ice] of Antarctic and Greenland could add 200 ft of global sea level rise—*has happened before with high C02 levels*. The National Geographic (www.climate.ngm.com) and the special issue as far back as June 2008: "The Science Is In", states "…ice sheet [collapse] in both Greenland and Antarctica would raise sea level 20 feet, inundating many coastlines".

Realize: The 20-foot rise represents "collapse" and the 200-foot level represents "loss of land-based ice", or a smaller change verses a major melt-down of sub- glacial ice, which from international studies looks ominous, either way, since we are approaching the tipping point. And the world is too concerned about impact on economy to adjust, where environment is on the bottom of the priorities list, like Area 4 developments.

11. WATER SOURCES NOW AND IN THE FUTURE:
The thirsty elephant in the room.... Whether or not we continue to develop in any area, our future water supply is no doubt going to become an increasingly larger issue, for many reasons, especially as population increases and demand for water increases with concomitant production of new housing. We may be in a drought for many long years, since certain scientific evidence shows that dry and wet years have occurred in long-term multi-century-cycles. Climate disruption, from uncorrected human influence is additive to this changing cycle and is exacerbating the water problem.

12. MORATORIUMS ON WATER USAGE:
In the past, in some other cities, when severe droughts or when a lack of a sufficient water source occurred, a moratorium on water hookups was implemented, meaning no permits or a long wait-list for limited hookups. Otherwise, water supplies for existing housing could become next to nothing. Therefore a moratorium in Newark, and other cities, should be implemented before it is too late, or our water supply as well as what is left of the economy could easily dry upg. Some towns, suburban areas and farms have already run out of water, with vain attempts to drill for more, despite the inevitable potential collapse of ground water reservoirs. However, if you listen to the developers and the cities that look for short-term expanding growth and immediate benefits, you will hear wishful

thinking and unscientific excuses, which will not allow us to be prepared in the long run.

Conservation practices on water usage, as proposed in new developments, still results in increased usage, and expands the need for more water from additional hookups, thus diluting sources even more so. Limiting hookups, controlling further development and "mitigating" population expansion are the immediate viable solutions, despite human ignorance to blindly make excuses to search for other reasons.

Cities may continue until conservation and water sources are exhausted, but by then those responsible for planning may likely be long-gone or moved to higher ground. State agencies are already proposing conservation and limitations in water consumption. If the drought continues, which is indicated by climate change, the future will require even more cutbacks. California reports have indicated a potential 9-year drought, and possibly considerable more years of drought as shown by tree rings, from as far back as 1400 AD to present.

We cannot create water. We obtain water from the dictates of weather, coupled with the impact of planetary forces on local and distant aquatic systems, including the oceans. But water must be continuously available and even increase as we demand more and more, assuming our climate can provide replenishment as climate disruption commences.

RESPONSE K-6: Please refer to Master Response 4 and Comments/Responses D-1 and D-2 regarding water supply.

COMMENT K-7: H. ADVANTAGES OF RESTRICTED GROWTH ALTERNATIVE (ENVIRONMENTAL PREFERENCE), AS PREVIOUSLY PRESENTED TO NEWARK BUT HAVE STILL BEEN IGNORED, BEGGING THE QUESTION AS TO WHY?

As previously discussed in prior EIRs and GP responses, the small quantitative differences between restricted and unrestricted growth simply means that they both could equate, if the goal is to obtain the housing and job objectives that the city consistently claims must be met. However, the all-encompassing impacts between the two alternatives in the long-run are different. In fact, the restricted growth alternative, as stated by the city to be environmental preferred, is the best option for the public because of the following:

(1) the alternative can meet the housing and jobs growth projections by focusing most development into already safer or protected areas, such as within the inner city;

(2) provides centralized walkable communities for a highly desired socially enhancing inner city focal point for the community--and for cultural exchange and entertainment within the city;

(3) supports inner city focused development that will be near existing businesses and facilities that will foster further expansion and improvements with true infill (many inner city buildings and lots, still empty and waiting) – as demonstrated by the improved quality of life and desirability in other Bay area cities such as Palo, Mt. View and Pleasanton. Improved quality of life becomes an attraction that enhances economics, real estate value and the successful schools

that follow;

(4) inner city areas are closer to existing and already centralized transportation and infrastructure, with economic benefits for improvements (promoted by greenhouse gas regulations, other regulations, government agencies and policies);

(5) minimizes traffic that would occur, in comparison to excessive sprawl into outer regions of the city that would increase noise and reduction in air quality. Outer areas also do not have infrastructure or support for transportation. (Recall that the Area 2 economics for the TOD rail proposal is defunct.);

(6) does not promote sprawl into vulnerable areas subject to liquefaction, climate disruption, sea level rise, flood inundation followed by erosion, etc.;

(7) inner city development will be much further from harm's way that may eventually exist at the exterior of the city.

(8) other than economic benefits of jobs and housing that the city promotes, environmental benefits of avoiding development in vulnerable areas such as Area 4 provides potential flood protection through wetlands management, retention of biological resources (endangered species in particular), negating need for disruptive fill, non-disturbance of cultural resources, and promotes view resources and open space near the bayfront--to name a few benefits to the public;

(9) the environmentally preferred alternative promotes the desired outcome of the city to develop Area 3 with residences, which also supports the balance of jobs and housing expected. In contrast, the unrestricted growth alternative encourages sprawl in Area 2 and 4, and is in conflict with California State policies and recommendations for inner city growth;

(10) overall quality of life is improved according to public wants and needs; and

(11) many other benefits, as referenced by other public comments.

Specifically, the environmentally preferred alternative and zoning of Area 3 for residential, and avoiding residential development in Area 4, supports the potential for flood protection for Area 3 and the rest of the city. Wetland expansion and restoration in most, if not all of Area 4, then becomes a wiser path for flood protection. An additional benefit would result in open space and view preservation, environmental protection and enhancement of wildlife habit in Area 4 and adjacent lands--as existed many years ago. Otherwise, development of Area 4 would hamper potential protections from wetland management within that area of excessive landfill and housing, since the ability to implement significant protections would be mostly lost. Restoration of Area 4 becomes a more desirable alternative to prepare for climate disruption and sea level rise and what, if anything, we can even realistically do to prevent catastrophe in the outer fringe and even within the city.

"Embracing Newark's Bayfront", as defined by the city of Newark, with development in Area 4, realistically produces a destructive impact to the bayfront-- not one of fostering protection of

wetlands, vistas, open space and other benefits to the city. Area 4 development will become a disruptive process of landfill and earth-moving that will actively impact all the wetlands in the area. Encroachments would allow development to be only within 100 feet of any remaining wetlands – proven to have serious detrimental disturbances to wildlife and shorebird habit, their foraging abilities and their migrations.

Therefore, the conclusion from the city that the Restricted Growth Alternative was determined to be the environmentally superior alternative--is correct. However, city arguments evolved into a simplified quantitative invalidation of that alternative, which was flawed and misleading, simply because the city claimed that the restricted growth alternative fully meets only seven of the eleven (but still a majority) objectives identified in the prior EIR. As stated previously, the city objectives do not include all the advantages of the environmentally preferred restricted growth alternative, and is biased to exclude many of those advantages, as cited by other sources as well. The restricted growth alternative is actually not restricted and should be named according to its actual benefits. The misnomer ("restricted" alternative) should be renamed as its purpose identifies, as described previously, i.e. as a "Focused Development Alternative", or even as another type of unrestricted growth such as "Inner City Alternative" versus the "Outer City Alternatives" for Area 2 and 4. *Therefore, as the evidence prevails, why not implement the wiser path of the environmentally preferable option?*

RESPONSE K-7: The commenter states that the No Development in Area 4 and Higher Density in Area 3 Alternative was rejected because it did not meet the project objectives. The RDEIR did not reject this alternative for further consideration, as it was selected as one of the Environmentally Superior Alternatives. In accordance with CEQA Guidelines 15126.6(c), the RDEIR, explained that the Alternative did not meet one of the main project objectives and the General Plan goals of providing housing and a golf course/open space in Area 4. This alternative would also be inconsistent with the General Plan's vision for the size and scale of development in Area 3.

COMMENT K-8: I. CONCLUSIONS: Development of vulnerable exterior areas such as Area 4 will not enhance the term the city documents used in their policy to "embrace Newark's bayfront location". *On the contrary, won't Area 4 development translate into environmental loss of open space, wetlands and wildlife habitat – degrading what little actually is present in the city of Newark?* (Newark is basically surrounded by Fremont.) Exterior sprawling development in Area 4 also would be contradictory to the city policies of "no loss of wetlands" and "not building in 100-year flood plains". Instead, the city attempts short- term mitigations to circumvent those policies. Furthermore, another contradiction is the city policy of creating "balance" (between open space and development), which will evolve towards an "imbalance" and loss of open space with development of Area 4.

The goal of distracting and focusing city resources and staff time towards expensive developments in land-filled sprawl near the Bay will draw an increase in population from outside sources, for only those who can afford these exclusive upscale residences. Quality of life for existing populations will be diminished by excessive traffic, loss of open space, wetland and upland degradation, loss of wildlife habit including endangered species and migratory waterbirds – and exposure of those

developments to flood hazards, sea level rise and the eventual need for expensive tax-payer funded protections – if even feasible.

Therefore the restricted growth alternative is far superior in every major heading cited in the EIR and in the application of regulations and policies that the city should be focusing upon. Protection and restoration of Area 4 becomes the preferred alternative to include within the Fish and Wildlife Refuge expansion boundaries, also recommended by the Bay Goals project. The development will require excessive landfill and will seriously diminish the benefits of wetlands, wildlife and open space and views, forever.

The public has consistently voiced their opinion over the years for inner city walkable small town developments, with a focal point, similar to that of other cities. Therefore the General Plan and associated Specific Plans, with their EIRs, should focus more on the need for inner city infrastructure and walkable communities that would be close to available transportation--not the exterior sprawl into vulnerable areas close to bayfront. *So why not focus on inner city improvements and potential protections for the future to mitigate for accelerating climate disruption and sea level rise, if nothing more, as a more responsible city plan? Why not at least concentrate on existing populations and resources for those who have lived here, paid their taxes and made their contribution towards city growth, long-term establishments and built their community over a period of many years for their desired quality of life?*

RESPONSE K-8: The project's consistency with the Goals and Policies of the 2013 General Plan are described in Table 3.1-1 of the RDEIR (pgs 51-69) and Response F-2. The commenter's concerns will be included in the Final EIR and thus will be before the City's decision-makers, the City Council, for their consideration.

L. RESPONSE TO COMMENTS FROM JANA SOKALE, SEPTEMBER 19, 2014

COMMENT L-1: I am writing as a Newark resident for over 20 years, as a biologist conducting wildlife research around San Francisco Bay and as a member of the Citizens Committee to Complete the Refuge. This letter provides comments on the REIR for the proposed Specific Plan for Areas 3 & 4 in Newark, CA. Areas 3 and 4 comprise approximately 850 acres of land located at the western edge of the City of Newark and bounded on the north by Mowry Avenue, to the east by Cherry Street, to the south by Stevenson Boulevard, and to the west by Mowry Slough, which flows to San Francisco Bay.

The REIR continues to contain omissions, inaccuracies and flaw analyses that must be rectified to comply with California Environmental Quality Act (CEQA) requirements. These flaws must be addressed and Newark must re-circulate a revised document.

1. Transportation

The REIR Fails to Analyze the Safety of a Multi-Use Trail Adjacent To A Golf Course.

The REIR describes "A combined emergency vehicle access (EVA) and pedestrian/bicycle trail is proposed across Area 4, with northerly EVA access to the site planned at Mowry Avenue just west of the railroad tracks. The access roadway will be locked and gated to allow only emergency vehicles; however, the gate will allow passage of pedestrians and bicycles. The EVA roadway/multi-use trail will be 20 feet wide. Along the east side of the trail, a vandal- resistant fence will separate the trail from the railroad right of way, and along the west side of the trail, a post and rail fence is proposed to separate the trail from the golf course (refer to Figure 2.4-3) (pg. 30).

The REIR fails to evaluate the safety concerns of aligning the multi-use trail adjacent to the golf course. A post and rail fence will provide no protection to trail users from golf balls. Please provide analysis and feasible mitigation measures to address injury to trail users from golf balls.

RESPONSE L-1: The City of Newark does not perceive a significant risk from the location of a pedestrian/bicycle trail near the golf course. To entirely preclude this small risk would require an enormous fence separating the trail from the golf course. Public trails as well as private residencies are routinely sited adjacent to each other without finding significant environmental impacts due to errant golf balls.

COMMENT L-2: 2. The REIR Fails To Analyze the Safety Of An At-Grade Crossing of the UPRR Line by a Multi-Use Trail. The REIR fails to analyze the safety of an at-grade crossing of the UPRR line by a multi-use trail (SF Bay Trail) that has the potential to serve both as a recreation route and transportation route for residents traveling to the Silliman Center and area schools. Please provide analysis and feasible mitigation measures to address the safety of an at-grade pedestrian/bicycle crossing of UPRR line.

RESPONSE L-2: Soundwalls are proposed along Sub-Areas B and C, between the railroad right-of-way and the proposed development and vandal-resistant fencing is proposed at the edge of the railroad right-of-way along Sub-Area D to Mowry Avenue. These features will prevent pedestrians crossing the railroad tracks anywhere other than at the Mowry Avenue and Stevenson Boulevard crossings. The City will work with the PUC and UPRR to maximize the safety of the at-grade crossing. The design specifications for EVA roadway will be subject to review and approval by the Alameda County Fire Department when final development plans are completed. The proposed EVA/trail is located proximate to the railroad tracks, in order to provide the maximum development area for the proposed golf course. In the event an alternative recreation use is pursued on Sub-Area D, the location of the trail would be reconsidered. From Area 3, a proposed paved trail will extend from Cherry Street to the south of the SCFC&WCD flood control channel and then cross the channel to connect to Ohlone Community College and the Silliman Recreation Complex.

COMMENT L-3: 3. The REIR Fails To Analyze The Safety Of Future Residents Of Area 4 Who Will Be Limited To A Single Point Of Ingress/Egress At Stevenson Boulevard If The EVA Is Gated, Locked and Accessible Only To Police And Fire Personnel As Planned.

The REIR states, "In addition to the new Stevenson Boulevard overcrossing into Area 4, emergency vehicle access (EVA) for police and fire service would be provided via Mowry Avenue. The EVA access to Area 4 will improve the safety of the railroad crossing and the connection to the golf course and residential units is planned just west of the railroad tracks. The access roadway will be locked and gated to allow only emergency vehicles (pg. 326)."

The REIR fails to explain how the EVA parallel the UPRR line will "improve the safety of the railroad crossing and the connection to the golf course and residential units…"

RESPONSE L-3: Please refer to Response L-2 and E-20.

COMMENT L-4: The REIR notes the 2013 General Plan "Land Use Policy T-5.9 Emergency Access. Improve the street system as necessary to facilitate emergency vehicle response and to provide multiple route options in the event a road is blocked by an emergency or is otherwise made impassable (pg. 46)." No analysis is provided of the single point of egress/ingress for residents to Area 4.

Please provide analysis of the safety of residents in the event of an emergency in Area 4 should the Stevenson overpass be blocked.

RESPONSE L-4: Pedestrians and bicycles could exit the site via the EVA to Mowry Avenue at any time. The EVA gate for vehicle access would contain a Knox-Box (known officially as the KNOX-BOX Rapid Entry System) a small, wall-mounted safe that holds keys for fire departments, Emergency Medical Services, and police to retrieve in emergency situations. Local fire companies can hold master keys to all boxes in their response area, so that they can quickly enter a gate or building without having to force entry or find individual keys held in deposit at the station. Emergency personnel would have keys to the locks and could open the gates and direct traffic to the EVA if needed. Such use would be at the discretion of the public safety experts managing the incident.

COMMENT L-5: 4. Air Quality Local Air Quality – Local Air Pollution Sources The REIR Fails To Analyze The Impact Of The New Cherry Logistics Truck Distribution Center on the School Site in Area 3.

In the REIR Appendix B Illingworth & Rodkin, Inc. writes "the location of the school was reviewed to identify sources of toxic air contaminants (TACs) that could adversely affect users of the school, primarily children." This memo notes "Only one stationary source of TAC emissions was identified within 1,000 feet: Source 18728, which is a standby diesel generator located at the campus of Ohlone College." However, the 2011 Bay Area Air Quality Management District

CEQA Air Quality Guidelines (2011 BAAQMD CEQA Guidelines) indicated that:

"Exposure of receptors to substantial concentrations of TACs and PM2.5 could occur from the following situations:

1. Siting a new TAC and/or PM2.5 source (e.g., diesel generator, truck distribution center, freeway) near existing or planned receptors; and

2. Siting a new receptor near an existing source of TAC and/or PM2.5 emissions. BAAQMD recommendations for evaluating and making a significance determination for each of these situations are discussed separately below."

The REIR fails to analyze the recently completed Cherry Logistics Center located at 38811 Cherry Street. This 120 loading dock, 575,000 SF distribution center was leased to a full-building tenant at shell completion and is the largest industrial/warehouse lease deal in the East Bay in more than 10 years and largest in the Bay Area in over five years. The cross-dock facility will provide 120 dock doors, full-size truck courts and on-site parking for 175+ trailers. Truck distribution centers are known to increase concentrations of TACs and PM2.5.

The 2011 BAAQMD CEQA Guidelines state that:

"When evaluating whether a new source of TAC and/or PM2.5 emissions would adversely affect existing or future proposed receptors, a lead agency should examine:

- the extent to which the new source would increase risk levels, hazard index, and/or PM2.5 concentrations at nearby receptors,

- whether the source would be permitted or non-permitted by the BAAQMD, and

- whether the project would implement Best Available Control Technology for Toxics (T- BACT), as determined by BAAQMD.

The incremental increase in cancer and non-cancer (chronic and acute) risk from TACs and PM2.5 concentrations at the affected receptors should be assessed. The recommended methodology for assessing community risks and hazards from PM2.5 and TACs follows a phased approach, within which progressively more advanced techniques are presented for each phase."

RESPONSE L-5: As stated in the RDEIR, air pollution sources within one-quarter mile of new housing or a school were considered to have a potential impact. The California Air Resources Board (CARB) recommends a 1,000 foot separation distance between truck distribution centers with more than 100 truck trips per day and new residences. The above referenced distribution center at 38811 Cherry Street is over one-half mile (3,500 feet) from the proposed school and housing area in Areas 3 and 4 and would not be significantly impacted by

local air pollution sources. Further, an updated search of the BAAQMD Stationary Source Screening Analysis Tool was completed in April 2014 and, disclosed in the RDEIR, to confirm if there were any new sources within 1,000 feet of the proposed school site. This updated search confirmed that new sensitive receptors would not be exposed to substantial pollutant concentrations from existing air pollutant sources.

COMMENT L-6: The REIR states, "The project (Area 3 and 4 Specific Plan) would not be a permanent source of air pollution that would expose the public to substantial pollutant concentrations. However, the Specific Plan area is located near industrial sources of air pollution. Air pollution sources within one-quarter mile of new housing or a school were considered to have a potential impact (page 148)."

The REIR states, "The California Air Resources Board (CARB) has recommended that lead agencies avoid locating new residences near truck distribution areas that accommodate more than 100 trucks per day (page 148)." Newark is currently proposing locating two schools near the new Cherry Logistics Center – the public elementary school proposed in Area 3 and the private Stratford School at the former Agilent facility located between Area 3 and the Cherry Logistics Center. The REIR also notes that, the "prevailing winds in the area are mostly from the northwest. This would place both schools downwind of the Cherry Logistics Center and the associated truck route.

The REIR must analyze this local air pollution source on the school proposed in Area 3 and the associated housing development.

RESPONSE L-6: Please refer to Response L-5.

COMMENT L-7: 5. Impacts to Western Burrowing Owls

The REIR Fails To Adequately Describe The Existing Environmental Setting Of Western Burrowing Owls.

The environmental setting should use the 2012 Staff Report on Burrowing Owl Mitigation developed by the California Department of Fish and Wildlife ("the Owl Report"), a copy of which is submitted herewith. The Owl Report requires that habitat assessments be conducted to evaluate the likelihood that a site supports burrowing owl, and adequate surveys. The Owl Report also requires that only individuals meeting detailed minimum qualifications should perform burrowing owl habitat assessments, surveys, and impact assessments. The Report also states that occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the last three years.

The REIR failed to discuss the environmental conditions for the western burrowing owl from a local and regional perspective. The REIR only described owls within the project area and did not describe the environmental setting of owls adjacent to the project area or in satellite burrows.

Over the past decade I have personally observed burrowing owls in areas adjacent to Areas 3 and 4.

SE Corner of Stevenson and Cherry – Breeding Pair fledged 6 young

Along Line D, Area 3 observed from Cherry Street – Single Owl
Former Agilent Building, Cherry Street – Single Owl
Sportsfield Park, Mowry Avenue – Breeding Pair
US Post Office, Clark Avenue – Single Owl

I also have knowledge of an owl at:
Former Agilent Building, Cherry Street – Single Owl

Significant new information has been learned about the continuing decline and habitat needs of this species. The REIR fails to adequately describe existing habitat conditions, quantify the acreage of suitable burrowing owl breeding and foraging habitat.

The REIR misrepresents the environmental setting. The REIR's statement (pg. 183) that "Suitable nesting and roosting habitat is somewhat limited by the intensive agricultural disturbance and existing development on much of the site" mischaracterizes the existing conditions in Area 4. In fact, there is no existing development within Area 4 and no agricultural crop is harvested from the site.

RESPONSE L-7: The assessment of potential use of Areas 3 and 4 by burrowing owls was conducted by H. T. Harvey & Associates senior wildlife ecologist Steve Rottenborn, who has extensive experience with burrowing owl surveys, habitat assessments, and impact assessments in the San Francisco Bay area, and who meets the criteria for a qualified biologist in the CDFW's 2012 Staff Report on Burrowing Owl Mitigation. Although the original assessment of impacts to burrowing owls was conducted prior to the CDFW's issuance of the 2012 Staff Report, the methods for assessing habitat suitability and owl use of the site was generally consistent with the 2012 Staff Report. Further, the RDEIR stated that the number of owls assumed to be using the site was based on a 3-year average, consistent with the 2012 Staff Report's recommendations, even though the number of owls had been declining prior to the year that serves as the CEQA baseline. Thus, a case could have been made that the number of pairs of owls presumed to be impacted was less than four pairs that the RDEIR assumed to be impacted, but the RDEIR took the more conservative approach of assuming that up to four pairs could be impacted.

The commenter describes areas where burrowing owls have been detected "over the past decade". Burrowing owl populations have been declining throughout the South San Francisco Bay area and, therefore, areas that were occupied more than 3 years in the past may no longer be occupied.

The sentence cited from page 183 of the RDEIR was not intended to indicate

that intensive development exists on Area 4, but rather that some development and intensive agricultural disturbance make most of Area 4 unsuitable for burrowing owls. Relatively little of Area 4 is developed with hardscape or structures, but the vast majority of the land in Area 4 that is not too wet for burrowing owls is intensively cultivated, and thus does not provide suitable owl nesting, roosting, or foraging habitat.

COMMENT L-8: 6. The REIR Fails To Adequately Analyze Project Impacts To The Western Burrowing Owl.

The REIR fails to identify the number of habitat acres to be impacted by development consistent with the current guidance contained in the Owl Report.

The California Department of Fish and Wildlife requires that both burrowing owl foraging and construction/development impacts be quantified in acres. Please quantify the total number of acres of foraging habitat available to owls. Please describe the habitat qualities of the landscape.

Impact BIO-4 (pg. 183): The REIR fails to quantify the loss of burrowing owl habitat. The California Department of Fish and Wildlife requires quantification of the impact to burrowing owl habitat. How many acres of foraging and nesting habitat will be impacted by this project?

RESPONSE L-8: This comment incorrectly suggests that the CDFW can "require" specific impact assessments. The 2012 Staff Report contains guidelines for assessing impacts to burrowing owls, but the CDFW cannot require that a project implement these guidelines or require that a project for which the CDFW is not the CEQA lead agency contain any specific analysis. At the 2013 California Burrowing Owl Consortium meeting in Mountain View, California, a number of burrowing owl biologists expressed reservations regarding the application of the 2012 Staff Report, and although it does contain some good information, its applicability on a project-by-project basis remains to be resolved.

Quantification of the acreage of suitable burrowing owl habitat to be impacted by this project is complicated by the very low quality of habitat represented by the intensively cultivated areas that dominate Areas 3 and 4, by the absence of owls from Area 3 (suggesting that owls may not use it at all), and by the decline in owls on Area 4 over several years prior to the CEQA baseline. Quantification of the acreage of habitat that could be used by burrowing owls, but that are either of very poor quality or that are not used because owls are no longer present is not an appropriate means of conveying how owls are impacted by the project as it would overestimate the actual impacts of the project on burrowing owls.

COMMENT L-9: 7. The REIR Fails To Adequately Analyze Mitigation Measures for Impacts To The Western Burrowing Owl.

The REIR fails to identify mitigation measures consistent with the current guidance contained in

the Owl Report.

MM BIO-4.2 (pg. 184): The REIR recommends nest buffer zones ranging from 150 feet to 250 feet depending upon the season. These buffer zones are inadequate according to research cited in the 2012 Staff Report on Burrowing Owl Mitigation. DFW recommends buffer zones ranging in distance from 200 meters (656 feet) to 500 meters (1,640 feet) during peak breeding season.

MM BIO-4.3 (pg. 184): The 2012 Staff Report on Burrowing Owls states "Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA." Eviction and exclusion has failed to stem the continuing decline of the local (South Bay) burrowing owl population. Any use of exclusion must include the elements listed below as described in the 2012 Staff Report on Burrowing Owl Mitigation. The REIR does not include these measures.

- A Burrowing Owl Exclusion Plan (see Appendix E of the 2012 Staff Report on Burrowing Owl Mitigation) is developed and approved by the applicable local DFW office;

- Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the Mitigating Impacts sections below. Temporary exclusion is mitigated in accordance with the item #1 under Mitigating Impacts below.

- Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for one week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.

- Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

"Mitigating impacts. Habitat loss and degradation from rapid urbanization of farmland in the core areas of the Central and Imperial valleys is the greatest of many threats to burrowing owls in California (Shuford and Gardali, 2008). At a minimum, if burrowing owls have been documented to occupy burrows (see Definitions, Appendix B) at the project site in recent years, the current scientific literature supports the conclusion that the site should be considered occupied and mitigation should be required by the CEQA lead agency to address project- specific significant and cumulative impacts. Other site-specific and regionally significant and cumulative impacts may warrant mitigation. The current scientific literature indicates the following to be best practices. If these best practices cannot be implemented, the lead agency or lead investigator may consult with the Department to develop effective mitigation alternatives. The Department is also available to assist in the identification of suitable mitigation lands.

1. Where habitat will be temporarily disturbed, restore the disturbed area to pre-project condition including decompacting soil and revegetating. Permanent habitat protection may be warranted if there is the potential that the temporary impacts may render a nesting site (nesting burrow and satellite burrows) unsustainable or unavailable depending on the time frame, resulting in reduced

survival or abandonment. For the latter potential impact, see the permanent impact measures below.

2. Mitigate for permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the information provided in Appendix A. Note: A minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area.

3. Mitigate for permanent impacts to nesting, occupied and satellite burrows and burrowing owl habitat with (a) permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals. The mitigation lands may require habitat enhancements including enhancement or expansion of burrows for breeding, shelter and dispersal opportunity, and removal or control of population stressors. If the mitigation lands are located adjacent to the impacted burrow site, ensure the nearest neighbor artificial or natural burrow clusters are at least within 210 meters (Fisher et al. 2007).

4. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission, for the purpose of conserving burrowing owl habitat and prohibiting activities incompatible with burrowing owl use. If the project is located within the service area of a Department approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits.

5. Develop and implement a mitigation land management plan to address long-term ecological sustainability and maintenance of the site for burrowing owls (see Management Plan and Artificial Burrow sections below, if applicable).

6. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.

7. Habitat should not be altered or destroyed, and burrowing owls should not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to Department-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.

8. Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present.

9. Where there is insufficient habitat on, adjacent to, or near project sites where burrowing owls will be excluded, acquire mitigation lands with burrowing owl habitat away from the project site. The selection of mitigation lands should then focus on consolidating and enlarging conservation areas located outside of urban and planned growth areas, within foraging distance of other conserved lands. If mitigation lands are not available adjacent to other conserved lands, increase the mitigation land acreage requirement to ensure a selected site is of sufficient size. Offsite mitigation may not adequately offset the biological and habitat values impacted on a one to one basis. Consult with the Department when determining offsite mitigation acreages.

10. Evaluate and select suitable mitigation lands based on a comparison of the habitat attributes of the impacted and conserved lands, including but not limited to: type and structure of habitat being impacted or conserved; density of burrowing owls in impacted and conserved habitat; and significance of impacted or conserved habitat to the species range-wide. Mitigate for the highest quality burrowing owl habitat impacted first and foremost when identifying mitigation lands, even if a mitigation site is located outside of a lead agency's jurisdictional boundary, particularly if the lead agency is a city or special district.

11. Select mitigation lands taking into account the potential human and wildlife conflicts or incompatibility, including but not limited to, human foot and vehicle traffic, and predation by cats, loose dogs and urban-adapted wildlife, and incompatible species management (i.e., snowy plover).

12. Where a burrowing owl population appears to be highly adapted to heavily altered habitats such as golf courses, airports, athletic fields, and business complexes, permanently protecting the land, augmenting the site with artificial burrows, and enhancing and maintaining those areas may enhance sustainability of the burrowing owl population onsite. Maintenance includes keeping lands grazed or mowed with weedeaters or push mowers, free from trees and shrubs, and preventing excessive human and human-related disturbance (e.g., walking, jogging, off-road activity, dog-walking) and loose and feral pets (chasing and, presumably, preying upon owls) that make the environment uninhabitable for burrowing owls (Wesemann and Rowe 1985, Millsap and Bear 2000, Lincer and Bloom 2007). Items 4, 5 and 6 also still apply to this mitigation approach.

13. If there are no other feasible mitigation options available and a lead agency is willing to establish and oversee a Burrowing Owl Mitigation and Conservation Fund that funds on a competitive basis acquisition and permanent habitat conservation, the project proponent may participate in the lead agency's program."

MM BIO- 4.4 (pg. 184): A total of 6.5 acres of foraging habitat per pair or single owl is no longer a recommended acreage. The 2012 Staff Report on Burrowing Owl Mitigation indicates, "the current scientific literature supports the conclusion that mitigation for permanent habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow." The report further indicates that "A minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting

the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area." This mitigation measure must be updated to reflect quantifiable habitat conditions and anticipated habitat loss due to development.

RESPONSE L-9: Please refer to the response to comment L-8. As indicated in that comment, the 2012 Staff Report guidelines are simply guidelines that project proponents and CEQA lead agencies might follow, but are not CDFW requirements. Further, the mitigation sections of the 2012 Staff Report are unclear as to implementation; as mentioned in the response to comment L-8, there was discussion at the 2012 California Burrowing Owl Consortium meeting regarding how recommendations for buffers (given the wide range, and very large size, of buffers discussed in the Staff Report) and mitigation for impacted habitat would be implemented by individual projects. Some South Bay CDFW staff still, even after issuance of the 2012 Staff Report, consistently recommend the same buffers that were indicated in mitigation measure BIO-4.2, and no CDFW staff commenting on project in which H. T. Harvey & Associates has been involved have yet recommended buffers as large as those discussed in the 2012 Staff Report.

Insofar as eviction of burrowing owls from burrows prior to construction (outside the breeding season) would prevent the owls from being directly killed or injured during earth-moving, we disagree with the statement that eviction does not help to minimize impacts.

The majority of the text in this comment includes excerpts from the 2012 Staff Report. Mitigation measure BIO-4.5A requires that the mitigation and monitoring plan for burrowing owl mitigation habitat must be submitted to the City of Newark and CDFW for review and approval. Thus, in addition to specifying the necessary components of the plan, this measure requires CDFW approval of the plan, giving the CDFW (on whose opinion many of these burrowing owl-related comments are based) not only the opportunity to comment on the adequacy of mitigation, but approval authority over the mitigation plan.

As discussed in the response to comment L-8, quantification of the acreage of impacted burrowing owl habitat on the project site is complicated by the very low quality of most of the habitat to be impacted (e.g., the intensively cultivated lands that provide little if any benefit to burrowing owls) and the absence of burrowing owls from most of the site, particularly in recent years. After consideration of the various approaches to determining appropriate mitigation for impacts to burrowing owls, the City elected to take a conservative approach to determining the number of pairs of owls that could be impacted and apply the acreage ratio that had been the standard prior to the CDFW's 2012 Staff Report which, by its own admission, contains no

definitive ratio or acreage recommendation. Also, as indicated above, the CDFW will need to approve the burrowing owl mitigation plan. As a result, the City can reasonably conclude that the mitigation described in the RDEIR will reduce impacts to burrowing owls to less-than-significant levels.

COMMENT L-10: The REIR provides for the opportunity to manage for "burrowing owls on and off-site (pg.184)." Off-site mitigation would contribute to the decline of the local South Bay burrowing owl population. The REIR provides no analysis of the significance of this form of mitigation to the local South Bay burrowing owl population.

RESPONSE L-10: Off-site mitigation does not necessarily imply that the mitigation would take place outside the local South Bay burrowing owl population. Although mitigation measure BIO-4.5B does allow off-site mitigation to occur outside the region, it also requires that some on-site enhancements occur to reduce impacts of the project on the South Bay burrowing owl population.

COMMENT L-11: MM BIO-4.7 (pg. 186): Aspects of this mitigation measure are simply infeasible and therefore ineffective at reducing the project impacts on the California burrowing owl. The concept that "Pets will be prohibited from ranging freely (off-leash dogs will be prohibited in conservation areas and no free-roaming outdoor cats will be permitted), to prevent their entry into sensitive species habitat" is unenforceable.

RESPONSE L-11: Please refer to Response E-81.

COMMENT L-12: 8. The REIR Fails To Adequately Analyze Cumulative Impacts To The Western Burrowing Owl.

The REIR provides no analysis of the cumulative biological impact resulting from the loss of local South Bay burrowing owl breeding and foraging habitat. Area 4 is approximately 560 acres of which approximately one half has been delineated as wetlands by the US Army Corps of Engineers. The remaining land is level, low-lying transitional grassland habitat ideally suited to burrowing owls. Loss of this large acreage should be reviewed as a cumulative impact to the burrowing owl. The REIR does not even address cumulative impacts to the species.

RESPONSE L-12: As indicated by the comment, a considerable proportion of Area 4 consists of wetlands, which may provide foraging habitat for burrowing owls but which (a) do not provide roosting or nesting habitat for owls due to their wet conditions, and (b) will be minimally impacted by the project. The City disagrees that the remaining (non-wetland) land is "ideally suited to burrowing owls" in its existing condition; as described in the RDEIR, the majority of this land is in cultivation, and has been in cultivation for decades. In that condition, this land provides few prey resources for burrowing owls and, due to frequent discing, is unsuitable as nesting or roosting habitat. Therefore, the impacts of the project on high-quality/suitable habitat are low.

Cumulative impacts to biological resources were discussed in the December 2009 Draft EIR and April 2010 Final EIR. Since that time, changes in South Bay conditions with respect to burrowing owls include the types of development activities that were anticipated in the 2009/2010 Draft and Final EIRs, as well as the adoption of the Santa Clara Valley Habitat Plan, which will result in beneficial effects on burrowing owls in the South Bay. As a result, the assessment of cumulative impacts to burrowing owls in the South Bay in the RDEIR remains adequate.

COMMENT L-13: 9. Impacts to Roosting Bats

The REIR Fails To Adequately Analyze Cumulative Impacts To Bats.

The REIR states, "Several bat species including the pallid and Yuma myotis bats have the potential to roost in existing structures and eucalyptus trees within Area 4 (pg. 190)." Figure 3.5-2 identifies structures and trees with potential for roosting bats (page 187). Upon review of GoogleEarth images of the site it appears as though two of the buildings identified as having potential for roosting bats have been demolished and removed from Area 4. These buildings appear in the October 2012 image and are no longer present in February 2014 image.

These structures were removed during the Citizens Committee to Complete the Refuge's (CCCR) legal action for judicial review of the 2010 EIR's compliance with CEQA (Alameda County Superior Court, Case No. RG10-530015). Explain why these potential habitat structures were removed prior to resolution of the court challenge. Explain if and how the City of Newark required implementation of MM BIO-7.1 through MM BIO-7.6. Please provide the biologist survey report available for public review.

This loss of bat habitat on site must be included in a revised bat cumulative impact analysis.

RESPONSE L-13: Until 2013, an abandoned and vacant house and barn structure had been located on the project site in Area 4. These structures were being used by vagrants and others for illicit activities and were considered a nuisance to public safety. Independent of the proposed project, the property owner contacted the Newark police department and the City and, in June 2013, the City issued a demolition permit for the structures. Prior to demolition, the structures were offered to the City of Newark Police Department to use for SWAT and emergency response training exercises. On September 25, 2013, the Police Department began the training exercises. At this point, the breeding season for bats (1 March through August 31) was over and no evidence of bat roosts had been detected. The exercises were completed on October 14-15, 2013. The buildings were subsequently demolished after October 16, 2013.

The REIR mitigation to survey the buildings for bats prior to building demolition was not triggered because the demolition was carried out independently of any project approval and to address s public safety hazard. While it is unlikely a bat roost was impacted, the applicant will provide an

alternative bat roost structure as part of the proposed project, in compliance with REIR MM BIO-7.6. An "alternative bat roost" is typically a bat box mounted on a tree or a pole that would be effective mitigation for any bats that had been using the house/barn. The design and placement of the structure will be determined by a qualified bat biologist based on the location of the original potential bat roost and which species is present. There are no new significant cumulative impacts to bats as a result of this change in the baseline condition.

COMMENT L-14: 10. The REIR Fails To Provide Mitigation Measures for Maternity Bat Roosts. The REIR provides no mitigation measure for bat maternity roosts, although the REIR indicates "The Area 4 project could result in significant impacts to nesting colonies of pallid bats, a California species of special concern, and Yuma myotis bats, a rare species in the South Bay." Pallid bat roosts are very susceptible to human disturbance, and urban development has been cited as the most significant factor contributing to their regional decline (Miner and Stokes 2005). Pallid bats were likely present throughout the South Bay historically, but they are slowly being extirpated from the area due to urban development and habitat loss. Please provide mitigation measures for bat maternity roosts.

RESPONSE L-14: While it is unknown if the project affected any bat roosts, Mitigation Measure BIO-7.6 will be implemented as part of the project, providing an alternative bat roost structure on the site. An "alternative bat roost" is typically a bat box mounted on a tree or a pole that would be effective mitigation for any bats that had been using the house/barn. The design and placement of the structure will be determined by a qualified bat biologist based on the location of the original potential bat roost and which species is present.

COMMENT L-15: 11. The REIR Fails To Adequately Describe The Existing Environmental Setting of Bats.

Further, the REIR's environmental setting is flawed as it fails to discuss the environmental conditions for bats from a local and regional perspective. The California Bat Working group is preparing a conservation plan for California bat species. The State of Washington recently released Draft Washington Bat Conservation Plan and covers many of the California species (Hayes and Wiles 2013). This plan notes, "The most important habitats for Washington's bats are those used for roosting and foraging." The REIR fails to address the importance foraging habitat. The Washington report notes, "Adequate foraging habitat is a second primary requirement of bat populations. A number of bat species in Washington concentrate their feeding near fresh water (especially in riparian areas) and along edge habitats, where insect availability is commonly high and vegetational clutter is reduced. Availability of drinking sites is another key component of bat foraging habitat, especially in drier regions of the state where water sources may be limited." These are landscape features of Area 4. The open lands, freshwater seeps and freshwater ponds in Area 4 provide ideal foraging habitat for bats. The REIR must address both roosting and foraging habitat for bat species of special concern.

RESPONSE L-15: The City disagrees that the RDEIR did not adequately characterize the

existing environmental setting for bats. The biological resources report that accompanied the 2009 Draft EIR evaluated bat habitat on the site and determined that impacts to bat foraging habitat would be less than significant, as ample foraging habitat for bats would be unimpacted or would be restored (or, at least, would become higher-quality foraging habitat for bats after they were no longer intensively cultivated). No events have changed the conclusions of this report. As described in the RDEIR, the majority of habitat that will be impacted by the project consists of intensively cultivated lands, and wetlands, aquatic habitats, and other habitats that provide foraging and drinking sites for bats will be minimally impacted by the project.

COMMENT L-16: 12. Indirect Impacts on Waterbird Use of Wetlands
The REIR Mitigation Measure for Indirect Impacts to Waterbirds is Inadequate.
The REIR states, "the perennial wetlands within the former Pintail Duck Club were documented to consistently support much higher numbers of waterbirds. Specifically, waterbirds were concentrated within an area of approximately 18 acres providing a mosaic of open water, exposed mud, and emergent vegetation. In a number of areas in the South Bay, large numbers of waterbirds feed, loaf (e.g., during high tides), preen, and even nest in close proximity to high levels of human activity (pg. 219)."

The REIR offers "MM BIO-10.1 Indirect impacts of residential and golf course development on birds using the undeveloped wetlands on the site shall be mitigated by the creation or enhancement of waterbird habitat on the site at a 0.5:1 ratio for a total of 9 acres of mitigation. Mitigation wetlands for these indirect impacts shall be located at least 300 feet from any development, to the maximum extent possible. The mitigation areas shall provide perennial or near-perennial water with a variety of depths ranging from very shallow water or exposed mud to water up to several feet deep to support the bird species currently using the former Pintail Duck Club. This mitigation can occur within the same wetland areas created as mitigation for permanent loss of wetlands as long as it is located at least 300 feet from any residential or golf course development."

In research conducted for the South Bay Salt Pond Restoration Project (SBSP Project) by my colleague and I determined that waterfowl responded strongly to new trail use at non-trail sites. Responses included fewer birds near trail levees compared to before disturbance, fewer species, and over 75% of birds responding by swimming or flying away from the levee in response to trail walkers. Pease, et al. (2005) noted that a single person walking is a highly disturbing activity and that both trail walkers and bicyclists cause significant flight responses by waterfowl. Our results at the non-trail sites support this statement. As the SBSP Project converts salt ponds used by waterfowl to tidal marshes, perennial wetland habitat for waterfowl will be reduced making the freshwater ponds in Area 4 an even more important resource for waterfowl on the Pacific Flyway. Findings of our waterfowl research indicate that trail use is also reducing the habitat available to ducks. A significant number of waterfowl avoided pond habitat up to an estimated 120 meters from the levee trail. Some waterfowl species consistently stayed 150 meters away from elevated levee trails. This new research suggestions both the importance of the freshwater ponds and the need for adequate buffer distance between human activity zones and habitat areas.

The mitigation ratio and the distance of mitigation lands to the potential housing and recreational developments should be further analyzed to reflect the growing body of research on human disturbance impacts on waterfowl and shorebirds.

RESPONSE L-16: The impact is assessed relative to the existing condition, in which a majority of SBSP Project ponds still provide ample habitat for waterbirds; as a result, future conditions of SBSP Project ponds do not affect the impact analysis for Newark Areas 3 and 4. In terms of the cumulative impact, the SBSP Project has a well-developed monitoring and adaptive management program that will identify declines in waterbirds on a regional scale prior to a significant impact and allow the SBSP Project to modify its management of remaining ponds to help maintain numbers of waterbirds regionally. Because the SBSP Project ponds are so much more extensive than the waterbird habitat in Newark Area 4 (Area 3 does not provide waterbird habitat), the Newark Areas 3 and 4 Specific Plan will not result in a cumulative impact to waterbird numbers or habitat in the South Bay. Therefore, the impacts on Area 4 do not make a cumulatively considerable contribution to cumulative impacts and mitigation is not necessary to reduce cumulative impacts to less-than-significant levels.

Although some waterbirds in Newark Area 4 will not tolerate human activity on levees adjacent to waterbird habitat (which is why mitigation measure BIO-10.1 was required), there are many examples of locations in the San Francisco Bay area where birds are habituated to humans sufficiently that they occur in large numbers within 300 feet (and even less), of areas heavily traveled by humans. Examples include Shoreline Lake and Charleston Slough in Mountain View, the Palo Alto Flood Control Basin and Palo Alto Baylands, Lake Merritt in Oakland, and the South Bayside Systems Authority lagoon in Redwood Shores). In Newark Area 4, some birds will tolerate human use of trails, some will habituate to human activity, and some will not tolerate or habituate to such activity. The mitigation wetlands required by mitigation measure BIO-10.1 will provide compensatory habitat for those birds that do not tolerate such human activity.

Regarding the comment that the distance between the mitigation wetlands and human activity should be greater than 300 feet, the majority of these wetlands areas will be well over 300 feet from human activity. Because the minimum distance must be 300 feet, and these wetlands are not expected to be linear features, the majority of wetland area will be well over 300 feet from human activity.

COMMENT L-17: 13. The REIR Fails To Analyze The Feasibility, And Therefore The Potential For Success, Of The Combined Biological, Geological and Hydrological Mitigation Measures.

The REIR includes a range of mitigation measure for biotic resources. Is there adequate land

within Area 4 to effectively preserve the existing wetlands and mitigate for the multitude of significant impacts to wildlife resources? Will the remaining lands maintain hydrological connections to the shallow groundwater that supports the mosaic of perennial wetlands, seasonal wetlands and transitional upland habitats? No analysis or plan is provided to convey the potential feasibility of MM BIO-1 through MM BIO-15. No analysis is provided to ensure the substantial ground disturbance activities will allow the remaining lands in Area 4 to support the ecological functions and values of the biological mitigation measures. The geological and hydrological measures are likely in direct conflict to the feasibility of retaining subsurface water flows the feed the natural seeps and ponds in Area 4. Analysis must be provided to assess the feasibility of the mitigation measures. Some of the significant ground disturbance actions required to support the development include:

- the placement and engineering of 2.1 million cubic yards of fill to raise the building pads,
- ground improvement measures including such as surcharging, rammed aggregate piers, or soil/cement mixing, to compensate for liquefaction,
- underground improvements to reduce the potential hydrostatic uplift pressures on the housing,
- soil corrosion measures to avoid degradation of foundations and public infrastructure including utilities, bridges, soundwalls, etc. in this aqueous environment, to list just a few of the ground disturbance actions.

RESPONSE L-17: Please refer to Master Response 2.

COMMENT L-18: 14. The REIR Fails To Adequately Analyze Mitigation Measures For Impacts To Wetlands.

The REIR notes, "The project would result in the loss of up to 85.6 acres of wetland/ marsh/aquatic habitat in Area 4. This would result in a substantial adverse effect on riparian habitat and on federally protected wetlands through the loss of these habitats (pg. 198)."

The REIR offers "compensatory mitigation for impacts to these habitats shall consist of two parts: (1) creation of high quality wetland and aquatic habitat within Area 4 within upland habitat at an acreage ratio of 1:1 (habitat created/enhanced: habitat impacted) to prevent any net loss of habitat functions or values, and (2) enhancement of existing seasonal wetland habitat that is currently within agricultural production (mapped as agricultural field/seasonal wetland habitat) at an acreage ratio of 0.5:1 (such enhancement will include cessation of farming activities, seeding with appropriate seasonal wetland plant seeds, and may include minor earth moving activities) (pg. 198).

The mitigation measure provided by the REIR fails to adequate address the importance of the existing wetland complex within Area 4. Area 4 has been identified in the 1999 Baylands Ecosystem Habitat Goals Project and 2013 Tidal Marsh Recovery Plan and were designated by Congress in 1991 as within the expansion boundary of Don Edwards San Francisco Bay National Wildlife Refuge. The mitigation ratios are too small and do not reflect the importance of this landscape or the current mitigation ratios used by the regulatory agencies. The California Coastal Commission's "preferred procedure is to use the results from the functional capacity analysis,

which provides for the preservation of both wetland acreage and functional capacity, in evaluating the adequacy of compensatory mitigation and mitigation ratios. In determining if functional capacity is maintained, both the adverse impacts and the proposed mitigation must be evaluated. In order to maintain functional capacity and wetland acreage, a mitigation plan should at least include the following:

- A wetland mitigation ratio in excess of one to one (i.e., one wetland acre must be restored or created for each acre lost through development). Many coastal development permits have required a ***mitigation ratio of four to one*** to compensate for wetland acreage and functional capacity lost during the re-establishment and maturation of the mitigation area. In some cases, larger mitigation ratios have been required to ensure that at least some compensation occurs in the event the mitigation project is only partially successful. Enhancement of degraded habitat may be included as a **component** of a mitigation plan if the total package results in an acceptable mitigation ratio.

- Wetland creation projects should be located adjacent to existing wetland habitat whenever possible, to increase the probability for success.

- Wetland creation projects should replace the same habitat type, preferably in the same watershed or area. However, if a regional management plan has been prepared for the area that demonstrates the need for a specific habitat type, the CCC **may consider** replacement with the identified critical habitat, provided that this replacement is endorsed by the appropriate fish and wildlife management agencies."

The mitigation measure for wetlands is wholly inadequate and must be evaluated against current regulatory practices and the significance afforded the land through the congressional designation.

RESPONSE L-18: Please refer to Master Response 2.

COMMENT L-19: The flaws of the REIR need to be rectified and the document recirculated for public review and comment.

RESPONSE L-19: Please refer to responses L-1 through L-18. The questions and opinions raised in the comment have not identified any new significant impact, nor do they indicate that the proposed Specific Plan would result in impacts of substantially increased severity than identified in the RDEIR. Further, the comments have not identified a project alternative or mitigation measure considerably different from others previously analyzed that would clearly lessen significant environmental impacts of the project. For these reasons, recirculation of the RDEIR is not warranted under CEQA Guidelines Section 15088.5.

SECTION 4.0 REVISIONS TO THE TEXT OF THE DRAFT EIR

This section contains revisions to the text of the *Recirculated Draft Environmental Impact Report, Newark Areas 3 and 4 Specific Plan*, dated August 2014. Revised or new language is underlined. All deletions are shown with a ~~line through the text~~.

Page S-7 Summary, Project Elements Table; **delete** the seventh (7th) bullet of column 2 under **Area 3**: Construction/ occupation of up to approximately 585 residential lots, Project Discretionary Approvals included in project level analysis, as follows:

- ~~Maintenance/access easements and/or permit to add/replace flapgate (Alameda County Flood Control and Water Conservation District)~~

Page S-8 Summary, Project Elements Table; **delete** the third (3rd) bullet of column 2 under **Area 4:** Construction/ occupation of residential units in Area 4, Project Discretionary Approvals included in project level analysis, as follows:

- ~~Maintenance /access easements and/or permit to add outfall(s) (Alameda County Flood Control and Water Conservation District)~~

Page S-9 Summary, Project Elements Table; **insert** a new bullet in column 3 under **Area 4:** Construction/ occupation of residential units in Area 4, Program Discretionary approvals included in program level analysis, as follows:

- Maintenance /access easements and/or permit to add outfall(s) and/or permit to add/replace flapgate (Alameda County Flood Control and Water Conservation District)

Page S-12 Summary of Impacts and Mitigation Measures Table, Air Quality; **revise** the second row, as follows:

Impact AIR-2: Operational air pollutant emissions associated with buildout of the proposed Specific Plan would generate ozone precursors ROG, and NOx~~, and PM_{10}~~ that exceed ~~both the current and the updated and~~ adopted 2011 BAAQMD significance thresholds; therefore, implementation of the	**MM AIR-2.1:** While mitigation measures listed above (MM AIR-1.1) are expected to reduce emissions from buildout of the Specific Plan, the ROG emissions, which are mostly produced by consumer products[7], would remain well above the significance threshold. NOx emissions would also remain significant with mitigation. ~~Emissions for PM10 would be~~

[7] Consumer products are those that the general public all purchase. These products include solvents, paints, cleaners, cosmetic products, landscape products (e.g., fertilizers), automotive products, etc. The California Air Resources Board has authority to regulate these statewide through regulations imposed on manufacturers. These types of emissions increase with the rate of population increase and there are no methods available to mitigate these emissions.

Specific Plan would result in a significant impact to regional air quality. **(Significant Impact)**	~~reduced to less than significant levels with the mitigation measures listed for MM AIR-1.1.~~ Operational ROG and NOx emissions would be a significant and unavoidable impact. **(Significant Unavoidable Impact)**

Page S-13 Summary of Impacts and Mitigation Measures Table, Air Quality; **revise** the first row, as follows:

Impact AIR-3: Based upon the BAAQMD significance thresholds for construction activity, temporary daily emissions of <u>ROG,</u> PM_{10} and $PM_{2.5}$ from truck hauling, along with emissions from on-site equipment used to move fill material would have emissions below the BAAQMD daily thresholds. Construction activity NOx emissions would be above the significance thresholds ~~for three of the eight-year estimated construction period and emissions of NOx would be significant for seven of the eight year construction period~~. Because NOx ~~and ROG~~ emissions are above the BAAQMD significance threshold of 54 pounds per day, the effect of these emissions to the air basin would be significant. **(Significant Impact)**	**MM AIR-3.1:** <u>With incorporation of Mitigation Measure 4.2 (MM-4.2), the NOx emissions levels will be reduced by over 33 percent to a less than significant level impact.</u> ~~The project proponent and the City cannot control emissions from independent trucks used to haul fill material. Additionally, due to the large size and extended duration of construction, there are no mitigation measures to reduce this impact, and it would remain significant and unavoidable.~~ **(<u>Less than</u> Significant <u>Impact with Mitigation</u>~~Unavoidable Impact~~)**

Page S-14 Summary of Impacts and Mitigation Measures Table, Air Quality; **revise** the MM AIR-4.2, as follows:

- All construction related activities within Area 3 shall provide a plan, for approval by the City, demonstrating that the heavy-duty (> 50 horsepower) <u>mobile</u> off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average <u>that meet U.S. EPA Tier 3 emissions standards, and portable equipment</u>

operating on the site for more than two days continuously, will meet U.S. EPA Tier 4 emission standards~~20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction~~. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

Page S-18 Summary of Impacts and Mitigation Measures Table, Biological Resources; **revise** the third paragraph of MM BIO-1.2A, as follows:

A detailed mitigation plan shall be developed by a qualified biologist under contract to the landowner/applicant requesting permits for wetland fill (prior to grading). ~~each future developer for individual development projects within the Specific Plan area which result in direct impacts to wetland habitats.~~ This plan will be submitted to and approved by appropriate regulatory agencies and the City of Newark prior to the initiation of grading within wetlands.

Page S-19 Summary of Impacts and Mitigation Measures Table, Biological Resources; **revise** the last sentence of MM BIO-1.2B, as follows:

The off-site component of the wetland mitigation will occur on lands located within 10 air miles of the current project site and will be located along the eastern shore of south San Francisco Bay within the same geographic watershed, or as otherwise approved by the USACE and RWQCB.

Page S-43 Summary of Impacts and Mitigation Measures Table, Biological Resources; **revise** the second sentence of MM BIO-14.2, as follows:

~~Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees.~~ Newark's tree preservation ordinance requires a permit for the removal of any tree with a trunk diameter of six inches or greater, measured at four feet above the ground. The replacement species must be native to the project area of the San Francisco Bay area.

Page S-56 Summary of Impacts and Mitigation Measures Table, Hydrology and Water Quality, MM HYD-1.2; **revise** the last paragraph on the page, as follows:

A long-term stormwater management and monitoring program. The stormwater at the outlets leaving the site shall be sampled on a first flush basis, once a year for the lifetime of the project. If the post-project sample results indicate that the quality of stormwater leaving the site has degraded from the base conditions, then the SWPPP shall be reviewed and revised, based upon consultation with the Regional Water Quality Control Board. A minimum of six parameters including pH, total suspended solids, oil and grease, nitrogen, and appropriate pesticide constituents should be

analyzed. In addition, the typical metals found in municipal stormwater shall be sampled and analyzed, such as copper, lead, or zinc, or bacteria.

Page S-68 Summary of Impacts and Mitigation Measures Table, Cumulative Global Climate Change; **delete** the text, as follows:

~~***CUMULATIVE GLOBAL CLIMATE CHANGE***~~	
~~**Impact C-GCC-4:** The proposed project would result in a cumulatively considerable contribution global climate change impact. **(Significant Cumulative Impact)**~~	~~**MM C-GCC-4.1:** All residential subdivisions and new commercial buildings within the Specific Plan shall incorporate as many green practices as appropriate and feasible in buildings and structures constructed subject to approval of the City of Newark.~~ ~~These measures shall include, but are not limited to:~~ ~~• Pre-wire (or equivalent most current technology) residences and commercial buildings to facilitate the installation of solar power.~~ ~~• LEED certification or equivalent for commercial buildings.~~ ~~• Include plug-ins (or equivalent most current technology) in residences to facilitate the use of electric and hybrid vehicles.~~ ~~**MM C-GCC-4.2:** All public landscaping areas within the Specific Plan shall follow the City of Newark's Bay Friendly Landscape Guide. Future homeowners associations or similar entity shall be encouraged to incorporate as many bay friendly landscape practices as appropriate and feasible.~~ ~~These practices shall include, but are not limited to:~~ ~~• No lawn areas less than 8 foot wide.~~ ~~• Where practical, utilize underground irrigation systems rather than surface applied irrigation to reduce evaporative loss.~~ ~~• Minimize mowed lawn areas in residential development neighborhoods and use mowed lawn areas only for active recreation areas in park spaces~~

	~~• Minimize use of plants that require extensive pruning and/or generate large amounts of green waste.~~ ~~• Utilize "Integrated Pest Management" principals in the landscape maintenance of the project.~~ ~~• Employ recycled materials for landscape materials such as headers, paving, street furniture, and mulch wherever practical.~~ ~~• Landscape lighting to respect dark sky principals, i.e. no light directed up-ward.~~ ~~While incorporation of the above measures will partially reduce the global climate change impact, the overall implementation of the Specific Plan will still make a cumulatively considerable contribution to global climate changes impacts and, therefore, result in a significant unavoidable impact.~~ **~~(Significant Unavoidable Impact)~~**

Page S-71 Summary, Avoidance Measures, **insert** in to table as shown:

Cumulative Global Climate Change
AM C-GCC-4.1: The following avoidance measures shall further reduce greenhouse gas emissions. All of these avoidance measures shall be incorporated into the City of Newark's development regulations and design review procedures to reduce potential greenhouse gas emission impacts to non-significant levels. All residential subdivisions and new commercial buildings within the Specific Plan shall incorporate as many green practices as appropriate and feasible in buildings and structures constructed subject to approval of the City of Newark. These measures shall include, but are not limited to: • Pre-wire (or equivalent most current technology) residences and commercial buildings to facilitate the installation of solar power. • LEED certification or equivalent for commercial buildings. • Include plug-ins (or equivalent most current technology) in residences to facilitate the use of electric and hybrid vehicles. **AM C-GCC-4.2:** All public landscaping areas within the Specific Plan shall follow the City of Newark's Bay Friendly Landscape Guide. Future homeowners associations or similar entity shall be encouraged to incorporate as many bay friendly landscape practices as appropriate and feasible. These practices shall include, but are not limited to: • No lawn areas less than 8 foot wide.

- Where practical, utilize underground irrigation systems rather than surface applied irrigation to reduce evaporative loss.
- Minimize mowed lawn areas in residential development neighborhoods and use mowed lawn areas only for active recreation areas in park spaces
- Minimize use of plants that require extensive pruning and/or generate large amounts of green waste.
- Utilize "Integrated Pest Management" principals in the landscape maintenance of the project.
- Employ recycled materials for landscape materials such as headers, paving, street furniture, and mulch wherever practical.
- Landscape lighting to respect dark sky principals, i.e. no light directed upward.

Page 4 Section 1.3.1.2 Project-Level Analysis in the Recirculated EIR; revise the last sentence of the second paragraph as follows:

~~Assuming none of the conditions described in CEQA Section 21166 has occurred, the City of Newark also intends this Recirculated EIR to adequately address the environmental impacts that could result from the Alameda County Flood Control and Water Conservation District (ACFC&WCD) accepting maintenance/access easements along levees and/or approving permits to add/replace a flapgate at the Line D outfall in Area 3.~~

Page 4 Section 1.3.1.3 Program-Level Analysis in the Recirculated EIR; **insert** the following text:

At the time the EIR was prepared, some elements contemplated by the Specific Plan were not very detailed. These elements consist of the following: construction and occupation of a new elementary school in Area 3, the operation and maintenance of the park in Area 3 (including a park improvement and maintenance agreement), the need for maintenance/access easements along levees, adding/replacing outfalls, and/or outfall flapgates in Area 4, construction and occupation of new residences in Area 4, construction and operation of a golf course or other recreation facility in Area 4, construction of the Stevenson Boulevard railroad crossing and Mowry Avenue EVA access, and the relocation of PG&E transmission lines in Area 4.

Page 12 Section 2.4.1 Area 3, Footnote 8; **revise** the following sentence as follows:

[8] A full description of multi-family siting standards is provided in the Specific Plan, ~~Draft~~ RDEIR Appendix H~~A~~.

Page 24 Section 2.4.3.1, Golf Course Operations; **insert** the following text at the end of the section:

Audubon International is not affiliated with the National Audubon Society. Audubon International is a not for profit 501(c)(3) environmental education organization based in Troy, New York. Established in 1987, the organization works with communities, developments, resorts and golf courses in 36 countries to plan and implement sustainable natural resource management practices, as well as receive public recognition (through their certification processes) for employing sound environmental stewardshipg.

The mission of Audubon International is to deliver high-quality environmental education and facilitate the sustainable management of land, water, wildlife, and other natural resources in all places people live, work, and play. Through education, technical assistance, certification, and recognition, Audubon International facilitates the implementation of environmental management practices that ensure natural resources are sustainably used and conserved. Audubon International has enrolled over 3,000 properties (including golf courses, cemeteries, ski areas, housing developments, hotels, and many others) and communities in its certification programs. It is the first organization to work extensively with the golf industry on sustainability issues, and has a long history of partnering effectively with industry associations such as the United States Golf Association (USGA).[8]

Page 32 Section 2.4.8 Grading and Imported Fill, **insert** the following text at the end of the section as follows:

It should be noted that on September 8, 2014, a representative of the property owner discovered that a construction firm had been illegally dumping on Newark Area 4. The representative immediately called the Newark Police Department who arrived on site several minutes later. H. T. Harvey & Associates were asked to visit the property the next morning, September 9, 2014, for the purpose of documenting the extent of dumping. H.J. Harvey & Associates personnel drove and hiked the perimeter of the fill areas which were obvious due to the significantly different soil color and composition of the fill material which included roots, small pieces of concrete, rocks and gravel in contrast to the native soils on the property. It is estimated that the fill area comprises 22.08 acres, consisting of 1.33 acres of aquatic habitat, 11.85 acres of wetlands, and 8.9 acres of upland habitat. The City considers this activity to be outside the scope of the project and the result of illegal unauthorized dumping. The resolution of this incident is the subject of an on-going investigation by the regulatory agencies including USEPA, the Corps, and the Alameda County District Attorney's Office. The presence of this unauthorized fill does not change the project's impacts or any of the conclusions in this REIR.

Page 69 Table 3.1-1, Policy HW-5.3, the following text is added to the end of the consistency paragraph:

[8] http://www.audubonintenational.org/, accessed October 14, 2014.

The project is consistent with this policy.

Page 104 Section 3.3 Air Quality; **revise** the first two paragraphs as follows:

There have been no substantial changes in ambient air quality or in the regulatory framework that would result in new impacts or impacts of substantially greater severity than those identified in the previously circulated EIR. The EIR used the (then proposed) 2009 BAAQMD thresholds of significance, which are same numeric thresholds identified for the San Francisco Bay Area Air Basin in the May 2011 BAAQMD CEQA Air Quality Guidelines and in common use today. There has been an update to the Clean Air Plan. Relevant policy changes are noted below. Since the air quality analysis was prepared, the BAAQMD recommended emissions modeling program used to predict air pollutant emissions was changed from the URBEMIS2007 model to the California Emissions Estimator Model (CalEEMod). The air quality analysis has been updated to reflect the changes in the new modeling data.

The following section is based upon air quality studies prepared in 2009, updated toxic air contaminants memorandum prepared in April 2014, and an air pollutant emissions update prepared in November 2014 completed ~~prepared~~ by *Illingworth & Rodkin, Inc*. ~~in February 2009, November 2009~~. The~~is~~ air quality reports are located in Appendix C of the Draft EIR. The~~An~~ updated memoranda~~um~~ from *Illingworth & Rodkin* regarding toxic air contaminants and air pollutant emissions are~~is~~ located in REIR Appendix B.

Page 120 Section 3.3.4.2 Long-Term Air Quality Impacts, Regional Air Quality Impacts, Operational Emissions; **revise** the text as follows:

Build out of the Areas 3 and 4 Specific Plan would add new traffic trips, which would lead to increased emissions of air pollutants. Emissions of air pollutants associated with the project were predicted using the ~~URBEMIS2007 model (Version 9.2.4)~~California Emissions Estimator Model (CalEEMod) (Version 9.2.4 Version 2013.2.2) recommended for use by BAAQMD. The CalEEMod model and the project vehicle trip generation rates were used to predict operational period air pollutant emissions associated with operation of a fully developed site under the proposed project. Model inputs and assumptions, including year of analysis, land use descriptions and assumptions, trip generation rates, travel distances, and area sources, are described in Appendix B. ~~This model predicts daily emissions associated with land use developments from motor vehicle activity and area emissions. The URBEMIS2007 model combines predicted daily traffic activity, associated with the different land use types, with emission factors from the State's mobile emission factor model (i.e., EMFAC2007).~~ *Hexagon Transportation Consultants* provided trip generation rates in the traffic report for the project that were used in the model. The vehicle trip length for school trips was adjusted to 2.5 miles, based on average trip lengths reported by the MTC. The air quality

analysis was completed in the same manner as the traffic report. The model assumed that there would not be any new wood burning stoves and all residential fireplaces would be natural gas fired, per BAAQMD Rules and Regulations, and that there would be no consumer product emissions from the golf course. Reductions from new regulations concerning energy usage, water usage and vehicle trips were also accounted for in the model.

~~Area 3 of the Specific Plan is served by transit and includes some bicycle lanes. Retail uses are located about 0.3 to 0.5 miles from Area 3. These uses are situated along the major roadways serving the Specific Plan area. Areas 3 and 4 was assumed to include a mix of uses. The URBEMIS2007 modeling assumed trip reductions based on these factors, so the project emissions are already somewhat mitigated (by about 6 to 8% over unmitigated emissions). For instance, nine AC Transit bus routes serve the area with headways of 30 to 60 minutes. Area 3 is less than one-quarter mile from these bus routes; however, Area 4 is located more than 0.5 miles away and would not be well served by existing transit. The URBEMIS2007 model includes default trip reductions based on the project type and setting. These adjustments were made to reflect the project conditions.~~

Build out of both Area 3 and Area 4 were anticipated to occur in 2025~~18 at the earliest, with Area 3 completed by 2015~~. The year of analysis is important to consider when modeling vehicle emissions, because the vehicle emission rates for ROG and NOx are currently decreasing with each year and are predicted to decrease substantially between 2010 and 2020. For instance, NOx emission rates will decrease by 56 percent during that period because of improvements in vehicle emissions and retirement of older, more polluting, vehicles from the roadways.

PM_{10} emissions are comprised of running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. The contribution of tire and brake wear is small compared to the other particulate matter emission processes. Gasoline powered engines have small rates of particulate matter emissions compared with diesel-powered trucks. Since much of the project traffic fleet is made up of light-duty gasoline-powered vehicles, a large portion of the PM_{10} emissions is from entrainment of roadway dust from vehicle travel. ~~The URBEMIS2007 default silt loading values were changed to reflect values that CARB uses for calculating paved roadway dust emissions for average vehicle traveling on arterial and collector roadways.~~

The model also predicts area source emissions associated with the proposed projects, which are minor for NOx and PM_{10} compared to emissions associated with traffic. These emissions are associated with natural gas consumption (primarily space and water heating), use of landscape equipment, consumer products, architectural coatings, and wood burning. ROG emissions associated with consumer product uses from new residences can be substantial (some examples of these products include: solvents, paints, cleaners, cosmetic products, landscape products (e.g., fertilizers),

automotive products, etc.). ~~Model default values for area sources are used, since more refined data are not available. Newark is not listed by the BAAQMD as a city that has adopted a wood smoke ordinance, so these emissions were included. PM10 emissions include about 15 percent wood burning fireplaces or wood stoves, recognizing that a majority would likely be natural gas-fired. Worst day PM10 emissions were calculated for a winter day that includes mobile sources and wood smoke and a summer day that primarily includes vehicle travel.~~

~~Daily emissions predicted with full build out of the project scenarios are reported in Table 3.3-4 and compared against BAAQMD threshold of 80 pounds per day. Development of the Specific Plan area would increase emissions of ROG, NOx, and PM_{10}. As shown in Table 3.3-4, the combination of new travel and new consumer product use by residences associated with the project would result in emissions of ROG and PM_{10} that exceed current BAAQMD significance thresholds.~~

~~The URBEMIS2007 model does not predict emissions from stationary equipment, other than general natural gas usage (i.e., area sources). Stationary equipment that could emit air pollution has not been identified for the plan area. Residential or mixed use projects do not usually include these sources. If stationary sources are included in the plan, they may require permits from BAAQMD. Such sources could include combustion emissions from large boilers used for heating and cooling or standby emergency generators (rated 50 horsepower or greater). These sources would normally result in minor emissions, compared to those from traffic generation reported above. Sources of air pollutant emissions complying with all applicable BAAQMD regulations generally will not be considered to have a significant air quality impact. Stationary sources that are exempt from BAAQMD permit requirements due to low emission thresholds would not be considered to have a significant air quality impact.~~

~~The ROG and PM_{10} direct and indirect emissions for the proposed Specific Plan are predicted to be above the current (1999) significance thresholds (80 pounds per day) established by the BAAQMD for ozone precursors pollutants and PM_{10}. This impact would be considered significant.~~

~~Table 3.3-4: Daily Project Emissions for Buildout of Areas 3 and 4 Specific Plan~~

~~Scenario~~	**~~Modeled Daily Emissions in Pounds Per Day (lbs/day)~~**			
	~~Reactive Organic Gases (ROG)~~	**~~Nitrogen Oxides (NOx)~~**	**~~Respirable Particulates (PM_{10})~~**	**~~Fine Particulates ($PM_{2.5}$)~~**
~~Area 3 - 2015~~	~~97~~	~~48~~	~~60 winter 48 summer~~	~~25 winter 10 summer~~

~~Area 3 - 2018~~	~~90~~	~~39~~	~~60 winter 48 summer~~	~~25 winter 10 summer~~
~~Area 4 - 2018~~	~~59~~	~~27~~	~~47 winter 34 summer~~	~~19 winter 7 summer~~
~~Total Area 3 + Area 4~~				
~~Areas 3 and 4 2018~~	~~149~~	~~66~~	~~107 winter 82 summer~~	~~44 winter 17 summer~~
~~1999 BAAQMD Significance Thresholds~~	~~80~~	~~80~~	~~80~~	~~--~~
~~2009 BAAQMD Significance Thresholds~~	~~54~~	~~54~~	~~82~~	~~54~~

~~Assuming complete build out of Area 3 by 2015, ROG emissions would be significant and other emissions would be less than significant under both the existing and the 2009 thresholds. In 2018, build out of Areas 3 and 4 would result in significant emissions for ROG, NOx, and PM10 with the proposed thresholds. That is, daily NOx emissions that were not identified as significant under the current guidelines would be considered significant under the proposed guidelines. Emissions of ROG and NOx would remain significant. The mitigation measures described below were developed to reduce ROG and PM10 emissions, mostly from vehicle travel. The same measures would reduce NOx emissions, but not to a less than significant level. There are no other reasonable and feasible mitigation measures that would further reduce project NOx emissions.~~

Operational emissions, reported in Table 3.3-4, are emissions predicted in 2025, which would be the first year that the project is assumed to be fully built out and operational. Average daily emissions were computed by dividing the total emissions by 365 days. As shown in the table, the project's average annual and daily emissions of ROG and NO_X associated with project operation would exceed the BAAQMD significance thresholds.

Table 3.3-4:
Annual and Daily Project Emissions for Buildout of Areas 3 and 4 Specific Plan

	ROG	**NOx**	**PM_{10}**	**$PM_{2.5}$**
Areas 3 and 4 Annual Emissions (tons)	16.74	13.30	11.15	3.34
BAAQMD Annual Emission Thresholds of Significance	*10*	*10*	*15*	*10*
Areas 3 and 4 Average Daily Emissions (lbs/day)*	91.7	72.9	61.1	18.1
BAAQMD Daily Emission Thresholds of Significance	*54*	*54*	*82*	*54*
*Based on 4.159 persons per household				

The mitigation measures described above (MM AIR-1.1) will reduce ROG and NOx emissions, but not to a less than significant level. There are no other

reasonable and feasible mitigation measures that would further reduce project emissions.

Impact AIR-2: Operational air pollutant emissions associated with buildout of the proposed Specific Plan would generate ozone precursors ROG, and NOx~~, and PM_{10}~~ that exceed ~~both the current and the updated and~~ adopted 2011 BAAQMD significance thresholds; therefore, implementation of the Specific Plan would result in a significant impact to regional air quality. **(Significant Impact)**

MM AIR-2.1: While mitigation measures listed above (MM AIR-1.1) are expected to reduce emissions from buildout of the Specific Plan, the ROG emissions, which are mostly produced by consumer products[9], would remain well above the significance threshold. NOx emissions would also remain significant with mitigation. ~~Emissions for PM10 would be reduced to less than significant levels with the mitigation measures listed for MM AIR-1.1.~~ Operational ROG and NOx emissions would be a significant and unavoidable impact. **(Significant Unavoidable Impact)**

Pages 123 Section 3.3.4.2 Long-Term Air Quality Impacts, Heath Effects of Air Quality Impact; **revise** the first sentence in the paragraph as follows:

Health Effects of Air Quality Impact

As described above, using the 2011 BAAQMD CEQA Air Quality Guidelines, project-generated emissions of ROG and NOx would be considered significant ~~(PM10 emissions are mitigated to a less than significant level)~~.

Page 127 Section 3.3.4.4 Construction (Short-Term) Air Quality Impacts, Construction Emission Related to Imported Fill Material; revise the text as follows:

~~The BAAQMD CEQA Guidelines apply daily and annual emissions thresholds to operational impacts, but not normally to construction impacts. According to the Guidelines, construction equipment is included in the regional emissions inventory, so since they are temporary, quantification of those emissions are not necessary. Under the current guidelines, construction activities are discussed and appropriate mitigation, mostly in the form of feasible PM10 control measures, are identified for~~

[9] Consumer products are those that the general public all purchase. These products include solvents, paints, cleaners, cosmetic products, landscape products (e.g., fertilizers), automotive products, etc. The California Air Resources Board has authority to regulate these statewide through regulations imposed on manufacturers. These types of emissions increase with the rate of population increase and there are no methods available to mitigate these emissions.

~~the project. This project would, however, include the import of a substantial amount of fill material, which is not typical of construction projects. The (2009 adopted) guidelines establish daily quantified emission thresholds for ROG, NOx, PM10 exhaust and PM2.5 exhaust that apply to construction activities.~~

Prior to project construction, up to about 2.1 million cubic yards of soil may be imported to the project site by truck. Most of this soil would be imported to Area 4. There are no detailed plans for the timing, but preliminary estimates are that it would require ~~one to two~~four years of continuous import of soil. This assessment assumes that 100 truckloads of material would be imported per day. Nearby construction projects are anticipated to be the source of fill material for this project. An average 10- mile one-way trip was used for this analysis to be conservative. Each truckload would include two trips: a trip to import the material to the site and a return trip to the source location.

The construction schedule was adjusted to be 10 years for CalEEMod, with the first four years comprised of grading emissions and hauling of 2.1-million cubic yards of soil material. It should be noted that the construction emissions modeled likely overestimate grading emissions, since the model assumed the use of a full inventory of grading construction equipment for four years, while the model default period is less than 1 year. It is likely that far less equipment would be necessary to accommodate the import of fill material. Construction was assumed to begin in 2015.

Construction trips were based on the default trip generation rate, except for the import of soil material. The trip rate for the model takes into account the 2.1-million cubic yards of soil material that would be imported. A trip distance of 10 miles was assumed for these haul trips.

Construction emissions are evaluated based on average daily emissions occurring throughout the construction period. Total and average daily emissions are reported in Table 3.3-6. Total emissions are reported in tons for air pollutants. Average daily emissions in pounds per day (lbs/day) are based on the total emissions divided by the number of construction days. The total number of construction days was estimated at 2,608 workdays over a 10-year period. The 2011 BAAQMD significance thresholds are used to compare to the predicted emissions.

Table 3.3-6:
Average Daily Construction Emissions for Areas 3 and 4 Specific Plan

	ROG	NOx	PM_{10}	$PM_{2.5}$
Areas 3 and 4 Average Daily Emissions (lbs/day)*	20.7	72.1	3.0	2.9
BAAQMD Daily Emission Thresholds of Significance	*54*	*54*	*82*	*54*
*Assuming 2,608 construction workdays (10 years of construction)				

~~The BAAQMD recommended URBEMIS2007 model was used to model construction exhaust emissions associated with the project. Full build out of the proposed project was assumed to begin in 2011 and last for about 5 to 8 years. Construction would probably last longer, but a more aggressive schedule was assumed for this analysis to avoid under prediction of emissions. All grading activities were assumed to occur in the first two years. The emissions include truck travel associated with fill import. An emission rate for a Heavy Duty Diesel Truck was used, assuming a speed of 25 miles per hour. The long duration periods for construction tasks were also selected, which tend to overstate the daily emissions. Emissions from this modeling are shown in Table 3.3-6.~~

~~Table 3.3-6: Project Construction Emissions for Build Out of Areas 3 and 4~~

~~Scenario~~	**~~Modeled Daily Emissions in Pounds PerDay (lbs/day)~~**			
	~~Reactive Organic Gases (ROG)~~	**~~Nitrogen Oxides (NOx)~~**	**~~Exhaust Respirable Particulates (PM_{10})~~**	**~~Exhaust Fine Particulates ($PM_{2.5}$)~~**
~~Construction Year 1~~	~~24~~	~~222~~	~~10~~	~~10~~
~~Construction Year 2~~	~~22~~	~~206~~	~~10~~	~~8~~
~~Construction Year 3~~	~~32~~	~~254~~	~~12~~	~~12~~
~~Construction Year 4~~	~~34~~	~~136~~	~~8~~	~~8~~
~~Construction Year 5~~	~~22~~	~~70~~	~~4~~	~~4~~
~~Construction Year 6~~	~~86~~	~~64~~	~~4~~	~~4~~
~~Construction Year 7~~	~~84~~	~~58~~	~~4~~	~~4~~
~~Construction Year 8~~	~~84~~	~~52~~	~~4~~	~~2~~
~~BAAQMD Significance Thresholds~~	~~54~~	~~54~~	~~82~~	~~54~~

Based upon the BAAQMD significance thresholds for construction activity, temporary daily emissions of ROG, PM_{10} and $PM_{2.5}$ from truck hauling, along with emissions from on-site equipment used to move fill material would have emissions below the BAAQMD daily thresholds. Construction activity NOx emissions would be above the significance thresholds ~~for three of the eight-year estimated construction period and emissions of NOx would be significant for seven of the eight-year construction period~~. Because NOx ~~and ROG~~ emissions are above the BAAQMD significance threshold of 54 pounds per day, the effect of

these emissions to the air basin would be significant.

Impact AIR-3: The proposed project temporary daily emissions for NOx ~~and ROG~~ would exceed the BAAQMD significance threshold of 54 pounds per day; therefore, construction of the Specific Plan would result in a significant impact to regional air quality. **(Significant Impact)**

In order to mitigate this impact, NOx emissions would have to be reduced by 33 percent. This could be achieved by requiring that mobile construction equipment with larger than 50 horsepower and operating on the site for more than two days continuously, meet U.S. EPA Tier 3 standards for NOx, and portable equipment operating on the site for more than two days continuously, meet U.S. EPA Tier 4 standards for NOx. The CalEEMod model can evaluate the effect of Tier 3 equipment during project construction. This would reduce the NOx emissions from 72.1 lbs/day to 44 lbs/day which is below BAAQMD's threshold of 54 lbs/day.

MM AIR-3.1: With incorporation of Mitigation Measure 4.2 (MM-4.2), the NOx emissions levels will be reduced by over 33 percent to a less than significant level impact. ~~The project proponent and the City cannot control emissions from independent trucks used to haul fill material. Additionally, due to the large size and extended duration of construction, there are no mitigation measures to reduce this impact, and it would remain significant and unavoidable.~~ **(Less than Significant Impact with Mitigation~~Unavoidable Impact~~)**

Page 132 Section 3.3.4.4 Construction (Short-Term) Air Quality Impacts, Construction Dust; **revise** Mitigation Measure 4.2 as follows:

- All construction related activities within Area 3 shall provide a plan, for approval by the City, demonstrating that the heavy-duty (> 50 horsepower) mobile off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average that meet U.S. EPA Tier 3 emissions standards, and portable equipment operating on the site for more than two days continuously, will meet U.S. EPA Tier 4 emission standards~~20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction~~. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available.

Page 133 Section 3.3.5 Conclusion, **revise** the third paragraph as follows:

The proposed Specific Plan will result in increase in regional pollutants (ROG~~,~~ and NOx~~, and PM10~~) that are in excess of BAAQMD significance thresholds. Mitigation measures (MM AIR-1.1) ~~would reduce emissions for PM_{10} to less than significant levels, but ROG emissions which are mostly produced by consumer products, and NOx emissions would remain well above the significance threshold~~ will reduce ROG and NOx emissions, but not to a less than significant level. **(Significant Unavoidable Impact)**

Page 133 Section 3.3.5 Conclusion, **revise** the sixth paragraph as follows:

With implementation of MM AIR-4.2, ~~T~~temporary daily emissions of NOx ~~and ROG from truck hauling along with emissions~~ from on-site equipment used to move fill material would not exceed ~~have emissions above~~ the BAAQMD daily thresholds. ~~Because they are above the BAAQMD threshold of significance, the effect of these emissions to the air basin would be significant. There is no feasible mitigation to reduce this impact to a less than significant level.~~ **(Less Than Significant ~~Unavoidable~~ Impact with Mitigation)**

Page 154 Section 3.5.2.1, *Biological Habitats*, **revise** the text of the third sentence of the second paragraph as follows:

In Area 3, only the northeastern corner (area proposed for development) was included in the biological impact analysis for the project because the rest of the site would not be affected by the project.

Page 175 Section 3.5.3.5, Impacts and Mitigation Measures for Biological Habitats, MM BIO-1.2A, **revise** the third paragraph as follows:

A detailed mitigation plan shall be developed by a qualified biologist under contract to the landowner/applicant requesting permits for wetland fill (prior to grading). ~~each future developer for individual development projects within the Specific Plan area which result in direct impacts to wetland habitats.~~ This plan will be submitted to and approved by appropriate regulatory agencies and the City of Newark prior to the initiation of grading within wetlands.

Page 175 Section 3.5.3.5, Impacts and Mitigation Measures for Biological Habitats, MM BIO-1.2B, **revise** the last sentence of the paragraph as follows:

The off-site component of the wetland mitigation will occur on lands located within 10 air miles of the current project site and will be located along the eastern shore of south San Francisco Bay within the same geographic watershed, or as otherwise approved by the USACE and RWQCB.

Page 204 Section 3.5.3.2, Impacts to Trees, MM BIO-14.2; **revise** the text of second sentence as follows:

~~Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees.~~ Newark's tree preservation ordinance requires a permit for the removal of any tree with a trunk diameter of six inches or greater, measured at four feet above the ground. The replacement species must be native to the project area of the San Francisco Bay area.

Page 206 Section 3.5.3 Biological Resources Impacts, Soil Stockpiling; **revise** the following text in the first paragraph as follows.

Implementation of the proposed development will require a substantial amount of soil to raise the elevation on the project site. Area 3 may require up to approximately 56,000 cubic yards of fill. On Area 3, the fill for lower elevation areas may be graded from higher elevation areas, or fill may be imported to the site. Area 4 will require between 1.1 and 2.1 million cubic yards of fill. As mentioned previously, it is assumed that the fill source would come from soil excavated from local major construction projects. ~~Due the large amount of soil required, stockpiling may precede grading and construction by some undetermined period of time.~~ In Area 4, the development envelope would likely be created at one time, beginning at the corner near the Stevenson Boulevard overcrossing of the railroad tracks, and moving (north) west from there. The entirety of the development envelope would likely be filled and mass-graded as part of the site preparation and infrastructure construction, prior to any residential development. Large volumes of fill would not be stockpiled on the site; rather, it would be spread across the site as it was delivered, to begin the process of building up the imported soil and allow for settlement of the fill. ~~Stockpiling~~ If any stockpiling did occur, it would not consist of large volumes and it would only occur in non-jurisdictional areas within Area 4; there are no such habitats in Area 3.

Page 253 Section 3.8.3.11 Long-Term Impacts to Stormwater Drainage Runoff Quality, MM HYD-1.2; **revise** the third paragraph, as follows:

A long-term stormwater management and monitoring program. The stormwater at the outlets leaving the site shall be sampled on a first flush basis, once a year for the lifetime of the project. If the post-project sample results indicate that the quality of stormwater leaving the site has degraded from the base conditions, then the SWPPP shall be reviewed and revised, based upon consultation with the Regional Water Quality Control Board. A minimum of six parameters including pH, total suspended solids, oil and grease, nitrogen, and appropriate pesticide constituents should be analyzed. In addition, the typical metals found in municipal stormwater shall will be sampled and analyzed, such as copper, lead, or zinc, or bacteria.

Page 305 Section 3.12.3.2 Water Supply; **revise** the third sentence of second paragraph as follows:

In the interim, ~~potable water and possibly~~ groundwater from an on-site well located within Area 4 will be used for all golf course irrigation and public park needs.

Page 330 Section 4.1 Cumulative Impacts, Land Use, **revise** the first sentence of the fifth paragraph as follows:

The projects listed in the cumulative analysis would all be required to implement General Plan policies and conform to residential and commercial design guidelines that are intended to minimize long-term land use conflicts.

Page 330 Section 4.1 Cumulative Impacts, Land Use, **revise** the first sentence of the seventh paragraph as follows:

Development in accordance with the City's General Plan, Zoning and Grading Ordinances, and adopted design guidelines will reduce the likelihood that the project considered in this cumulative analysis would result in a significant long-term cumulative land use compatibility impact.

Page 340 Section 4.4 Cumulative Global Climate Change Impacts; **revise** the first paragraph, as follows:

Several reports which specifically focus on climate change projections and impacts to the State of California have been published since the previous climate change evaluation was prepared for the 2009 DEIR. While an updated Climate Change Addendum was prepared (Appendix I of the RFEIR) this section was updated, it should be noted that uncertainty is an inherent quality of any climate change projection, becoming more uncertain the farther into the future a projection is forecast. The few intervening years since the 2009 DEIR was prepared have not reduced this forecasting uncertainty.

This section provides a general discussion of global climate change and focuses on emissions from human activities that alter the chemical composition of the atmosphere. The discussion on global climate change and greenhouse gas emission is primarily based upon the California Global Warming Solutions Act of 2006 (Assembly Bill (AB) 32), the 2006 Climate Action Team (CAT) Report to Governor Schwarzenegger and the Legislature, and research, information and analysis completed by the International Panel on Climate Change (IPCC), California Climate Change Center (CCCC), the United States Environmental Protection Agency, California Air Resources Board, and the CAT. Estimates of greenhouse gas emissions for ~~several components of~~ the project are provided in Appendix J~~C and Appendix G~~ of the ~~Draft~~ RDEIR.

Page 345 Section 4.4.2.3 Assembly Bill (AB) 32 - The California Global Warming Solutions Act of 2006, BAAQMD CEQA Guidelines; **revise** the third sentences of the second paragraph as follows:

The BAAQMD *CEQA ~~Draft~~ Air Quality Guidelines* also outline a methodology for estimating greenhouse gases, including use of the CalEEModURBEMIS model for direct emissions from land use projects.

Page 351 Section 4.4.4.1 Thresholds of Significance; **revise** the fourth paragraph, as follows:

The BAAQMD CEQA Air Quality Guidelines contain methodology and thresholds of significance for evaluating greenhouse gas emissions (GHG) from land use type projects. The BAAQMD thresholds were developed specifically for the Bay Area after considering the latest Bay Area greenhouse gas inventory and the effects of AB 32 scoping plan measures that would reduce regional emissions. ~~The BAAQMD released *CEQA Draft Air Quality Guidelines* which update the current BAAQMD CEQA Guidelines include the first quantified greenhouse gas (GHG) emissions threshold for land use projects. The BAAQMD *CEQA Draft Air Quality Guidelines* also outline a methodology for estimating greenhouse gases, including use of the URBEMIS model for direct emissions from land use projects. The *Draft Air Quality Guidelines* (if adopted) would supersede the BAAQMD's current *BAAQMD CEQA Guidelines* (1999). It is anticipated that the BAAQMD Board of Directors will consider adoption of the BAAQMD CEQA Guidelines Update and Thresholds in December 2009.~~ The basis for the GHG threshold established by BAAQMD is to help bring the Bay Area in to compliance with the goals of AB 32, by ensuring that future emissions from land use projects will not interfere with the AB 32 goal that would reduce 2020 GHG emissions to 1990 levels. ~~The proposed new BAAQMD thresholds do not require quantification of GHG emission from projects that comply with a qualified Climate Action Plan. Since Newark and most Bay Area communities have not adopted a qualified Climate Action Plan, BAAQMD is recommending two different project thresholds: The first is a bright-line threshold of total direct and indirect emissions of 1,100 metric tons per year. This threshold basically serves as a de minimus threshold. Projects with emissions below this level are not expected to conflict with the overall goal of the Bay Area doing its fair share to help the State reach AB 32's goal in 2020. The Areas 3 and 4 Specific Plan project, like many others, would have emissions well above the thresholds mostly due to the size. The second threshold is to have emissions that meet an efficiency standard of 4.6 metric tons per service population per year. This threshold is developed by dividing the project's annual direct and indirect GHG emissions by the sum of the predicted population increase and the number of new jobs. For the purposes of this EIR, the proposed BAAQMD threshold has been used in evaluating the GHG impact of the proposed Areas 3 and 4 Specific Plan project.~~ Projects that have emissions below 1,100 MT of CO2e per year are considered to have less than significant GHG emissions. Land use projects with emissions above the 1,100 MT per year threshold would then be subject to a GHG efficiency threshold of 4.6 MT per year per capita. Projects with emissions above the thresholds would be considered to have an impact, which, cumulatively, would be significant.

~~The 2009 proposed BAAQMD numeric thresholds used in the circulated EIR analysis are the same thresholds adopted by BAAQMD in May 2011 in BAAQMD's CEQA Air Quality Guidelines for the San Francisco Bay Area Air Basin, and are in common use today (2014).~~

Page 352 Section 4.4.4.2 Impacts from the Project (Changes in Emissions of Greenhouse Gases); **revise** the section as follows:

Carbon dioxide, the primary man-made greenhouse gas of concern, would be generated by the proposed project primarily from mobile sources and energy usage. Currently, neither CARB, BAAQMD, nor the City of Newark, have established regulations, guidance, methodologies, or other means that would require the implementation of measures that would reduce GHG emissions from projects. The BAAQMD ~~proposed~~ thresholds and methodology have been used to evaluate the proposed Specific Plan project.

~~Predicted annual emissions of GHG associated with the development of the proposed Areas 3 and 4 Specific Plan were calculated using CalEEMod. The California Air Pollution Control Officers Association (CAPCOA) has provided guidance for calculating project emissions. Emissions from area, mobile and electricity usage are recommended by CAPCOA. Area and mobile source emissions were calculated using the URBEMIS2007 model with the same inputs used to calculate emissions of air pollutant.~~

~~The estimated emissions also include emissions from water conveyance. These emissions are recommended in the proposed BAAQMD guidelines, based on water usage and generic statewide electricity consumption rates for conveying water to residences. Indirect source emissions from electricity usage were based on rates recommended by the California Climate Action Registry General Reporting Protocol and electricity emission rates recommended by EPA. CAPCOA and CCAR recommend an annual electricity usage rate of 16.7 kilowatts per square foot for commercial spaces (these rates were also used for school uses). CO2 emission rates for electricity use in California are 878.7 pounds per megawatt-hour or 0.8787 pounds per kilowatt-hour. CO2 is the primary GHG emitted from this type of project. Although there are emissions of methane and nitrous oxide, which are more potent GHGs, their emissions are very small compared to CO2 (i.e., less than three percent equivalent CO2). As a result, these emissions are not calculated. Table 4.4-1 shows the annual GHG emissions in tons per year.~~

~~Unmitigated, the project would result in 19,991 metric tons of GHG per year. The Specific Plan is expected to increase population by 3,427 people, based on up to 1,260 new residential units. Approximately 482 total new jobs would be created, including jobs associated with the proposed elementary school and golf course. As a result, the project would generate 5.1 metric tons of CO2 per year per service population (residents plus employees). Obtaining LEED certification that reduces~~

~~energy usage emissions by 20 percent would reduce the efficiency number to 4.8 metric tons of CO2 per year per service population~~

~~The results reported in Table 4.4-1 are based primarily on a "business-as-usual" scenario, where current emission rates would apply. This will not likely be the case as AB 32 will require GHG emission reductions in all sectors. Area source emissions could be reduced by 20 percent or more through increased energy efficiency (e.g., green building practices). Transportation emission rates will likely decrease due to increased fuel efficiency and lower carbon content in fuels. The URBEMIS2007 model does not accurately reflect future fuel efficiency. Fuel efficiency is regulated by the U.S. Department of Transportation and current CARB regulations that address climate change. Newer fuel standards would increase light-duty automobile and light-duty truck fuel efficiency by 10 miles per gallon (to 34 miles per gallon for cars sold in 2020). CARB proposes more efficient standards as part of the State's efforts to reduce GHG emissions. These standards would apply to new vehicles sold, and therefore, would gradually effect the overall fleet as these new vehicles replace older vehicles. As a result the CO2 emissions estimates for vehicle travel do not accurately reflect future conditions and it is likely that CO2 emissions with a more fuel-efficient vehicle fleet would be less.~~

~~Most GHG emissions associated with the project would come from motor vehicle use. The Area 3 project would be located within walking distance of some services for proposed project users, such as a school, retail establishments, and restaurants. Area 4 would be mostly located beyond normal walking distance to transit and retail services.~~

~~Energy usage (natural gas and electricity usage combined) would generate about 36 percent of the proposed project GHG emissions. Features that reduce energy consumption and waste can be included in new development that would reduce emissions. These would include energy-efficient construction methods, inclusion of solar photovoltaic panels to produce energy, solar water heaters, passive solar design, appropriate landscape, and water recycling systems. For example, Energy Star rated buildings have CO2 emissions that are about 25 percent lower than existing buildings of similar size and use.~~[10]

~~Table 4.4-1: Summary of Estimated Project Greenhouse Gas Emissions~~

~~Source Type~~	**~~Basis for Calculation~~**	**~~Annual Emissions (tons per year)~~**	**~~Annual Emissions (metric tons per year)~~**

[10] Energy Star – U.S. EPA and U.S. Department of Energy - http://www.energystar.gov/index.cfm?c=evaluate_performance.bus_portfoliomanager_carbon

~~Area Source~~	~~Natural gas and landscape equipment from URBEMIS2007~~	~~3,938[1]~~	~~3,573~~
~~Mobile Sources~~	~~Traffic from URBEMIS2007~~	~~15,292[2]~~	~~13,873~~
~~Electricity Usage~~	~~Estimated commercial/school space and residential energy usage along with PG&E emission rates~~	~~2,485~~	~~2,254~~
~~Water Conveyance~~	~~Assuming 356 million gallons (mg) annual water and 3,950 kwh to convey 1 mg water~~	~~321~~	~~291~~
	~~**Total**~~	~~**22,036**~~	~~**19,991**~~

~~Notes: The URBEMIS model was used to estimate the project's construction, area source, and mobile source emissions. An estimate of possible greenhouse gas emissions from electricity use was made based on certified PG&E emission rates.~~

~~(1) Could be reduced by 20% or more through increased energy efficiency (e.g., green building practices)~~

~~(2) Includes reduction due to existing mix of uses, alternative transportation options and other project features that reduce trips and vehicles miles traveled – mostly applied to Area 3.~~

~~Source: Illingworth & Rodkin, 2009.~~

Energy Efficiency and Use

Implementation of the Specific Plan will be required to meet the requirements of Title 24 of the California Administrative Code, as is pertains to energy efficiency. All development will also be required to comply with the City of Newark Green Building and Construction and Demolition Recycling Ordinance. The Specific Plan has incorporated Water Conservation Standards into future project design. All residential and non-residential development within the Areas 3 and 4 Specific Plan will be developed with the latest technology in water efficient plumbing fixtures and irrigation systems, including but not limited to the following:~~11~~

For Residential Development within Areas 3 and 4:

- High efficiency (1.3 gallons per flush or less) and dual flush toilets,
- High efficiency clothes washers with a water factor of six (6) or less,
- High efficiency dish washers,
- Water efficient bathroom and kitchen fixtures

For Commercial Development within Areas 3 and 4:

- High efficiency (1.3 gallons per flush or less) and dual flush toilets,
- High efficiency urinals (1/2 gallon per flush or less),
- High efficiency clothes washers with a water factor of six (6) or less,

~~11~~ ~~Many, if not most, of these technologies will be legal requirements under the pending Plumbing Code revisions expected in 2010.~~

- High efficiency dish washers, where feasible, sensor driven c-line, or rack conveyor machines that recycle final rinse water,
- Low flow pre-rinse spray nozzles,
- Air-cooled ice machines,
- Water efficient bathroom and kitchen fixtures (e.g. faucets with auto shut-off mechanisms)

For Golf Course and Landscape Development within Areas 3 and 4:

- Water efficient irrigation systems include weather-based irrigation-controllers, drip irrigation systems for non-turf areas and the installation of drought-tolerant landscaping in-lieu of irrigated turf, wherever possible.
- All decorative fountains shall recycle water. The latest water efficient technologies for commercial car washing and cooling shall be used.
- Install a separate, non-potable distribution system (i.e. "purple pipe") for the golf course and other non-residential landscape needs. This distribution system will, at a minimum, include a non-potable water transmission main extending through the site with at least two points of connection to Cherry Street (for connection with a future recycled water main) at the northern and southern limits of Area 3 frontage with Cherry Street. The on-site system will also include non-potable distribution mains extending to areas where recycled water could be used.

Water Efficient Landscape Ordinance

- The State of California Department of Water Resources is expected to formally amend Chapter 2.7 Model Water Efficient Landscape Ordinance, Sections 490 through 495 in Division 2, Title 23 of the California Code of Regulations. All local agencies will be required to adopt a similar ordinance by January 2010 to meet new water conservation standards related to landscape improvements. All landscape improvements in Areas 3 and 4 will be subject to these requirements.

There are many other opportunities for the Specific Plan development to use energy efficient design. Since the Specific plan will not be developed/constructed in one phase, there are options for designing an energy and resource efficient development through measures similar to those described in the Governor's Green Building Action Plan. These measures could include requiring all private development within the Specific Plan to be certified buildings by U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) or similar standards, and partnerships with utility companies to develop a local energy and sustainably plan for all development.

Residential development within the Specific Plan could also include energy conserving design and construction techniques to exceed Title 24 requirements and could incorporate Green Building Practices including pre-wiring and/or installing houses with solar power. It should be noted, that in 2011, State Law requires every new subdivision of 50 houses or more to include an upgrade for solar power.

The Specific Plan also includes the provision of recycled water lines for landscaping, over both Areas 3 and 4, when it is available, which will provide further energy and water savings.

Through the features listed above, the proposed Specific Plan project will implement several of the greenhouse gas (GHG) reduction measures identified in the California Governor's Office of Planning and Research *CEQA and Climate Change Technical Advisory* (June 19, 2008, Attachment 3).

Planning and Smart Growth Principles

The Governor's Office of Planning and Research *CEQA and Climate Change Technical Advisory* recommends implementing land use strategies to encourage jobs/housing proximity, transit-oriented development, high density development along transit corridors, and mixed use projects that integrate housing, including affordable housing, civic and retail amenities, and walkable communities.

The proposed Areas 3 and 4 Specific Plan allows for a mix of housing types, with higher density and affordable housing located along a transit corridor that is proximate to community amenities and retail. The Specific Plan includes a neighborhood-serving elementary school and parks and trails.

According to the Association of Bay Area Governments (ABAG), Newark had approximately 17,870 jobs in 2010. The 2010 U.S. Census indicates there are 21,000 employed residents living in Newark, a number that slightly exceeds the number of jobs in the City. The City's 2013 General Plan has a planning horizon extending to 2035 and is projected to result in approximately 60,510 residents, 19,699 housing units, and 22,609 jobs in Newark by 2035. This represents a growth of 17,937 residents, 6,283 housing units, and 4,739 jobs over existing (2010-2013) conditions. *Policy LU-1.3* of the 2013 General Plan seeks to balance housing and job growth. The proposed Specific Plan proposes 1,260 dwelling units compared to 2,700 dwelling units assumed for Area 4 in the 1992 General Plan. Therefore, the proposed Specific Plan includes fewer dwelling units than what is included in the City's previous General Plan for Areas 3 and 4. The proposed Specific Plan would result in a reduction in potential jobs on the site, from 2,920 jobs projected under the 1992 General Plan to 1,940 jobs under the proposed General Plan and Specific Plan designations. Since the potential jobs and housing would both be reduced, the Specific Plan would not result in a noticeable change to the City's jobs/housing balance.

Currently, compliance with AB32 is the State's plan to achieve reductions in GHG emissions to 1990 levels. This will not be an easy task, as the State is expected to experience population growth that would include increased vehicle usage and energy demand. As a result, long-term emissions would require substantial reductions to achieve AB 32 goals.

The Specific Plan would result in a net increase in greenhouse gas emissions, in terms of carbon dioxide equivalents. While Area 3 of the Specific Plan would provide a range of residential density development and an elementary school at an infill location in the City that would be proximate to existing civic and retail amenities, Area 4 is generally located beyond normal walking distance to transit and retail services. Development under the proposed Specific Plan would, however, be designed and constructed pursuant to the City of Newark Green Building and Construction and Demolition Recycling Ordinance and would include provisions for recycled water for all non-potable water needs. Development also would comply with the applicable policies in the City's Climate Action Plan. ~~Despite the inclusion of these measures, implementation of the proposed Specific Plan is not anticipated to be able to reduce overall greenhouse gas emissions to 1990 levels. Even with a 20% reduction in area source emissions achieved through proposed increased energy efficiency, the Specific Plan is projected to generate 4.8 metric tons of CO2 per year per service area population. The proposed BAAQMD threshold for GHG is 4.6 metric tons per year per service area; therefore, the project would not reduce GHG sufficiently to help the State reach AB 32's goal in 2020. For the reasons described above, the project would make a cumulatively significant contribution to global climate changes impacts.~~

The CalEEMod model along with the project vehicle trip generation rates and estimates were used to predict operational period GHG emissions associated with operation of a fully developed site under the proposed project. Refer to Appendix B for model inputs and assumptions related to year of analysis, trip generation rates, electricity generation, and energy usage. Greenhouse gas emissions from the project include emissions from energy consumption, vehicular trips to and from the site, solid waste generation, and water usage.

It is estimated that the project would generate 16,258 MT CO2e in 2025 which would be the first year that the project is assumed to be fully built out and operational. Full buildout of the project occurring later than 2025 would result in lower emissions due to reduced emission rates from newer vehicles with lower emission rates replacing older, more polluting vehicles through attrition of the overall vehicle fleet.

It is anticipated that the project would result in 3,427 residents and 482 new workers, for a total service population of 3,909.[12] Therefore, the 2025 per capita rate of project emissions is 3.9 MT CO2e, which is below the BAAQMD efficiency threshold of 4.6 MT CO2e/year. The project would have a less than significant greenhouse gas emission impact. **(Less Than Significant Impact)**

[12] This is based on an estimated 4.159 residences per household.

~~**Impact C-GCC-4:** The proposed project would result in a cumulatively considerable contribution global climate change impact. **(Significant Cumulative Impact)**~~

AM C-GCC-4.1: The following avoidance measures shall further reduce greenhouse gas emissions. All of these avoidance measures shall be incorporated into the City of Newark's development regulations and design review procedures to reduce potential greenhouse gas emission impacts to non-significant levels.

~~**MM C-GCC-4.1:**~~ All residential subdivisions and new commercial buildings within the Specific Plan shall incorporate as many green practices as appropriate and feasible in buildings and structures constructed subject to approval of the City of Newark. These measures shall include, but are not limited to:

- Pre-wire (or equivalent most current technology) residences and commercial buildings to facilitate the installation of solar power.
- LEED certification or equivalent for commercial buildings.
- Include plug-ins (or equivalent most current technology) in residences to facilitate the use of electric and hybrid vehicles.

AM~~M~~ C-GCC-4.2: All public landscaping areas within the Specific Plan shall follow the City of Newark's Bay Friendly Landscape Guide. Future homeowners associations or similar entity shall be encouraged to incorporate as many bay friendly landscape practices as appropriate and feasible. These practices shall include, but are not limited to:

- No lawn areas less than 8 foot wide.
- Where practical, utilize underground irrigation systems rather than surface applied irrigation to reduce evaporative loss.
- Minimize mowed lawn areas in residential development neighborhoods and use mowed lawn areas only for active recreation areas in park spaces
- Minimize use of plants that require extensive pruning and/or generate large amounts of green waste.
- Utilize "Integrated Pest Management" principals in the landscape maintenance of the project.
- Employ recycled materials for landscape materials such as headers, paving, street furniture, and mulch wherever practical.

- Landscape lighting to respect dark sky principals, i.e. no light directed up-ward.

~~While incorporation of the above measures will partially reduce the global climate change impact, the overall implementation of the Specific Plan will still make a cumulatively considerable contribution to global climate changes impacts and, therefore, result in a significant unavoidable impact. (**Significant Unavoidable Impact)**~~

Page 357 Section 4.4.4.2 Impacts from the Project (Change in Emission of Greenhouse Gases), Project Construction GHG Emissions; **revise** the second paragraph as follow:

The CalEEMod model was used to predict construction greenhouse emissions. It is estimated that the construction of the project would emit up to 16,518 MT of CO2e per year. ~~Project construction period emissions were predicted using the URBEMIS2007 model. In the case of this GHG assessment, annual emissions were predicted. These annual emissions were expected to range from 1,721 to 6,677 metric tons of CO2 per year over the 8-year construction period used in the air quality analysis.~~ Annual emissions would vary depending on the length of the construction period. A longer build out period would most likely result in lower annual construction emissions. Highest emissions would occur during the grading period when fill material would be imported to the site.

It should be noted that the BAAQMD encourages the incorporation of BMPs to reduce GHG emissions during construction where feasible and applicable. BMPs may include, but are not limited to, using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment; using local building materials; and recycling or reusing construction waste or demolition materials.

Page 358 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise; **revise** the fourth paragraph, as follows:

Global temperatures have increased by about one degree Fahrenheit and sea level has risen by approximately 0.5 foot over the past century.[13] An historic rate of sea level rise of 1.3 mm per year (0.4 foot per century, has been estimated for San Francisco Bay.[14] Although quantitative consensus regarding future sea level rise is difficult to obtain, most credible scientific organizations agree that sea level will most likely continue to rise, perhaps at an accelerated rate. Figure 4.4-1 shows a range of potential future sea levels based on IPCC climate change scenarios.[15] The mid-range projection of sea level change by 2058 from Figure 4.4-1 is approximately 160 mm, or about six inches. A set of climate scenarios prepared for the California Energy Commission's PIER Climate Change Research Program (Cayan et al, 2009) project

[13] Intergovernmental Panel on Climate Change (IPPC), 1996.
[14] National Oceanographic and Atmospheric Administration (NOAA), 2001.
[15] IPPC AR4, WG1.

that under medium to medium-high emissions scenarios, mean sea level along the California coast will rise from 1.0 to 1.4 meters by the year 2100 as a result of thermal expansion of the oceans and an increase in ocean volume as land ice melts and runs off. Within the proposed Area 3 and 4 Specific Plan, the residential structures of Area 4 would be most directly impacted by global climate and sea level changes.

Page 359 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise; **revise** the first and second paragraphs, as follows:

The United States Army Corps of Engineers (USACE) published an engineering circular (October 2011~~July 1, 2009~~) to direct the consideration of sea level rise estimates in project planning and design. While this methodology is required only for USACE civil work activities, it offers valuable guidance for any planning effort. The USACE report recommends that the planning, engineering and designing for projects within the tidal zone or with downstream tidal boundary conditions consider how sensitive and adaptable the project is to a range of sea level rise estimates (low, intermediate and high). Specifically, the USACE directs determination of "how sensitive alternative plans and designs are to these rates for future local mean sea-level change, how this sensitivity affects calculated risk, and what design of operations and maintenance measures should be implemented to minimize adverse consequences while maximizing beneficial effects"[16].

The "low" sea level rise estimate recommended by the USACE report is based on local historic tide gauges. In San Francisco, the Presidio tide gauge has the longest period of record and is consistently used for historic sea level trends in San Francisco Bay. The long term average sea level rise at the Presidio gauge is 2.01 millimeters per year (mm/yr), with a 95 percent confidence limit of plus or minus 0.21 mm/yr (NOAA, Station 9414290). "Intermediate" and "high" sea level rise estimates are based on the National Resource Council (NRC) curves and equations developed for a 1987 Report (*Responding to Changes in Sea Level: Engineering Implications*), modified to account for the updated annual estimate of sea level rise made in the *2007 IPCC report* and to account for the date of the development of the equation. Table 4.4-2 identifies the range of sea level rise potential for the City of Newark using the USACE ~~this~~ methodology, assuming adoption of the Presidio gauge for the local historic sea level trend, and a baseline of Year 2000 for further comparison~~construction of a given project in 2010~~. Sea level rise is projected to Year 2120, assuming project construction in 2025 and a 100-year project life.

Page 360 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise; **revise** the table and first sentence in the first paragraph, as follows:

[16] USACE, "Water Resource Policies and Authorities Incorporating Sea-level Change Considerations in Civil Works Programs", July 1, 2009.

Table 4.4-2: Range of Sea Level Rise Projections Using USACE Methodology (feet)

Year	Low	Intermediate	High
2030~~2025~~	0.2~~0.1~~	0.3~~0.2~~	0.7~~0.4~~
2050	0.3	0.6~~0.5~~	1.6~~1.4~~
2100 ~~2175~~	0.7~~0.4~~	1.6~~0.9~~	4.8~~2.8~~
2120~~2100~~	0.8~~0.6~~	2.0~~1.5~~	6.5~~4.6~~

The sea level rise scenario adopted by the BCDC in 2011 (10-17 inches by 2050, 17-32 inches by 2070, and 31-69 inches by 2100) were developed in 2010 by the California Climate Action Team (CAT), using the United Nations Intergovernmental Panel on Climate Change (IPCC) greenhouse gas emission scenarios.

Page 360 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise; **replace** the second paragraph with the text, as follows:

In March 2013 the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) updated its guidelines for incorporating sea level rise projections into planning and decision making for projects in California. Table 4.4-3 presents these comparative sea level rise estimates based on Year 2000.

Table 4.4-3: Comparison of Sea Level Rise Projections with Year 2000 Baseline

Year	Sea Level Rise Projection in Feet					
	Low Range			High Range		
	2009 CAT	2013 CAT	USACE	2009 CAT	2013 CAT	USACE
2030	---	0.1	0.2	---	1.0	0.7
2050	1.0	0.4	0.3	1.5	2.0	1.6
2100	1.8	1.4	0.7	4.6	5.5	4.8
2120	---	---	0.8	---	---	6.5

The most current available estimates for sea level rise by 2050 range from 0.3 foot to 2.0 feet, and by 2100 from 0.7 foot to 5.5 feet. Furthermore, the range of estimate for Year 2100 sea level rise made by the California Climate Action Team in 2009 (34 inches) increased by nearly 50 percent (to 50 inches) in 2013.

Table 4.4-4 summarizes Pacific Institute estimates of when certain discrete increases in mean sea level can be expected, which they used in 2012 to examine potential inundation adjacent to San Francisco Bay. The IPCC's emissions scenarios represent

potential socio-economic responses to changing climate. In the "B1" scenario, "a high level of environmental and social consciousness combine[s] with a globally coherent approach to a more sustainable development" to somewhat forestall the acceleration of climate change relative to the "A2" scenario.

Table 4.4-4: Year to Reach Estimated Mean Sea Level Rise

Sea Level Rise		Year Reached	
meters	**feet**	**IPCC A2**	**IPCC B1**
0.0	0.0	2000	2000
0.5	1.6	2054	2057
1.0	3.3	2083	2098
1.4	4.6	2100	2125

~~Using the above methodology, the *2009 Assessment Report* gives a range of sea level rise of 30–45 cm (12 – 18 inches) by 2050 (relative to 2000 levels). This is similar to the 10–17 inch rise by 2050 adopted by the BCDC in October 2011. Although other CCCC reports, as well as the San Francisco BCDC 2009 report, have adopted a 2100 sea level rise projection of 1.4 meters (4.6 feet), this projection is not explicitly stated in the text of the *2009 Assessment Report* (it can only be deduced from included graphs). It should be noted that the range of sea level rise estimates produced from this methodology is about 0.6 m – 1.45 m (2.0 – 4.8 feet). The 4.6 feet of rise by 2100 predicted at the upper end of this range is similar to the USACE methodology high range for 2100 for San Francisco Bay, as shown in Table 4.4-2. The BCDC's 2011 adoption of 31-69 inches by 2100 falls generally within the range of the previous projections. In summary, significant uncertainties remain in sea level rise projections, particularly as one forecasts farther into the future. The most currently available estimates for sea level rise by 2050 range from 0.3 foot to 1.5 feet, and by 2100 from 0.6 foot to 5.75 feet.~~

Page 360 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise, Impacts to the Project from Sea Level Rise; **revise** the last paragraph on the page, as follows:

It is expected that as sea levels rise, not only will the occurrence of storm-related high sea level, or surge, events increase, but so may the amount of surge itself (currently about 3.1 feet above mean-high high water in Newark). Newark's Municipal Code calls for residential structures to be "elevated to or above the base flood elevation or to a minimum of six inches above the building pad which shall be at a minimum elevation of 11.25 feet on the National Geodetic Vertical Datum (NGVD), whichever affords the greater degree of flood damage protection." Fill placed within the project site to a minimum elevation of 11.25 feet NGVD will provide 3.75 feet of freeboard

above the current one-percent stillwater elevation of 7.5 feet and 3.25 feet of freeboard over the regulatory base flood elevation of eight (8) feet NGVD. Using an amalgam of available sea level rise predictions discussed above, the future one-percent flood elevation from San Francisco Bay high tides is anticipated to reach the minimum proposed structure elevations by roughly 2090 for the IPCC "A2 Scenario" and by roughly 2110 for the IPCC "B1 Scenario". Using USACE planning guidelines, the minimum proposed structure elevations would be inundated by the 100-year storm surge by 2570, 2175 and 2085 for the "low", "intermediate" and "high" sea-level rise projections, respectively.

Using the range of generally accepted sea level rise projections, it is possible but not certain that the lowest structures of the Specific Plan area will be within a Special Flood Hazard Area during the life span of the project. ~~Assuming the USACE methodology low sea level rise projection for 2100, an additional 0.6 foot added to the 100-year stillwater flood elevation of 7.5 feet NGVD, the Municipal Code's minimum building pad elevation (11.25 feet) would provide 3.15 feet of freeboard, which exceeds the current National Flood Insurance Program (NFIP) coastal freeboard criterion for stillwater surge of two feet. If the predicted "intermediate" scenario of a 1.5 feet rise in sea level comes to fruition by 2100; the placed fill to elevation 11.25 would provide 1.75 feet of freeboard. For the "high" sea level rise scenario, the one-percent water surface elevation would inundate the project by nearly one foot. That is, a rise in extreme storm surge equal to the extreme mean sea level rise would create a storm surge water surface elevation of 12.1 feet (7.5 ft + 4.6 ft sea level rise) which would inundate the minimum project elevation of 11.25 feet by 10.2 inches. If the "high" sea level rise scenario proves to be true, adaptive strategies to improve flood protection (for example levees or floodwalls) may prove to be necessary in the future. These estimates account for a range of estimates for the increase in mean sea level, but do not include any increase to the surge itself. Quantitative estimates for the increased storm surge have not been made, and are unlikely to be determined in the foreseeable future.~~

Page 361 Section 4.4.4.3 Impacts to the Proposed Project from Global Climate Change, Sea Level Rise, Impacts to the Project from Sea Level Rise; **revise** the third paragraph on the page, as follows:

The project will provide 3.75 feet of freeboard above the current one-percent stillwater elevation of 7.5 feet. Using the USACE methodology ~~and assuming construction in 2010 (for consistency)~~, available project freeboard would not be overwhelmed by projected sea level rise through 2175~~8~~ for the "intermediate" scenario, but would be overwhelmed by 2085~~9~~ for the "high" sea level rise scenario.

Appendices RDEIR Volume II, Appendix I; **insert** Updated Climate Change Impact Addendum in this document on page 217.

Appendices RDEIR Volume II, Appendix J; **insert** Updated Newark Areas 3 & 4 Air Pollutant and GHG Emissions Using CalEEMod version 2013.2.2 in this document on page 230.

APPENDIX I

Updated Climate Change Impact Addendum

NEWARK AREAS 3 & 4
UPDATED CLIMATE CHANGE IMPACT ADDENDUM

Introduction

In October 2009 Schaaf & Wheeler completed a potential climate change impacts evaluation for the City of Newark (City) to support the cumulative impacts section of the 2010 Environmental Impact Report (DEIR) for Newark Areas 3 and 4 (Project). This discussion focused on the current status of climate change understanding, research, and projections, and how projected climate change may impact the Project. This evaluation concluded that the only readily quantifiable cumulative impact is sea level rise, noted the uncertainty in sea level rise predictions, and found that although anticipated sea level rise might reduce freeboard afforded by Project fill, the Project itself should not be in jeopardy from 100-year tidal flooding.

Since the previous evaluation was completed, several additional studies have been published, many of which focus on climate change projections and impacts to California. The purpose of this updated report addendum is to present findings from the updated studies with emphases on new information contained therein, and to further evaluate the anticipated impacts, conclusions, and recommendations as warranted by the additional studies.

Most of these updated studies are from the California Climate Change Center (CCCC). Established in 2003 by the California Energy Commission's Public Interest Energy Research (PIER) Program to document climate change research relative to the state, core research activities take place at the Scripps Institution of Oceanography and the University of California, Berkeley, complemented by efforts at other research institutions. The CCCC Report Series, which make up the majority of updated studies reviewed for this addendum, detail ongoing center-sponsored research. Priority research areas defined in PIER's five year climate change research plan are: monitoring, analysis, and modeling of climate; analysis of options to reduce greenhouse gas emissions; assessment of physical impacts and of adaptation strategies; and analysis of the economic consequences of both climate change impacts and the efforts designed to reduce emissions.

Reports reviewed for this updated evaluation include:

- Sea-Level Change Considerations for Civil Works Programs (Circular No. 1165-2-212; United States Army Corps of Engineers, October 1, 2011);
- Climate Change Scenarios and Sea Level Rise Estimates for the California 2009 Climate Change Scenarios Assessment (California Climate Change Center, August 2009);
- Using Future Climate Projections to Support Water Resource Decision Making in California (California Climate Change Center, August 2009);
- Projections of Potential Flood Regime Changes in California (California Climate Change Center, August 2009);
- The Impacts of Sea-Level Rise on the California Coast (California Climate Change Center, August 2009);
- 2009 California Climate Adaptation Strategy, Public Review Draft (California Natural Resources Agency, August, 2009);
- The Impacts of Sea Level Rise on the San Francisco Bay, A White Paper from the California Energy Commission's California Climate Change Center prepared by the Pacific Institute, July 2012;
- Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present and Future (Board on Earth Sciences and Resources and Ocean Studies Board, Division on Earth and Life Studies, National Research Council of the National Academies, 2012);
- Climate Change 2013: The Physical Science Basis, Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC, 2013); and
- State of California Sea-Level Rise Guidance Document developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT), with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust, March 2013 update.

The above-listed reports have been published by the respective agencies sponsoring each report and, as such, have not necessarily undergone the peer-review process required for publication in scientific journals. Many of the reports present interim results, and information contained within the reports is subject to change.

Current Status of Climate Change Understanding and Research

This updated evaluation synopsizes climate change understanding and research as of October 2014. Several reports which specifically focus on climate change projections and impacts to the State of California have been published since the previous climate change evaluation was prepared for the 2009 EIR. While this evaluation offers an updated summary of these projections and impacts, it should be noted that uncertainty is an inherent quality of any climate change projection, becoming more uncertain the farther into the future a projection is forecast. The few intervening years since the 2009 EIR was prepared have not reduced this forecasting uncertainty.

Climate Change Impacts to Water Resources in Newark, California

The study reports listed above include updated projections and impacts relevant to sea level rise, storm surge and wave height, precipitation, and flooding. Temperature change, water supply and water quality projections and impacts are not significantly different as a result of this updated review and, as such, those discussion topics from the DEIR are not included in this addendum. This should not be construed to imply that these issues are any less of a concern, only that those concerns are not affected by the reports reviewed for this updated addendum.

Only relevant updated information for sea level rise, storm surge, precipitation, and flooding are discussed herein.

<u>Sea Level Rise</u>

Sea levels are expected to continue to rise, and the rate of increase will likely accelerate. A set of climate scenarios prepared for the California Energy Commission's PIER Climate Change Research Program (Cayan et al, 2009) project that under medium to medium-high emissions scenarios, mean sea level along the California coast will rise from 1.0 to 1.4 meters by the year 2100 as a result of thermal expansion of the oceans and an increase in ocean volume as land ice melts and runs off.

The evaluation of sea level rise impact to proposed development contained herein focuses on two sets of planning guidelines: one prepared by the United States Army Corps of Engineers; the second prepared by the California Climate Action Team.

The United States Army Corps of Engineers (USACE) published an updated engineering circular in October 2011 to direct the consideration of sea level rise estimates in project planning and design. While this methodology is required only for USACE civil work activities, it offers a valuable guidance for any planning effort.

In summary, the USACE circular recommends that "planning, engineering designing, operating, and maintaining for sea level change must consider how sensitive and adaptable 1) natural and managed ecosystems and 2) human and engineered systems are to climate change and other related global changes." Planning studies and system designs over the life cycle of a proposed project should consider alternatives that are "formulated and evaluated for the entire range of possible future rates of sea-level change (SLC), represented…by three scenarios of 'low,' 'intermediate,' and 'high' rates of future SLC."

The "low" sea level rise estimate recommended by the USACE circular is based on local historic tide gauges. In San Francisco, the Presidio tide gauge has the longest period of record and is consistently used for historic sea level trends in San Francisco Bay. The long term average sea level rise at the Presidio gauge is 2.01 millimeters per year (mm/yr), with a 95% confidence limit of plus or minus 0.21 mm/yr (NOAA, Station 9414290). "Intermediate" and "high" sea level rise estimates are based on the National Resource Council (NRC) curves and equations developed for a 1987 Report (*Responding to Changes in Sea Level: Engineering Implications*), modified to account for the updated annual estimate of sea level rise made in the 2007 IPCC report, and manipulated to include consideration of the date of the equation development, so that USACE estimates of relative sea level rise can be compared to other sources for sea level rise estimates.

The "intermediate" sea level rise projection is based on the modified NRC Curve I, and the "high" sea level rise projection on the modified NRC Curve III. This equation is:

$$E(t_2) - E(t_1) = 0.0017(t_2 - t_1) + b(t_2^2 - t_1^2)$$

where:

t_1 = time between construction date and 1986;

t_2 = time between date at which sea level rise projection is desired and 1986;

$E(t)$ = eustatic sea-level, in meters, as a function of (t); and

b = 2.36E-5 for modified NRC Curve I and 1.005E-4 for modified NRC Curve III.

The high rate exceeds the upper bounds of IPCC estimates from 2001 and 2007 to accommodate potential rapid loss of ice from Antarctica and Greenland, but is within the range of peer-reviewed articles released since that time.

Table 1 presents the range of sea level rise potential for the City of Newark using the USACE methodology, assuming adoption of the Presidio gauge for the local historic sea level trend, and a baseline of Year 2000 for further comparison. Sea level rise is projected to Year 2120, assuming project construction in 2020 and a 100-year project life.

Table 1: Range of Sea Level Rise Projections Using USACE Methodology with Presidio Gage and Year 2000 Baseline

USACE Methodology Sea Level Rise Projection Range (feet)			
Year	**Low**	**Intermediate**	**High**
2030	0.2	0.3	0.7
2050	0.3	0.6	1.6
2100	0.7	1.6	4.8
2120	0.8	2.0	6.5

A draft version of the *Impacts of Sea-Level Rise on the California Coast*, developed by The Pacific Institute for the CCCC was released in March 2009, with much publicity surrounding the new 2100 sea level rise estimate of "5 feet" (March 12, 2009 *San Francisco Chronicle* article). The development of this sea level rise estimate is presented in somewhat more detail, however, in the *Climate Change Scenarios and Sea Level Rise Estimates for the California 2009 Climate Change Scenarios Assessment* Report (August 2009), also produced for the CCCC. In short, the sea level rise estimates adopted by the CCCC are based on an empirical formula developed by Rahmstorf (2007) which relates global mean sea level rise to global mean surface air temperature. The report states (and shows graphically) that the Rahmstorf predicted values are then manipulated to include the impact of reservoirs and dams, but exactly what this modification entails, and its justification, is unclear. The supporting article for this modification, *Impact of Artificial Reservoir Water Impoundment on Global Sea Level*,[1] appears to focus on the impact of reservoir and dam storage to historic sea level trends and Schaaf & Wheeler is unable to locate any published article which details a modified Rahmstorf method.

[1] Chao, B.F., Wu, Y.H., Li, Y.S., April 11, 2008: 'Impact of Artificial Reservoir Water Impoundment on Global Sea Level', Science Magazine, Volume 320, pp. 212-214.

Four years later (in March 2013) the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) updated its guidelines for incorporating sea level rise projections into planning and decision making for projects in California. Table 2 presents these comparative sea level rise estimates based on Year 2000.

Table 2: Comparison of Sea Level Rise Projections with Year 2000 Baseline

Sea Level Rise Projection in Feet						
Year	Low Range			High Range		
	2009 CAT	2013 CAT	USACE	2009 CAT	2013 CAT	USACE
2030	---	0.1	0.2	---	1.0	0.7
2050	1.0	0.4	0.3	1.5	2.0	1.6
2100	1.8	1.4	0.7	4.6	5.5	4.8
2120	---	---	0.8	---	---	6.5

Significant uncertainties remain in sea level rise projections, particularly forecasting further into the future. The most current available estimates for sea level rise by 2050 range from 0.3 foot to 2.0 feet, and by 2100 from 0.7 foot to 5.5 feet. Furthermore, the range of estimate for Year 2100 sea level rise made by the California Climate Action Team in 2009 (34 inches) increased by nearly 50 percent (to 50 inches) in 2013.

Table 3 summarizes Pacific Institute estimates of when certain discrete increases in mean sea level can be expected, which they used in 2012 to examine potential inundation adjacent to San Francisco Bay. The IPCC's emissions scenarios represent potential socio-economic responses to changing climate. In the "B1" scenario, "a high level of environmental and social consciousness combine[s] with a globally coherent approach to a more sustainable development" to somewhat forestall the acceleration of climate change relative to the "A2" scenario.

Table 3: Year to Reach Estimated Mean Sea Level Rise

Sea Level Rise		Year Reached	
meters	feet	IPCC A2	IPCC B1
0.0	0.0	2000	2000
0.5	1.6	2054	2057
1.0	3.3	2083	2098
1.4	4.6	2100	2125

Storm Surge and Wave Runup

Updated reports repeat the general trend of increasing extreme high sea levels (surge). In short, it is expected that as mean sea level rises, not only will the occurrence of high sea level, or surge, events increase, but so may the height of the surge itself, which is currently about 3.7 feet above mean-higher high water in Newark. The California Climate Change Center "assumes that all tide datums, e.g. mean high tide and flood elevations, will increase by the same amount as mean sea level."[2]

In general, wave runup in San Francisco Bay is a function of local bathymetry and wind patterns, which are not well-captured by regional climate models. Discussed in more detail below, 'storminess' trends due to climate change are uncertain and differ in both magnitude and direction in different reports. As such, this updated addendum makes no changes to the findings presented in the previous DEIR analysis.

Project Impact from Projected Sea Level Rise

The one-percent storm surge for San Francisco Bay at Mowry Slough is 8 feet NGVD, compared to a mean high tide of about 4.3 feet NGVD.[3] Wave runup is the elevation wind-driven waves will reach as waves break on land, which is not anticipated to be an issue within the Plan Area, which is on the Bay versus the open ocean. Both storm surge and wave runup may be affected by climate change. These impacts, however, are not particularly well understood at this time. Extreme wave heights and surge fluctuations tend to increase from the south to the north along the California Coast, as a result of increasing storm intensities along the northern coast (Cayan, 2007).

Although uncertainty remains, recent studies have concluded that if sea level rise is on the lower end of the current predicted ranges, the occurrence of extremely high sea level events will increase, but the increase in extremes would be not so different from the increasing trend that has been seen in California for the past several decades. Common practice, consequently, is to treat projections of future mean sea level rise as equivalent to a shift in vertical datum.

[2] Heberger, et al, 2009 "The Impacts of Sea Level Rise on the California Coast. A Paper from [the] California Climate Exchange Center."

[3] U.S. Army Corps of Engineers, San Francisco District, "San Francisco Bay Tidal Stage vs. Frequency Study," October 1984.

The minimum elevation of any habitable structure within the Plan Area would be 11.75 feet NGVD, providing 3.75 feet of freeboard above the current one-percent stillwater elevation (regulatory base flood elevation) of 8 feet NGVD. Using an amalgam of available sea level rise predictions presented herein, the future one-percent flood elevation from San Francisco Bay high tides is anticipated to reach the minimum proposed structure elevations by roughly 2090 for the IPCC "A2 Scenario" and by roughly 2110 for the IPCC "B1 Scenario". Using USACE planning guidelines, the minimum proposed structure elevations would be inundated by the 100-year storm surge by 2570, 2175 and 2085 for the "low", "intermediate" and "high" sea level rise projections, respectively.

Using the range of generally accepted sea level rise projections, it is possible but not certain that the lowest structures of the Plan Area will be within a Special Flood Hazard Area during the life span of the project.

Project Impact from Changes in Precipitation

The previous DEIR evaluation concluded that although there is no scientific consensus, the most recent global and regional models predict that total mean precipitation will modestly decrease in the latter half of the next century. Further, that while total rainfall may decrease, a modest increase in the number and magnitude of large precipitation events is predicted, with longer dry periods between events.

The 2009 *Climate Change Scenarios* report states that the occurrence of significant storms declines at least marginally and that the occurrence of high daily precipitation events generally remains about the same through 2100 as it does in the historical projections. It should be noted that this conclusion is markedly different from previous conclusions by the same authors,[4] and that several CCCC reports reviewed for this addendum state the conclusion that was previously presented: that there is a modest tendency for increases in the numbers and magnitudes of large precipitation events.

The most current studies reviewed for this addendum both conflict previous conclusions and other updated studies, further exemplifying that there is no consensus regarding the potential impacts of climate change on the frequency or magnitude of large storm events.

[4] Cayan, D. R., Maurer, E. P., Dettinger, M. D., Tyree, M., and Hayhoe, K., 2007: 'Climate change scenarios for the California region', Climatic Change, 87, Suppl. 1, 21–42 doi: 10.1007/s10584-007-9377-6.

Flooding

Schaaf & Wheeler reviewed the *Projections of Potential Flood Regime Changes in California* report, produced for the CCCC (August 2009). In general, this report is only able to project flood regime changes in those watershed areas affected by snowmelt and distribution of precipitation between rain and snow. These projections are not useful to the Project, given that snowfall in Newark is exceedingly rare.

While increased flood risk is very generally identified as an impact of climate change in most reports, in general, the knowledge about this impact is limited to those impacts caused by increased sea level rise and occurrence and magnitude of extreme high tide events, as described in more detail previously. Whether climate change will result in increased runoff in areas with no snow is unknown.

Regulations, Policies and Actions Related to Climate Change

Federal

United States Army Corps of Engineers

The recent engineering circular presenting guidance on incorporating sea level rise into project planning, engineering, and design is described in detail previously in this report. While incorporation of these guidelines is only required for USACE civil works projects, and as such does not directly affect the Project, but it may be a useful tool for sea level rise analysis.

United States Fish and Wildlife Service

Based on the U.S. Fish and Wildlife Service report, "Planning for Climate Change on the National Wildlife Refuge System", the Service is directed to explicitly plan for 1 to 1.5 meters (3.3 to 4.9 feet) of eustatic sea-level rise by the year 2100.

State

California Department of Water Resources

The California Department of Water Resources (DWR) published a draft *2009 California Climate Adaptation Strategy* Report (August 2009). This report includes several proposed actions to incorporate climate change impacts to the California Environmental Quality Act (CEQA) process.

These actions include near term goals of continuing to address climate change impacts from projects on wildlife, including cumulative impacts, and the development of internal guidance by the Department of Fish and Wildlife (DFW) to help staff address climate adaptation and to ensure climate change impacts are appropriately addressed in CEQA documents.

Long term actions include:

- Based on climate change scenarios, the development by DFW of thresholds of significance for the adaptive capacity of species related to direct, indirect and cumulative impacts of projects;
- Encouragement of local governments to adopt climate change adaptation actions for conservation, land use, research and regulatory measures;
- Achieve consistency in state and local regulations, general plans, and ordinances and develop sustainable funding mechanisms to support climate change planning efforts that focus on biodiversity conservation.

Local

San Francisco Bay Conservation and Development District

The San Francisco Bay Conservation and Development Commission (BCDC) updated the *San Francisco Bay Plan* in October 2011 to deal with the expected impacts of climate change in San Francisco Bay. Sea level rise risk assessments are required when planning within shoreline areas. If sea level rise and storms that are expected to occur during the life of the project would result in public safety risks, the project must be designed to cope with flood levels expected by mid-century. If it is likely that the project will remain in place longer than mid-century (which is the case for Newark Areas 3 and 4), the applicant must have a plan to address the flood risks expected at the end of the century.

BCDC states that "the California Climate Action Team's sea level rise projections, ranging from 10-17 inches at mid-century and 31-69 inches at the end of the century, currently provide the best available sea level rise projections for the West Coast. However, scientific uncertainty remains regarding the pace and amount of future sea level rise and project applicants may use other sea level rise projections if they provide an explanation."

The Bay Plan states that fill may be placed in the Bay to protect existing and planned development from flooding and erosion. New projects on fill that are likely to be affected by future sea level rise and storm activity during the life of the project must be set back far enough from the shoreline to avoid flooding, must be elevated above expected flood levels, must be designed to tolerate flooding, or should employ other means of addressing flood risks.

Conclusions

The previous climate change evaluation (and DEIR) concluded that the only quantifiable flood risk impact to Newark due to climate change is the projected increase in sea level over a wide range, with no assigned certainties or upper bounds to that range. While this update does not change that basic conclusion, it is clear that the ranges of reported estimates of sea level rise specific to California and San Francisco Bay have only increased since the 2010 EIR was first written.

Storm surge, wave runup, precipitation, and flooding have been further evaluated based on updated studies not available when the previous climate change evaluation was prepared. These updated studies do not make any numerical forecasts for the aforementioned parameters. While the overall precipitation trends of modest drying is repeated in these updated reports, the previous projection of an increased number and magnitude of significant rainfall events (with longer dry periods between storms) is updated to project either no change, or a minor decrease in the magnitude and frequency of these significant rainfall events. In conclusion, significant uncertainty remains regarding the projections of how climate change will impact the magnitude and frequency of significant rainfall events.

Habitable structures within the Plan Area will have at least 3.75 feet of freeboard above the current one-percent stillwater elevation. Using the USACE methodology, available freeboard would not be overwhelmed by projected sea level rise through 2175 for the 'intermediate' scenario, but would be overwhelmed by 2085 (during the project lifetime) for the 'high' sea level rise scenario.

Given the uncertainty in these sea level rise projection scenarios, it is not clear that the additional fill needed for theoretical protection against the one-percent storm surge with high range sea level rise projections is appropriate in the near term, particularly when the weight of such additional fill accelerates settlement of the fill, thus requiring even more fill. An adaptive strategy against rising sea level, which might include an earthen

levee or structural floodwall along the top perimeter of the fill, is more appropriate and can take advantage of more complete climate change data, predictions and regulations in the future. Through the proposed freeboard and an adaptive strategy to address the appropriate future sea level, the Specific Plan would not be adversely affected by predicted global climate change sea level rise.

APPENDIX J

Updated Newark Areas 3 & 4 Air Pollutant and GHG Emissions Using CalEEMod version 2013.2.2

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MEMO

Date: November 12, 2014

To: Julie Wright, *David J. Powers and Associates*

From: James Reyff

Subject: **Newark Areas 3 & 4 Air Pollutant and GHG Emissions Update Using CalEEMod version 2013.2.2**

This memo presents the results of CalEEMod modeling for the Newark Area 3 & 4 project. Previously, the emissions were computed using the URBEMIS2007 emissions modeling program. The California Emissions Estimator Model (CalEEMod) became available in 2011. The Bay Area Air Quality Management District requested that all new projects beginning in August 2013 use the new 2013 version of CalEEMod. Version 2013.2.2, which is the latest version available, was used to predict project emissions.

CalEEMod Inputs

Inputs to the model included the proposed project land uses and corresponding sizes, site acreage, available construction information, traffic trip generation, and project features that would reduce emissions. Inputs to the model are described below. Note that two model runs were developed: Run 1 - all residential units and the school and Run 2 - the golf course and import of 2.1-million cubic yards of soil material. The golf course was separated from the entire project to more accurately estimate emissions from soil hauling that would last over four years and address an inaccuracy with the model that predicts consumer product emissions based on golf course acreage when these emissions do not apply to this type of use. This is a known bug in the model that should be corrected when a new version is released.

Land Uses

The following land uses were input to the model:

Run 1 = 600-student Elementary School, 760 single-family housing on 78 acres, and 500 single-family housing on 86 acres.

Run 2 = 140-acre Golf Course and 20,000-square-foot club house on 140 acres.

Construction Inputs

The construction schedule was adjusted to be 10 years for Run 1, given that substantial construction on Area 4 cannot begin until soil import is completed, which would last 4 years. The schedule for Run 2 was adjusted to 5 years, with the first four years comprised of grading emissions and hauling of 2.1-million cubic yards of soil material. It should be noted that the construction emissions modeled for Run 2 likely overestimate grading emissions, since the model assumed the use of a full inventory of grading construction equipment for four years, while the model default period is less than 1 year. It is likely that far less equipment would be necessary to accommodate the import of fill material. Construction was assumed to begin in 2015.

Construction equipment usage was based on the model default with the exception that cranes and welders would not be used. Construction trips were based on the default trip generation rate, except for the import of soil material. The trip rate for Run 2 takes into account the 2.1-million cubic yards of soil material that would be imported. A trip distance of 10 miles was assumed for these haul trips.

Operational Inputs

The default operational trip generation rates from the project traffic impact assessment predictions were used. The trip length for school trips was adjusted to 2.5 miles, based on average trip lengths reported by the Metropolitan Transportation Commission (MTC).

Area source inputs were adjusted as follows:

Run 1 assumed that there would not be any new wood burning stoves and all residential fireplaces would be natural gas fired, per BAAQMD Rules and Regulations.

Run 2 assumed that there would be no consumer product emissions from the golf course

Reductions for energy usage, water usage and vehicle trips were accounted in the Mitigation portion. In order to mitigate construction emissions of NOx, Tier 3 mobile equipment and Tier 4 portable equipment were selected. Best Management Practices were also selected to reduce fugitive dust emissions.

Mitigation Measures

Construction emissions are evaluated based on average daily emissions occurring throughout the construction period. In order to reduce NOx below those thresholds, emissions would have to be reduced by 33 percent. This could be achieved by requiring that mobile construction equipment larger 50 horsepower and operating on the site for more than 2 days continuously, meet U.S. EPA Tier 3 standards for NOx, and portable equipment operating on the site for more than 2

days continuously, meet U.S. EPA Tier 4 standards for NOx. The effect of these mitigation measures was included in the CalEEMod modeling as "Mitigated Construction" emissions.

The effect of mitigation on operational emissions was predicted in CalEEMod as "Mitigated Operational" emissions. Many of these mitigation measures are features included in the project or project setting. The ability to quantify mitigated emissions is limited to CalEEMod's selection of mitigation measures.

Construction Emissions

Total and average daily emissions are reported in Table 1. Total emissions are reported in tons for air pollutants and metric tons (M tons) for CO2e. Average daily emissions in pounds per day (lbs/day) are based on the total emissions divided by the number of construction days. The total number of construction days was estimated at 2,608 workdays over a 10-year period. The 2010 BAAQMD significance thresholds are used to compare to the predicted emissions. Average daily NOx emissions would exceed these thresholds.

Table 1. Project Average Daily Construction Emissions

Description	ROG	NOx	PM_{10} Exhaust	$PM_{2.5}$ Exhaust	CO_2e
Run 1 (Residences and School) Total Emissions	21.75 tons	39.04 tons	1.79 tons	1.66 tons	9,559 M tons
Run 2 (Golf Course and fill import) Total Emissions	5.29 tons	54.94 tons	2.09 tons	1.92 tons	6,959 M tons
Total Run 1 + Run 2	27.04 tons	93.98 tons	3.88 tons	3.58 tons	16,518 M tons
Average Daily Emissions (pounds per day)*	20.7 lbs/day	72.1 lbs/day	3.0 lbs/day	2.9 lbs/day	--
BAAQMD Thresholds (pounds per day)	*54*	*54*	*82*	*54*	--
Exceed Threshold?	*No*	***Yes***	*No*	*No*	
Total Mitigated Emissions		24.64 + 32.77 57.41 tons			
Average Daily Mitigated Emissions		44.0			
Exceed Threshold with Mitigation?		*No*			

*Assuming 2,608 construction workdays (10 years of construction)

Operational Emissions

Operational emissions, reported in Table 2, are based on the annual emissions predicted by CalEEMod. These are emissions predicted in 2025, which would be the first year that the project is assumed to be fully built out and operational. Average daily emissions were computed by dividing the total emissions by 365 days.

Table 2. Project Annual and Average Daily Operational Emissions

Description	ROG	NOx	PM_{10} Total	$PM_{2.5}$ Total	CO_2e
Run 1 (Residences and School) Total Emissions	16.71 tons	14.67 tons	10.64 tons	3.19 tons	15,589 M tons
Run 2 (Golf Course) Total Emissions	0.31 tons	0.63 tons	0.51 tons	0.15 tons	669 M tons
Total Run 1 + Run 2	17.02 tons	15.30 tons	11.15 tons	3.34 tons	16,258 M tons
Average Daily Emissions (pounds per day)*	93.3 lbs/day	83.8 lbs/day	61.1 lbs/day	18.3 lbs/day	--
BAAQMD Thresholds (pounds per day)	*54*	*54*	*82*	*54*	*3.9 M tons/capita*
BAAQMD CO2e Thresholds (M Tons/capita)	--	--	--	--	*4.6 M tons/capita*
Exceed Threshold?	***Yes***	***Yes***	*No*	*No*	*No*
Total Mitigated Emissions	16.43 + 0.31 16.74 tons	12.77 + 0.63 13.30 tons			
Average Daily Mitigated Emissions	91.7 lbs/day	72.9 lbs/day			
Exceed Threshold with Mitigation?	***Yes***	***Yes***			

* Based on 4.159 persons per household

The CalEEMod model outputs are attached.

Newark Areas 3 and 4 Construction Only

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Elementary School	600.00	Student	0.00	50,000.00	0
Single Family Housing	760.00	Dwelling Unit	78.00	1,368,000.00	2174
Single Family Housing	500.00	Dwelling Unit	86.00	900,000.00	1430

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	4			**Operational Year**	2024
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	291	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - PG&E Rate for post 2020

Land Use - Assigned all Area 3 acreage to residential

Construction Phase - Assume default construction schedule, adjusted to 10 years (i.e., divide by 1.5, since CalEEMod assumes 15 years)

Off-road Equipment - Crane or welders not used for residential portion, ie, divide hours by 5

Trips and VMT - All haul soil hauling trips assigned to Golf Course construciton

Grading - All import of soil applied to Golf Course construction CalEEMod run

Architectural Coating -

Vehicle Trips - School trips are 2.5 miles per MTC

Woodstoves - No wood burning - all natural gas

Consumer Products - Used default

Area Coating -

Construction Off-road Equipment Mitigation - Tier 2 mobile construction, Tier 4 portable and BMPs for fugitive dust

Mobile Land Use Mitigation - These are part of project, not mitigation

Area Mitigation - VOC paints per BAAQMD Regs and no wood fireplaces

Energy Mitigation - Assume increase over 2008 building standards per new Title 24 standards

Water Mitigation - Assume water reduction strategies

Energy Use - Used defaults

Waste Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	50
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	107.00
tblConstructionPhase	NumDays	3,100.00	2,067.00
tblConstructionPhase	NumDays	310.00	207.00
tblConstructionPhase	NumDays	220.00	147.00
tblConstructionPhase	NumDays	120.00	80.00
tblFireplaces	FireplaceWoodMass	215.60	0.00
tblFireplaces	NumberGas	693.00	1,260.00
tblFireplaces	NumberWood	567.00	0.00
tblLandUse	LandUseSquareFeet	50,162.02	50,000.00
tblLandUse	LotAcreage	1.15	0.00
tblLandUse	LotAcreage	162.34	86.00
tblLandUse	LotAcreage	246.75	78.00
tblOffRoadEquipment	UsageHours	7.00	1.40
tblOffRoadEquipment	UsageHours	8.00	1.60
tblProjectCharacteristics	CO2IntensityFactor	641.35	291
tblProjectCharacteristics	OperationalYear	2014	2024
tblVehicleTrips	CC_TL	7.30	2.50
tblVehicleTrips	CNW_TL	7.30	2.50
tblVehicleTrips	CW_TL	9.50	2.50
tblWoodstoves	WoodstoveDayYear	26.24	0.00
tblWoodstoves	WoodstoveWoodMass	1,355.20	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.8345	9.4453	6.4614	7.4300e-003	1.6433	0.4678	2.1111	0.7756	0.4304	1.2060	0.0000	703.3581	703.3581	0.2048	0.0000	707.6594
2016	0.7882	5.4673	7.8515	0.0134	1.5153	0.2625	1.7778	0.5388	0.2449	0.7837	0.0000	1,127.8736	1,127.8736	0.1051	0.0000	1,130.0800

2017	0.7104	4.5484	7.4594	0.0139	0.6807	0.2161	0.8968	0.1836	0.2022	0.3858	0.0000	1,132.8220	1,132.8220	0.0872	0.0000	1,134.6541
2018	0.6349	4.0642	7.0080	0.0139	0.6833	0.1840	0.8672	0.1843	0.1722	0.3565	0.0000	1,109.2340	1,109.2340	0.0845	0.0000	1,111.0093
2019	0.5716	3.6841	6.5992	0.0139	0.6833	0.1600	0.8433	0.1843	0.1498	0.3341	0.0000	1,082.7368	1,082.7368	0.0820	0.0000	1,084.4582
2020	0.5240	3.2844	6.3011	0.0139	0.6859	0.1400	0.8259	0.1850	0.1310	0.3161	0.0000	1,056.0078	1,056.0078	0.0802	0.0000	1,057.6926
2021	0.4864	2.8697	6.0519	0.0139	0.6833	0.1205	0.8038	0.1843	0.1128	0.2971	0.0000	1,043.8058	1,043.8058	0.0784	0.0000	1,045.4514
2022	0.4505	2.5597	5.7751	0.0138	0.6807	0.1035	0.7842	0.1836	0.0969	0.2805	0.0000	1,032.5644	1,032.5644	0.0769	0.0000	1,034.1793
2023	0.4198	2.2893	5.5544	0.0138	0.6807	0.0911	0.7718	0.1836	0.0853	0.2689	0.0000	1,025.2336	1,025.2336	0.0756	0.0000	1,026.8205
2024	16.3303	0.8290	1.4674	2.8400e-003	0.0745	0.0397	0.1142	0.0199	0.0368	0.0567	0.0000	226.2698	226.2698	0.0511	0.0000	227.3436
Total	**21.7505**	**39.0413**	**60.5294**	**0.1206**	**8.0109**	**1.7850**	**9.7959**	**2.6232**	**1.6623**	**4.2854**	**0.0000**	**9,539.9058**	**9,539.9058**	**0.9258**	**0.0000**	**9,559.3483**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.1790	3.2548	4.5250	7.4300e-003	0.2318	0.1466	0.3784	0.1076	0.1466	0.2541	0.0000	703.3573	703.3573	0.2048	0.0000	707.6586
2016	0.4828	3.3201	7.6675	0.0134	0.4801	0.1073	0.5874	0.1533	0.1049	0.2583	0.0000	1,127.8732	1,127.8732	0.1051	0.0000	1,130.0796
2017	0.4716	3.0483	7.4392	0.0139	0.3956	0.0976	0.4931	0.1136	0.0952	0.2089	0.0000	1,132.8218	1,132.8218	0.0872	0.0000	1,134.6538
2018	0.4374	2.8694	7.0336	0.0139	0.3971	0.0960	0.4931	0.1141	0.0938	0.2079	0.0000	1,109.2337	1,109.2337	0.0845	0.0000	1,111.0090
2019	0.4036	2.7102	6.6528	0.0139	0.3971	0.0942	0.4913	0.1141	0.0922	0.2063	0.0000	1,082.7365	1,082.7365	0.0820	0.0000	1,084.4579
2020	0.3778	2.4924	6.3756	0.0139	0.3986	0.0923	0.4909	0.1145	0.0904	0.2050	0.0000	1,056.0075	1,056.0075	0.0802	0.0000	1,057.6923
2021	0.3615	2.2532	6.1445	0.0139	0.3971	0.0900	0.4871	0.1141	0.0883	0.2024	0.0000	1,043.8055	1,043.8055	0.0784	0.0000	1,045.4511
2022	0.3451	2.1162	5.8842	0.0138	0.3956	0.0894	0.4850	0.1137	0.0877	0.2014	0.0000	1,032.5641	1,032.5641	0.0769	0.0000	1,034.1790
2023	0.3274	1.9676	5.6719	0.0138	0.3957	0.0889	0.4846	0.1137	0.0873	0.2010	0.0000	1,025.2333	1,025.2333	0.0756	0.0000	1,026.8203
2024	16.2810	0.6104	1.6631	2.8400e-003	0.0425	0.0328	0.0754	0.0120	0.0328	0.0448	0.0000	226.2696	226.2696	0.0511	0.0000	227.3434
Total	**19.6672**	**24.6426**	**59.0572**	**0.1206**	**3.5312**	**0.9350**	**4.4662**	**1.0706**	**0.9192**	**1.9899**	**0.0000**	**9,539.9024**	**9,539.9024**	**0.9258**	**0.0000**	**9,559.3449**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**9.58**	**36.88**	**2.43**	**0.00**	**55.92**	**47.62**	**54.41**	**59.18**	**44.70**	**53.57**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	10.9752	0.1078	9.3582	4.9000e-004		0.0643	0.0643		0.0641	0.0641	0.0000	192.9234	192.9234	0.0181	3.2600e-003	194.3130
Energy	0.2449	2.0959	0.9116	0.0134		0.1692	0.1692		0.1692	0.1692	0.0000	3,639.9547	3,639.9547	0.1676	0.0695	3,665.0235
Mobile	5.4878	12.4612	57.3160	0.1570	10.1617	0.2492	10.4109	2.7313	0.2298	2.9611	0.0000	10,794.9608	10,794.9608	0.3231	0.0000	10,801.7452

Waste						0.0000	0.0000		0.0000	0.0000	329.4909	0.0000	329.4909	19.4724	0.0000	738.4103
Water						0.0000	0.0000		0.0000	0.0000	26.5061	85.3106	111.8167	2.7309	0.0660	189.6392
Total	**16.7079**	**14.6650**	**67.5858**	**0.1708**	**10.1617**	**0.4827**	**10.6444**	**2.7313**	**0.4632**	**3.1944**	**355.9970**	**14,713.1495**	**15,069.1465**	**22.7121**	**0.1388**	**15,589.1311**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	10.9752	0.1078	9.3582	4.9000e-004		0.0643	0.0643		0.0641	0.0641	0.0000	192.9234	192.9234	0.0181	3.2600e-003	194.3130
Energy	0.1938	1.6578	0.7204	0.0106		0.1339	0.1339		0.1339	0.1339	0.0000	3,042.9629	3,042.9629	0.1489	0.0584	3,064.1817
Mobile	5.2542	11.0011	52.7462	0.1332	8.5537	0.2133	8.7670	2.2991	0.1967	2.4958	0.0000	9,158.4292	9,158.4292	0.2782	0.0000	9,164.2710
Waste						0.0000	0.0000		0.0000	0.0000	329.4909	0.0000	329.4909	19.4724	0.0000	738.4103
Water						0.0000	0.0000		0.0000	0.0000	21.2049	64.2613	85.4662	2.1844	0.0528	147.6903
Total	**16.4232**	**12.7667**	**62.8248**	**0.1443**	**8.5537**	**0.4114**	**8.9651**	**2.2991**	**0.3947**	**2.6938**	**350.6958**	**12,458.5768**	**12,809.2726**	**22.1019**	**0.1144**	**13,308.8663**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**1.70**	**12.94**	**7.04**	**15.55**	**15.82**	**14.76**	**15.78**	**15.82**	**14.78**	**15.67**	**1.49**	**15.32**	**15.00**	**2.69**	**17.61**	**14.63**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2015	4/22/2015	5	80	
2	Grading	Grading	4/23/2015	2/5/2016	5	207	
3	Building Construction	Building Construction	2/6/2016	1/9/2024	5	2067	
4	Paving	Paving	1/10/2024	8/1/2024	5	147	
5	Architectural Coating	Architectural Coating	8/2/2024	12/30/2024	5	107	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 517.5

Acres of Paving: 0

Residential Indoor: 4,592,700; Residential Outdoor: 1,530,900; Non-Residential Indoor: 75,000; Non-Residential Outdoor: 25,000

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	1.40	226	0.29

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	1.60	46	0.45
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	475.00	143.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	95.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.7227	0.0000	0.7227	0.3972	0.0000	0.3972	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.2104	2.2756	1.7053	1.5600e-003		0.1235	0.1235		0.1137	0.1137	0.0000	149.2045	149.2045	0.0445	0.0000	150.1399
Total	**0.2104**	**2.2756**	**1.7053**	**1.5600e-003**	**0.7227**	**0.1235**	**0.8462**	**0.3972**	**0.1137**	**0.5109**	**0.0000**	**149.2045**	**149.2045**	**0.0445**	**0.0000**	**150.1399**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0900e-003	4.5600e-003	0.0441	8.0000e-005	6.5400e-003	6.0000e-005	6.5900e-003	1.7400e-003	5.0000e-005	1.7900e-003	0.0000	6.1560	6.1560	3.7000e-004	0.0000	6.1638

Total	**3.0900e-003**	**4.5600e-003**	**0.0441**	**8.0000e-005**	**6.5400e-003**	**6.0000e-005**	**6.5900e-003**	**1.7400e-003**	**5.0000e-005**	**1.7900e-003**	**0.0000**	**6.1560**	**6.1560**	**3.7000e-004**	**0.0000**	**6.1638**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0976	0.0000	0.0976	0.0536	0.0000	0.0536	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0381	0.7783	0.9360	1.5600e-003		0.0384	0.0384		0.0384	0.0384	0.0000	149.2043	149.2043	0.0445	0.0000	150.1397
Total	**0.0381**	**0.7783**	**0.9360**	**1.5600e-003**	**0.0976**	**0.0384**	**0.1360**	**0.0536**	**0.0384**	**0.0921**	**0.0000**	**149.2043**	**149.2043**	**0.0445**	**0.0000**	**150.1397**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.0900e-003	4.5600e-003	0.0441	8.0000e-005	3.7100e-003	6.0000e-005	3.7700e-003	1.0500e-003	5.0000e-005	1.1000e-003	0.0000	6.1560	6.1560	3.7000e-004	0.0000	6.1638
Total	**3.0900e-003**	**4.5600e-003**	**0.0441**	**8.0000e-005**	**3.7100e-003**	**6.0000e-005**	**3.7700e-003**	**1.0500e-003**	**5.0000e-005**	**1.1000e-003**	**0.0000**	**6.1560**	**6.1560**	**3.7000e-004**	**0.0000**	**6.1638**

3.3 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8977	0.0000	0.8977	0.3722	0.0000	0.3722	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6132	7.1537	4.6010	5.5900e-003		0.3441	0.3441		0.3166	0.3166	0.0000	532.5220	532.5220	0.1590	0.0000	535.8606
Total	**0.6132**	**7.1537**	**4.6010**	**5.5900e-003**	**0.8977**	**0.3441**	**1.2418**	**0.3722**	**0.3166**	**0.6888**	**0.0000**	**532.5220**	**532.5220**	**0.1590**	**0.0000**	**535.8606**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7800e-003	0.0115	0.1110	2.0000e-004	0.0164	1.5000e-004	0.0166	4.3700e-003	1.4000e-004	4.5100e-003	0.0000	15.4756	15.4756	9.3000e-004	0.0000	15.4951

Total	**7.7800e-003**	**0.0115**	**0.1110**	**2.0000e-004**	**0.0164**	**1.5000e-004**	**0.0166**	**4.3700e-003**	**1.4000e-004**	**4.5100e-003**	**0.0000**	**15.4756**	**15.4756**	**9.3000e-004**	**0.0000**	**15.4951**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1212	0.0000	0.1212	0.0503	0.0000	0.0503	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1301	2.4605	3.4339	5.5900e-003		0.1079	0.1079		0.1079	0.1079	0.0000	532.5214	532.5214	0.1590	0.0000	535.8599
Total	**0.1301**	**2.4605**	**3.4339**	**5.5900e-003**	**0.1212**	**0.1079**	**0.2291**	**0.0503**	**0.1079**	**0.1582**	**0.0000**	**532.5214**	**532.5214**	**0.1590**	**0.0000**	**535.8599**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7800e-003	0.0115	0.1110	2.0000e-004	9.3300e-003	1.5000e-004	9.4800e-003	2.6300e-003	1.4000e-004	2.7600e-003	0.0000	15.4756	15.4756	9.3000e-004	0.0000	15.4951
Total	**7.7800e-003**	**0.0115**	**0.1110**	**2.0000e-004**	**9.3300e-003**	**1.5000e-004**	**9.4800e-003**	**2.6300e-003**	**1.4000e-004**	**2.7600e-003**	**0.0000**	**15.4756**	**15.4756**	**9.3000e-004**	**0.0000**	**15.4951**

3.3 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.8977	0.0000	0.8977	0.3722	0.0000	0.3722	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0842	0.9726	0.6388	8.0000e-004		0.0466	0.0466		0.0429	0.0429	0.0000	75.6544	75.6544	0.0228	0.0000	76.1337
Total	**0.0842**	**0.9726**	**0.6388**	**8.0000e-004**	**0.8977**	**0.0466**	**0.9443**	**0.3722**	**0.0429**	**0.4151**	**0.0000**	**75.6544**	**75.6544**	**0.0228**	**0.0000**	**76.1337**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	1.4700e-003	0.0142	3.0000e-005	2.3600e-003	2.0000e-005	2.3800e-003	6.3000e-004	2.0000e-005	6.5000e-004	0.0000	2.1467	2.1467	1.2000e-004	0.0000	2.1492

Total	**9.9000e-004**	**1.4700e-003**	**0.0142**	**3.0000e-005**	**2.3600e-003**	**2.0000e-005**	**2.3800e-003**	**6.3000e-004**	**2.0000e-005**	**6.5000e-004**	**0.0000**	**2.1467**	**2.1467**	**1.2000e-004**	**0.0000**	**2.1492**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1212	0.0000	0.1212	0.0503	0.0000	0.0503	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0187	0.3534	0.4933	8.0000e-004		0.0155	0.0155		0.0155	0.0155	0.0000	75.6544	75.6544	0.0228	0.0000	76.1336
Total	**0.0187**	**0.3534**	**0.4933**	**8.0000e-004**	**0.1212**	**0.0155**	**0.1367**	**0.0503**	**0.0155**	**0.0658**	**0.0000**	**75.6544**	**75.6544**	**0.0228**	**0.0000**	**76.1336**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9000e-004	1.4700e-003	0.0142	3.0000e-005	1.3400e-003	2.0000e-005	1.3600e-003	3.8000e-004	2.0000e-005	4.0000e-004	0.0000	2.1467	2.1467	1.2000e-004	0.0000	2.1492
Total	**9.9000e-004**	**1.4700e-003**	**0.0142**	**3.0000e-005**	**1.3400e-003**	**2.0000e-005**	**1.3600e-003**	**3.8000e-004**	**2.0000e-005**	**4.0000e-004**	**0.0000**	**2.1467**	**2.1467**	**1.2000e-004**	**0.0000**	**2.1492**

3.4 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2882	2.4784	1.7439	2.4500e-003		0.1860	0.1860		0.1746	0.1746	0.0000	223.0953	223.0953	0.0531	0.0000	224.2099
Total	**0.2882**	**2.4784**	**1.7439**	**2.4500e-003**		**0.1860**	**0.1860**		**0.1746**	**0.1746**	**0.0000**	**223.0953**	**223.0953**	**0.0531**	**0.0000**	**224.2099**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2013	1.6990	2.4061	4.0300e-003	0.1086	0.0256	0.1342	0.0312	0.0235	0.0547	0.0000	366.1691	366.1691	2.9600e-003	0.0000	366.2313
Worker	0.2135	0.3158	3.0485	6.0500e-003	0.5066	4.3300e-003	0.5109	0.1348	3.9700e-003	0.1387	0.0000	460.8081	460.8081	0.0261	0.0000	461.3559

Total	**0.4148**	**2.0148**	**5.4546**	**0.0101**	**0.6152**	**0.0299**	**0.6451**	**0.1660**	**0.0275**	**0.1934**	**0.0000**	**826.9772**	**826.9772**	**0.0291**	**0.0000**	**827.5872**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0483	0.9504	1.7054	2.4500e-003		0.0619	0.0619		0.0619	0.0619	0.0000	223.0950	223.0950	0.0531	0.0000	224.2096
Total	**0.0483**	**0.9504**	**1.7054**	**2.4500e-003**		**0.0619**	**0.0619**		**0.0619**	**0.0619**	**0.0000**	**223.0950**	**223.0950**	**0.0531**	**0.0000**	**224.2096**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2013	1.6990	2.4061	4.0300e-003	0.0698	0.0256	0.0954	0.0217	0.0235	0.0452	0.0000	366.1691	366.1691	2.9600e-003	0.0000	366.2313
Worker	0.2135	0.3158	3.0485	6.0500e-003	0.2877	4.3300e-003	0.2920	0.0810	3.9700e-003	0.0850	0.0000	460.8081	460.8081	0.0261	0.0000	461.3559
Total	**0.4148**	**2.0148**	**5.4546**	**0.0101**	**0.3576**	**0.0299**	**0.3874**	**0.1027**	**0.0275**	**0.1302**	**0.0000**	**826.9772**	**826.9772**	**0.0291**	**0.0000**	**827.5872**

3.4 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2923	2.5516	1.9070	2.7100e-003		0.1871	0.1871		0.1755	0.1755	0.0000	244.0947	244.0947	0.0578	0.0000	245.3082
Total	**0.2923**	**2.5516**	**1.9070**	**2.7100e-003**		**0.1871**	**0.1871**		**0.1755**	**0.1755**	**0.0000**	**244.0947**	**244.0947**	**0.0578**	**0.0000**	**245.3082**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2090	1.6841	2.5543	4.4500e-003	0.1202	0.0245	0.1447	0.0345	0.0225	0.0570	0.0000	398.3168	398.3168	3.1100e-003	0.0000	398.3821
Worker	0.2091	0.3127	2.9980	6.6900e-003	0.5605	4.5600e-003	0.5650	0.1491	4.2000e-003	0.1533	0.0000	490.4105	490.4105	0.0264	0.0000	490.9638

Total	**0.4181**	**1.9968**	**5.5523**	**0.0111**	**0.6807**	**0.0290**	**0.7097**	**0.1836**	**0.0267**	**0.2103**	**0.0000**	**888.7273**	**888.7273**	**0.0295**	**0.0000**	**889.3459**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0535	1.0515	1.8869	2.7100e-003		0.0685	0.0685		0.0685	0.0685	0.0000	244.0944	244.0944	0.0578	0.0000	245.3079
Total	**0.0535**	**1.0515**	**1.8869**	**2.7100e-003**		**0.0685**	**0.0685**		**0.0685**	**0.0685**	**0.0000**	**244.0944**	**244.0944**	**0.0578**	**0.0000**	**245.3079**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.2090	1.6841	2.5543	4.4500e-003	0.0773	0.0245	0.1018	0.0240	0.0225	0.0465	0.0000	398.3168	398.3168	3.1100e-003	0.0000	398.3821
Worker	0.2091	0.3127	2.9980	6.6900e-003	0.3183	4.5600e-003	0.3229	0.0897	4.2000e-003	0.0938	0.0000	490.4105	490.4105	0.0264	0.0000	490.9638
Total	**0.4181**	**1.9968**	**5.5523**	**0.0111**	**0.3956**	**0.0290**	**0.4246**	**0.1137**	**0.0267**	**0.1404**	**0.0000**	**888.7273**	**888.7273**	**0.0295**	**0.0000**	**889.3459**

3.4 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2511	2.2504	1.8686	2.7200e-003		0.1568	0.1568		0.1472	0.1472	0.0000	242.2607	242.2607	0.0572	0.0000	243.4617
Total	**0.2511**	**2.2504**	**1.8686**	**2.7200e-003**		**0.1568**	**0.1568**		**0.1472**	**0.1472**	**0.0000**	**242.2607**	**242.2607**	**0.0572**	**0.0000**	**243.4617**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1974	1.5316	2.4554	4.4600e-003	0.1207	0.0228	0.1434	0.0347	0.0209	0.0556	0.0000	392.9601	392.9601	3.0600e-003	0.0000	393.0245
Worker	0.1863	0.2822	2.6841	6.7100e-003	0.5626	4.4100e-003	0.5670	0.1497	4.0800e-003	0.1537	0.0000	474.0132	474.0132	0.0243	0.0000	474.5231

Total	**0.3837**	**1.8138**	**5.1395**	**0.0112**	**0.6833**	**0.0272**	**0.7105**	**0.1843**	**0.0250**	**0.2094**	**0.0000**	**866.9733**	**866.9733**	**0.0273**	**0.0000**	**867.5476**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0537	1.0556	1.8941	2.7200e-003		0.0688	0.0688		0.0688	0.0688	0.0000	242.2604	242.2604	0.0572	0.0000	243.4615
Total	**0.0537**	**1.0556**	**1.8941**	**2.7200e-003**		**0.0688**	**0.0688**		**0.0688**	**0.0688**	**0.0000**	**242.2604**	**242.2604**	**0.0572**	**0.0000**	**243.4615**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1974	1.5316	2.4554	4.4600e-003	0.0776	0.0228	0.1003	0.0241	0.0209	0.0450	0.0000	392.9601	392.9601	3.0600e-003	0.0000	393.0245
Worker	0.1863	0.2822	2.6841	6.7100e-003	0.3195	4.4100e-003	0.3240	0.0900	4.0800e-003	0.0941	0.0000	474.0132	474.0132	0.0243	0.0000	474.5231
Total	**0.3837**	**1.8138**	**5.1395**	**0.0112**	**0.3971**	**0.0272**	**0.4243**	**0.1141**	**0.0250**	**0.1391**	**0.0000**	**866.9733**	**866.9733**	**0.0273**	**0.0000**	**867.5476**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2216	2.0295	1.8406	2.7200e-003		0.1345	0.1345		0.1263	0.1263	0.0000	239.5676	239.5676	0.0564	0.0000	240.7520
Total	**0.2216**	**2.0295**	**1.8406**	**2.7200e-003**		**0.1345**	**0.1345**		**0.1263**	**0.1263**	**0.0000**	**239.5676**	**239.5676**	**0.0564**	**0.0000**	**240.7520**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1805	1.3976	2.3229	4.4500e-003	0.1207	0.0212	0.1418	0.0347	0.0195	0.0541	0.0000	386.1725	386.1725	2.9900e-003	0.0000	386.2354
Worker	0.1694	0.2570	2.4358	6.7100e-003	0.5626	4.3100e-003	0.5669	0.1497	3.9900e-003	0.1537	0.0000	456.9967	456.9967	0.0226	0.0000	457.4708

Total	**0.3499**	**1.6546**	**4.7586**	**0.0112**	**0.6833**	**0.0255**	**0.7087**	**0.1843**	**0.0234**	**0.2078**	**0.0000**	**843.1692**	**843.1692**	**0.0256**	**0.0000**	**843.7062**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0537	1.0556	1.8941	2.7200e-003		0.0688	0.0688		0.0688	0.0688	0.0000	239.5673	239.5673	0.0564	0.0000	240.7517
Total	**0.0537**	**1.0556**	**1.8941**	**2.7200e-003**		**0.0688**	**0.0688**		**0.0688**	**0.0688**	**0.0000**	**239.5673**	**239.5673**	**0.0564**	**0.0000**	**240.7517**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1805	1.3976	2.3229	4.4500e-003	0.0776	0.0212	0.0987	0.0241	0.0195	0.0435	0.0000	386.1725	386.1725	2.9900e-003	0.0000	386.2354
Worker	0.1694	0.2570	2.4358	6.7100e-003	0.3195	4.3100e-003	0.3239	0.0900	3.9900e-003	0.0940	0.0000	456.9967	456.9967	0.0226	0.0000	457.4708
Total	**0.3499**	**1.6546**	**4.7586**	**0.0112**	**0.3971**	**0.0255**	**0.4226**	**0.1141**	**0.0234**	**0.1375**	**0.0000**	**843.1692**	**843.1692**	**0.0256**	**0.0000**	**843.7062**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2001	1.8516	1.8269	2.7300e-003		0.1167	0.1167		0.1096	0.1096	0.0000	236.9470	236.9470	0.0560	0.0000	238.1227
Total	**0.2001**	**1.8516**	**1.8269**	**2.7300e-003**		**0.1167**	**0.1167**		**0.1096**	**0.1096**	**0.0000**	**236.9470**	**236.9470**	**0.0560**	**0.0000**	**238.1227**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1657	1.1951	2.2192	4.4600e-003	0.1211	0.0190	0.1401	0.0348	0.0174	0.0522	0.0000	378.7096	378.7096	2.9100e-003	0.0000	378.7708
Worker	0.1582	0.2377	2.2550	6.7300e-003	0.5648	4.2700e-003	0.5691	0.1502	3.9600e-003	0.1542	0.0000	440.3512	440.3512	0.0213	0.0000	440.7991

Total	**0.3239**	**1.4328**	**4.4742**	**0.0112**	**0.6859**	**0.0232**	**0.7091**	**0.1850**	**0.0214**	**0.2064**	**0.0000**	**819.0609**	**819.0609**	**0.0242**	**0.0000**	**819.5698**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0539	1.0596	1.9014	2.7300e-003		0.0690	0.0690		0.0690	0.0690	0.0000	236.9467	236.9467	0.0560	0.0000	238.1225
Total	**0.0539**	**1.0596**	**1.9014**	**2.7300e-003**		**0.0690**	**0.0690**		**0.0690**	**0.0690**	**0.0000**	**236.9467**	**236.9467**	**0.0560**	**0.0000**	**238.1225**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1657	1.1951	2.2192	4.4600e-003	0.0779	0.0190	0.0968	0.0242	0.0174	0.0416	0.0000	378.7096	378.7096	2.9100e-003	0.0000	378.7708
Worker	0.1582	0.2377	2.2550	6.7300e-003	0.3208	4.2700e-003	0.3250	0.0903	3.9600e-003	0.0943	0.0000	440.3512	440.3512	0.0213	0.0000	440.7991
Total	**0.3239**	**1.4328**	**4.4742**	**0.0112**	**0.3986**	**0.0232**	**0.4218**	**0.1145**	**0.0214**	**0.1359**	**0.0000**	**819.0609**	**819.0609**	**0.0242**	**0.0000**	**819.5698**

3.4 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1786	1.6720	1.8015	2.7200e-003		0.0993	0.0993		0.0932	0.0932	0.0000	236.0824	236.0824	0.0553	0.0000	237.2440
Total	**0.1786**	**1.6720**	**1.8015**	**2.7200e-003**		**0.0993**	**0.0993**		**0.0932**	**0.0932**	**0.0000**	**236.0824**	**236.0824**	**0.0553**	**0.0000**	**237.2440**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1592	0.9774	2.1540	4.4400e-003	0.1207	0.0170	0.1376	0.0347	0.0156	0.0503	0.0000	376.7369	376.7369	2.8900e-003	0.0000	376.7977
Worker	0.1487	0.2203	2.0963	6.7100e-003	0.5626	4.2300e-003	0.5669	0.1497	3.9200e-003	0.1536	0.0000	430.9864	430.9864	0.0202	0.0000	431.4097

Total	**0.3078**	**1.1977**	**4.2503**	**0.0112**	**0.6833**	**0.0212**	**0.7045**	**0.1843**	**0.0195**	**0.2039**	**0.0000**	**807.7233**	**807.7233**	**0.0231**	**0.0000**	**808.2074**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0537	1.0556	1.8941	2.7200e-003		0.0688	0.0688		0.0688	0.0688	0.0000	236.0822	236.0822	0.0553	0.0000	237.2437
Total	**0.0537**	**1.0556**	**1.8941**	**2.7200e-003**		**0.0688**	**0.0688**		**0.0688**	**0.0688**	**0.0000**	**236.0822**	**236.0822**	**0.0553**	**0.0000**	**237.2437**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1592	0.9774	2.1540	4.4400e-003	0.0776	0.0170	0.0946	0.0241	0.0156	0.0397	0.0000	376.7369	376.7369	2.8900e-003	0.0000	376.7977
Worker	0.1487	0.2203	2.0963	6.7100e-003	0.3195	4.2300e-003	0.3238	0.0900	3.9200e-003	0.0939	0.0000	430.9864	430.9864	0.0202	0.0000	431.4097
Total	**0.3078**	**1.1977**	**4.2503**	**0.0112**	**0.3971**	**0.0212**	**0.4183**	**0.1141**	**0.0195**	**0.1336**	**0.0000**	**807.7233**	**807.7233**	**0.0231**	**0.0000**	**808.2074**

3.4 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1589	1.4951	1.7777	2.7100e-003		0.0826	0.0826		0.0777	0.0777	0.0000	235.2847	235.2847	0.0548	0.0000	236.4360
Total	**0.1589**	**1.4951**	**1.7777**	**2.7100e-003**		**0.0826**	**0.0826**		**0.0777**	**0.0777**	**0.0000**	**235.2847**	**235.2847**	**0.0548**	**0.0000**	**236.4360**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1516	0.8596	2.0450	4.4200e-003	0.1202	0.0166	0.1369	0.0346	0.0153	0.0499	0.0000	374.9497	374.9497	2.9400e-003	0.0000	375.0115
Worker	0.1400	0.2050	1.9524	6.6800e-003	0.5605	4.1900e-003	0.5647	0.1491	3.8900e-003	0.1530	0.0000	422.3300	422.3300	0.0191	0.0000	422.7318

Total	**0.2916**	**1.0647**	**3.9974**	**0.0111**	**0.6807**	**0.0208**	**0.7015**	**0.1836**	**0.0192**	**0.2028**	**0.0000**	**797.2797**	**797.2797**	**0.0221**	**0.0000**	**797.7433**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0535	1.0515	1.8869	2.7100e-003		0.0685	0.0685		0.0685	0.0685	0.0000	235.2844	235.2844	0.0548	0.0000	236.4357
Total	**0.0535**	**1.0515**	**1.8869**	**2.7100e-003**		**0.0685**	**0.0685**		**0.0685**	**0.0685**	**0.0000**	**235.2844**	**235.2844**	**0.0548**	**0.0000**	**236.4357**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1516	0.8596	2.0450	4.4200e-003	0.0773	0.0166	0.0940	0.0240	0.0153	0.0393	0.0000	374.9497	374.9497	2.9400e-003	0.0000	375.0115
Worker	0.1400	0.2050	1.9524	6.6800e-003	0.3183	4.1900e-003	0.3225	0.0897	3.8900e-003	0.0935	0.0000	422.3300	422.3300	0.0191	0.0000	422.7318
Total	**0.2916**	**1.0647**	**3.9974**	**0.0111**	**0.3956**	**0.0208**	**0.4165**	**0.1137**	**0.0192**	**0.1329**	**0.0000**	**797.2797**	**797.2797**	**0.0221**	**0.0000**	**797.7433**

3.4 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1458	1.3732	1.7694	2.7100e-003		0.0707	0.0707		0.0665	0.0665	0.0000	235.3889	235.3889	0.0546	0.0000	236.5345
Total	**0.1458**	**1.3732**	**1.7694**	**2.7100e-003**		**0.0707**	**0.0707**		**0.0665**	**0.0665**	**0.0000**	**235.3889**	**235.3889**	**0.0546**	**0.0000**	**236.5345**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1414	0.7238	1.9560	4.4000e-003	0.1203	0.0162	0.1365	0.0346	0.0149	0.0495	0.0000	373.8783	373.8783	2.7200e-003	0.0000	373.9354
Worker	0.1325	0.1923	1.8290	6.6800e-003	0.5605	4.1800e-003	0.5647	0.1491	3.8800e-003	0.1530	0.0000	415.9664	415.9664	0.0183	0.0000	416.3507

Total	**0.2739**	**0.9161**	**3.7850**	**0.0111**	**0.6807**	**0.0204**	**0.7011**	**0.1837**	**0.0188**	**0.2024**	**0.0000**	**789.8446**	**789.8446**	**0.0210**	**0.0000**	**790.2861**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0535	1.0515	1.8869	2.7100e-003		0.0685	0.0685		0.0685	0.0685	0.0000	235.3887	235.3887	0.0546	0.0000	236.5342
Total	**0.0535**	**1.0515**	**1.8869**	**2.7100e-003**		**0.0685**	**0.0685**		**0.0685**	**0.0685**	**0.0000**	**235.3887**	**235.3887**	**0.0546**	**0.0000**	**236.5342**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1414	0.7238	1.9560	4.4000e-003	0.0773	0.0162	0.0936	0.0240	0.0149	0.0389	0.0000	373.8783	373.8783	2.7200e-003	0.0000	373.9354
Worker	0.1325	0.1923	1.8290	6.6800e-003	0.3183	4.1800e-003	0.3225	0.0897	3.8800e-003	0.0935	0.0000	415.9664	415.9664	0.0183	0.0000	416.3507
Total	**0.2739**	**0.9161**	**3.7850**	**0.0111**	**0.3957**	**0.0204**	**0.4160**	**0.1137**	**0.0188**	**0.1325**	**0.0000**	**789.8446**	**789.8446**	**0.0210**	**0.0000**	**790.2861**

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.6700e-003	0.0346	0.0476	7.0000e-005		1.6500e-003	1.6500e-003		1.5600e-003	1.5600e-003	0.0000	6.3390	6.3390	1.4600e-003	0.0000	6.3697
Total	**3.6700e-003**	**0.0346**	**0.0476**	**7.0000e-005**		**1.6500e-003**	**1.6500e-003**		**1.5600e-003**	**1.5600e-003**	**0.0000**	**6.3390**	**6.3390**	**1.4600e-003**	**0.0000**	**6.3697**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6400e-003	0.0193	0.0506	1.2000e-004	3.2400e-003	4.4000e-004	3.6800e-003	9.3000e-004	4.0000e-004	1.3300e-003	0.0000	10.0680	10.0680	7.0000e-005	0.0000	10.0695
Worker	3.3900e-003	4.8800e-003	0.0465	1.8000e-004	0.0151	1.1000e-004	0.0152	4.0100e-003	1.0000e-004	4.1200e-003	0.0000	11.0458	11.0458	4.7000e-004	0.0000	11.0558

Total	**7.0300e-003**	**0.0242**	**0.0971**	**3.0000e-004**	**0.0183**	**5.5000e-004**	**0.0189**	**4.9400e-003**	**5.0000e-004**	**5.4500e-003**	**0.0000**	**21.1138**	**21.1138**	**5.4000e-004**	**0.0000**	**21.1253**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4400e-003	0.0283	0.0508	7.0000e-005		1.8400e-003	1.8400e-003		1.8400e-003	1.8400e-003	0.0000	6.3390	6.3390	1.4600e-003	0.0000	6.3697
Total	**1.4400e-003**	**0.0283**	**0.0508**	**7.0000e-005**		**1.8400e-003**	**1.8400e-003**		**1.8400e-003**	**1.8400e-003**	**0.0000**	**6.3390**	**6.3390**	**1.4600e-003**	**0.0000**	**6.3697**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.6400e-003	0.0193	0.0506	1.2000e-004	2.0800e-003	4.4000e-004	2.5200e-003	6.5000e-004	4.0000e-004	1.0500e-003	0.0000	10.0680	10.0680	7.0000e-005	0.0000	10.0695
Worker	3.3900e-003	4.8800e-003	0.0465	1.8000e-004	8.5700e-003	1.1000e-004	8.6800e-003	2.4100e-003	1.0000e-004	2.5200e-003	0.0000	11.0458	11.0458	4.7000e-004	0.0000	11.0558
Total	**7.0300e-003**	**0.0242**	**0.0971**	**3.0000e-004**	**0.0107**	**5.5000e-004**	**0.0112**	**3.0600e-003**	**5.0000e-004**	**3.5700e-003**	**0.0000**	**21.1138**	**21.1138**	**5.4000e-004**	**0.0000**	**21.1253**

3.5 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0712	0.6869	1.0529	1.6400e-003		0.0338	0.0338		0.0311	0.0311	0.0000	144.0634	144.0634	0.0466	0.0000	145.0419
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0712**	**0.6869**	**1.0529**	**1.6400e-003**		**0.0338**	**0.0338**		**0.0311**	**0.0311**	**0.0000**	**144.0634**	**144.0634**	**0.0466**	**0.0000**	**145.0419**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2500e-003	3.2400e-003	0.0308	1.2000e-004	0.0100	7.0000e-005	0.0101	2.6600e-003	7.0000e-005	2.7300e-003	0.0000	7.3251	7.3251	3.1000e-004	0.0000	7.3317

Total	**2.2500e-003**	**3.2400e-003**	**0.0308**	**1.2000e-004**	**0.0100**	**7.0000e-005**	**0.0101**	**2.6600e-003**	**7.0000e-005**	**2.7300e-003**	**0.0000**	**7.3251**	**7.3251**	**3.1000e-004**	**0.0000**	**7.3317**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0322	0.5328	1.2442	1.6400e-003		0.0298	0.0298		0.0298	0.0298	0.0000	144.0632	144.0632	0.0466	0.0000	145.0417
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0322**	**0.5328**	**1.2442**	**1.6400e-003**		**0.0298**	**0.0298**		**0.0298**	**0.0298**	**0.0000**	**144.0632**	**144.0632**	**0.0466**	**0.0000**	**145.0417**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2500e-003	3.2400e-003	0.0308	1.2000e-004	5.6800e-003	7.0000e-005	5.7600e-003	1.6000e-003	7.0000e-005	1.6700e-003	0.0000	7.3251	7.3251	3.1000e-004	0.0000	7.3317
Total	**2.2500e-003**	**3.2400e-003**	**0.0308**	**1.2000e-004**	**5.6800e-003**	**7.0000e-005**	**5.7600e-003**	**1.6000e-003**	**7.0000e-005**	**1.6700e-003**	**0.0000**	**7.3251**	**7.3251**	**3.1000e-004**	**0.0000**	**7.3317**

3.6 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	16.2261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6700e-003	0.0652	0.0968	1.6000e-004		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	13.6599	13.6599	7.7000e-004	0.0000	13.6761
Total	**16.2358**	**0.0652**	**0.0968**	**1.6000e-004**		**3.2600e-003**	**3.2600e-003**		**3.2600e-003**	**3.2600e-003**	**0.0000**	**13.6599**	**13.6599**	**7.7000e-004**	**0.0000**	**13.6761**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0104	0.0149	0.1422	5.5000e-004	0.0461	3.4000e-004	0.0465	0.0123	3.2000e-004	0.0126	0.0000	33.7686	33.7686	1.4500e-003	0.0000	33.7990

Total	**0.0104**	**0.0149**	**0.1422**	**5.5000e-004**	**0.0461**	**3.4000e-004**	**0.0465**	**0.0123**	**3.2000e-004**	**0.0126**	**0.0000**	**33.7686**	**33.7686**	**1.4500e-003**	**0.0000**	**33.7990**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	16.2261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5900e-003	6.8900e-003	0.0980	1.6000e-004		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004	0.0000	13.6599	13.6599	7.7000e-004	0.0000	13.6760
Total	**16.2277**	**6.8900e-003**	**0.0980**	**1.6000e-004**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**	**0.0000**	**13.6599**	**13.6599**	**7.7000e-004**	**0.0000**	**13.6760**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0104	0.0149	0.1422	5.5000e-004	0.0262	3.4000e-004	0.0265	7.3800e-003	3.2000e-004	7.7000e-003	0.0000	33.7686	33.7686	1.4500e-003	0.0000	33.7990
Total	**0.0104**	**0.0149**	**0.1422**	**5.5000e-004**	**0.0262**	**3.4000e-004**	**0.0265**	**7.3800e-003**	**3.2000e-004**	**7.7000e-003**	**0.0000**	**33.7686**	**33.7686**	**1.4500e-003**	**0.0000**	**33.7990**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Increase Diversity

Improve Walkability Design

Improve Destination Accessibility

Increase Transit Accessibility

Integrate Below Market Rate Housing

Improve Pedestrian Network

Provide Traffic Calming Measures

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	5.2542	11.0011	52.7462	0.1332	8.5537	0.2133	8.7670	2.2991	0.1967	2.4958	0.0000	9,158.4292	9,158.4292	0.2782	0.0000	9,164.2710
Unmitigated	5.4878	12.4612	57.3160	0.1570	10.1617	0.2492	10.4109	2.7313	0.2298	2.9611	0.0000	10,794.9608	10,794.9608	0.3231	0.0000	10,801.7452

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Elementary School	774.00	0.00	0.00	350,812	295,297
Single Family Housing	7,273.20	7,660.80	6665.20	16,166,157	13,607,914
Single Family Housing	4,785.00	5,040.00	4385.00	10,635,630	8,952,575
Total	12,832.20	12,700.80	11,050.20	27,152,598	22,855,786

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Elementary School	2.50	2.50	2.50	65.00	30.00	5.00	63	25	12
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3
Single Family Housing	12.40	4.30	5.40	26.10	29.10	44.80	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.540708	0.062029	0.166535	0.109313	0.030530	0.004548	0.019619	0.054044	0.001811	0.003599	0.005676	0.000189	0.001400

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,125.5355	1,125.5355	0.1122	0.0232	1,135.0852
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,215.9288	1,215.9288	0.1212	0.0251	1,226.2454
NaturalGas Mitigated	0.1938	1.6578	0.7204	0.0106		0.1339	0.1339		0.1339	0.1339	0.0000	1,917.4274	1,917.4274	0.0368	0.0352	1,929.0966
NaturalGas Unmitigated	0.2449	2.0959	0.9116	0.0134		0.1692	0.1692		0.1692	0.1692	0.0000	2,424.0259	2,424.0259	0.0465	0.0444	2,438.7781

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	1.76415e+007	0.0951	0.8129	0.3459	5.1900e-003		0.0657	0.0657		0.0657	0.0657	0.0000	941.4166	941.4166	0.0180	0.0173	947.1459
Single Family Housing	2.6815e+007	0.1446	1.2356	0.5258	7.8900e-003		0.0999	0.0999		0.0999	0.0999	0.0000	1,430.9532	1,430.9532	0.0274	0.0262	1,439.6617
Elementary School	968000	5.2200e-003	0.0475	0.0399	2.8000e-004		3.6100e-003	3.6100e-003		3.6100e-003	3.6100e-003	0.0000	51.6562	51.6562	9.9000e-004	9.5000e-004	51.9705
Total		**0.2449**	**2.0959**	**0.9116**	**0.0134**		**0.1692**	**0.1692**		**0.1692**	**0.1692**	**0.0000**	**2,424.0259**	**2,424.0259**	**0.0465**	**0.0444**	**2,438.7781**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Elementary School	737625	3.9800e-003	0.0362	0.0304	2.2000e-004		2.7500e-003	2.7500e-003		2.7500e-003	2.7500e-003	0.0000	39.3625	39.3625	7.5000e-004	7.2000e-004	39.6020
Single Family Housing	1.39657e+007	0.0753	0.6435	0.2738	4.1100e-003		0.0520	0.0520		0.0520	0.0520	0.0000	745.2639	745.2639	0.0143	0.0137	749.7994
Single Family Housing	2.12279e+007	0.1145	0.9782	0.4162	6.2400e-003		0.0791	0.0791		0.0791	0.0791	0.0000	1,132.8011	1,132.8011	0.0217	0.0208	1,139.6951
Total		**0.1938**	**1.6578**	**0.7204**	**0.0106**		**0.1339**	**0.1339**		**0.1339**	**0.1339**	**0.0000**	**1,917.4274**	**1,917.4274**	**0.0367**	**0.0352**	**1,929.0966**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	300000	39.5986	3.9500e-003	8.2000e-004	39.9346
Single Family Housing	3.53647e+006	466.7977	0.0465	9.6200e-003	470.7583
Single Family Housing	5.37543e+006	709.5325	0.0707	0.0146	715.5526
Total		**1,215.9288**	**0.1212**	**0.0251**	**1,226.2454**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Elementary School	238075	31.4248	3.1300e-003	6.5000e-004	31.6914
Single Family Housing	3.28929e+006	434.1709	0.0433	8.9500e-003	437.8547
Single Family Housing	4.99972e+006	659.9398	0.0658	0.0136	665.5391
Total		**1,125.5355**	**0.1122**	**0.0232**	**1,135.0852**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Mitigated	10.9752	0.1078	9.3582	4.9000e-004		0.0643	0.0643		0.0641	0.0641	0.0000	192.9234	192.9234	0.0181	3.2600e-003	194.3130
Unmitigated	10.9752	0.1078	9.3582	4.9000e-004		0.0643	0.0643		0.0641	0.0641	0.0000	192.9234	192.9234	0.0181	3.2600e-003	194.3130

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0180	0.0000	9.8000e-004	0.0000		0.0124	0.0124		0.0123	0.0123	0.0000	177.6304	177.6304	3.4000e-003	3.2600e-003	178.7114
Landscaping	0.2817	0.1078	9.3572	4.9000e-004		0.0519	0.0519		0.0519	0.0519	0.0000	15.2930	15.2930	0.0147	0.0000	15.6015
Total	**10.9752**	**0.1078**	**9.3582**	**4.9000e-004**		**0.0643**	**0.0643**		**0.0641**	**0.0641**	**0.0000**	**192.9234**	**192.9234**	**0.0181**	**3.2600e-003**	**194.3130**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	1.6226					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	9.0530					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0180	0.0000	9.8000e-004	0.0000		0.0124	0.0124		0.0123	0.0123	0.0000	177.6304	177.6304	3.4000e-003	3.2600e-003	178.7114
Landscaping	0.2817	0.1078	9.3572	4.9000e-004		0.0519	0.0519		0.0519	0.0519	0.0000	15.2930	15.2930	0.0147	0.0000	15.6015
Total	**10.9752**	**0.1078**	**9.3582**	**4.9000e-004**		**0.0643**	**0.0643**		**0.0641**	**0.0641**	**0.0000**	**192.9234**	**192.9234**	**0.0181**	**3.2600e-003**	**194.3130**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

Use Water Efficient Landscaping

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	85.4662	2.1844	0.0528	147.6903

Unmitigated	111.8167	2.7309	0.0660	189.6392

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.45454 / 3.74026	3.2283	0.0477	1.1800e-003	4.5940
Single Family Housing	82.0941 / 51.755	108.5884	2.6833	0.0649	185.0452
Total		**111.8167**	**2.7309**	**0.0661**	**189.6392**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Elementary School	1.16364 / 2.9922	2.5132	0.0381	9.4000e-004	3.6052
Single Family Housing	65.6753 / 41.404	82.9530	2.1462	0.0518	144.0852
Total		**85.4662**	**2.1844**	**0.0528**	**147.6904**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	329.4909	19.4724	0.0000	738.4103
Unmitigated	329.4909	19.4724	0.0000	738.4103

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133

Single Family Housing	1513.68	307.2634	18.1587	0.0000	688.5970
Total		**329.4909**	**19.4724**	**0.0000**	**738.4103**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Elementary School	109.5	22.2275	1.3136	0.0000	49.8133
Single Family Housing	1513.68	307.2634	18.1587	0.0000	688.5970
Total		**329.4909**	**19.4724**	**0.0000**	**738.4103**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

Newark Area 4 Golf Course with Site Fill

Alameda County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Golf Course	140.00	Acre	140.00	20,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	63
Climate Zone	5			**Operational Year**	2025
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	291	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Assume PG&E Rate for post 2020

Land Use - Square footage is club house up to 20,000 sf

Construction Phase - Based on 4-year grading plan for all of Site 4 and assume 1 year to construct buildings/infrastructure

Off-road Equipment -

Off-road Equipment - Minimal use of cranes and welders

Grading - Import of 2,100,000 cy of soil material

Trips and VMT - Assumed 10-mile haul trip near Fremont

Architectural Coating - Assume low VOC paints per BAAQMD Regs

Vehicle Trips -

Woodstoves -

Consumer Products - No consumer products for non-residential land uses

Area Coating -

Energy Use - Used default

Construction Off-road Equipment Mitigation - Tier 3 mobile equipment, Tier 4 portable equipment and BMPs

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 3
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	220.00	30.00
tblConstructionPhase	NumDays	3,100.00	220.00
tblConstructionPhase	NumDays	310.00	1,040.00
tblConstructionPhase	NumDays	220.00	10.00
tblConsumerProducts	ROG_EF	2.14E-05	1E-09
tblGrading	AcresOfGrading	2,600.00	140.00
tblGrading	MaterialImported	0.00	2,100,000.00
tblLandUse	LandUseSquareFeet	6,098,400.00	20,000.00
tblOffRoadEquipment	UsageHours	7.00	1.00
tblOffRoadEquipment	UsageHours	8.00	1.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	291
tblProjectCharacteristics	OperationalYear	2014	2025
tblTripsAndVMT	HaulingTripLength	20.00	10.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	1.3959	15.1988	12.8771	0.0185	3.9414	0.5656	4.5070	1.9169	0.5204	2.4372	0.0000	1,721.1263	1,721.1263	0.2390	0.0000	1,726.1443
2016	1.2911	13.9898	12.2172	0.0184	3.9414	0.5199	4.4613	1.9169	0.4783	2.3951	0.0000	1,700.7147	1,700.7147	0.2376	0.0000	1,705.7049
2017	1.2172	12.8375	11.7025	0.0184	3.9411	0.4770	4.4181	1.9168	0.4389	2.3556	0.0000	1,665.7075	1,665.7075	0.2363	0.0000	1,670.6698
2018	1.0887	11.1366	10.8793	0.0182	3.9406	0.4064	4.3470	1.9166	0.3739	2.2905	0.0000	1,627.7810	1,627.7810	0.2351	0.0000	1,632.7173
2019	0.2997	1.7729	1.6816	2.5500e-003	0.0109	0.1161	0.1270	2.9500e-003	0.1090	0.1120	0.0000	222.6575	222.6575	0.0497	0.0000	223.7004
Total	**5.2926**	**54.9356**	**49.3576**	**0.0760**	**15.7754**	**2.0850**	**17.8604**	**7.6701**	**1.9204**	**9.5905**	**0.0000**	**6,937.9870**	**6,937.9870**	**0.9976**	**0.0000**	**6,958.9367**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e

Year	tons/yr										MT/yr					
2015	0.7092	8.7695	11.1941	0.0185	2.1782	0.2422	2.4204	0.5377	0.2366	0.7743	0.0000	1,721.1254	1,721.1254	0.2390	0.0000	1,726.1433
2016	0.6429	8.1129	10.7563	0.0184	2.1782	0.2248	2.4031	0.5377	0.2206	0.7584	0.0000	1,700.7138	1,700.7138	0.2376	0.0000	1,705.7040
2017	0.6210	7.6619	10.5505	0.0184	2.1779	0.2178	2.3958	0.5376	0.2142	0.7518	0.0000	1,665.7066	1,665.7066	0.2363	0.0000	1,670.6689
2018	0.5994	7.2850	10.3166	0.0182	2.1775	0.2165	2.3939	0.5375	0.2128	0.7503	0.0000	1,627.7801	1,627.7801	0.2351	0.0000	1,632.7164
2019	0.1568	0.9406	1.7372	2.5500e-003	0.0109	0.0601	0.0710	2.9500e-003	0.0601	0.0630	0.0000	222.6572	222.6572	0.0497	0.0000	223.7002
Total	**2.7292**	**32.7698**	**44.5546**	**0.0760**	**8.7228**	**0.9614**	**9.6842**	**2.1536**	**0.9443**	**3.0978**	**0.0000**	**6,937.9831**	**6,937.9831**	**0.9976**	**0.0000**	**6,958.9328**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**48.43**	**40.35**	**9.73**	**0.00**	**44.71**	**53.89**	**45.78**	**71.92**	**50.83**	**67.70**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2995	0.6324	3.0027	7.7900e-003	0.4992	0.0126	0.5118	0.1342	0.0116	0.1458	0.0000	532.1080	532.1080	0.0158	0.0000	532.4387
Waste						0.0000	0.0000		0.0000	0.0000	26.4294	0.0000	26.4294	1.5619	0.0000	59.2300
Water						0.0000	0.0000		0.0000	0.0000	0.0000	77.0623	77.0623	7.6800e-003	1.5900e-003	77.7162
Total	**0.3100**	**0.6324**	**3.0039**	**7.7900e-003**	**0.4992**	**0.0126**	**0.5118**	**0.1342**	**0.0116**	**0.1458**	**26.4294**	**609.1729**	**635.6023**	**1.5854**	**1.5900e-003**	**669.3876**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0106	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.2995	0.6324	3.0027	7.7900e-003	0.4992	0.0126	0.5118	0.1342	0.0116	0.1458	0.0000	532.1080	532.1080	0.0158	0.0000	532.4387
Waste						0.0000	0.0000		0.0000	0.0000	26.4294	0.0000	26.4294	1.5619	0.0000	59.2300
Water						0.0000	0.0000		0.0000	0.0000	0.0000	57.7967	57.7967	5.7600e-003	1.1900e-003	58.2871
Total	**0.3100**	**0.6324**	**3.0039**	**7.7900e-003**	**0.4992**	**0.0126**	**0.5118**	**0.1342**	**0.0116**	**0.1458**	**26.4294**	**589.9073**	**616.3367**	**1.5835**	**1.1900e-003**	**649.9585**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**3.16**	**3.03**	**0.12**	**25.16**	**2.90**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	1/1/2015	12/26/2018	5	1040	
2	Building Construction	Building Construction	12/27/2018	10/30/2019	5	220	
3	Paving	Paving	10/31/2019	11/13/2019	5	10	
4	Architectural Coating	Architectural Coating	11/14/2019	12/25/2019	5	30	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 140

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 30,000; Non-Residential Outdoor: 10,000 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Grading	Excavators	2	8.00	162	0.38
Building Construction	Cranes	1	1.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Paving	Pavers	2	8.00	125	0.42
Paving	Rollers	2	8.00	80	0.38
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Graders	1	8.00	174	0.41
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Paving Equipment	2	8.00	130	0.36
Grading	Scrapers	2	8.00	361	0.48
Building Construction	Welders	1	1.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Grading	8	20.00	0.00	207,638.00	12.40	7.30	10.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	8.00	3.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	12.40	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Use Soil Stabilizer

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2057	0.0000	3.2057	1.7293	0.0000	1.7293	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.8842	10.3156	6.6346	8.0600e-003		0.4962	0.4962		0.4565	0.4565	0.0000	767.8908	767.8908	0.2293	0.0000	772.7050
Total	**0.8842**	**10.3156**	**6.6346**	**8.0600e-003**	**3.2057**	**0.4962**	**3.7019**	**1.7293**	**0.4565**	**2.1858**	**0.0000**	**767.8908**	**767.8908**	**0.2293**	**0.0000**	**772.7050**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.5005	4.8667	6.0825	0.0101	0.7120	0.0692	0.7812	0.1813	0.0637	0.2449	0.0000	930.9198	930.9198	8.3600e-003	0.0000	931.0954
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	0.0165	0.1600	2.8000e-004	0.0237	2.2000e-004	0.0239	6.3000e-003	2.0000e-004	6.5000e-003	0.0000	22.3156	22.3156	1.3400e-003	0.0000	22.3438
Total	**0.5117**	**4.8832**	**6.2425**	**0.0104**	**0.7357**	**0.0695**	**0.8051**	**0.1876**	**0.0639**	**0.2514**	**0.0000**	**953.2355**	**953.2355**	**9.7000e-003**	**0.0000**	**953.4392**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4426	0.0000	1.4426	0.3502	0.0000	0.3502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1974	3.8863	4.9516	8.0600e-003		0.1727	0.1727		0.1727	0.1727	0.0000	767.8899	767.8899	0.2293	0.0000	772.7041
Total	**0.1974**	**3.8863**	**4.9516**	**8.0600e-003**	**1.4426**	**0.1727**	**1.6153**	**0.3502**	**0.1727**	**0.5229**	**0.0000**	**767.8899**	**767.8899**	**0.2293**	**0.0000**	**772.7041**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.5005	4.8667	6.0825	0.0101	0.7120	0.0692	0.7812	0.1813	0.0637	0.2449	0.0000	930.9198	930.9198	8.3600e-003	0.0000	931.0954
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0112	0.0165	0.1600	2.8000e-004	0.0237	2.2000e-004	0.0239	6.3000e-003	2.0000e-004	6.5000e-003	0.0000	22.3156	22.3156	1.3400e-003	0.0000	22.3438
Total	**0.5117**	**4.8832**	**6.2425**	**0.0104**	**0.7357**	**0.0695**	**0.8051**	**0.1876**	**0.0639**	**0.2514**	**0.0000**	**953.2355**	**953.2355**	**9.7000e-003**	**0.0000**	**953.4392**

3.2 Grading - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2057	0.0000	3.2057	1.7293	0.0000	1.7293	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.8456	9.7632	6.4124	8.0500e-003		0.4677	0.4677		0.4303	0.4303	0.0000	759.4542	759.4542	0.2291	0.0000	764.2649
Total	**0.8456**	**9.7632**	**6.4124**	**8.0500e-003**	**3.2057**	**0.4677**	**3.6735**	**1.7293**	**0.4303**	**2.1597**	**0.0000**	**759.4542**	**759.4542**	**0.2291**	**0.0000**	**764.2649**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4355	4.2119	5.6622	0.0101	0.7120	0.0519	0.7639	0.1813	0.0478	0.2290	0.0000	919.7114	919.7114	7.3300e-003	0.0000	919.8653
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9900e-003	0.0148	0.1426	2.8000e-004	0.0237	2.0000e-004	0.0239	6.3000e-003	1.9000e-004	6.4900e-003	0.0000	21.5491	21.5491	1.2200e-003	0.0000	21.5747
Total	**0.4455**	**4.2267**	**5.8047**	**0.0104**	**0.7357**	**0.0521**	**0.7878**	**0.1876**	**0.0479**	**0.2355**	**0.0000**	**941.2605**	**941.2605**	**8.5500e-003**	**0.0000**	**941.4400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4426	0.0000	1.4426	0.3502	0.0000	0.3502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1974	3.8863	4.9516	8.0500e-003		0.1727	0.1727		0.1727	0.1727	0.0000	759.4533	759.4533	0.2291	0.0000	764.2640
Total	**0.1974**	**3.8863**	**4.9516**	**8.0500e-003**	**1.4426**	**0.1727**	**1.6153**	**0.3502**	**0.1727**	**0.5229**	**0.0000**	**759.4533**	**759.4533**	**0.2291**	**0.0000**	**764.2640**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4355	4.2119	5.6622	0.0101	0.7120	0.0519	0.7639	0.1813	0.0478	0.2290	0.0000	919.7114	919.7114	7.3300e-003	0.0000	919.8653
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.9900e-003	0.0148	0.1426	2.8000e-004	0.0237	2.0000e-004	0.0239	6.3000e-003	1.9000e-004	6.4900e-003	0.0000	21.5491	21.5491	1.2200e-003	0.0000	21.5747
Total	**0.4455**	**4.2267**	**5.8047**	**0.0104**	**0.7357**	**0.0521**	**0.7878**	**0.1876**	**0.0479**	**0.2355**	**0.0000**	**941.2605**	**941.2605**	**8.5500e-003**	**0.0000**	**941.4400**

3.2 Grading - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2057	0.0000	3.2057	1.7293	0.0000	1.7293	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.7929	9.0470	6.0847	8.0200e-003		0.4312	0.4312		0.3967	0.3967	0.0000	744.5610	744.5610	0.2281	0.0000	749.3517
Total	**0.7929**	**9.0470**	**6.0847**	**8.0200e-003**	**3.2057**	**0.4312**	**3.6370**	**1.7293**	**0.3967**	**2.1261**	**0.0000**	**744.5610**	**744.5610**	**0.2281**	**0.0000**	**749.3517**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4155	3.7773	5.4916	0.0101	0.7118	0.0456	0.7574	0.1812	0.0419	0.2231	0.0000	900.4977	900.4977	7.0600e-003	0.0000	900.6459
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8100e-003	0.0132	0.1262	2.8000e-004	0.0236	1.9000e-004	0.0238	6.2800e-003	1.8000e-004	6.4500e-003	0.0000	20.6489	20.6489	1.1100e-003	0.0000	20.6722
Total	**0.4243**	**3.7905**	**5.6178**	**0.0103**	**0.7354**	**0.0458**	**0.7812**	**0.1875**	**0.0421**	**0.2296**	**0.0000**	**921.1465**	**921.1465**	**8.1700e-003**	**0.0000**	**921.3181**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4426	0.0000	1.4426	0.3502	0.0000	0.3502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1967	3.8714	4.9326	8.0200e-003		0.1720	0.1720		0.1720	0.1720	0.0000	744.5601	744.5601	0.2281	0.0000	749.3509
Total	**0.1967**	**3.8714**	**4.9326**	**8.0200e-003**	**1.4426**	**0.1720**	**1.6146**	**0.3502**	**0.1720**	**0.5222**	**0.0000**	**744.5601**	**744.5601**	**0.2281**	**0.0000**	**749.3509**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.4155	3.7773	5.4916	0.0101	0.7118	0.0456	0.7574	0.1812	0.0419	0.2231	0.0000	900.4977	900.4977	7.0600e-003	0.0000	900.6459
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8100e-003	0.0132	0.1262	2.8000e-004	0.0236	1.9000e-004	0.0238	6.2800e-003	1.8000e-004	6.4500e-003	0.0000	20.6489	20.6489	1.1100e-003	0.0000	20.6722
Total	**0.4243**	**3.7905**	**5.6178**	**0.0103**	**0.7354**	**0.0458**	**0.7812**	**0.1875**	**0.0421**	**0.2296**	**0.0000**	**921.1465**	**921.1465**	**8.1700e-003**	**0.0000**	**921.3181**

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.2057	0.0000	3.2057	1.7293	0.0000	1.7293	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.6824	7.6799	5.4576	7.9600e-003		0.3597	0.3597		0.3309	0.3309	0.0000	727.0648	727.0648	0.2264	0.0000	731.8180
Total	**0.6824**	**7.6799**	**5.4576**	**7.9600e-003**	**3.2057**	**0.3597**	**3.5654**	**1.7293**	**0.3309**	**2.0602**	**0.0000**	**727.0648**	**727.0648**	**0.2264**	**0.0000**	**731.8180**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3958	3.4194	5.2878	9.9500e-003	0.7113	0.0448	0.7561	0.1810	0.0412	0.2222	0.0000	878.0759	878.0759	7.0600e-003	0.0000	878.2241
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7500e-003	0.0118	0.1117	2.8000e-004	0.0234	1.8000e-004	0.0236	6.2300e-003	1.7000e-004	6.4000e-003	0.0000	19.7290	19.7290	1.0100e-003	0.0000	19.7503
Total	**0.4035**	**3.4312**	**5.3995**	**0.0102**	**0.7348**	**0.0449**	**0.7797**	**0.1873**	**0.0413**	**0.2286**	**0.0000**	**897.8049**	**897.8049**	**8.0700e-003**	**0.0000**	**897.9744**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					1.4426	0.0000	1.4426	0.3502	0.0000	0.3502	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1952	3.8416	4.8947	7.9600e-003		0.1707	0.1707		0.1707	0.1707	0.0000	727.0639	727.0639	0.2263	0.0000	731.8172
Total	**0.1952**	**3.8416**	**4.8947**	**7.9600e-003**	**1.4426**	**0.1707**	**1.6133**	**0.3502**	**0.1707**	**0.5209**	**0.0000**	**727.0639**	**727.0639**	**0.2263**	**0.0000**	**731.8172**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.3958	3.4194	5.2878	9.9500e-003	0.7113	0.0448	0.7561	0.1810	0.0412	0.2222	0.0000	878.0759	878.0759	7.0600e-003	0.0000	878.2241
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7500e-003	0.0118	0.1117	2.8000e-004	0.0234	1.8000e-004	0.0236	6.2300e-003	1.7000e-004	6.4000e-003	0.0000	19.7290	19.7290	1.0100e-003	0.0000	19.7503
Total	**0.4035**	**3.4312**	**5.3995**	**0.0102**	**0.7348**	**0.0449**	**0.7797**	**0.1873**	**0.0413**	**0.2286**	**0.0000**	**897.8049**	**897.8049**	**8.0700e-003**	**0.0000**	**897.9744**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.8000e-003	0.0252	0.0211	3.0000e-005		1.7700e-003	1.7700e-003		1.6600e-003	1.6600e-003	0.0000	2.7248	2.7248	6.4000e-004	0.0000	2.7383
Total	**2.8000e-003**	**0.0252**	**0.0211**	**3.0000e-005**		**1.7700e-003**	**1.7700e-003**		**1.6600e-003**	**1.6600e-003**	**0.0000**	**2.7248**	**2.7248**	**6.4000e-004**	**0.0000**	**2.7383**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.7000e-004	5.9000e-004	0.0000	3.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.0948	0.0948	0.0000	0.0000	0.0948
Worker	4.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0918	0.0918	0.0000	0.0000	0.0919
Total	**9.0000e-005**	**4.2000e-004**	**1.1100e-003**	**0.0000**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**4.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.1865**	**0.1865**	**0.0000**	**0.0000**	**0.1866**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.0000e-004	0.0118	0.0214	3.0000e-005		7.8000e-004	7.8000e-004		7.8000e-004	7.8000e-004	0.0000	2.7248	2.7248	6.4000e-004	0.0000	2.7383
Total	**6.0000e-004**	**0.0118**	**0.0214**	**3.0000e-005**		**7.8000e-004**	**7.8000e-004**		**7.8000e-004**	**7.8000e-004**	**0.0000**	**2.7248**	**2.7248**	**6.4000e-004**	**0.0000**	**2.7383**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.0000e-005	3.7000e-004	5.9000e-004	0.0000	3.0000e-005	1.0000e-005	3.0000e-005	1.0000e-005	1.0000e-005	1.0000e-005	0.0000	0.0948	0.0948	0.0000	0.0000	0.0948
Worker	4.0000e-005	5.0000e-005	5.2000e-004	0.0000	1.1000e-004	0.0000	1.1000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.0918	0.0918	0.0000	0.0000	0.0919
Total	**9.0000e-005**	**4.2000e-004**	**1.1100e-003**	**0.0000**	**1.4000e-004**	**1.0000e-005**	**1.4000e-004**	**4.0000e-005**	**1.0000e-005**	**4.0000e-005**	**0.0000**	**0.1865**	**0.1865**	**0.0000**	**0.0000**	**0.1866**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6423	1.5034	2.2100e-003		0.1097	0.1097		0.1030	0.1030	0.0000	194.8987	194.8987	0.0458	0.0000	195.8598
Total	**0.1785**	**1.6423**	**1.5034**	**2.2100e-003**		**0.1097**	**0.1097**		**0.1030**	**0.1030**	**0.0000**	**194.8987**	**194.8987**	**0.0458**	**0.0000**	**195.8598**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1500e-003	0.0244	0.0405	8.0000e-005	2.1000e-003	3.7000e-004	2.4700e-003	6.0000e-004	3.4000e-004	9.4000e-004	0.0000	6.7358	6.7358	5.0000e-005	0.0000	6.7368
Worker	2.3700e-003	3.6000e-003	0.0341	9.0000e-005	7.8800e-003	6.0000e-005	7.9400e-003	2.1000e-003	6.0000e-005	2.1500e-003	0.0000	6.3992	6.3992	3.2000e-004	0.0000	6.4059
Total	**5.5200e-003**	**0.0280**	**0.0746**	**1.7000e-004**	**9.9800e-003**	**4.3000e-004**	**0.0104**	**2.7000e-003**	**4.0000e-004**	**3.0900e-003**	**0.0000**	**13.1350**	**13.1350**	**3.7000e-004**	**0.0000**	**13.1427**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0435	0.8549	1.5463	2.2100e-003		0.0566	0.0566		0.0566	0.0566	0.0000	194.8985	194.8985	0.0458	0.0000	195.8596
Total	**0.0435**	**0.8549**	**1.5463**	**2.2100e-003**		**0.0566**	**0.0566**		**0.0566**	**0.0566**	**0.0000**	**194.8985**	**194.8985**	**0.0458**	**0.0000**	**195.8596**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.1500e-003	0.0244	0.0405	8.0000e-005	2.1000e-003	3.7000e-004	2.4700e-003	6.0000e-004	3.4000e-004	9.4000e-004	0.0000	6.7358	6.7358	5.0000e-005	0.0000	6.7368
Worker	2.3700e-003	3.6000e-003	0.0341	9.0000e-005	7.8800e-003	6.0000e-005	7.9400e-003	2.1000e-003	6.0000e-005	2.1500e-003	0.0000	6.3992	6.3992	3.2000e-004	0.0000	6.4059
Total	**5.5200e-003**	**0.0280**	**0.0746**	**1.7000e-004**	**9.9800e-003**	**4.3000e-004**	**0.0104**	**2.7000e-003**	**4.0000e-004**	**3.0900e-003**	**0.0000**	**13.1350**	**13.1350**	**3.7000e-004**	**0.0000**	**13.1427**

3.4 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.1300e-003	0.0747	0.0718	1.1000e-004		4.0500e-003	4.0500e-003		3.7200e-003	3.7200e-003	0.0000	10.0197	10.0197	3.1700e-003	0.0000	10.0863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.1300e-003**	**0.0747**	**0.0718**	**1.1000e-004**		**4.0500e-003**	**4.0500e-003**		**3.7200e-003**	**3.7200e-003**	**0.0000**	**10.0197**	**10.0197**	**3.1700e-003**	**0.0000**	**10.0863**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	3.1000e-004	2.9500e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5529	0.5529	3.0000e-005	0.0000	0.5535
Total	**2.1000e-004**	**3.1000e-004**	**2.9500e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5529**	**0.5529**	**3.0000e-005**	**0.0000**	**0.5535**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.7500e-003	0.0553	0.0846	1.1000e-004		2.9900e-003	2.9900e-003		2.9900e-003	2.9900e-003	0.0000	10.0197	10.0197	3.1700e-003	0.0000	10.0863
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.7500e-003**	**0.0553**	**0.0846**	**1.1000e-004**		**2.9900e-003**	**2.9900e-003**		**2.9900e-003**	**2.9900e-003**	**0.0000**	**10.0197**	**10.0197**	**3.1700e-003**	**0.0000**	**10.0863**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	3.1000e-004	2.9500e-003	1.0000e-005	6.8000e-004	1.0000e-005	6.9000e-004	1.8000e-004	0.0000	1.9000e-004	0.0000	0.5529	0.5529	3.0000e-005	0.0000	0.5535
Total	**2.1000e-004**	**3.1000e-004**	**2.9500e-003**	**1.0000e-005**	**6.8000e-004**	**1.0000e-005**	**6.9000e-004**	**1.8000e-004**	**0.0000**	**1.9000e-004**	**0.0000**	**0.5529**	**0.5529**	**3.0000e-005**	**0.0000**	**0.5535**

3.5 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1043					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0000e-003	0.0275	0.0276	4.0000e-005		1.9300e-003	1.9300e-003		1.9300e-003	1.9300e-003	0.0000	3.8299	3.8299	3.2000e-004	0.0000	3.8367
Total	**0.1083**	**0.0275**	**0.0276**	**4.0000e-005**		**1.9300e-003**	**1.9300e-003**		**1.9300e-003**	**1.9300e-003**	**0.0000**	**3.8299**	**3.8299**	**3.2000e-004**	**0.0000**	**3.8367**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.1800e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2212	0.2212	1.0000e-005	0.0000	0.2214
Total	**8.0000e-005**	**1.2000e-004**	**1.1800e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2214**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1043					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.5000e-004	1.9300e-003	0.0275	4.0000e-005		6.0000e-005	6.0000e-005		6.0000e-005	6.0000e-005	0.0000	3.8299	3.8299	3.2000e-004	0.0000	3.8367
Total	**0.1047**	**1.9300e-003**	**0.0275**	**4.0000e-005**		**6.0000e-005**	**6.0000e-005**		**6.0000e-005**	**6.0000e-005**	**0.0000**	**3.8299**	**3.8299**	**3.2000e-004**	**0.0000**	**3.8367**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-005	1.2000e-004	1.1800e-003	0.0000	2.7000e-004	0.0000	2.7000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2212	0.2212	1.0000e-005	0.0000	0.2214
Total	**8.0000e-005**	**1.2000e-004**	**1.1800e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.7000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2212**	**0.2212**	**1.0000e-005**	**0.0000**	**0.2214**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2995	0.6324	3.0027	7.7900e-003	0.4992	0.0126	0.5118	0.1342	0.0116	0.1458	0.0000	532.1080	532.1080	0.0158	0.0000	532.4387
Unmitigated	0.2995	0.6324	3.0027	7.7900e-003	0.4992	0.0126	0.5118	0.1342	0.0116	0.1458	0.0000	532.1080	532.1080	0.0158	0.0000	532.4387

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Golf Course	705.60	814.80	823.20	1,333,773	1,333,773
Total	705.60	814.80	823.20	1,333,773	1,333,773

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Golf Course	9.50	7.30	7.30	33.00	48.00	19.00	52	39	9

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.540056	0.061957	0.166386	0.109317	0.030556	0.004563	0.019776	0.054742	0.001819	0.003581	0.005670	0.000186	0.001392

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Land Use	kBTU/yr	tons/yr										MT/yr					
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Golf Course	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Golf Course	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

Category	tons/yr										MT/yr					
Mitigated	0.0106	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003
Unmitigated	0.0106	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003
Total	**0.0106**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5000e-003**	**2.5000e-003**	**1.0000e-005**	**0.0000**	**2.6400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0104					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.2000e-004	1.0000e-005	1.2800e-003	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	2.5000e-003	2.5000e-003	1.0000e-005	0.0000	2.6400e-003
Total	**0.0106**	**1.0000e-005**	**1.2800e-003**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**2.5000e-003**	**2.5000e-003**	**1.0000e-005**	**0.0000**	**2.6400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	57.7967	5.7600e-003	1.1900e-003	58.2871
Unmitigated	77.0623	7.6800e-003	1.5900e-003	77.7162

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 166.807	77.0623	7.6800e-003	1.5900e-003	77.7162
Total		**77.0623**	**7.6800e-003**	**1.5900e-003**	**77.7162**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Golf Course	0 / 125.106	57.7967	5.7600e-003	1.1900e-003	58.2871
Total		**57.7967**	**5.7600e-003**	**1.1900e-003**	**58.2871**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	26.4294	1.5619	0.0000	59.2300
Unmitigated	26.4294	1.5619	0.0000	59.2300

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	130.2	26.4294	1.5619	0.0000	59.2300
Total		**26.4294**	**1.5619**	**0.0000**	**59.2300**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Golf Course	130.2	26.4294	1.5619	0.0000	59.2300
Total		**26.4294**	**1.5619**	**0.0000**	**59.2300**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Vegetation

SECTION 5.0 COPIES OF THE COMMENT LETTERS RECEIVED ON THE DRAFT EIR

The original comment letters received on the Recirculated Draft EIR are provided on the following pages.

United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
San Francisco Bay National Wildlife Refuge Complex
1 Marshlands Road
Fremont, California 94555

SEP 19 2014

Terrence Grindall
Community Development
Director City of Newark
Newark, California 94560-3796

SUBJECT: Comments regarding Draft Recirculated Environmental Impact Report (REIR) for the Newark Areas 3 and 4 Specific Plan

Dear Mr.Grindall:

The Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) appreciates the opportunity to review the REIR for the Newark Areas 3 and 4 Specific Plan. We reiterate our previous comment that Area 4 should not be developed. The project proposal prescribes costly artificial flood protection that could be more economically created through restoring portions of the project area to its natural wetland habitat, thereby ensuring protection from increasing storm events and sea-level rise as a result of global climate change. Moreover, Area 4 was identified by Congress in 1990 as important wildlife habitat that should be included within the Refuge. Furthermore, the ponds adjacent to Area 4 are planned for restoration to tidal influence. Area 4 could provide valuable ecotonal habitat transitioning from restored wetlands to upland areas. We would like to reiterate and introduce a number of points as follows.

- The Bayland Ecosystem Habitat Goals Project (1999) estimates indicate a loss of 79 percent of tidal marsh habitat since the 1800s, and only 8 percent of the original pre-historical tidal marshes remain. The project's proposal simply exacerbates those losses of historic tidal marsh. With the anticipated fill of wetlands or other potential impacts to endangered species habitat on the project site, future environmental review should include Endangered Species Act Section 7 consultation with U.S. Fish and Wildlife Service, Endangered Species Program at the Sacramento Fish and Wildlife Office, (916) 414-6600. While the REIR considers those wetland areas to be filled as poor or marginal quality due to intensive and ongoing agricultural disturbance, we believe otherwise. Discontinuing these agricultural activities and removing barriers to the natural flow of bay water has high potential of restoring these areas to high quality wetland habitat for endangered species like the salt marsh harvest mouse.

- Area 4 has great potential to provide natural and economical flood protection from sea-level rise, extreme storm events, and 100-year flooding potential. Vermeer and Rahmstorf (2009)[1] developed a sea-level rise model projecting increases from 0.75-1.9 meters by 2100. Parris et al. (2012:10)[2] expressed "very high confidence (>9 in 10 chance) that global mean sea level will rise at least 0.2 meters (8 inches) and no more than 2.0 meters (6.6 feet) by 2100. Based on the U.S. Fish and Wildlife Service report, "Planning for Climate Change on the National Wildlife Refuge

[1] Vermeer, M., and S. Rahmstorf. 2009. Global sea level linked to global temperature. *Proceedings of the National Academy of Sciences of the United States of America* 106:21527-21532.

[2] Parris, A., P. Bromirski, V. Burkett, D. Cayan, M. Culver, J. Hall, R. Horton, K. Knuuti, R. Moss, J. Obeysekera, A. Ballenger, and J. Weiss. 2012. *Global sea level rise scenarios for the US National Climate Assessment.* NOAA Technical Memo OAR CP0-1. National Oceanic and Atmospheric Administration, Washington, DC. 37 pp.

System", the Service is directed to explicitly plan for 1-1.5 meter eustatic sea-level rise by the year 2100. We do not believe the fill estimates are sufficient to address these sea-level rise estimates.

- We do not agree with the REIR's findings that the project is consistent with the intent of our Refuge. While Sub Area E is not proposed for development, it is not specifically proposed for wetland restoration or enhancement. Sub Area C (also within our approved acquisition boundary) is planned for residential development. A third of Sub Area C is considered wetland, and thus has the potential to provide endangered species habitat.

- The wetland mitigation ratio of 1.5:1 is too low, and should be a minimum of 2:1. We believe much of the lands that are currently in agricultural production can be restored to wetland habitat. In addition upland ecotone needs to be considered in wetland mitigation in order to provide refugia during high tide and extreme storm events. It is also not clear how on-site mitigated wetland habitat will be protected in perpetuity. Funding and a long-term plan for these areas need to be clarified. The REIR also noted that these wetland mitigation areas may be transferred to us. This is the first time we have any knowledge of this proposal.

- With regard to invasive plant species, we recommend that the project incorporate priority invasive plants and management protocols as identified by the California Invasive Plant Council. Control of invasive plant species needs to be conducted and monitored beyond the 3-year timeframe suggested in the REIR.

- Why were no cumulative biological impacts assessed in the REIR?

Thank you for considering our comments. We recommend that you to contact the U.S. Fish and Wildlife Service Endangered Species Division in Sacramento to discuss Section 7 consultation required of any impacts to listed species habitat. Please keep us informed of the EIR process, especially any future opportunities to provide comment. If you have questions regarding our comments, please contact Winnie Chan, refuge planner, at 510-792-0222.

Sincerely,

Acting for Eric Mruz
Refuge Manager,
Don Edwards San Francisco Bay
National Wildlife Refuge

Cc: Ryan Olah, USFWS
Brian Wines, SFB RWQCB
Carin High, Citizens Committee to Complete the Refuge

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY EDMUND G. BROWN Jr., Governor

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Serious Drought. Help save water!

September 18, 2014

ALA880675
ALA/880/PM VAR
SCH# 2007052065

Mr. Terrence Grindall
Community Development Department
City of Newark
37101 Newark Boulevard
Newark, CA 94560

Dear Mr. Grindall:

Newark Areas 3 and 4 Specific Plan Project – Draft Recirculated Environmental Impact Report (DREIR)

Thank you for continuing to include the California Department of Transportation (Caltrans) in the environmental review process for the project referenced above. Please refer to our comments on the Notice of Preparation in a letter dated June 6, 2007. We have reviewed the DREIR and have the following comments to offer.

Traffic Impacts
One of Caltrans' ongoing responsibilities is to collaborate with local agencies to avoid, eliminate, or reduce to insignificance potential adverse impacts by local development on State highways. The following are comments on the potential traffic impacts from this project.

1. The Transportation Impact Analysis (TIA), which was completed in 2009, presents two issues:

   - The counts are at least five years old. Traffic patterns have likely changed, so new counts are needed for a valid traffic study. Caltrans recommends the TIA be based on more recent counts for it to be accurate and valid.

   - The trip generation rates used in TIA are from the 7th Edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual (Manual). The most recent edition of the Manual is the 9th Edition. Caltrans recommends that the rates used for the TIA be taken from the 9th Edition.

2. A 130,000 square feet office complex was included in the Trip Generation Estimates. Note 2 in Table 5 states, "The office component was included as part of the proposed project to

provide a more conservative analysis. However, this office use is an existing land use and not part of the proposed project." Caltrans recommends this statement be further clarified. Why would an *existing* development that generates around 200 peak hour trips be included in the trip generation estimates and its traffic included in the counts for the proposed project?

Lead Agency
As the lead agency, the City of Newark (City) is responsible for all project mitigation, including any needed improvements to State highways. The project's fair share contribution, financing, scheduling, implementation responsibilities and lead agency monitoring should be fully discussed for all proposed mitigation measures. This information should also be presented in the Mitigation Monitoring and Reporting Plan of the environmental document.

Transportation Management Plan (TMP)
If it is determined that traffic restrictions and detours are needed on or affecting State highways, a TMP or construction TIS may be required of the developer for approval by Caltrans prior to construction. Traffic Management Plans must be prepared in accordance with Caltrans' *Manual on Uniform Traffic Control Devices*. Further information is available for download at the following web address:
http://www.dot.ca.gov/hq/traffops/signtech/mutcdsupp/pdf/camutcd2012/Part6.pdf.

Please ensure that such plans are also prepared in accordance with the TMP requirements of the corresponding jurisdictions. For further TMP assistance, please contact the Caltrans District 4 Office of Traffic Management Operations at (510) 286-4579.

Vehicle Trip Reduction
Caltrans commends the City for its ongoing progress in locating needed housing, jobs and neighborhood services near major mass transit centers, with connecting streets configured to facilitate walking and biking. By doing so, the City promotes mass transit use and reducing regional vehicle miles traveled and traffic impacts on the State highways.

We also commend and encourage the City to continue developing Travel Demand Management (TDM) policies to promote usage of nearby public transit lines and reduce vehicle trips on the State Highway System. These policies could include lower parking ratios, car-sharing programs, bicycle parking and showers for residents and employees, and providing transit passes to residents and employees, among others.

Habitat Restoration and Management
Project level activities related to habitat restoration and management should be done in coordination with local and regional Habitat Conservation Plans, and with Caltrans where our programs share stewardship responsibilities for habitats, species, and/or migration routes.

Sea Level Rise
The effects of sea level rise may have impacts on transportation facilities located in the project area. Executive Order (EO) S-13-08 directs State agencies planning construction projects in areas vulnerable to sea level rise to begin planning for potential impacts by considering a range

of sea level rise scenarios for the years 2050 and 2100. Higher water levels may increase erosion rates, change environmental characteristics that affect material durability, lead to increased groundwater levels and change sediment movement along shores and at estuaries and river mouths, as well as affect soil pore pressure at dikes and levees on which transportation facilities are constructed. All these factors must be addressed through geotechnical and hydrological studies conducted in coordination with Caltrans.

Traffic Impact Fees

Please identify traffic impact fees to be used for project mitigation. Development plans should require traffic impact fees based on projected traffic and/or based on associated cost estimates for public transportation facilities necessitated by development. Scheduling and costs associated with planned improvements on State ROW should be listed, in addition to identifying viable funding sources correlated to the pace of improvements for roadway improvements, if any.

Should you have any questions regarding this letter, please contact Brian Brandert of my staff at (510) 286-5505 or brian.brandert@dot.ca.gov.

Sincerely,

ERIK ALM, AICP
District Branch Chief
Local Development - Intergovernmental Review

c: Scott Morgan, State Clearinghouse

San Francisco Bay Conservation and Development Commission
455 Golden Gate Avenue, Suite 10600, San Francisco, California 94102 tel 415 352 3600 fax 415 352 3606

September 18, 2014

Terrence Grindall
Community Development Director
City of Newark
37101 Newark Boulevard
Newark, CA 94560

Via Email: terrence.grindall@newark.org

SUBJECT: Newark Areas 3 & 4 Specific Plan, BCDC Inquiry File No. AL.FT.7025.1

Dear Mr. Grindall:

Thank you for the opportunity to comment on the Recirculated Environmental Impact Report for the Newark Areas 3 & 4 Specific Plan. This letter sets forth the comments of the staff of the BCDC, as distinguished from the Commission itself. The comments set forth below are based on the Commission's enabling legislation, the *McAteer-Petris Act* (MPA), Cal. Government Code § 66600 *et seq.*, the regulations that the Commission has adopted to implement that law (Cal. Code of Regulations, Title 14, Div. 5), and relevant findings and policies of the Commission's *San Francisco Bay Plan* (Bay Plan). As a permitting authority along the San Francisco Bay shoreline, the BCDC is responsible for granting or denying permits for any proposed fill (earth or any other substance or material, including pilings or structures placed on pilings, and floating structures moored for extended periods), extraction of materials or change in use of any water, land or structure within the Commission's jurisdiction.

Jurisdiction and Authority. BCDC's jurisdiction over San Francisco Bay extends over Bay tidal areas up to the mean high tide level, including all sloughs, and in marshlands up to five feet above mean sea level; a shoreline band consisting of territory located between the shoreline of the Bay and 100 feet landward and parallel to the shoreline; salt ponds; managed wetlands (areas diked from the Bay and managed as duck clubs); and certain waterways tributary to the Bay, specifically as mentioned in MPA § 66610(e)(1), "Plummer Creek in Alameda County, to the eastern limits of the saltponds….". In addition to said MPA language staff has determined that the Commission's Bay jurisdiction within the area of the General Plan Tune Up includes "… on Mowry Slough [extending to] culvert at Mowry Avenue bridge crossing" (Inquiry File AL.AA.6516.1 File 5, Lacko, 2004) and "At bend in channel near Plummer Creek" (Inquiry File AL.HY.6801.1 FILE 3, Permit M81-14)

Furthermore, as has been previously noted in other letters to the City of Newark, BCDC maintains it likely has managed wetlands authority in some parts of the project area (the former Pintail and Whistling Wing Duck Clubs). Any project proposed within the Commission's managed wetlands jurisdiction must be authorized by the Commission pursuant to a Commission permit, and the Commission will use relevant provisions of the MPA as well as the managed wetlands policy, along with other relevant policies in the Bay Plan, to evaluate the project. The Commission can grant a permit for a project if it finds that the project is either (1) necessary to the health, safety or welfare of the public in the entire Bay Area, or (2) is consistent with the provisions of the MPA and the Bay Plan.

Climate Change and Safety of Fills. It appears that some areas within the plan area and along the adjacent shoreline that are within the Commission's jurisdiction may be vulnerable to projected sea level rise. Staff recommends that a robust analysis of the effects of sea level rise based on the latest data from the National Oceanic Atmospheric Administration Coastal Services Center on sea level rise vulnerability be used, and that the latest science-based sea level rise projections for the area be utilized when considering the vulnerability of the project areas to sea level rise.

The Bay Plan policies on the safety of fills state that, "Adequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project. " Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies on the safety of fills and shoreline protection and it is likely that many of the proposed structures within the Specific Plans would be expected to last until 2100. These policies apply to proposals for fill within the Commission's Managed Wetland jurisdiction.

Public Access. Section 66602 of the McAteer-Petris Act states, in part, that "existing public access to the shoreline and waters of the San Francisco Bay is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided." Furthermore, the McAteer-Petris Act authorizes the placement of fill in the Bay only for water-oriented uses or minor fill for improving shoreline appearance or public access. The MPA, at section 66602.1, also requires that in managed wetlands "in any such areas are authorized to be developed and used for other purposes, the development should provide the maximum public access to the Bay, consistent with the project..."

Development policies for areas identified in the FEIR that are within BCDC's jurisdiction should be consistent with BCDC's public access requirements and not preclude, "maximum feasible access to and along the waterfront and on any permitted fills should be provided in and through every new development in the Bay or on the shoreline....and maximum access, consistent with the project" in areas of managed wetlands approved for development.

Fill. Section 66605 of the McAteer-Petris Act states that fill in San Francisco Bay should only be authorized when: (1) the public benefits from the fill clearly exceed the public detriment from the loss of water area; (2) no upland alternative location is available for the project purpose; (3) the fill is the minimum amount necessary to achieve the purpose of the fill; (4) the fill will minimize harmful effects to the Bay; and (5) that the fill should be constructed in accordance with sound safety standards. If the proposed project would involve fill in the Bay, the project proponent will need to show that fill associated with the project meets all of the above listed criteria.

Water Quality. The Bay Plan's policies on water quality state that, "new projects should be sited, designed, constructed and maintained to prevent, or if prevention is infeasible, to minimize the discharge of pollutants to the Bay .... " Additionally, in order to protect the Bay from the water quality impacts of nonpoint source pollution, "new development should be sited and designed consistent with standards in municipal storm water permits and state and regional storm water management guidelines .... To offset the impacts from increased impervious areas and land disturbances, vegetated swales, permeable pavement materials, preservation of existing trees and vegetation, planting native vegetation and other appropriate measures should be evaluated and implemented where appropriate .... "

Thank you for your careful consideration of the foregoing comments on the Recirculated Final Environmental Impact Report of Newark Areas 3 and 4 Specific Plan Project. If you have any questions please contact me directly at (415) 352-3667.

Sincerely,

JAVIER DEL CASTILLO
Coastal Planner

JDC/go

cc: Ana Apodaca

ALAMEDA COUNTY WATER DISTRICT

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(510) 668-4200 • FAX (510) 770-1793 • www.acwd.org

September 19, 2014

Terrence Grindall
Assistant City Manager
City of Newark
37101 Newark Boulevard
Newark CA 94560-3796

Dear Mr. Grindall:

Subject: Draft Recirculated Environmental Impact Report for Newark Areas 3 and 4 Specific Plan Project

The Alameda County Water District (ACWD) wishes to thank you for the opportunity to comment on the "Draft Recirculated Environmental Impact Report for Newark Areas 3 and 4 Specific Plan Project."

ACWD has reviewed the Draft Recirculated Environmental Impact Report (REIR) and would appreciate your consideration of the following comments:

1. Utilities and Service Systems – Water Supply:

    a. Water Supply Shortage Emergency: The ACWD service area and the State of California are currently experiencing a water supply shortage emergency. ACWD has taken steps to encourage water use reductions throughout the service area. On March 13, 2014, ACWD declared a water shortage emergency and adopted ACWD Ordinance No. 2014-01, imposing broad water use restrictions, water use prohibitions, and other measures, including restrictions on water use for purposes other than domestic use, public health, and fire protection. These restrictions will remain in place through the end of the water shortage emergency. In addition, ACWD may adopt additional water use restrictions or implement other measures should they become necessary.

b. Water Supply Assessment: California Water Code Section 10910 (from SB 610) requires a Water Supply Assessment (WSA) for projects with water demands at or exceeding the equivalent of 500 residential units. The WSA evaluates the expected future water demands of the service area, including the expected water demands due to the project development, in comparison to the existing and expected future water supply.

   For all developments, ACWD works with the cities in our service area to identify when projects meet this WSA threshold prescribed in the Water Code. Additionally, ACWD reviews all development projects during CEQA (e.g., Draft Mitigated Negative Declarations or Draft Environmental Impact Reports) to compare a project's proposed water demands to ACWD's water demand forecasts.

   Because the Newark Areas 3 & 4 project meets this WSA threshold, in 2008 ACWD prepared a WSA for the Newark Areas 3 & 4. As described in the REIR, the WSA was based on water supply and demand assumptions documented in ACWD's 2006-2010 Urban Water Management Plan (UWMP). A key conclusion of the WSA was that: (1) ACWD had incorporated the future water demands for this site into our demand forecasts; and (2) existing and future water supplies were projected to be adequate for the expected growth due to this project.

   The District-wide water supply and demand assumptions were updated by ACWD in the 2010-2015 UWMP, and based on the 2010-2015 UWMP, in April 2014 ACWD confirmed the validity of the conclusions of the 2008 WSA. However, due to the on-going drought and other factors, ACWD anticipates that the water supply reliability assumptions of its water supply sources may be further revised by the California Department of Water Resources, San Francisco Public Utilities Commission and ACWD's analyses of local hydrologic conditions. In the event that future analyses by ACWD indicates that projected water supplies are not sufficient to meet the needs of the Area 3 and 4 demands, ACWD may impose conditions that go beyond the water supply and conservation measures identified in the REIR and WSA as a condition of water service.

c. Non-Potable Water Supply: On page 305 of the REIR, it is stated that irrigation needs of Areas 3 and 4 will be switched over to reclaimed water service at the time reclaimed water becomes available. It also stated that "potable water and possibly *(emphasis added)* groundwater from an on-site well located within Area 4 will be used for all golf course irrigation and public park needs." In order to reduce demands on the potable water system, the REIR should provide a firm commitment for the use of a non-potable supply (e.g., groundwater) as a source for golf course irrigation and other large landscape demands until such time that reclaimed water becomes available.

2. ACWD Contacts: The following ACWD contacts are provided so that the City can coordinate with ACWD as needed during the CEQA process:

   - Eric Cartwright, Special Assistant to the General Manager, at (510) 668-4206, or by email at eric.cartwright@acwd.com, for coordination regarding water supply issues.

   - Steven Inn, Groundwater Resources Manager at (510) 668-4441, or by email at steven.inn@acwd.com, for coordination regarding ACWD's groundwater resources.

   - Michelle Myers, Well Ordinance Supervisor, at (510) 668-4454, or by email at michelle.myers@acwd.com, for coordination regarding groundwater wells and drilling permits.

   - Ed Stevenson, Development Services Manager, at (510) 668-4472, or by email at ed.stevenson@acwd.com, for coordination regarding public water system infrastructure and water services.

Thank you for the opportunity to comment on the Project at this time.

Sincerely,

Walter L. Wadlow
General Manager

ec/bbm
cc: Robert Shaver, ACWD
Eric Cartwright, ACWD
Thomas Niesar, ACWD
Steven Inn, ACWD
Michelle Myers, ACWD
Ed Stevenson, ACWD

CITIZENS COMMITTEE TO COMPLETE THE REFUGE

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cccrrefuge@gmail.com

Terrance Grindall
Community Development Director
City of Newark
37101 Newark Boulevard
Newark, CA 94560
E-mail: terrence.grindall@newark.org

September 19, 2014

Re: Recirculated Draft Environmental Impact Report (REIR) Newark Areas 3 and 4 Specific Plan Project, August 2014, SCH No. 2007052065

This responds to the REIR for the proposed specific plan for Areas 3 & 4 in Newark, CA. Areas 3 and 4 comprise approximately 850 acres of land (estimates vary from 850 acres to 856 acres within the REIR and Specific Plan) located at the western edge of the City of Newark and bounded on the north by Mowry Avenue, to the east by Cherry Street, to the south by Stevenson Boulevard, and to the west by Mowry Slough.

The Citizens Committee to Complete the Refuge (CCCR) thanks you for the opportunity to review and comment on the REIR for the Area 3 and 4 Specific Plan Project REIR. Attorney Brian Gaffney, Coastal Ecologist and Botanist Dr. Peter Baye, and Wildlife Biologist Jana Sokale have prepared substantive comments on behalf of CCCR and submitted letters under separate cover. Based upon our review of the REIR we find it contains serious omissions, inaccuracies, and flaws that must be rectified to comply with California Environmental Quality Act (CEQA) requirements. For these reasons, as well as those articulated in the letters submitted by Brian Gaffney, Dr. Peter Baye, and Jana Sokale, Wayne Miller, as well as the letter submitted by San Francisco Baykeeper, and regulatory and resource agencies, we urge the City to correct the fatal flaws of this REIR. These flaws must be rectified and the City must re-circulate a revised document.

REIR Purpose: The REIR states, page S-4:

> For information purposes, this EIR identifies when the analysis is at a project-level, as it is for many of these approvals, and at a program-level, which it is for certain additional approvals necessary to implement development at a site-specific level, chiefly in Area 4...
> ...Analysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans, and any required future environmental review can be deferred until such time as the lead agency is presented with a proposal for a more specific improvement.

1. The REIR then provides a table (pages S-7 to S-10) that is supposed to provide clarity as to what components of the proposed development are evaluated at a "project" or "programmatic" level. This table only serves to further confuse the issue. As just one example, and specific to Area 4, the table lists the Specific Plan as being a "discretionary approval included in project level analysis." What does this mean?

2. How can the Specific Plan, the overarching plan of development for Area 4 (and Area 3), fall under "project level analysis," when analysis of the "physical change in environment," e.g. fill of wetlands within Area 4, falls under the category of "program level analysis?"

REIR text, page S-4 states:

> When, as here, a lead agency anticipates using the tiering process in connection with an EIR for a large-scale planning approval, such as a *specific plan*, detailed, *site-specific information may not be available for all reasonably foreseeable improvements*. *That is true here for the proposed residential and golf course development in Area 4 as well as for the development of a school in Area 3, the design and size of which is not known at this time. Analysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans, and any required future environmental review can be deferred until such time as the lead agency is presented with a proposal for a more specific improvement.* [emphasis added]

This seems to acknowledge that the specific area plan is lacking in specific details for major components of the project.

REIR text on page S-5, only further confuses the issue:

> With respect to elements evaluated at a project level, *it is anticipated that this EIR will be adequate to address the significant environmental impacts of currently pending and future discretionary approvals required for that element to be constructed and operated.* [emphasis added]

3. The salient question is, and has always been, not whether the various mentioned discretionary approvals should be considered a "project" under CEQA (§15378), thus requiring environmental review, but whether the REIR actually includes an adequate disclosure of environmental impacts and their review and mitigation within the current process. The public has the right to know what specific elements of the Specific Area Plan will be subject to additional review and analysis, whether additional mitigation measures will be proposed, and whether there will be an opportunity for additional public comment.

The text of the REIR, page S-10 says specifically:

> In Area 4, the EIR provides a *programmatic level of analysis of the environmental impacts from the construction and operation of new houses and a golf course, including analysis of impacts on wetlands, burrowing owls, salt marsh harvest mice, wandering shrew, water birds, special status plant species, trees, archeological resources, geotechnical resources related to liquefaction, undocumented fill, differential settlement, and corrosive soils, and potential hazardous materials*. Because the analysis is at a programmatic level for Area 4, it is likely that CEQA will require tiering from this EIR to prepare project-level analysis prior to approving a tentative map for residential development or a use permit for a golf course or other recreational activity in Area 4. [emphasis added]

4. Based upon this statement, it is unclear if the level of analysis for the following environmental impacts is believed to be sufficiently detailed, or whether the City intends to conduct additional environmental review for the following environmental impacts for construction of a school in Area 3, residential development in Area 4, or golf course or some other form of recreation in Area 4:

    - aesthetics and visual resources
    - air quality
    - cultural resources (not archaeological)
    - energy
    - hydrology, flooding, and water quality

- hazards and hazardous materials
- land use
- noise
- public services
- water supply and utilities and service systems

Please clarify whether the environmental impacts (bulleted above) will be analyzed in more detail in the future? Please also confirm that additional environmental analysis and detailed information will be provided for the issues identified in the paragraph above.

5. Page 4 of the REIR states that in addition to construction of the school in Area 3, construction and occupation of new residences in Area 4, and construction and operation of a golf course or other recreational facility in Area 4, the construction of the Stevenson Boulevard overcrossing, the Mowry Avenue EVA access and the relocation of the PG&E transmission lines in Area 4 have been analyzed a the programmatic level. Will additional review provide opportunities for public comment under CEQA?

6. With regard to the construction and occupation of new residences in Area 4, is the filing of more than one Tentative Tract Map anticipated? Is submission of a Tentative Tract Map the only trigger for additional environmental review of construction and occupation of new residences within Area 4?

7. Would additional review be triggered for all parcels proposed for residential development within Area 4, or only for those parcels with wetlands? Will parcels that don't have wetlands but support special status species also receive additional environmental review?

8. Please identify if there are triggers for additional CEQA review other than the filing of a Tentative Tract Map, (e.g. Planned Unit Development Permit or Conditional Use Permit) and as important, please indicate whether additional opportunities for public comment under CEQA will be available.

9. Please indicate what assurances can be provided to the public, that as project specific information becomes available, the public will be afforded additional opportunities to provide comment under CEQA.

Introduction: The REIR concisely and adequately describes the requirement of the California Environmental Quality Act (CEQA) to prepare and EIR and the function of an EIR – that it is an "informational document, which will inform public agency decision makers, and the public of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project" §15121(a). Also that certain types of "projects" such as those pertaining to the adoption or amendment of a comprehensive zoning ordinance or local general plan, don't require an EIR be as detailed as an EIR on a specific project that might follow §15146 (b). And that:

> An EIR should be prepared with a sufficient degree of analysis to provide decision makers with information which enable them to make a decision *which intelligently considers environmental consequences*. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the *sufficiency of an EIR is to be reviewed in light of what is reasonably feasible*. Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but *for adequacy, completeness, and a good-faith effort at full disclosure*. [emphasis added]

The REIR fails to meet these requirements as we will discuss in sections to follow.

Reference Availability:

10. To facilitate public review, and to ensure pertinent information is preserved for future decision-makers, staff, regulatory and resource agencies, and the public, all studies and consultant reports referred to in the REIR and relied upon for the identification of environmental impacts, the analysis of those impacts, and mitigation measures proposed to reduce the adverse effects of those impacts, should be grouped together as appendices and attached to this REIR. The REIR references several reports that were included as appendices to the Draft EIR, but does not incorporate them into the current environmental review document. One has to hunt around the City's website to try to track them down. The following documents/reports are referred to in the REIR and should be incorporated into the appendices of the REIR:
    - Appendix A of the DEIR - Newark Areas 3 & 4 Specific Area Plan - shouldn't the REIR instead be referring to Appendix H (of the REIR) instead of referring back to the Specific Plan of the DEIR
    - Appendix B of the DEIR - Congestion Management Analysis - also referred to as the Transportation Impact Analysis
    - Appendix C of the DEIR - Air Quality Analysis
    - Appendix D of the DEIR - Environmental Noise Assessment
    - Appendix E of the DEIR - Biological Resources Report
    - Appendix F of the DEIR - Geotechnical Feasibility Evaluation
    - Appendix G of the DEIR - Hydrology and Water Quality Report
    - Appendix H of the DEIR - Hazardous Materials
    - Appendix I of the DEIR - Water Supply Assessment
    - Appendix J of the DEIR - The NOP and public responses to the NOP

Project Description:

Area 3 is approximately 296 acres and the portion of land bounded by Mowry Avenue, Cherry Street, Stevenson Boulevard, and the Union Pacific Railroad tracks. The general plan designation for this portion of the specific plan is Special Business Park, Public Open Space, and Public Institutional (REIR, page 11). The area is zoned Industrial Technology Park and High Technology Park with Open Space/Parks. The current Specific Plan proposal only addresses re-designation of 78 acres located in the southeastern-most corner of the site from Special Industrial to Low-Medium Density Residential. A Planned Unit Development Map would divide the property into 588 parcels, that include 585 residential lots, two open space parcels, and a 9-acre school/park site (located on the northeastern corner of Sub Area A). The proposed overall housing density would be 13.4 dwelling unit per net acre.

Area 4 is approximately 560 acres (552 acres is also used) of land surrounded by Mowry Avenue, the Union Pacific Railroad tracks, Stevenson Boulevard, and Mowry Slough. Area 4 is planned for high-quality low-density residential use (4.2-8.5 units per acre), an 18-hole golf course, and open space. The current land use designation is low-density residential. The current zoning is agricultural except for a small area of General Industrial near the current terminus of Stevenson Blvd. The zoning for Sub Areas B and C would be amended to Residential District R. The Specific Plan proposes up to 316 acres of developed area, including upscale single family detached housing in Sub Areas B and C, a potential golf course or other undefined recreational uses in Sub Areas B and D. Sub Area E (244 acres) is outside of the proposed development envelope and could remain agricultural or be used for wetland preservation and wetland mitigation to off-set the adverse impacts of the proposed development.

Only development envelopes are provided for Sub Areas B, C, and D. The Specific Plan REIR provides no specifics regarding how the Sub Areas might be developed other than Sub Area B is strictly residential, Sub Area C could be both residential and golf course (or some other form of recreational use), and Sub Area D could be used for golf course or an

unspecified recreational use, but not residential. The quantity of wetlands that could be filled ranges from 0 to 86 acres. The REIR states, "This EIR will evaluate the full range of potentially impacted/filled wetlands."

Even at a programmatic level, the REIR fails to provide sufficient information to determine, analyze, and propose mitigation for the adverse impacts of the development proposed in Area 4.

11. Even at a programmatic level, the description of anticipated activities is inadequate. Decision-makers, regulatory and resource agencies, and the public, all we are provided are blobs on a map depicting development envelopes., with no hint of how development of the site would proceed, and therefore, any ability to substantively evaluate the efficacy of any of the mitigation measures proposed in reducing the adverse impacts of the proposed project.
12. How will the development of the site proceed?
13. Do the landowners/City envision the existing parcels will be subdivided into smaller parcels?
14. How will grading and filling of the site proceed? Will the entirety of the development envelopes be filled and mass graded, or will this occur in piece-meal fashion?
15. The project description indicates portions of Sub Areas B, C, and D that are not developed could be retained as open space or used for wetlands mitigation. At what point in time would the decision of what areas will or will not be developed be made, and by whom? The current landowner? New landowners?
16. Will it be in phases and if so, will the fill begin at the Union Pacific Railroad tracks and move out towards Mowry Slough as developers purchase the lands?
17. Or will it occur in a more haphazard fashion and is there any possibility the western edges of Sub Area B could be developed prior to Sub Area C being developed? The answers to these questions address the issue of conserving wetlands and habitat. Page 14 of the REIR states, "Planning for the development in Area 4 has been undertaken with the intent of avoiding and minimizing impacts to wetlands to the maximum extent practicable."
    If this is the case, and if the landowners eventually obtain permits to fill wetlands within Area 4, then the best way to avoid and minimize impacts would be to keep the development envelop very compact, and begin development along the railroad tracks, expanding west from there.
18. Buried on page 148 of the REIR, in the section pertaining to Noise Impacts, is the following description of how development of Area 4 might proceed (not the actual details of where housing and infrastructure would be located, rather how the site would be prepared for construction of residences, etc.):

    > Development of the Areas 3 and 4 Specific Plan would be phased, *with grading and construction of project infrastructure completed first*. Residential units and the elementary school at Area 3 would then be constructed. Area 3 development would occur prior to Area 4. Development of Area 4 including the Stevenson Boulevard overcrossing and PG&E tower modifications would proceed prior to development of the golf course and residential in Area 4. It is unknown at this time which Area 4 development, the golf course or residential units, would be constructed first. [emphasis added]

If this description is accurate, it would seem wetland mitigation would be the responsibility of the landowner at the time of the grading, and not individual future landowners as suggested in the Biological Resources discussion of wetland mitigation responsibilities.

19. Please clarify whether the description provided above (from REIR, page 148) is an accurate representation of how the site would be prepared for actual construction of residential development.

2.4.2.1 Area 4 - Vehicular and Pedestrian Access: Additional components of the proposed project include the extension of Stevenson Blvd. onto Area 4 as an elevated roadway to avoid crossing the Union Pacific Railroad tracks at grade. The elevated roadway necessitates modification (elevation) of PG & E towers and lines. An Emergency Vehicle Access (EVA) is proposed just west, and along the railroad tracks on Area 4, crossing Mowry Avenue at grade.

20. In the event of an emergency, will residents of Area 4 have the ability to utilize the EVA to leave the site? If so, how would that be coordinated as a locked gate is proposed to restrict access, to preclude use of the at grade crossing at Mowry Avenue.

2.4.3 - Golf Course - The REIR states, page 21, "The golf course use is analyzed in the respective sections of this EIR including, transportation, air quality, biological resources, hydrology, flooding and water quality, hazardous materials, water supply, utilities and energy. At the time a detailed golf course design is developed, the design will be evaluated by the City as part of the project-specific environmental review, per CEQA Guideline 15168."

21. Please specifically address the question of which, if not all of the impacts listed, will be subject to further agency and public review and comment under CEQA, if and when a detailed golf course design is developed. Further analysis is certainly necessary for all of these impacts once project details are provided.
22. There have been opinions expressed by members of the Planning Commission and City Council that a golf course will never be built in Area 4. If this is the case, why is the golf course retained as a project objective? Is the golf course retained only to reject the alternative of No Development in Area 4.
23. Substantial evidence exists that golf courses in general are not financially sustainable for communities, despite the City's protests that they are. Which again begs the question, why is the City continuing to include the golf course as a project objective.

Audubon Cooperative Sanctuary Program for Golf Courses - The REIR states the "proposed golf course will adopt the Audubon International Program for golf courses." In a different setting, the possibility exists that we might be supportive of this program, however, it should be made clear that this is not a program sponsored by the National Audubon Society, and Area 4 is NOT an appropriate location for a golf course.

A 2005 study, that received a Research Award of Honor from the American Society of Landscape Architects. "Fool's Gold: Audubon International Certification as a Predictor of Foraging Habitat Suitability for Wading Birds, a case study," by Robert G. Collins (http://www.asla.org/awards/2005/students/winner11.html)(attached). The results of this study lead the author to note, "...The results of this study suggest that for Audubon International, and some golf course developments, there is greater value in the perception of the existence of habitat than actually creating quality habitat...It is clear that the Audubon International certification process in no way guarantees equity among their member courses in terms of habitat suitability."

An August 7, 2007, St. Petersburg Times article (attached), "Audubon groups at odds over names, objectives," (http://www.sptimes.com/News/080700/State/Audubon_groups_at_odd.shtml) provides an example of the controversy surrounding Audubon International's use of the name "Audubon." "This Audubon signature certification is being used to justify and allay concerns about environmental misdeeds connected with golf course building," said Brad Cornell of the Collier Audubon Society. "TwinEagles fits the definition for why we don't want to certify golf courses that are displacing natural resources. . . . It's misleading and disingenuous."

24. Please clarify in the REIR, that the Audubon International Program for golf courses is a completely separate entity from the National Audubon Society. The National Audubon Society issued this statement in 2011 (http://audubonoffloridanews.org/?p=7411)(attached):

    > Audubon receives many calls and letters from people who have confused Audubon with a different organization calling itself Audubon International. Since its inception in 1991, Audubon International, funded in part by the United States Golf Association, has been certifying golf courses that pay an annual membership fee as Audubon Cooperative Sanctuaries. Similar fee-based certifications are available from Audubon International to

developers of cemeteries, municipal parks, campgrounds, resorts, stores, industrial facilities, marinas, residential communities and preparatory schools.
Audubon is not associated with Audubon International in any way. Audubon does not certify golf courses, or any other development, as being environmentally sound. Indeed, Audubon very often opposes such development. Furthermore, Audubon sanctuaries are protected natural spaces for public enjoyment. No Audubon sanctuary is certified for development.
We ask your cooperation and care in distinguishing between Audubon and Audubon International, and in clarifying that these various certification programs are not endorsed or supported by Audubon.

2.4.4.1 Area 3 and 4 Street Standards and Improvements: Stevenson Boulevard: The information provided in the REIR is inadequate to assess the potential impacts of this component of the Specific Plan on existing hydrology, wetlands, aquatic habitat, and listed species.

25. Will all construction of the proposed flyover fully avoid any impacts to the Pacific Commons/Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) mitigation area immediately southeast of Stevenson Blvd.? If not impacts to the biotic resources of this area must be clearly stated and mitigation measures proposed.
26. What impact will the Stevenson Boulevard flyover have on the existing wetland mitigation site? Mitigation measures must be provided must be provided to protect this site.
27. The existing wetland mitigation areas on either side of Stevenson Blvd. (to the north and south) must be protected from inadvertent construction impacts. The boundaries of the construction area must be clearly delineated to avoid adverse impacts.

2.4.5 PG & E Towers and Lines: Please note if "crane access" is required for the use of a vertical cage or waist cage to raise the 230 kV tower (Number 0/5) adverse impacts to endangered species habitat may occur and consultation with the U.S. Fish and Wildlife Service must occur in advance of any work in the area. In addition, seasonal prohibition of work may be required to avoid "take" of listed species.

2.4.8 Grading and Imported Fill: To raise the proposed development out of the current 100-year flood plain, approximately 56,000 cubic yards of fill will be imported to Area 3, and approximately 2.1 million cubic yards of fill will be required for Area 4.

The EIR does not adequately describe:

28. Where fill will be stockpiled (at a programmatic level a generalized stockpile envelope could suffice),
29. Whether New Technology Park Associates will begin stockpiling material immediately (grading permit required),
30. A more definitive period of time the stockpiled material might be stored than "for longer periods of time",
31. Whether wetlands fill will be necessary to access the stockpile site(s)
32. Who will be responsible for regularly inspecting the efficacy of mitigation measures to prevent mobilization of stockpiled soils into adjacent (?) wetlands
33. At what point filled to be stockpiled will be tested for "quality" (this information will need to be made available to the USACE and RWQCB prior to placement in wetlands)?
34. Potential sources of fill other than those provided previously, as they are likely no longer available (e.g. the Irvington BART station and soil from the undergrounding of the Hetch Hetchy pipeline)
35. If the site is to be filled and graded as individual parcels are sold off, what happens with the remaining fill if all the parcels in Sub Areas B and C of Area 4 aren't developed? Does the fill remain on-site in stockpiles forever or would it eventually be sold? Impacts of removing the fill on the newly developed and surrounding neighborhoods would require environmental review and mitigation measures.

36. The REIR also fails to give any indication of how introduction of fill to the site might occur. How and where will 100+ trucks/ day access the site?

Answers to these questions inform decision makers and the public about how undeveloped lands may be conserved or fragmented, which in turn influences the viability and value of any mitigation. They also shed light on how cumulative impacts may be identified, analyzed and mitigated.

3.1 Land Use

3.1.2.1 San Francisco Bay Trail

It is our understanding that any proposed realignment of the Bay Trail, and in particular, any realignment that involves a loop through Area 4, will require future project level CEQA review.

37. Please clarify whether this understanding is correct.
38. Please indicate who would be the lead agency for any Bay Trail Realignment CEQA environmental review.
39. We have repeatedly stated any proposal to realign the Bay Trail along the outboard levee of Area 4 should be avoided as it will have significant adverse impacts to biological resources that occur on-site and within the adjacent Mowry Slough.

3.1.3.1 San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan

40. The REIR, page 40, inaccurately describes BCDC's regulatory authority over portions of Area 4. In a letter dated September 27, 2013, sent in response to the Newark General Plan Update DEIR, in addition to the jurisdiction described in the DEIR, BCDC stated:

    The DEIR references the above language but could provide a more accurate characterization of BCDC's managed wetland jurisdiction over a portion of the project area in Focus Area 4, specifically the sites referred to as the Pintail and Whistling Wing Duck Clubs referenced in figure 4.3.1 ("Biological Resources") of the DEIR. Section 66610(d) of the MPA states, in part that "the area of jurisdiction of the San Francisco Bay Conservation and Development Commission includes...Manages wetlands consisting of all areas which have been diked off from the bay and have been maintained during the three years immediately preceding the effective date of the amendment of this section during the 1969 Regular Session of the Legislature as a duck hunting preserve, game refuge or for agriculture." BCDC has considerable evidence gathered by the California Department of Fish and Wildlife that the that the Pintail and Whistling Wings duck clubs were actively used during the three-year period in 1966-1969 referred to in MPA § 66610(d). Based on the information we have, we believe these areas fall under the Commission managed wetlands jurisdiction. This area is now delineated in page 193, figure CS-1 of the Draft General Plan by two dots, one for each club. Figures 4.3-1 and CS-1 of the DEIR should be revised to show the areas that comprise the two clubs and the status of these areas as "managed wetlands" under the MPA.

41. Please include this text in the REIR discussion of BCDC's regulatory jurisdiction. Also, please include a map as requested by BCDC's comment letter to the GPU DEIR, that depicts BCDC's described jurisdiction and the location of this jurisdiction in relation to Sub Areas B and C (and if appropriate D), so decision-makers, regulatory and resource agencies, and the public may better understand the extent of BCDC's jurisdiction within Area 4.

Land Use Goals and Policies:

Policies LU-4.13, 4.14 - Bayfront Identity and View Protection -
It is not evident how the bayfront identity or view protection (Peninsula Hills and San Francisco Bay) will benefit any residents other than those living within Area 4. In fact, views across to the Peninsula Hills will no longer be visible by travelers along Cherry Street, as the views will be blocked by soundwalls and houses.

Policy LU-7.3 - It is a contradiction to claim protection of biological resources while proposing development of Area 4. It is unlikely that protection of rare plants and animals (animals) in particular will be able to coexist with development and human activity, particularly, when mitigation measures proposed for prevention of disturbance by domestic and nuisance species are unenforceable (e.g. no outdoor cats will be allowed within the development).

Transportation Goals and Policies:

Policy T-2.12 Trails along Railroad and Utilities. -

42. There is a public safety issue of children crossing over an at grade railroad crossing at Mowry Avenue to access the playing fields or recreational facilities of the Silliman Center.

Conservation and Sustainability Goals and Policies:

43. The Specific Plan is in conflict with the City's Open Space and Conservation Goals and Policies. Development of over half of Area 4 is inconsistent with Goals CS-1 and CS-2. DESFBNRW – has identified most of Area 4 as a Priority 1 acquisition area because of the unique ability of the site to provide endangered species habitat, a diversity of habitats including pickleweed wetlands, seasonal wetlands, open water, transition zone to uplands and uplands. Proximity of the site to the Ohlone College campus provides a unique opportunity to incorporate the site into educational programs.

44. Proposed development would severely impact on site resources (human disturbance, use of chemicals, run-off from streets, nuisance species, light pollution, etc.) and resources on adjacent Refuge lands.

Goal CS-5 - Reduce Greenhouse Gas Emissions and Planning for Sea Level Rise:

45. This Specific Plan is inconsistent with the 2009 California Climate Adaptation Strategy – it is at best reactive, as opposed to the recommendation:

> Consider project alternatives that avoid significant new development in areas that *cannot be adequately protected* (planning, permitting, development, and building) from *flooding*, wildfire and erosion *due to climate change*. The most risk-averse approach for minimizing the adverse effects of sea level rise and storm activities is *to carefully consider new development within areas vulnerable to inundation* and erosion. *State agencies should generally not plan, develop, or build any* ***new significant structure*** *in a place where that structure will require significant protection from sea level rise, storm surges, or coastal erosion during the expected life of the structure*. However, vulnerable shoreline areas containing **existing** development that have regionally significant economic, cultural, or social value may have to be protected, and in-fill development in these areas may be accommodated. State agencies should

incorporate this policy into their decisions and other levels of government are also encouraged to do so. (CS-2; OCR-1 and 2; W-4 and 9; TEI -2 and 7)."[emphasis added]

3.1.4 Land Use Impacts:

3.1.4.1 Thresholds of Significance:

For the purposes of this EIR, based upon Appendix G of the CEQA Guidelines, a land use impact is considered significant if the project will:

- conflict with any applicable habitat conservation plan or natural community conservation plan; or
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;

46. The Specific Plan is inconsistent with Public Law 100-56, the recommendations of the Goals Project, and the recommendations of the 2009 California Climate Adaptation Strategy.

> Public Law 100-556 the "Land Protection Plan, Potential Additions to San Francisco Bay National Wildlife Refuge, Alameda, San Mateo, and Santa Clara Counties, September 1990." The congressionally approved Refuge Expansion Boundary expressly identified large portions of Area 4 as Priority One for acquisition because of the ability of these lands to provide for the preservation and enhancement of highly significant wildlife habitat and for the protection of waterfowl and sensitive and rare wildlife species, including species known to be threatened with extinction.

The Baylands Ecosystem Habitat Goals Report is described as "The concept to develop regional wetlands goals is recommended by the Governor's "California Wetlands Conservation Policy" and by the Comprehensive Conservation and Management Plan (CCMP) of the U.S. Environmental Protection Agency's San Francisco Estuary Project. It is also supported by most of the agencies and non-governmental groups with major planning, operational, or regulatory interests in Bay Area wetlands."

The Goals Project Report (June 2000) states in the section of "Unique Restoration Opportunities," "…There are opportunities to restore historic tidal marsh/upland transitional habitat and associated vernal pool habitat at the upper ends of Newark, Plummer, Mowry, and Albrae Sloughs." Under the "Recommendations" section the report states, "…Protect and enhance the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the Pintail duck club. The report also recommends that tidal influence be restored on this site and that seasonal wetlands be improved.

The 2009 California Climate Change Strategy states:

> p. 51 Wetland habitats from the Sacramento Valley southward to the Salton Sea and the tidal marshes of San Francisco Bay also provide essential wintering habitat for hundreds of thousands of birds as they migrate north and south along the Pacific Flyway.

> p. 52 Moreover, *inland migration is frequently hindered by development* such as bulkheads, seawalls, roads, and buildings. Continued growth and development in coastal areas will only *increase the direct pressure on*

remaining habitats and make inland migration more difficult. Sea-level rise, especially at the increasing rates projected for the 21st century, may result in the loss of substantial areas of critical habitat for a variety of coastal species.

p. 74 Habitat Protection **–** The state should identify priority conservation areas and recommend lands that should be considered for acquisition and preservation. The state should *consider prohibiting projects that would place development in undeveloped areas already containing critical habitat, and those containing opportunities for tidal wetland restoration, habitat migration, or buffer zones.*

The strategy should likewise encourage projects that protect critical habitats, fish, wildlife and other aquatic organisms and connections between coastal habitats. The state should pursue activities that can increase natural resiliency, such as restoring tidal wetlands, living shoreline, and related habitats; managing sediment for marsh accretion and natural flood protection; and maintaining upland buffer areas around tidal wetlands. *For these priory conservation areas, impacts from nearby development should be minimized, such as secondary impacts from impaired water quality or hard protection devices.*

The proposed development of Area 4 is inconsistent with the recommendation of the Official Final "Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California." This plan was released by Region 9 of the U.S. Fish and Wildlife Service, August 27, 2013, one year prior to the release of the REIR. This comprehensive plan, focuses on the recovery of 17 species of imperiled birds, plants and animals, including the federally-listed, endangered salt marsh harvest mouse, a species that has been recorded as occurring within Area 4. The Recovery Plan is unique in its approach to preserve and recover ecosystem functions (including biodiversity) that benefit a suite imperiled species, rather than focusing on individuals plants, animals or birds. Area 4 has been identified within Segment Q (map attached) of the Recovery Plan and the <u>entire</u> site has been recommended for future ecotone restoration. This Recovery Plan is an important road map for preserving imperiled species that inhabit the edges of the bay and is not even mentioned in the REIR.

47. Please include a description of the "Recovery Plan for Tidal Marsh Ecosystems of Northern and Central California" within the REIR and include a copy of the map indicating the recommendation the entire site for restoration of ecotone restoration.

48. The public law, policies, strategies, and recovery plan listed above emphasize the importance of Area 4 from a regional perspective. The mixture of wetlands, aquatic, and other habitats including uplands are important for sustaining current populations of waterfowl and listed and sensitive plant and wildlife species, as well as providing a hedge for these species and habitats in the face of sea level rise.

49. The Land Use Impacts proposed in Area 4 by the Specific Area plan are in conflict with regional, State, federal policies and strategies, and the adverse impacts are significant.

San Francisco Bay Trail: ““The future Specific Plan developer(s) of Area 4 will be required to provide an easement for the Bay Trail to run along the top of the levees that form the western edge of the project, if that ultimately is the preferred alignment. The Specific Plan is consistent with the Bay Trail and does not conflict with efforts to complete the Bay Trail.”

50. We have repeatedly requested this alternative route be abandoned. We have done this in writing during the scoping period for the DEIR; we have made these comments publicly during community meetings. This will have a significant adverse impact on Biological Resources e.g. significant increase in human disturbance, noise, nuisance species on listed species and wetlands. Please refer to the discussion of Biological Resources for additional comments. If this alternative is proposed for implementation a "project" level EIR should be required, any necessary "improvements" to the privately owned levees described, and all environmental impacts identified.

San Francisco Bay Conservation and Development Commission (BCDC) San Francisco Bay Plan -

51. Until the extent of BCDC jurisdiction is known, it is premature to make a determination that the proposed development in Area 4 is consistent with the Bay Plan or with the latest Bay Plan Amendments regarding Climate Change and Adaptation.

3.2 Transportation:

52. Were vehicle trips associated with the transport of school-aged children to and from school included in the traffic calculations? For all school levels? Were vehicle trips associated with transporting students to school from Area 4 included in the calculations? Were calculations done to account for parents driving their students from the Specific Plan area to other elementary schools should an elementary school not be constructed in Area 3? This could have a significant impact on congestion on surface streets during the morning commute.
53. Why is no analysis of vehicle miles traveled (VMT) included in the analysis of traffic impacts? The only reference the REIR makes to VMT, is that there has been a decline in VMT in the U.S. within the past year likely due rising costs of fuel. Level of Service (LOS) estimates may provide an indication of congestion on roadways, and trip estimates may give an indication of the number of times people are getting into their cars, but these do not provide a complete picture of the traffic impacts of development on the physical environment. With an increased focus on sustainability, reduction of greenhouse gases, conservation of energy, reduction of impacts to air quality, an analysis of VMT must be included in the REIR analysis of traffic impacts.

The proposed project is located at the southernmost boundary of the City. The project will introduce 5 million car trips per year. There is no convenient public transportation to Area 4 – Area 4 is at least ½ mile away from an existing bus stop, and close to a mile away from the nearest shops, etc. It is unlikely parents in Area 4 would walk their child to school in Area 3 or to the Silliman Center.

3.3 Air Quality:

54. The assumptions made when analyzing the impacts of haul trucks bringing fill to the project site are seriously flawed. If it is assumed 2.1 million cubic yards of fill will be delivered to the site with only 100 truck trips per day, then trucks with 20 cy yard capacity, working only 5 days per week would require four years to bring that amount of fill to the site, and that time frame may be conservative if two-feet of freeboard are required to reduce air quality impacts.
55. The EIR fails to address the fundamental flaw of the Specific Plan that is locating a large development at the edges of the city, away from city services and amenities, and away from major public transportation hubs. Rather than attempting to reduce vehicle miles traveled a true indicator of public transit-pedestrian-bicycle friendly development, the REIR proposes mitigation measures that either still focus on automobile travel as the main mode of transportation (reducing LOS by widening streets, including dedicated turn lanes, etc.) while proposing public transit mitigation measures that are may not result in reduction in Greenhouse Gas Emissions (GGEs) because they do not provide for actual public transportation, rather the facilities associated with public transit (e.g. bus stop shelters, etc.).

The Specific Plan shall incorporate the following measures, which would reduce transportation-related emissions. The measures listed in below are expected to include implementation of appropriate TCMs. Incorporation of these measures would reduce the impact to a less-than-significant level.

• Improve existing or construct new bus pullouts and transit stops at convenient locations along Cherry Street and Stevenson Boulevard. Pullouts shall be designed so that normal traffic flow on arterial roadways would not be impeded when buses are pulled over to serve riders. Bus stops shall include shelters, benches and posting of transit information;

• Appropriate bicycle amenities shall be included. This would include bike lane connections throughout the project site. Off-site bicycle lane improvements shall be considered for roadways that would serve the project;

• The City and project proponents shall *explore* and *implement feasible* means to bring transit or shuttle service to Area 4; [emphasis added]

56. These mitigation measures, while they may sound good on paper, have little value in reducing the GGEs of the Specific Area plan when it is estimated only 3% of the residents will ride bicycles, and only 12 people from the neighborhoods ride a bus during peak hours, if buses continue to be available. Nor does "exploring" or "implementing *feasible*" transit or shuttle service to Area 4 ensure this will actually occur.

57. Please explain, how on the ground, and not on paper, implementation of these mitigation measures will reduce the GGE contributions of the Specific Area plan to a level that is less than significant.

3.3.4.5 Odor

The REIR states:

> The Specific Plan would develop new residences in an area that may have noticeable odors. The Specific Plan area, especially Area 4, is located near the east shore of San Francisco Bay. This area contains numerous square miles of tidal wetlands that result in occasional odors. In addition, Cargill operates salt evaporation ponds to the north-northwest of the Specific Plan area. Both the wetlands and the salt evaporation ponds have the potential to cause odors that may affect residences. *Naturally decaying organic material, such as algae, produces odors. These odors could be strongest in spring and summer when there is an abundance of algae and winds may blow this decaying material on to dikes.* Very low tides during these times could also result in odors from exposing decaying matter to the prevailing winds. However, these types of odors are not likely to result in odor complaints because they will be considered as part of the natural environment by the occupants. As a result, natural odors that are produced by the bay wetlands would have a less-than-significant impact. **(Less than Significant Impact)**

58. Strong winds can also disturb anaerobic muds on the bottom of salt ponds, the odor of anaerobic mud, and decaying algae can be overwhelming. As noted in the description above, the times when these odors are likely to be strongest coincide when people are more likely to spend time outdoors. It cannot be assumed residents of the development will find odor impacts less than significant, and it represents poor planning to assume these types of odors will not generate complaints.

3.4 Noise:

59. The REIR fails to identify, analyze or mitigate the impacts of noise or vibration on wildlife. Construction and post-construction activities may "harass" sensitive wildlife species, as well as migratory, and nesting birds by disrupting normal roosting, feeding, breeding, or nesting behaviors. Studies have revealed noise can impact a species ability to communicate with potential mates or can increase an individual's susceptibility to predation. This analysis should be prepared and the results circulated for public review and comment.
60. Vibration – The REIR fails to discuss construction impacts of soil compaction, whether vibration impacts will result from compaction activities, and how adverse impacts of the vibration generated on wildlife will be mitigated.

3.5 Biological Resources:

The Specific Plan states:

> While the City of Newark General Plan has identified development that is projected to occur within Area 4, this area has also been identified for its ecological value by regional planning efforts. The southern and western portions of Area 4 were included in the approved 1990 Refuge Boundary Expansion area of the Don Edwards San Francisco Bay National Wildlife Refuge (SFBNWR), indicating that these lands were pre-approved for addition to the Refuge in the future. The Baylands Habitat Goals Project (1999) includes recommendations to "protect and enhance the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the (former) Pintail Duck Club." Being situated between existing salt production ponds that were formerly tidal wetlands and vernal pool habitat east of the site, Area 4 provides one of the few places in the South Bay with upland habitat transitioning between tidal wetlands and vernal pools, and the Goals Project identified the site's potential value in providing upland transition zones adjacent to tidal wetlands. Upland habitats provide a buffer or transition area upslope from wetlands and marshes. Where such upland transition zones are located adjacent to tidal marsh, they provide important refugia for tidal marsh species during high tides that inundate most of the marsh plain. Even in nontidal areas, such upland habitat can provide refugia for wetland species during periods of flooding. (Appendix A, p. 16)
>
> And
>
> ...The value of Area 4 in providing upland transition zones adjacent to tidal wetlands has also been identified by the Baylands Ecosystem habitat Goals Report (1999), a report of habitat recommendations prepared by the San Francisco Bay Area Wetland Ecosystem Goals Project, a consortium of nine state and federal agencies, including the San Francisco Estuary Institute.

61. We concur with this assessment. Lands such as those identified for acquisition were included within the Refuge Expansion Boundary because of the scarcity of this habitat within the acreage of the original Refuge acquisition and its importance in preserving the biodiversity of the bay ecosystem.

62. The Specific Plan proposal would consume most of the uplands habitat present within Area 4. Depending upon what figures one uses, either the information from the body of the text of the REIR or the information from the Specific Plan there could be approximately only 53.5 acres of uplands habitat remaining if all of Sub Areas B, C, and D are developed. That is a mere 21% of the total undeveloped uplands in Area 4. Wetland creation is proposed in this upland area to off-set the losses of up to 85.6 acres of wetlands/waters habitat. Lastly, the remaining uplands in Area 4 would be located between the levees along Mowry Slough and the wetlands to be preserved and/or the development envelope leaving this area vulnerable to human disturbance, nuisance species, light and noise pollution, etc. thereby reducing its habitat value for species attempting to move upslope away from rising sea levels.

63. Thus, the Specific Plan will not support actions to preserve and maintain the lands of the [Don Edwards] San Francisco Bay National Wildlife Refuge and is in conflict with the Land Use Goals and Policies of the General Plan.

64. Land management practices of frequent and ongoing disturbance has resulted in reduced habitat values. This is an artificial condition and habitat values would improve if agricultural habitats in particular seasonal wetlands were not frequently disced.

65. We also question whether (p.120) discing within the past three years of areas that have supported pickleweed cover isn't a violation of the Clean Water Act and Endangered Species Act, as areas that support pickleweed clearly are not in agricultural production and therefore should not qualify for agricultural exemptions. We are also extremely concerned that areas that were previously dominated by pickleweed but have been disced have been subsequently invaded by Russian thistle.

3.5.2.4 Jurisdictional Waters of the U.S./Waters of the State

We concur a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers (USACE) will be required for the placement of fill in wetlands/other waters of the U.S. In addition, certification or waiver will be required from the San Francisco Bay Regional Water Quality Control Board (RWQCB) under Section 401 of the Clean Water Act.

66. The REIR states "No seasonal wetland, aquatic freshwater marsh, brackish marsh, or detention basin habitat occurs within the 78-acre project footprint of Area 3. Therefore, proposed development in Area 3 will have no impacts to these habitat types." Does this include the wetland mitigation area to the northwest of Stevenson Blvd.? What is the source of hydrology for this wetlands mitigation area, and will the hydrological regime of this area be impacted by the development of Area 3?

67. The proposed project is clearly not "water dependent," therefore, under the 404 (b) (1) Guidelines (40 C.F.R. 230.10) the applicants must rebut the presumption that a practicable alternative exists that is less environmentally damaging. The preamble to the Guidelines states that it is the applicant's responsibility to rebut this presumption. The Memorandum of Agreement between EPA and the Corps concerning mitigation under the CWA 404 (b)(1) Guidelines (Mitigation MOA) states:

    1. Section 230.10(a) allows permit issuance for only the least environmentally damaging practicable alternative. The thrust of this section on alternatives is avoidance of impacts. Section 230.10(a)(1) requires that to be permittable, an alternative must be the least environmentally damaging practicable alternative *(LEDPA)*. In addition, Section 230.10(a)(3) sets forth rebuttable presumptions that 1) alternatives for non-water dependent activities that do not involve special aquatic sites are available…

    2. Minimization. Section 230.10(d) states that appropriate and practicable steps to minimize the adverse impacts will be required through project modifications and permit conditions.

68. Sequencing requires the applicant must first *avoid* impacts to wetlands, next *minimize* those impacts, and only after avoidance and minimization of impacts has occurred, compensate for any unavoidable impacts. However, as wetlands are considered "Special aquatic sites" and it is presumed a less damaging practicable upland alternative to placing fill in wetlands exists.

USACE Permit Authorization: p. 73 of Appendix E, Biological Resources Technical Report states, "A permit from the USACE (*either a Nationwide Permit* or an Individual Permit, depending on the impact) will be required from the USACE for any *Project-related impacts* to jurisdictional Waters of the U.S."[emphasis added]

69. It is unlikely the proposed development project will qualify for nationwide permit authorization. Nationwide permit 29 for Residential Developments is not authorized for use in non-tidal wetlands adjacent to tidal waters.

70. Due to the regional environmental importance of Area 4, the complexity of issues that must be balanced (e.g. wetlands vs. uplands, endangered species and their habitats, etc.) it would be appropriate to submit an application to the USACE for the entirety of Area 4. We recognize that phasing will pose a problem, but clearly all of the development within the boundaries of Area 4 is inter-related. Certainly a precedent exists as both the San Francisco and Sacramento Districts have processed Clean Water Act authorizations for specific area plans.

71. Piece-mealing of project impacts is prohibited under the Clean Water Act and the National Environmental Policy Act (NEPA). The USACE definition of "Independent utility can be found in the Nationwide Permit definitions, "A test to determine what constitutes a single and complete project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility." All projects within Area 4 will be dependent upon the establishment of a fill pad and utility infrastructure ranging from the establishment of the Stevenson Blvd. flyover to the installation and hook up of the storm drain system, electrical, etc. As such submittal of individual permit applications including nationwide permit authorization requests would be considered piece-mealing and should be prohibited.

72. Similarly it is not possible to determine if adverse impacts to listed species (USFWS) or wetlands and waters (USACE and Environmental Protection Agency – EPA) are adequately mitigated if the review is piece-mealed.

73. Furthermore, due to the regional significance of the site, the large amount of wetlands fill proposed, and the complexity of competing resource needs, it would be appropriate for the Corps to prepare an Environmental Impact Statement (EIS) for the Specific Area plan.

Thresholds of significance:

74. The Specific Plan conflicts with established regional planning for maintaining habitat diversity as well as recent State strategies for preserving biodiversity in anticipation of sea level rise impacts. The impacts of the Specific Plan on buffer areas adjacent to tidal wetlands, i.e. seasonal wetlands and uplands transition zones and uplands is significant and unmitigated.

The EIR is fatally flawed – Inadequate information provided:

Indirect Impacts:

Impacts of Alteration of Site Hydrology on Avoided Wetlands and Associated Species

The REIR discusses some impacts to the hydrological regime of the site that might alter the extent and quality of unfilled wetlands. For example, p. 177 of the REIR states:

> The proposed Specific Plan would result in hydrologic alterations within Area 4 that could affect the wetland and marsh habitats on the site. The addition of impervious surfaces through the construction of buildings and roadways and the compaction of soil would result in significant changes in the amount, location, quality, and velocity of stormwater runoff flowing into existing wetland habitats. Stormwater discharged into natural habitats at concentrated levels would increase the likelihood of soil erosion and channelization, and impacts related to water quality. If stormwater runoff is diverted to storm drains, the water level of seasonal wetlands

would be reduced and changes in the preserved natural habitats would be substantial. In addition, the construction of the golf course would intercept precipitation, likely decreasing the amount of water entering natural habitats.

75. However, the REIR fails to discuss the impacts of groundwater pumping for the golf course on existing wetlands of high value. Page 11 of Appendix G – Hydrology states:

> Recharge of the seasonal wetland and marsh habitats near the Pintail Duck Club from groundwater seeps occurs in mid-to late-summer. Evidence of this recharge from groundwater seeps includes bubbling water and the presence of a greater extent of surface water and hydrophytic vegetation in areas near the former Pintail Duck Club during the late summer months as compared to water levels in the early spring or summer, as observed in the summers of 2006, 2007, and 2008.

And page 14, of that appendix states:

> Before reclaimed water is available, the golf course will be irrigated using an existing onsite well with an estimated demand of 490 acre-feet per year. This well will draw from ACWD's managed groundwater resources in the Niles Cone without placing a burden on the District's potable water production facilities.1 Therefore, the project will have a ***less-than-significant*** impact on groundwater supplies or areas of groundwater recharge.

76. The REIR provides no assessment of what if any impacts groundwater pumping will have on Area 4 seasonal wetland and marsh habitats near the Pintail Duck Club.

77. The REIR must also give some indication of the areal extent of indirect impacts, the number may be conservative, but based upon a "worst case scenario" what is the areal extent of indirect impacts that would require mitigation?

Nuisance species: The REIR provides a section that describes some of the potential impacts of invasive plants species and preserved, created, and enhanced wetlands, but provides no such discussion of nuisance species.

78. The REIR admits nuisance species such as domestic pets and feral cats may pose problems for existing wildlife populations, but fails to identify the suite of likely nuisance species or to suggest mitigation measures to reduce their negative impacts on wildlife species in general and listed and sensitive species in particular. For example, the Specific Plan depicts picnic areas overlooking wetlands habitat, but the REIR fails to discuss the attractiveness of trash cans to nuisance species like raccoons, gulls, corvids, etc. or what measures will be implemented to prevent access to garbage, etc.

79. The REIR mentions a mitigation measure requiring dogs to be on leash along the levees, but does not mention how this issue will be addressed for other areas of the development, nor how it will be enforced.

Page 181 of the REIR states:

> Domestic pets, cats in particular, may stray from the project's residential areas and may depredate these potentially breeding special-status species or their nests. Non-native mammals are likely to increase on the project site following development. These species may compete with or prey on some of these special-status species. As discussed below under *Impacts to Sensitive Habitats and Species from Recreational Disturbance*, golfers and visitors may go beyond established recreational areas and access the ACFC&WCD and Mowry Slough levees which may disturb, crush, or degrade habitat for these species. Planting of trees within the golf course or residential areas will provide additional perches and nesting sites for raptors that may prey on these special-status species.

If on-site mitigation for impacts to wetlands, waterbird foraging habitat, and special-status species habitat is provided per measures to mitigate other project impacts, such mitigation will increase the extent and quality of nesting and/or foraging habitat for these special-status species, restoring the project's adverse effects to some extent.

80. There is no mention of specific mitigation measures dealing with feral cats, gulls, corvids, Canada geese on the golf course, etc. Rather the REIR concludes that because additional high quality habitat will be provided through mitigation and enhancement these significant adverse impacts will be less than significant.

See the discussion below regarding compensatory mitigation that explains why such a determination cannot be made.

81. Please add a section to the REIR identifying nuisance species that are likely to occur and mitigation measures that are enforceable and effective to ensure nuisance will not have a significant adverse impact on wildlife species in general and listed and sensitive species in particular.

Compensatory mitigation – wetlands, waters, species:

Pursuant to §15121(a) and §15146(b) of CEQA, the REIR does not provide decision-makers or the public a clear understanding of the location or acreages of habitat in which compensatory mitigation could be implemented for wetlands and species. Thus decision makers and the public are unable to determine if the mitigation measures purported to reduce significant adverse impacts to a level that is less than significant are realistic and capable of being implemented.

The REIR proposes 1.5:1 replacement of seasonal wetlands that may be created/enhanced on-site, off-site, mitigated through the purchase of mitigation credits, etc.

82. Mitigation ratios cannot be ascertained to be appropriate without understanding the opportunity to evaluate the:
    - likelihood of success of implementation (e.g. does sufficient hydrology to maintain the created wetlands without detriment to existing habitats, etc.),
    - the landscape context in which the habitat would be created (e.g. for salt marsh harvest mouse habitat is upslope escape habitat available free from human disturbance and nuisance species impacts and in an area that wouldn't make the mouse susceptible to predation?),
    - the surrounding land uses (e.g. open space or residential? isolated or corridors available? Etc.)
    - nature of habitats that might be converted from one type to another
    - proximity of off-site mitigation to project site
    - in-kind vs. out-of-kind mitigation
    - whether mitigation is being proposed for more than one type of impact in the same area (double-dipping mitigating for more than one impact in the same acreage is not acceptable – e.g. expecting seasonal wetlands to provide 50% burrowing owl foraging habitat)

83. The REIR should clearly indicate the area and acreage available in which to create wetland habitat, where wetland enhancement might occur on-site given the current development envelopes, and how indirect impacts would be prevented from degrading the value of the mitigation creation and enhancement activities. Based on calculations from information provided in Appendix H, Part 1 and from the Specific Plan, it appears the amount of uplands available in which wetlands and sensitive species (e.g. burrowing owl) mitigation could occur would be approximately 53.5 to 59 acres.

84. Clearly this is not enough area in which to create 1.5:1 mitigation for loss of wetlands. The REIR must provide more definitive and realistic mitigation measures, given the "worst case scenario" of up to 85.6 acres of wetlands fill and a currently unknown figure of indirect impacts:

    - how much mitigation can occur on-site,
    - where will it be located on-site (Mitigation squeezed between the development envelope and the outboard Mowry Slough levee may not provide adequate escape habitat for the salt marsh harvest mouse, may become inundated over time, may be subject to constant disturbance, etc.)
    - how much will need to occur off-site,
    - does land that could be acquired to mitigate the impacts of Specific Plan implementation actually exist within 10 miles of the project site along the eastern shoreline? It is our impression that most of the land from San Leandro down to Alviso are in some form of public ownership. Thus is this even a viable mitigation measure?
    - Where would mitigation credits be purchased and for what habitat and species?

85. These are issues that are critical in determining the efficacy, long-term viability, and feasibility of the proposed mitigation measures in actually lowering the significant impacts of the project to levels that are less than significant. Without this information the REIR cannot assert the adverse biological impacts are less than significant.

Proposed mitigation measures are unenforceable or ineffective:

Page 181 of the REIR states:

> Maintenance activities around the golf course and residential areas, or golfers and residents, who enter natural areas, may unintentionally disturb or destroy nests. Although the project does not include the establishment or improvement of any formal trails along Mowry Slough, the number of people and domestic animals expected to access the levee along Mowry Slough will be greater following project development, subjecting pairs of these species nesting along Mowry Slough to more disturbance.
>
> And

The REIR mentions that implementation of the Specific Plan may result in more people accessing the levees and walking their dogs in these areas, more specifically that levee users may "bring dogs to these areas that may harass or prey on sensitive bird and mammal species." (p.194)

The REIR proposes mitigation measures as follows:

> Incorporation of the following measures will reduce special status species and sensitive habitat impacts to a less than significant level:
>
> **MM BIO-9.1:** As the design of the golf course progresses disturbance by golfers of adjacent sensitive habitats and species shall be minimized. For example, high-use areas such as tees and greens shall be set back from the edge of the golf course, and broad rough/out-of-bounds areas shall occur along the interface between the golf course and sensitive habitats.
>
> **MM BIO-9.2:** On the golf course, areas that are "out of bounds" (which will include the artificial burrowing owl burrow complexes and all natural areas that are not directly filled during golf course construction) shall be clearly marked as such, explaining the importance of preserving the ecological integrity of the adjacent natural

areas. Signs will be erected along the ACFC&WCD levees and along Mowry Slough describing the ecological value of adjacent wetland areas and instructing users to stay on the ACFC&WCD levee tops, stay out of sensitive habitats, and keep dogs on leashes. **(Less Than Significant Impact with Mitigation)**

86. Human disturbance of nesting birds can result in abandonment of nests and chicks, resulting in decreased reproductive success (Rodgers and Smith 1995, Carney and Sydeman 1999, USFWS 2001, Ruhlen and others 2003, Lafferty and others 2006). Disturbance can also lead to decreased abundance or behavioral alteration of non-breeding birds (Burger and Gochfeld 1991, Schummer and Eddleman 2000, Lafferty 2001, Burger and others 2004).

87. Signage has been demonstrated to be completely ineffectual in reducing trespass into areas supporting populations of sensitive or listed species. Recent studies by USGS scientist Kevin Lafferty at the Coal Oil Point U.S. Reserve in Santa Barbara (*2005 Final Report on the Western Snowy Plovers; Restoration of breeding by snowy plovers following protection from disturbance, Biodiversity and Conservation 92006) 15:2217-2230)* concerning human impacts to shorebirds on a beach showed that after a year of very adequate signage there was no improvement in the public's adherence to staying out of restricted areas. However, once a steward/docent program was in place on the beach, the public's compliance with restricted zones increased exponentially.

88. While a docent program may not be possible, monitoring of public compliance with signage and an enforcement program must be implemented.

89. Refuge staff have extensive experience with the issue of people along levee trails failing to comply with leash requirements. At Bair Island signage was posted regarding leash laws and the consequences should dog walkers fail to comply. A required % of compliance was posted, in addition volunteers provided information, consequences of non-compliance was advertised – no dogs allowed, and non-compliance was monitored. In the end, even with an extension of the monitoring period, the public failed to comply with the leash requirement, and dog walking may be prohibited once trails are reopened to the public (currently shut down for restoration work).

90. Unless some regular enforcement program is funded and implemented on a regular and frequent basis, access to the Mowry Slough levees should be prohibited.

91. Similarly, unless an enforcement program is funded and implemented for sensitive habitat areas on the golf course and elsewhere in the development, a determination cannot be made that the impacts of human disturbance have been reduced to less than significant levels cannot be made.

3.5 Biological Resources additional comments:

92. Mitigation measures for nesting peregrine falcons, raptors, loggerhead shrike, tri-colored blackbirds and bats do not provide for replacement of lost nesting/maternity roost habitat.

93. Buffer zones around sensitive species should be reviewed and approved by the California Department of Fish and Game (CDFG) and USFWS.

94. Environmentally Sensitive Area and exclusion fencing for the salt marsh harvest mouse and salt marsh wandering shrew should include installed and inspected daily by a qualified mammalogist. Use of weed whackers should be prohibited in areas where hand removal of vegetation is required … *hand removal*…

95. Mitigation ratios will be determined during Section 7 consultation (Biological Opinion process) with the USFWS for impacts to habitat of salt marsh harvest mouse and salt marsh wandering shrew. The mitigation and monitoring plan will require the approval of the USFWS, CDFG, USACE, and RWQCB.

96. If trucks must cross wetland areas, measures must be taken to reduce soil compaction, and before and after topography should be provided to the USACE and RWQCB to ensure flow of water across the landscape is not adversely impacted.

97. No night lighting should occur during construction.

98. p. 177 – Who will bear the responsibility of enforcing MM-BIO2.1 AND MM-BIO-2.2 to ensure stockpile soils do not migrate into adjacent wetland areas? Inspections of the stockpile mitigation measures should be conducted on a daily basis and should be monitored during and after rain events to ensure they are effective.

3.7 Geology and Soils:

3.8 HYDROLOGY, Flooding, and Water Quality:

Also under this section is the statement: "Acceptance and maintenance/access easements along levees and/or permit to move tide gate(s)," by Alameda County Flood Control and Water Conservation District (ACFC&WCD).

99. What levees does this statement refer to? All levees both internal to the project site and along Mowry Slough? Please clarify what is meant by this statement. Who would be performing the "maintenance," what tide gates are being referred to, and who would be responsible for moving them? It is our understanding that an agreement was reached between the owners of one of the parcels (Peery and Arrillaga) and the State of California and State Lands Commission in 1994 regarding the ownership of the tidal lands immediately adjacent to their property, whereupon Peery and Arrillaga quit claimed all their right, title, and interest in the waterways and lands lying westerly of the outer toe of the existing levee adjacent to Mowry Slough. In return, the State granted specific easements for drainage (this does not remove the requirement for CWA authorization) in very specific locations. If tide gates are to be moved outside the areas defined in the 1994 agreement, permits may be required from State Lands Commission.

3.10 Aesthetics and Visual Resources:

100. The REIR fails to address the impacts of light pollution on wildlife species – the only mention of the biotic habitat is "No night lighting would be directed towards the undisturbed wetland areas." This single sentence fails to acknowledge significant levels of light pollution will be introduced by the neighborhoods, development infrastructure, and golf course facilities to an area that currently has low levels of artificial light.

101. Light pollution is documented to have serious adverse impacts for a wide range of wildlife ranging from invertebrates to mammals. It disrupts migratory patterns, foraging capabilities, predation, nesting, breeding, etc. (Longcore and Rich, "Ecological Light Pollution" Front Ecol Environ 2004, 2(4): 191-198). Longcore and Rich report the findings of Buchanan (1998 "Low-illumination prey detection by squirrel treefrogs," J Herpetology 32: 270-74) in which three different species of amphibians forage at different illumination intensities. As an example the squirrel treefrog (*Hyla* squirrela) forages only between 10^{-5} lux and 10^{-3} lux under natural conditions, while the western toad (*Bufo boreas*) only forages at illuminations between 10^{-1} and 10^{-5} lux.

102. Evidence suggests light pollution affects the choice of nesting sites in the black-tailed godwit, with choice locations being the farther away from roadway lighting (De Molenaar et al 2000, in Longcore and Rich). Buchanan found frogs he was studying stopped their mating calls when the lights of a nearby stadium were turned on.

103. Sufficient evidence exists that demonstrates artificial lights have adverse impacts on wildlife. The REIR must estimate the increase in light levels that could occur as a result of the Specific Area Plan and propose mitigation measures that will reduce adverse impacts to on-site and adjacent wildlife populations.

104. The assessment of visual and aesthetic resources impacts fails to assess the impacts to the viewshed that will be experienced by pedestrians, bicyclists, and drivers along Cherry Street. While existing development does partially block some of the views, the installation of sound barriers along Cherry Street will prohibit any remaining views across the bay.

4.0 Cumulative Impacts:

105. The EIR should analyze the cumulative impacts of the loss of upper tidal marsh habitat, transition zones, and uplands in proximity to the bay on the federally listed species and special status species that have been identified on the site or immediately adjacent to the site (e.g. salt marsh harvest mouse, burrowing owl). Note this comment from the South Bay Salt Pond Restoration Project FEIS:

> The land within the Authorized Expansion Boundary reflects the diversity of wildlife habitats that could be restored to tidal wetlands, brackish marsh, managed ponds, seasonal wetlands, vernal pools, grasslands, riparian, freshwater marshes and *adjacent uplands*…
> … Some lands outside the SBSP Restoration Project Area are more suitable for certain types of restoration than lands within the Project Area…
> … Some of these privately owned lands also provide opportunities to restore locally rare habitats (*e.g.,* riparian, seasonal wetlands, former duck clubs) that *are limited when considering only the lands within the Project Area*. [emphasis added]

5.0 Alternatives Analysis:

106. The REIR states the "primary objective of the Areas 3 and 4 Specific Plan is to provide low density residential, a golf course, and/or recreational facilities, and land for a school for the current and future residents of Newark." And identifies the following specific project objectives:

- Through a General Plan amendment allow residential uses;
- Provide up to 1,260 units of low density residential uses (4.2 – 8.5 units per acre) in Areas 3 and 4;
- Provide high quality residential uses including a mix of executive housing types;
- Provide up to 189 below market rate housing units that are within the 1,260 total residential units;
- Provide land for an up to 600-student elementary school in Area 3 to serve both the Specific Plan development and neighboring residential;
- Provide vehicle access to Area 4 via a railroad overcrossing at Stevenson Boulevard;
- Provide and contribute toward community recreational facilities;
- Provide land for a golf course available to the public.
- *If a golf course is found unfeasible, then another recreation use that is acceptable to the City shall be provided as a condition of development*. (emphasis added)

The alternatives considered by the City include:

1. a “No Project Alternative” in which current conditions continue,
2. a “No Project Alternative” [perhaps more appropriately titled “Implementation of the Current General Plan”?] in which the existing General Plan would be implemented,
3. a “No Development in Area 4 and Higher Density Area 3 Alternative,” in which an elementary school with a 600-student capacity and 1260 homes would be built within the 77-78 acres described in this DEIR,
4. a “Reduced Housing Alternative” in which the development of Area 3 would proceed as proposed in this DEIR, but no housing would be constructed in Area 4 – only a 120-acre golf course would be constructed designed to minimize impacts to wetlands,
5. a “No Golf Course Alternative” in which everything would be developed as proposed in this DEIR except that a passive park would replace the golf course and housing would not be condensed to minimize wetland fill and impacts to wildlife resources, but would remain as depicted,
6. and the “Location (Area 2) Alternative” that would presumably provide 1260 housing units but no golf course?

We support Alternative 3. This alternative avoids development of Area 4 would result in a significant reduction in adverse environmental impacts.

In addition, an alternative that does not develop Area 4 is superior due to:

- the recognized resource value of the site for restoration and preservation as ecotone habitat,
- the recommendation of the California Climate Change Adaptation Strategy that areas such as Area 4 (not specifically identified) be protected for species migration, flood protection, etc. as sea level rises,
- the unique mosaic of a variety of wetlands and uplands that exists on the site
- the relative isolation of the site from existing services (promoting the use of personal cars rather than alternative modes of transportation)
- and the repeated recommendations from resource and regulatory agencies that Area 4 be preserved,

As stated earlier in our comment letter, we question the continued inclusion of a golf course in the project objectives. We have heard from members of the Planning Commission and City Council, that they don't believe a golf course will ever be constructed in Area 4. Substantive evidence exists that golf courses increasingly are not financially sustainable. We must conclude then, the only reason to continue to include a golf course as a project objective is to provide rationale to reject the No Development of Area 4 Alternative.

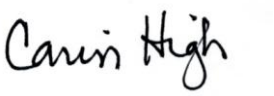
As indicated in the comments provided above, as well as those submitted by Brian Gaffney, Dr. Peter Baye, Jana Sokale, Wayne Miller, San Francisco Baykeeper and resource and regulatory agencies, it is evident the REIR fails to adequately identify, analyze and propose mitigation for significant adverse impacts to the physical environment that would result from implementation of this specific area plan. It is impossible even at a programmatic level to analyze the extent of impacts to biological resources due to the lack of information provided (e.g. impacts to groundwater systems, ability to implement wetlands mitigation, how the site will be developed - i.e. mass filling and grading or piece-meal construction, etc.). It is evident the biological mitigation measures that have been proposed will not reduce the impacts of the project to a level that is less than significant.

In addition to the comments provided in this letter, we are attaching and ask that the City enter into the record for the REIR and respond to, a CCCR comment letter dated June 24, 2010, regarding the 2010 Areas 3 and 4 Specific Area Plan FEIR as the comments submitted remain valid. We also request you enter into the record and respond to comments submitted by CCCR in response to the Newark GPT DEIR, dated September 27, 2013 pertaining to golf course feasibility.

The flaws of the REIR need to be rectified and the document recirculated for public review and comment.

Thank you for the opportunity to provide comments. Please continue to keep us informed of any additional opportunities for public comment.

Sincerely,



Carin High
CCCR Vice-Chair

cc: Mayor Nagy
Newark City Council Members
Newark Planning Commission
John Becker, City Manager
Anne Morkill, SFBNWR Refuge Complex Manager, USFWS
Eric Mruz, DESFBNWR Refuge Manager, USFWS
Winnie Chan, USFWS
Joy Albertson, USFWS
Cay Goude, USFWS
Jane Hicks, Chief, Regulatory Division, USACE
Katerina Gallacatos, South Section Chief, USACE
Mike Monroe, Environmental Protection Agency
Scott Wilson, CDFG
Marcia Grefsrud, CDFG
Bruce Wolfe, San Francisco Bay Regional Water Quality Control Board
Brian Wines, San Francisco Bay Regional Water Quality Control Board
Bob Doyle, Assistant General Manager of Land Acquisition, EBRPD
General Manager Planning and Stewardship, EBRPD
Stewardship Manager, EBRPD
Brad Olson, Environmental Programs Manager, EBRPD
Alameda Creek Alliance
California Native Plant Society
Friend of Coyote Hills
Greenbelt Alliance
Ohlone Audubon Society
Sierra Club

RESEARCH AWARD OF HONOR

Fool's Gold: Audubon International Certification as a Predictor of Foraging Habitat Suitability for Wading Birds, a case study

Robert G. Collins, Sudent, ASLA
Mississippi State University
Advisors: Susan J. Mulley

Narrative Summary:

PROBLEM RESEARCHED / BACKGROUND

The future ability of the Southwest Florida environment to sustain healthy wading bird populations is in doubt. Already, these birds, which are seen as "bioindicators of the health of wetland ecosystems in Florida" (Smith, Richardson, & Collopy 1995 p. 247) have collectively reduced their nesting attempts by 90% since the 1940's (Frederick and Spalding 1994). Habitat loss and alterations to the natural hydrological patterns in the Everglades have been cited as reasons for their precipitous decline (Bancroft, Strong, Sawicki 1994, Hoffman & Jewell 1994, Powell, Bjork, Odgen, Paul, Powell, & Robertson 1989). The astonishing pace at which land is being developed, and the resulting destruction of habitat, shows no signs of slowing. Regarding the future of development in the region, Al Hoffman, Jr., the founder and Chairman of the Board of *WCI* Communities, Inc., remarked, "There's no power on earth that can stop it...It's an inevitable tidal wave!" (Grunwald 2002). Census figures show that he may be correct since the population of Collier County grew by 65% during the decade of the 1990's (Audubon International 2003b).

As habitat for wading birds is lost or degraded, non-traditional foraging sites, such as golf courses, will become increasingly important for this suite of species. All golf courses in Southwest Florida use constructed lakes for a variety of purposes, both aesthetic and functional, with many being used as foraging sites for wading birds. Currently, Audubon International, a not-for-profit environmental organization, which is dedicated "...to improve(ing) the quality of life and the environment through research, education, and conservation assistance," (Audubon International 2004a, no page) certifies golf courses that have a commitment to environmental quality, which includes "identify(ing) habitat enhancement / restoration projects" (Audubon International 2003e, no page). As with approximately 500 other Audubon societies in the United States, Audubon International is not affiliated with the National Audubon Society. With the help of the United States Golf Association, Ron Dodson helped establish the Audubon International Cooperative Sanctuary Program for Golf Courses in 1991 (Dodson 1992).

To attain status in the Gold *Signature* Sanctuary Program, which represents their highest level of environmental stewardship, Audubon International will prepare an Environmental Master Plan in addition to being involved with the project prior to the "final sighting and design of the project" (Audubon International 2003e). The Environmental Master Plan includes an ecological design for the golf club, a natural resource management plan, and a community education and information plan (Audubon International 2004b). Also, a member of the Audubon International

staff will visit the site twenty times. The fees associated with the Gold Level certification include a $100,000 technical service fee, a $9,000 program fee, and an annual membership fee of $500.

RELATIONSHIPS INVESTIGATED

For this study, the suitability of wading bird foraging habitat on three Audubon International Certified Gold golf courses was compared to that on three non-Audubon courses in the Fort Myers / Bonita Springs / Naples area of Florida. It was assumed for this study that "habitat enhancement / restoration projects" (Audubon International 2003e, no page) on the Audubon International golf courses would include wading bird foraging habitat since wading birds are "bioindicators of the health of wetland ecosystems in Florida" (Smith, Richardson, & Collopy 1995 p. 247). Presumably, the amount of suitable wading bird foraging habitat on the Certified Gold courses would be greater than that found on typical Florida golf courses. In order to evaluate this premise, I randomly selected three non-Audubon courses. These courses were then compared to the three Certified Gold Audubon International golf courses on a series of eight (8) indicators that influence the suitability of wading bird foraging habitat. The resulting data allows me to determine if Audubon International certification results in improved foraging habitat for wading birds beyond what is found on typical Florida golf courses. Results of the study are examined within the larger context of sustainable development and natural capital.

METHODS

An evaluation matrix was developed in order to analyze eight (8) indicators that influence the suitability of wading bird foraging habitat, and courses were ranked separately for each indicator. The *Wetland Assessment Technique for Environmental Review* provides a precedent for using an evaluation matrix as a tool to assess environmental quality (Florida Power and Light 2001). Anderson and Gutzwiller (1996) recommend that habitat features at both the micro and macro scale be analyzed. Accordingly, site-specific factors, management issues, and the overall landscape scale are all represented in the matrix. With the exception of the analysis of negative adjacent land uses and golf course proximity to natural preserve areas, no indicators were chosen that are outside the realm of influence of the design, construction, or management of the golf course. Each indicator of habitat suitability was given a set of parameters based on the literature that were tested in the field or collected through interviews with golf course managers and superintendents. Values were assigned to each of these parameters through the data collection process in order to draw comparisons between each course for the series of indicators. The following is the list of general indicators of habitat suitability that were tested: water depth, water type, vegetation (riparian buffer and aquatic), size of individual wetlands and total wetland area on each golf course, buffer zones, bottom surface composition, pesticide and herbicide usage, and landscape context.

Overall Comparison of Audubon International Certified vs. Non-Audubon Golf Courses

Mean rank was calculated by averaging the rank from 1 to 6, with 1 representing the best potential suitability and 6 the worst, of the Audubon and the non-Audubon golf courses. The mean rank, mean, and standard deviation were calculated and reported for the following metrics, which were sub-categorized according to quantitative and qualitative measurements:

Quantitative Measurements
Total available foraging area at the 6 inch contour (acres), Total wetland acreage, Total ephemeral wetland acreage, and Percentage of available wetland at the 6 inch contour

Qualitative Measurements
Total percentage of wetland bordered by aquatic vegetation, Average width of aquatic vegetation, Vegetation mass (square feet), Total percentage of vegetative cover, Wetlands with tall and dense vegetation, Pounds of nitrogen applied per 1000 square feet, Total acreage of manicured turf, Total acreage of environmentally sensitive preserve areas, Average width of riparian buffer, and Percentage of turf buffered

RESULTS

Results of this study, which are examined within the context of sustainable development and natural capital, include the following four critical metrics: total available foraging area at the 6 inch contour, percentage of available wetland at the 6 inch contour, vegetation mass, and total percentage of vegetative cover. These metrics were determined based on the existing literature, which consistently notes that water depth followed by vegetation structure and composition have the greatest degree of influence on the ability of wading birds to successfully feed.

Total Available Foraging Area at the 6 inch Contour (acres)
A total of 1,353 depth measurements were taken on six golf courses, and a contour model was built for each wetland to a maximum depth of 36 inches based on their relevant measurements. For the purposes of this study, total available foraging area is reported at the 6 inch contour since ten (10) out of the fourteen (14) birds in the assemblage can successfully feed at this depth. The importance of water depth is emphasized by the fact that only 6 of these birds can successfully feed in water eight inches deep. The Audubon International Certified Gold golf courses ranked first, third, and fifth overall in this category while the non-Audubon courses ranked second, fourth and sixth.

Percentage of Available Foraging Area at the 6 inch contour
Percentage of available wetland is a more accurate indicator of relative habitat suitability than the statistics for total available foraging area since the total acreage category is skewed to the courses with the most water. Percentage of available foraging area was calculated by dividing the total wetland area at the 6 inch depth by the total wetland area on each golf course. Again, the Audubon International Certified Gold golf courses rank first, third and fifth overall.

Vegetation Mass (square feet)
Vegetation mass was calculated by multiplying the total linear feet of wetland bordered by aquatic vegetation by the average width of aquatic vegetation for each golf course. The Audubon International Certified Gold golf courses rank second, third, and fifth overall in this category while the non-Audubon golf courses rank first, fourth, and sixth.

Total Percentage of Vegetative Cover
Total percentage of vegetative cover was calculated by dividing vegetation mass by total wetland acreage on each golf course. The Audubon International Certified Gold golf courses rank first,

third, and fifth overall in this category while the non-Audubon golf courses rank second, fourth, and sixth.

ANALYSIS/DISCUSSION

The results of this study suggest that in relation to the non-Audubon courses, Audubon International is generally more successful in meeting the secondary habitat requirements for foraging wading birds, but their Gold Certification does not always guarantee improved suitability for the site-specific indicators that actually determine the viability of the potential foraging area.

Watson (1998) found that golf courses enrolled in the Audubon International Cooperative Sanctuaries Program can charge 34% more in greens fees than non-Audubon courses based on people's willingness to pay (WTP) for "environmentally certified goods" (Watson 1998 cited in Singleton 2001 p. 3). In their promotional literature, Audubon International (2003b) acknowledges the economic benefit to developers and golf courses that their certification provides. They write, "The designation (Gold Certification) is useful in permitting, marketing and sales efforts, or other appropriate activities" (Audubon International 2003e, no page). Through their promotion of environmentally sound and sustainable development, Audubon International and their business partners, therefore, are realizing the benefits of manmade capital, which is produced from natural capital (Franceschi and Kahn 2003).

Audubon International's close ties to the United States Golf Association, however, raise important questions about their objectivity. The results of this study suggest that for Audubon International, and some golf developments, there is greater value in the perception of the existence of habitat than actually creating quality habitat. Pelican Preserve, in particular, presents a façade of habitat suitability. It is clear that the Audubon International certification process in no way guarantees equity among their member courses in terms of habitat suitability. Rather, the various levels (Gold, Silver, and Bronze), along with Audubon International's duration of involvement with a specific project, reflect the degree of financial commitment from the developer or owner, not a set standard that Audubon International uses as a guide to award worthy golf courses or developments. This results in a distinct inequity for some members of the Audubon *Signature* Program where the same level of habitat suitability on one Certified Gold course is drastically better, or much worse, than another Certified Gold course. Raptor Bay, for example, is far superior to both Old Collier and Pelican Preserve in terms of the actual provision of wading bird foraging habitat.

Despite the "annual recertification visits", it is very unlikely that Pelican Preserve would ever be removed from Audubon International's roll of Certified Gold *Signature* Sanctuaries, especially considering Audubon International's recent partnership, valued at $2.5 million, with WCI Communities, Inc., the developer of the property (Audubon International 2003a). According to Audubon International, their relationship with WCI includes plans for ten additional communities in Florida, all of which were planned to be Certified Gold at the time of publication of this document (Audubon International 2003d). Explaining WCI's commitment to environmental quality, Audubon International notes, "WCI (has) a full-time team of four environmental managers dedicated to building sustainable communities and educating consumers, communities, and industry leaders" (Audubon International 2003a). Mirroring this

statement in the wake of Audubon International's partnership with WCI, Ron Dodson, President and CEO of Audubon International, explains "WCI is clearly leading the way for individuals and builders to drive change and help protect our natural resources. One person...one home...one community...one industry at a time" (WCI Communities 2003). Al Hoffman, Jr., who is the founder and Chairman of the Board of WCI Communities, Inc. as well as the former 'National Co-Chair and the Florida State Finance Chairman for the George W. Bush for President Campaign', has a slightly less committed view on protecting Florida's natural resources (WCI Communities 2003). Protesting regulations designed to save Florida panther habitat, Hoffman said, "What is the cost of protecting this bastardized species? How much land is society going to sacrifice?" (Grunwald 2002, no page). Further evidence of Hoffman's [lack of] commitment to the environment is exemplified in the following statement that he made in 2002: "We need to protect the environment for our own selfish motives...If we destroy the environment, it won't serve us anymore...(regulators)...think the world will end if they can't protect that little tree" (Grunwald 2002, no page).

Obviously, statements like those of Al Hoffman, Jr. will not be published in any of the promotional literature for Audubon International or WCI since the perception of eco-friendly design is in the best economic interests of both organizations. In fact, public support for the 'inevitable tidal wave' of development might erode without the perception of conservation within the context of these developments. It is also ironic that WCI Communities professes a commitment to sustainability considering Hoffman's leadership of the controversial Florida Council of 100, a business group that advocated a proposal based on a previous plan devised by Azurix, an Enron subsidiary, that sought to "...take over part of the Everglades restoration in exchange for state permits to buy and sell water" (Hollander 2005, p. 20). Their revised plan attempted to facilitate "movement of water around the state" by "undermining the geographic logic of the water management districts" that would ultimately limit the ability of these districts to preserve natural hydrological patterns and promote water conservation (Hollander 2005, p. 20). Clearly, this plan was an attempt not to promote sustainability or natural resource protection, but one that would fuel more development and ensure improved cash flow for the business interests represented on the Florida Council of 100. Previous research (Bancroft et al. 1994) has shown that this plan, if implemented, would undoubtedly have had a serious negative impact on wading bird populations in this region. In a bizarre legal motion, Hollander (2005) writes that the Association of Florida Community Developers, of which WCI Communities is a member, challenged the Florida Department of Environmental Protection's findings "regarding the amount of water that should be reserved for Everglades and other wetland restoration in Florida" based on the argument that the Everglades are part of "natural systems that no longer exist" (Caputo 2004 cited in Hollander 2005, p. 21). Hollander continues, "The thrust of water politics is not behind restoring the Everglades ecosystem but rather it is about storing water for purposes of development and ultimately, about privatizing at least some of the state's water resources. Moreover, it is also about cementing political economic ties that will further political ambitions at the national scale" (Hollander 2005, p. 24). Al Hoffman's willingness to undermine science in favor of unchecked development, along with his close ties with the Bush family, indicates that money and political power are more important to him than genuinely sustainable development. Audubon International, because of their partnership with WCI Communities, is complicit in the pursuit of an agenda that is antithetical to the fundamentals of sustainable development, which they claim to promote. In their *Principles For Sustainable Resource Management*, Audubon

International writes, “Sustainable development and sustainable resource management means using natural resources in ways beneficial to human beings, now and into the future, and at the same time not depleting those resources nor adversely impacting biological diversity” (Audubon International 1998). If Al Hoffman, WCI Communities, and the Florida Council of 100 were to realize their goal of “...allowing private interests to sell water without regulatory interference” (Hollander 2005, p. 20) the precise result would be the depletion of natural resources along with negative impacts to biological diversity.

Although Audubon International is classified as a not-for-profit environmental organization, it is clear from their history that they were created to advance, at least in part, the interests of the golf development industry. The results of this study support the conclusion that Audubon International’s primary interest is in promoting development. Whether or not the future developments that they certify meet the standards set forth in their literature, or the perception of what those standards mean, is of secondary importance. Furthermore, research by White (2003) shows that improved foraging habitat for wading birds is not positively correlated with Audubon International certification. While only two (2) of the twelve (12) courses in the White (2003) study set were Audubon International Certified *Signature* Sanctuaries, it is worth noting that they ranked last and second to last in the “probability of observing an open water wader” category (White 2003, p. 83).

The language of sustainability is embedded in many of Audubon International’s publications, and they certainly recognize that there is both a value, and significant public interest in preserving natural capital so that future generations will not have diminished environmental resources as a result of the actions of the current generation (Franceschi and Kahn 2003). The results of this study indicate that Audubon International’s rhetoric is decoupled from genuine sustainability in their developments as they relate to wading bird populations. In fact, evidence collected by Gawlik and Sklar (2000) suggests that, in relation to Raptor Bay, birds that choose to forage at Pelican Preserve and Old Collier would incur increased energetic costs, which could have a serious negative impact on their population numbers because of the decreased amount of available foraging area, as determined by water depth. In their study of ecological traps, Kokko and Sutherland write, “...when managing habitats, it is necessary to consider not just the actual habitat quality, but also the perceived quality. Creating high-quality habitat without the right cues will be of little use, while allowing poor-quality habitat to appear very suitable might be damaging to the entire population” (Kokko and Southerland 2001, p. 548). This concern is especially relevant for golf course wetlands since it can be assumed that these highly managed landscapes will have decreased water quality, relative to pristine wetlands, as well as the potential to expose birds to highly toxic insecticides and herbicides. Results of this study indicate that Pelican Preserve wetlands, in general, are largely unsuitable for foraging purposes, but cues such as vegetation structure and abundance may suggest otherwise to wading birds searching for foraging sites.

Pearce noted, “...modern environmentalism has failed to address the underlying causes of environmental degradation, which lie in the economic sphere. Simply stated, conservation appears not to pay when compared with the economic returns that society gets from converting natural assets into (explicitly) commercial ones” (Pearce 1998, p. 23). The golf industry, through

Audubon International, has opportunistically capitalized on this concern. The realization that golf courses historically have a bad reputation environmentally and that conservation could be achieved in the context of the golf environment prompted the formation of Audubon International. However, it is important that conservation efforts on golf courses and in developments strive to move beyond a façade of habitat suitability. The danger, of course, emerges that approval for future developments may potentially be at least partially contingent on the agreement to create and restore wildlife habitat. If the habitat created is of little value in relation to the habitat that existed on-site prior to disturbance, the target population of the manufactured habitat could be in grave danger.

Several recent studies have shown that golf courses do present unique conservation opportunities (Moul & Elliott 1993, Key 2003, Gordon, Jones, & Philips 2004). This study observed suitable habitat, especially at Raptor Bay. However, an ethical conflict arises when it is obvious that some Audubon International courses are promoted as furthering sustainability and wildlife conservation, which includes "identify(ing) habitat enhancement/restoration projects" (Audubon International 2003e) when the evidence shows that, in fact, very little viable wading bird foraging habitat actually exists on two of the three Certified Gold golf courses in question. By couching their developments in the language of sustainability and conservation, Audubon International has attempted to reverse the trend observed by Pearce (1998) so that golf courses become part of the conservation movement, thereby allowing economic development and wildlife conservation to co-exist regardless of the reality of habitat provision.

Perhaps Audubon International subscribes to the concept of "weak sustainability" as described by Franceschi and Kahn (2003). More likely, a series of interrelated, complex factors work to limit Audubon International's ability to guarantee the presence of large amount of suitable habitat on their Certified Gold golf courses. These might include, but are not limited to: the developer's program goals, construction realities, management practices, a conservation focus on other species of wildlife, the relative conservation potential of each individual site, and the rigidity of Audubon International's own ranking system. Regardless of the reasons for their shortcomings, the integrity of Audubon International's *Signature* Sanctuary Program is in question because they have failed to significantly contribute, despite their assertion to the contrary, to the sustainability of wading bird populations - an important segment of Florida's natural capital.

Further potential research on this topic should include point count data. A comparison of bird response to Audubon vs. non-Audubon courses would be a worthwhile investigation. Also interesting would be a further analysis of the energetic cost to wading birds that choose golf course wetlands for foraging sites when very little potential foraging area actually exists on the course. It is possible that some golf course wetlands act as an ecological trap to foraging wading birds, and increased awareness of this potential hazard would be very beneficial. Another interesting future study would be to assess the public's reaction to the name 'Audubon' and what qualities are associated with this name. I think further analysis of Audubon International's use of the name, especially in an ethical context, is warranted considering the results of this study.

This study analyzed a series of indicators at the micro and macro scale that influence the suitability of wading bird foraging habitat. The primary importance of this study is in providing

awareness of the disconnect between image and reality for Audubon International certification of golf courses. While their certification process was found to be lacking in terms of the narrow focus of wading bird foraging habitat, the results of this study demonstrate that further research into wildlife habitat provided by Audubon International programs is warranted. While the sustainable development movement continues to grow in popularity, its variant offspring should be critically analyzed in order to help avoid a future of decreased returns from natural capital. Furthermore, landscape architecture practitioners can help ensure an authentically sustainable future by refusing to be satisfied with the mere image of sustainability since future generations will likely require a built environment that does not sacrifice the earth's natural resources, which include wildlife populations.

http://www.asla.org/awards/2005/students/winner11.html

accessed 9-19-2014

St. Petersburg Times ONLINE STATE

Audubon groups at odds over names, objectives

By CRAIG PITTMAN

Businessman Stephen Cejner was trying to reassure all the people who were mad at him. Sure, his company wants to build an 18-hole golf course amid the dunes and scrub of the North Peninsula State Recreation Area near Daytona Beach.

But he insisted this would be the most environmentally sensitive golf course possible. After all, he said, his company would be "working with Audubon to make it a signature golf course."

No, not that Audubon, not the venerable conservation organization of dedicated birdwatchers. That Audubon Society opposes Cejner's plans to develop half of the beachfront land the state bought to preserve it from development.

Cejner was referring to Audubon International, a New York-based organization more concerned with birdies than birdwatching. Supported in part by $100,000 a year from the U.S. Golf Association, Audubon International collects hefty fees from developers for stamping the Audubon name on golf courses around the country.

To Audubon Society officials, Audubon International is like an evil twin who constantly causes trouble. They say developers frequently promise a golf course project is going to be "Audubon-certified," while Audubon Society members are unaware of or opposed to the project.

"When Audubon International certifies a golf course, it clearly creates a lot of confusion in the mind of the general public," said Charles Lee, senior vice president of Audubon of Florida. "There are cases where the developers go in and get some upfront connection to Audubon International and they wave that around in the government hearings."

It happened last month in Tampa. Environmental activists were questioning the plans for Grand Hampton, a new 1,600-home golf community planned in New Tampa that would plop down houses, apartments, businesses and an 18-hole golf course next door to the Cypress Creek Preserve, a watershed that feeds into the Hillsborough River, the city's main source of drinking water.

So the developers' attorney, Joel Tew of Clearwater, promised that the project would meet Audubon standards. That surprised the board of the Tampa Audubon Society. They sent their

president, Gerard Craddick, to the next council meeting to explain to city officials that the Audubon Society had not, and would not, endorse Grand Hampton.

"I attempted to make it clear that there was a distinction" between the Audubon Society and Audubon International, Craddick said.

Council members said they were surprised to hear there was more than one Audubon. Tew told a reporter his client, Toll Brothers, had no idea there was a difference between the two organizations.

In the end, though, the council voted to approve the rezoning for the project -- so long as the golf course signed up for Audubon International certification. Watching the vote, Craddick said he felt like asking the council, "Hello, were you listening?"

The most extreme example of this identity crisis is TwinEagles in Collier County. TwinEagles paid $9,500 to join Audubon International's honor roll, even though the Collier Audubon Society is suing to block the development.

"This Audubon signature certification is being used to justify and allay concerns about environmental misdeeds connected with golf course building," said Brad Cornell of the Collier Audubon Society. "TwinEagles fits the definition for why we don't want to certify golf courses that are displacing natural resources. . . . It's misleading and disingenuous."

Ron Dodson founded Audubon International, which has an annual budget of $2.5-million. He says this confusion happens all over the country. He insists that he dislikes it too, but what can you do?

"Every time we know of where a developer has gone before a government agency and said they were going to be affiliated with Audubon and we have not been involved, it has blown up in their face," he said.

Dodson said he's never heard of the Grand Hampton project in Tampa or Cejner's plans for the state recreation area. As for TwinEagles, it has not completed its certification as an Audubon signature course because of drainage problems, he said.

But he said all three of those projects may yet wind up winning Audubon certification if their owners are willing to play by his rules. If developers are going to build golf courses anyway, he said, why not make sure they don't wipe out every bit of wildlife habitat? Why not help them avoid overloading the course with pesticides and fertilizers?

"A golf course is not a wildlife refuge but they have some attributes similar to a wildlife refuge," Dodson said. Making them environmentally friendly "accomplishes more than standing on the sidelines yelling and screaming about everything proposed."

As far as Dodson is concerned, his organization is just as much a part of the Audubon family as the better-known society, although he concedes, "We're like that weird uncle up in the attic that nobody wants to talk about at the reunion."

* * *

Dodson, 52, was in Florida last week touring potential golf course developments in Bartow, Ocala and Bonita Springs. He makes $79,500 a year stamping the Audubon name on golf course projects from coast to coast and ticking off the Audubon Society. But there was a time when the Audubon Society's magazine hailed him as one of the top 10 environmentalists in the country.

He went to college on a golf scholarship (his handicap now is between 12 and 15) and wound up teaching in Kentucky. But Dodson said, "All I ever wanted to do my whole adult life was go to work for the National Audubon Society."

In 1982 his dream came true. He was hired by the National Audubon Society to be a regional vice president in Albany, N.Y. But the job wasn't what he thought it would be: "I spent most of my time out begging for money."

Then, in 1987, the organization had a $3.5-million budget shortfall. Dodson was downsized.

"It was a traumatic thing for myself, my wife and my three kids when I lost my job," he said. Although Dodson said he harbors no ill will toward his former employer, he also said that when the Audubon president who fired him later lost his job too, "we had a party that day in my office."

Dodson invested his savings in creating his own Audubon job by reviving the Audubon Society of the State of New York. He launched a program in which people paid to register their back yards, businesses and golf courses as Audubon wildlife sanctuaries.

The National Audubon Society cried foul, filing a lawsuit to block Dodson from using any name connected to the 19th-century ornithologist John James Audubon because it would confuse people.

John Bianchi, a spokesman for the National Audubon Society, said the lawsuit was settled and organization officials do not discuss it. That's because there was no settlement, Dodson said -- the Audubon Society lost.

In a 1991 ruling, a New York judge wrote that the Audubon Society does not hold the exclusive right to the name Audubon and had failed to prove there was any confusion over which Audubon was which. She suggested the people complaining about Dodson would "do well to take a lesson from nature" because "where the more varied the species, the greater the chance for succeeding in issues of survival."

* * *

Meanwhile Dodson, thanks to the financial backing of the U.S. Golf Association, had created Audubon International to spread his reach beyond New York. More than 2,500 golf courses around the country have paid $100 to register as Audubon sanctuaries.

Then he began working with golf course developers to design environmentally friendly golf courses that would then be certified as members of the Audubon International "signature" program. They would have to meet certain standards designed to protect the environment, draw up a management plan and agree to site inspections to check the work.

The base rate for the signature program is $9,500 per course, with a $500 a year membership fee. The price goes up depending on how involved Audubon's experts get in the work. For a 2,600-acre project on the site of an old bomb factory in Nevada, Dodson said, he's charging the developer $400,000.

The first Audubon signature course was Collier's Reserve in Naples, Fla., and since it was approved, 14 others nationwide have been joined the list. More than 100 others have applied, but more than 30 have dropped out of the running. Only one signature course has ever been kicked out of the program, Dodson said, the Charter Club at Summerfield in Stuart.

Dodson concedes that golf courses do not belong on some environmentally sensitive sites. A few years ago a Hilton Head, S.C., developer tried to enlist Dodson's organization in planning a golf course on some environmentally sensitive land, and Dodson turned him down flat.

The developer built it anyway, Dodson said, adding, "I'm not sure I did any good in that instance."

Dodson and Audubon Society officials have met to try to figure out a way to eliminate the confusion and perhaps even work together. So far, nothing has changed. Despite their nearly identical names, said Bianchi of the National Audubon Society, "there's very little common ground."

- Times staff writer Michael Sandler and researchers Cathy Wos, Kitty Bennett and Caryn Baird contributed to this report.

http://www.sptimes.com/News/080700/news_pf/State/Audubon_groups_at_odd.shtml

accessed 9-19-2014

Audubon of Florida News

A Clarification on Golf Course "Certification"

posted on March 11, 2011 in Chapters

Legislation introduced in the Florida House and Senate last week proposes to site five golf courses by Jack Nicklaus in Florida State Parks. The preambles to the bills suggest Nicklaus' previous courses were environmentally sensitive because they were endorsed by "Audubon International."

Audubon International is an entity which is not related to the conservation organizations Audubon of Florida, National Audubon Society or Audubon chapters in Florida, commonly referred to as "Audubon." While some golf courses may work to reduce their "footprint" by limiting irrigation, limiting fertilizer use, and attempting to create habitat, Audubon *does not certify them*.

Read on for details.

NATIONAL AUDUBON SOCIETY STATEMENT ON AUDUBON INTERNATIONAL

New York, NY, The National Audubon Society (Audubon) was founded in 1905 for the purpose of conserving and restoring natural ecosystems, focusing on birds and other wildlife, and their habitats. Audubon is supported by over 400,000 members with state offices, programs, and 500 chapters across the country.

Audubon receives many calls and letters from people who have confused Audubon with a different organization calling itself Audubon International. Since its inception in 1991, Audubon International, funded in part by the United States Golf Association, has been certifying golf courses that pay an annual membership fee as Audubon Cooperative Sanctuaries. Similar fee-based certifications are available from Audubon International to developers of cemeteries, municipal parks, campgrounds, resorts, stores, industrial facilities, marinas, residential communities and preparatory schools.

Audubon is not associated with Audubon International in any way. Audubon does not certify golf courses, or any other development, as being environmentally sound. Indeed, Audubon very often opposes such development. Furthermore, Audubon sanctuaries are protected natural spaces for public enjoyment. No Audubon sanctuary is certified for development.

We ask your cooperation and care in distinguishing between Audubon and Audubon International, and in clarifying that these various certification programs are not endorsed or supported by Audubon.

http://audubonoffloridanews.org/?p=7411

accessed 9-19-2014

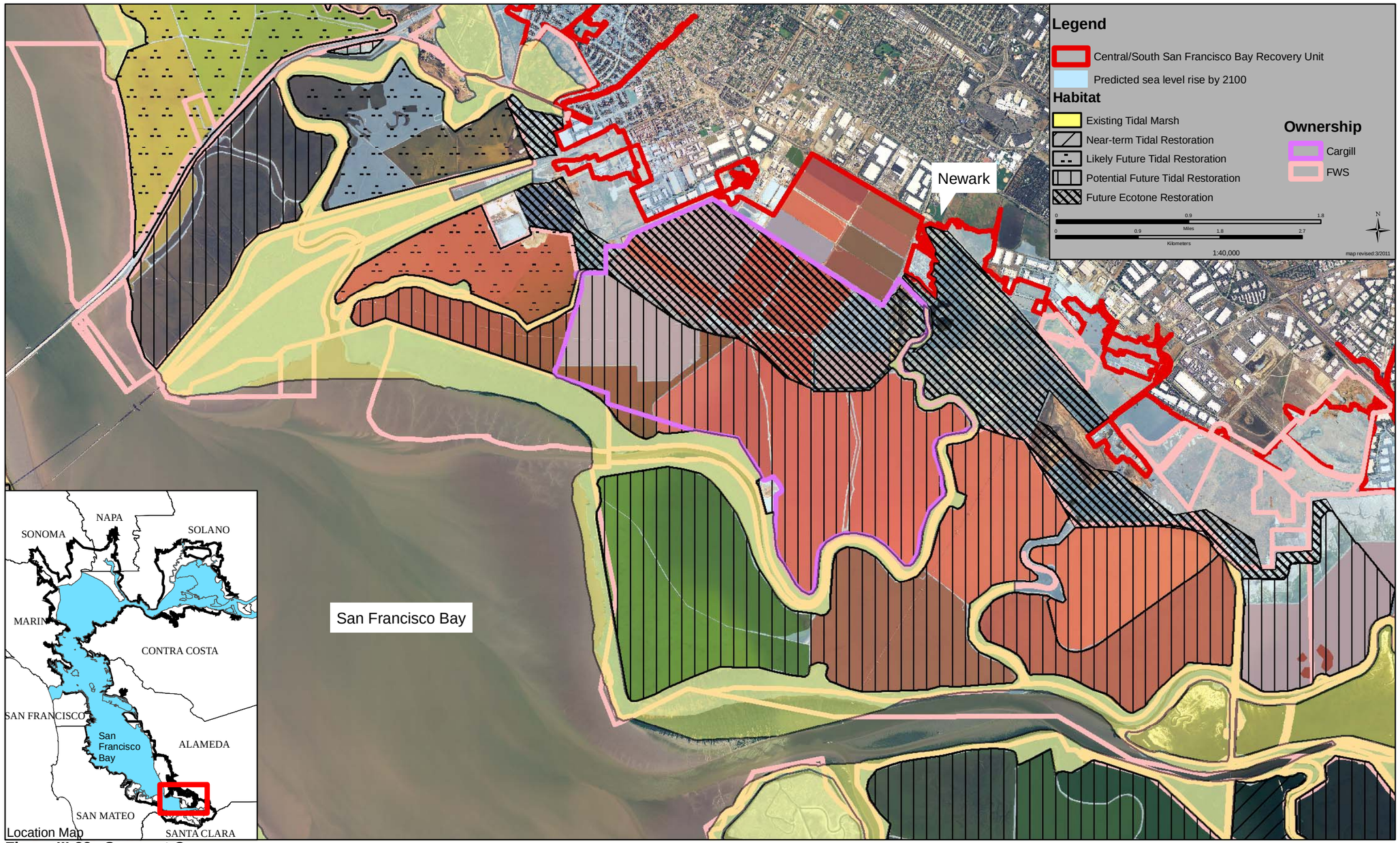


Figure III-23. Segment Q

CITIZENS COMMITTEE TO COMPLETE THE REFUGE

453 Tennessee Lane, Palo Alto CA 94306 Tel 650 493-5540 Fax 650 494-7640 e-mail: marsh@refuge.org

Terrance Grindall
Community Development Director
City of Newark
37101 Newark Boulevard
Newark, CA 94560
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June 24, 2010

Dear Mr. Grindall,
The Citizens Committee to Complete the Refuge continues to urge the City to correct the substantive flaws of the Environmental Impact Report (EIR) for the Area 3 & 4 Specific Plan Project and to re-circulate a revised document that remedies the issues identified by CCCR, its consultants and attorneys, other environmental groups and resource and regulatory agencies.

Area 4 mitigation measures for biological impacts are inadequately described:

Importance of Upland Transition Zones to the Functional Values of the Wetlands and Preservation of Endangered and Common Bay edge Species:

The EIR/FEIR maintains adequate mitigation has been provided to offset the significant adverse impacts to upwards of 85.6 acres of direct wetland fill. The EIR/FEIR do not provide sufficient information regarding potential acreage of indirect impacts to wetlands nor does the document indicate the acreage of impacts to wetlands that could arise through efforts to "create" new wetlands out of uplands, or "enhancement" activities of existing on-site wetlands. Thus it is impossible to determine if the full extent of impacts have been identified or mitigated.

The DEIR (p. S-8) MMBIO-1.2A - Impacts to wetland and aquatic habitat on the site states:

- Future project proponents will utilize a combination of on-site wetland creation and enhancement, and/or acquisition of existing wetlands located off site.

- On-site component will include the **creation of wetland and aquatic habitat within the upland that is currently disked and graded w/in Area 4** and will enhance portions of remaining areas of agricultural field/seasonal wetland habitat (emphasis added)

The DEIR also indicates:

> "The Specific Plan is consistent with the Refuge approved acquisition boundary. The value of Area 4 **in providing upland transition zones adjacent to tidal wetlands has also been identified by the Baylands Ecosystem Habitat Goals Report (1999),** a report of habitat recommendations prepared by the San Francisco Bay Area Wetland Ecosystem Goals Project, a consortium of nine state and federal agencies, including the San Francisco Estuary Institute." (page 115).

MMBIO-1.2A is inconsistent with the stated and regionally documented need to preserve upland transition zones as retreat habitat for the recovery of listed species in the face of sea level rise. MMBIO-1.2A attempts to mitigate for the loss of filled wetlands by creating/enhancing wetlands out of other habitats of importance for

survival of bay edge species. This measure would destroy the unique mosaic of habitats these lands currently host - a multitude of wetlands and upland habitats as indicated in Table 3.5-2 (page 115) that provide habitat resiliency and preserve regional biodiversity.

FEIR Master Response 2 statement (p. 11) implies all of the remaining undeveloped uplands in Sub Area E could be impacted through wetlands creation:

> Assuming full development and 85.6 acres of wetland impacts, the creation portion of the wetland mitigation standard would require the creation of 85.6 acres (applying the creation ratio of 1:1) of wetlands in areas that are currently uplands. **Sub-Area E, which would remain undeveloped, contains approximately 35 acres of uplands that could be used for wetland creation.** As a result, 50.6 acres of such wetland fill could not be mitigated within Area 4, and would instead have to be mitigated through the alternative mitigation option (MM BIO-1.2B) which allows for the acquisition and permanent preservation of existing wetlands at a ratio 1.5:1 (habitat preserved: habitat impacted) at an approved wetland mitigation bank (i.e. off site) or other private lands within 10 air miles of the Project and located along the eastern shore of south San Francisco Bay within the same geographic watershed. (emphasis added)

This master response is **internally inconsistent** with other comments provided in the FEIR.

The USFWS commented on the DEIR:

> **COMMENT A-2:** *Comment 2:* S-8, BIO-1, Mitigation Measure 1.2: Upland habitat areas onsite should not necessarily be destroyed to create/enhance wetland for mitigation of impacts. Adjacent uplands and adequate upland/marsh ecotone should be included in the wetland creation/enhancement design. These higher areas provide critical high tide refugia for marsh species like the salt marsh harvest mouse and California clapper rail. The Refuge is currently experimenting with ecotone and adjacent upland restoration at their Environmental Education Center.

THE FEIR response to Comment A-2 stated, **"It is fully acknowledged the importance of the upland/wetland ecotone in and adjacent to marsh habitats** even though the future wetland mitigation will not be tidally influenced. The City agrees that the **future design related to wetland creation should maintain a mosaic of upland and wetland habitats**, particularly in the southern portion of the project site" (page 14). (emphasis added)

The master response comment and approach to wetland mitigation is in conflict with the above statement to "maintain a mosaic of upland and wetland habitats." There is no mitigation plan offered for uplands in the EIR/FEIR. Conflicting comments such as these call into question even the basic intent of the mitigation measures.

The EIR/FEIR provides conflicting statements regarding the importance of the upland transition zones that occur onsite and how they will be impacted by proposed mitigation measures. The documents recognize the regional importance of the upland habitat, their value for tidal marsh species as sea level rises and yet no mitigation is proposed to offset the loss of this important upland habitat.

The DEIR indicates that:

> *"A detailed mitigation plan shall be developed by a qualified biologist under contract to each future developer for individual development projects within the Specific Plan area which result in direct impacts to wetland habitats. This plan will be submitted and approved by the City of Newark prior to the initiation of grading within wetlands (page S-9).*

This statement fails to acknowledge that no grading permit should be authorized anywhere on the site until a comprehensive mitigation plan has been submitted and reviewed by the regulatory and permitting agencies. Issuance of a grading permit for any portion of the site may have negative indirect impacts on wetlands, may have direct impacts on survival of endangered species through the loss of upland refugia habitat, may compromise the ability to provide the necessary wetland mitigation and would be an irretrievable commitment of resources.

The EIR/FEIR does not demonstrate that sufficient land is available on-site or off-site to mitigate for the loss of 85.6 acres of wetlands and the transitional upland habitat needed to maintain the ecological functions of the various wetlands types and survival of bay edge species.

There is no conceptual comprehensive mitigation plan for the area that demonstrates how all the required mitigation measures might be accomplished on site and how they might interface with each other. Such an overview is necessary to guide future decision makers and developers as review of impacts and review of mitigation will be piece-mealed, and each developer will be required to develop their own mitigation plan.

The approach also fails to recognize the role of regulatory and resource agencies in permitting this project. Newark city staff lacks the qualifications to determine what is or is not appropriate biological mitigation.

The DEIR further indicates that:

> *A detailed mitigation plan will outline the necessary steps for mitigation; including plan view graphic of target mitigation activities, brief seeding plan, and monitoring and reporting plan, including success criteria.*

This statement assumes sufficient information has already been provided and is known about the adequacy of upland sites for supporting wetlands creation e.g. sufficient hydrology, soils, etc. No discussion of the adequacy of these lands to serve as mitigation is provided. The EIR/FEIR does not discuss the existing conditions of the site to support the feasibility of mitigation nor does it address the changed conditions of the site after development has occurred. These changed conditions may include 2.1 M cubic yards of fill that may impact local hydrology, soundwalls along the length of UPRR tracks that will require significant deep foundations that may disrupt the lateral flow of groundwater recharge to the lands, artificial irrigation of golf course turf that may change local hydrology and introduce herbicides, pesticides, rodenticides and fertilizers that may indirectly impact the ability of the land to support the targeted mitigation habitat and/or listed species.

The DEIR further indicates that:

> *Potential impacts associated with grading activities required for mitigation of seasonal wetlands have been considered during this current specific plan CEQA impacts analysis no additional significant impacts have been identified.*

This simply cannot be known without at least a conceptual mitigation plan that indicates the locations of mitigation areas and their relationship to the existing mosaic of wetlands and transitional uplands scattered across Area 4. No attempt is made to offer this level of detail or even indicate conceptually what areas are considered impacted by the direct placement of fill, by the indirect impacts of the changed conditions resulting from the fill and the direct and indirect impacts of mitigation measures placed on the remaining landscape.

Furthermore there are inconsistencies in the number of wetland acres that will be impacted. The biological resources section and summary indicates 85.6 acres of impacted wetland habitat, but in Appendix G – Hydrology and Water Quality Report the Environmental Impacts section (page 7) indicates a total of 92.4 acres of wetlands in Sub Areas B, C and D could be filled if the site is fully developed with housing and a golf course.

THE DEIR MM BIO-1.2B indicates: Alternatively, **at the discretion of the project developer(s), and as approved by the City of Newark**, all or a portion of the mitigation requirements for impacts to seasonal wetland habitats, may be satisfied through the acquisition and permanent preservation of existing wetlands at a ratio 1.5:1 (existing habitat: habitat impacted) at an approved wetland mitigation bank (i.e. off site) or other private lands. (emphasis added)

This decision should certainly not be left to the discretion of the project developers. In addition, there is no indication of where such private lands might exist, no indication of how the lands would be acquired, and no conceptual plan of how mitigation will occur on the site. Acquisition and preservation does not equal "no net loss" as is the policy of the State.

FEIR Master Response 2:

> Ultimately, if the developer cannot comply with the wetland mitigation proposed in the Draft EIR, then they cannot build their project utilizing the maximum footprint as shown in the Draft EIR. Prior to obtaining City approval for any development that would fill wetlands in Area 4, the applicant will be required to demonstrate precisely how and where the Draft EIR wetland mitigation measures will be satisfied. **If the developer is unable to satisfy the wetland mitigation measures in a full development scenario, then the developer will have to reduce the scope of the proposed development and the associated wetland impacts to the degree necessary to be able to satisfy the wetland mitigation measures. Note that wetland creation could occur not just in Sub-Area E, but also elsewhere within Area 4. For example, instead of fully developing all of Sub-Area B, a portion of Sub-Area B could be developed, and the remaining uplands in Sub-Area B could be used to create wetlands in order to satisfy the Draft EIR wetland mitigation requirements. There are approximately 154.6 acres of upland habitat within Sub-Areas B, C, and D that could be used to create wetlands. In this scenario it is likely that all wetland creation mitigation could be completed on-site.**

This statement demonstrates that based upon the information provided in the EIR/FEIR we have no way of knowing how this area will be developed, where mitigation will occur onsite and what it's proximity will or won't be to the development envelope. This is important with respect to indirect impacts of the development on the mitigation site and with respect to habitat continuity – patches of mitigation surrounded by the development envelope are unacceptable mitigation. Nor is it possible for the City to determine if the development project is feasible and/or would produce sufficient property tax revenues to offset public service liabilities associated with a development on the outskirts of the City.

The focus on mere replacement of wetland acres may jeopardize the local populations of salt marsh harvest mouse and salt marsh wandering shrew. The mitigation proposed (aside from the puzzling master response

above) has been focused in Sub Area E – converting the uplands in this area to wetlands, presumably by soil removal to lower the topographic position and allowing the former uplands to be inundated by rainfall or springs. This would remove higher elevation escape habitat for the salt marsh harvest mouse and salt marsh wandering shrew, leaving only the developed areas as less than desirable escape habitat that would further imperil these species.

Deferral of Mitigation:

FEIR Master Response 2 states:

> Since the amount of ultimate wetland fill is unknown, the Draft EIR established rigorous mitigation requirements and standards that will be implemented in the future through the City entitlements process as specific development proposals seek approval to construct within Areas 3 and 4. **Those specific development proposals must quantify their impacts to wetlands and other biological resources, and then propose in a mitigation plan specifically how and where those impacts will be minimized consistent with the standards established in the EIR. As a result, the specific location of such future mitigation (either on-site, or off-site), and the size and design of future created or enhanced wetlands, are unknowable at this time.** As described in MM BIO-1.2A, such future mitigation plan(s) will be prepared, submitted, and approved by the City of Newark prior to initiation of any grading within or fill of wetlands. (emphasis added)

The "rigorous mitigation requirements" appear to be the 1:1 creation ratio and the 0.5:1 enhancement ratio, as well as the ratios for burrowing owl, waterbird, and salt marsh harvest mouse/wandering shrew ratios. There are numerous mitigation measures that might reduce the adverse impacts of the development on the preserved wetlands…measures regarding water quality, invasive species control, however, there is very little language regarding the standards future mitigation monitoring plans must adhere to in order to demonstrate the feasibility of the mitigations proposed – the focus is all on the monitoring requirements. This omission was described in the RWQCG comment letter cited in this review below. The ratios for creation and enhancement of wetlands, and salt marsh harvest mouse/wandering shrew are not likely to be acceptable to the resource or regulatory agencies as demonstrated by the RWQCB comments and CDFG. The manner in which the City proposes to identify on-site habitat available for burrowing owl is not likely to be acceptable to resource agencies (e.g. foraging habitat could be golf course, levees, etc.) The burrowing owl discussion in Appendix E p. 110 has slightly more protective language than that found in the EIR itself. The mitigation and monitoring report standards set by the City are inadequate and not up to the standards of the regulatory agencies as demonstrated by the RWQCB comments. Neither the City nor the public has any certainty based upon the requirements of the EIR to determine whether the adverse biological impacts of the proposed "project" will be mitigated. We have only the City's promise that it will be.

The U.S. Fish and Wildlife Service (USFWS) commented about the uncertainty that off-site mitigation could occur and provided guidance on the additional information that would be required:

> **COMMENT A-3:** *Comment 3:* S-8, BIO-1, Mitigation Measure 1.2: It is unclear where acquisition of off-site wetlands for mitigation would occur. There are few mitigation banks left in the South Bay. Areas should be clearly identified in the DEIR to determine if they sufficiently address impacts of the proposed action. Any mitigation for the proposed action should result in one specific mitigation site with a detailed restoration plan. Individual detailed mitigation plans developed by each future developer as proposed in the DEIR will result in a fragmented patchwork of small parcels of poor quality wetland.

Furthermore, any mitigation sites should include an endowment to support long-term management success.

The City responded:

> **RESPONSE A-3:** Specific off-site wetlands for mitigation, if needed, **will be identified as part of the future entitlement process and environmental review**. The basic criteria for the location of off-site wetlands are described in the Draft EIR as having to occur within 10 air miles of the current project site and are to be located along the eastern shore of the South San Francisco Bay within the same geographic watershed. The City also notes that *California Native Plant Society v. City of Rancho Cordova* (2009)172 Cal.App.4th 603, confirmed an EIR need not identify specific habitat mitigation sites and that the City could rely on the result of a future study to determine replacement habitat location. (emphasis added)

To our knowledge there are no mitigation banks in existence within the area specified and few public lands that could be acquired. The only site the City has provided is a proposed mitigation bank along Newark Slough that has been proposal stage for at minimum three years, and already supports a majority of wetlands habitat. According to the City this site has the potential for 20 acres of mitigation credits should it ever become available. It is not unreasonable under these circumstances to ask the City to provide additional credible documentation that indicates mitigation for impacts to 85.6 or 92 acres of wetlands can be accomplished.

Mitigation Feasibility:

Please refer to Comment E-3 of the RWQCB:

COMMENT E-3: Comment 3 Section 3.5, Biological Resources, 3.5.3.2, Impacts and Mitigation Measures for Biological Impacts, Pages 135 and 136.

> Implementation of the Specific Plan would result in the loss of up to 85.6 acres of wetland/march/aquatic habitat, including 7.65 acres of salt marsh harvest mouse/salt marsh wandering shrew habitat. As mitigation for this significant impact the DEIR offers Mitigation Measure BIO-1.2A.
>
> To offset impacts to the wetland and aquatic habitat on the site, the future project proponent(s) will utilize a combination of on-site wetland creation and enhancement, and/or acquisition of existing wetlands located off site. The on-site component of the mitigation shall include creation of wetland and aquatic habitat within upland habitat that is currently disked and graded within Area 4 and will enhance portions of the remaining areas of agricultural field/seasonal wetland habitat within Area 4, as described below.
>
> Compensatory mitigation for impacts to these habitats shall consist of two parts: (1) creation of high quality wetland and aquatic habitat within Area 4 within upland habitat at an acreage ratio of 1:1 (habitat created/enhanced:habitat impacted) to prevent any net loss of habitat functions or values, and (2) enhancement of existing seasonal wetland habitat that is currently within agricultural production (mapped as agricultural field/seasonal wetland habitat) at an acreage ratio of 0.5:1 (such enhancement will include cessation of farming activities, seeding with appropriate seasonal wetland plant seeds, and may include minor earth moving activities). In summary, any impacts to seasonal wetlands, freshwater marsh, brackish marsh, detention basin, and aquatic habitat will be mitigated at a total acreage ratio of 1.5:1 (habitat created and enhanced: habitat impacted).

The *San Francisco Bay Area Wetlands Ecosystem Habitat Goals Project* recommended that the tidal marsh/upland transition zone of Area 4 be protected and enhanced, including the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the Pintail Duck Club (all located in Area 4). In addition, the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) has expressed strong interest in acquiring Area 4, because of its significance as habitat for endangered species and location adjacent to the Refuge, and the Bay Conservation and Development Commission (BCDC) has expressed interest in restoring the diked historic baylands in Area 4 to tidal action and enhancing the wildlife values of the onsite wetlands.

The proposed mitigation quantities appear to be insufficient to compensate for the impacts associated with the fill of wetlands in Area 4. **Since Area 4 is one of the largest remaining areas of open space along the baylands, provides habitat for endangered species, and is adjacent to the Refuge, impacts to Area 4 will be regionally significant and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat.** In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Water Board is not likely to authorize fill of wetlands at Area 4, **unless mitigation was demonstrably capable of providing equal habitat benefit for listed species. The proposal to convert some areas of uplands in Area 4 to wetlands is also problematic, since a combination of wetlands and associated uplands are essential to high habitat value.**

At present, the DEIR does not demonstrate that adequate mitigation is available. Onsite mitigation will be compromised by its proximity to the development envelope of the site, which will introduce noise pollution, light pollution, and domestic animals into the vicinity of preserved or enhanced habitats. **The DEIR does not identify any feasible locations for offsite mitigation.** There are very few parcels of undeveloped land in private ownership that are available for use as mitigation wetlands, and are in proximity to protected lands that currently provide habitat for listed species.

Proposed mitigation measures should be presented in sufficient detail for readers of the CEQA document to evaluate the likelihood that the proposed remedy will actually reduce impacts to a less than significant level. CEQA requires that mitigation measures for each significant environmental effect be adequate, timely, and resolved by the lead agency. In an adequate CEQA document, mitigation measures must be feasible and fully enforceable through permit conditions, agreements, or other legally binding instruments (CEQA Guidelines Section 15126.4). Mitigation measures to be identified at some future time are not acceptable. It has been determined by court ruling that such mitigation measures would be improperly exempted from the process of public and governmental scrutiny which is required under the California Environmental Quality Act.

The current DEIR does not demonstrate that it is feasible to mitigate all of the potentially significant biological impacts of the Project to a less than significant level. Although the current CEQA document covers a Specific Plan, it should contain proposed mitigation measures at a sufficient level of detail to allow an assessment of the feasibility of the proposed mitigation. Such proposed mitigation measures should be presented in sufficient detail for readers of the CEQA document to evaluate the likelihood that the proposed remedy will actually reduce impacts to a less than significant level. Such a demonstration could include the identification of available land for mitigation actions and the measures that would be necessary to establish mitigation wetlands on those properties. We encourage the City of Newark to revise the DEIR to include specific mitigation proposals for major impacts to wetlands and marsh habitats. In the project-level DEIRs, mitigation proposals should be provided in even greater detail.

> The revised DEIR should be re-issued for public review. Including specific mitigation measures in a Final EIR is inappropriate, since this information would not have been subject to public review before the Final EIR was adopted. **Since the DEIR does not even include a conceptual mitigation plan, we are not able to assess whether or not it is possible to provide sufficient mitigation to reduce Project impacts to a less than significant level.** We encourage the City of Newark to revise the DEIR to include conceptual mitigation plan(s).
>
> **The conceptual mitigation plan(s) should include factors to account for potential distances between the areas of impact and the mitigation sites, temporal losses of habitat, and the uncertainty of success associated with any mitigation project**. When mitigation is constructed, enhanced, or preserved offsite, the amount of mitigation should be increased to account for the distance between the impact site and the mitigation site. We also encourage project proponents to construct mitigation projects before impacting waters of the State. When impacts occur prior to the full functioning of mitigation sites, mitigation is required for the temporal loss of habitat between the time that habitat is impacted and the time that the mitigation site has developed sufficiently to be fully functioning as habitat. The amount of proposed mitigation should also account for the uncertainty associated with the successful creation of any wetland mitigation site.
>
> **The conceptual mitigation plan(s) should contain sufficient detail to demonstrate that proposed mitigation project(s) are hydrologically feasible and accessible to impacted wildlife species.** Mitigation should also be "in kind" as much as is feasible. When mitigation is not "in-kind", then the amount of mitigation must be increased to compensate for the disparity. (emphasis added)

The City of Newark's response is to merely refer to the inadequate master response regarding mitigation.

Master Response 2:

> There are potential mitigation sites within the 10 mile radius the Draft EIR proposed, which extends approximately from Hayward to Milpitas. The commenters are correct in stating that at present no formal mitigation bank is approved to sell wetland credits; however, as an example, there is a proposed bank very near the project site, called the Newark Slough Mitigation Bank, that is currently going through the approval process; that bank advertises 20+ acres of wetlands available for mitigation. Also, for clarification, the mitigation in the Draft EIR states "or other private lands" thus, off-site mitigation is not limited to formal mitigation banks.

If one looks along the shoreline from Hayward to Milpitas there are few privately-owned parcels remaining…the mitigation bank that is mentioned has been "in the works" for approximately five years and has not gone forward, moreover as mentioned by the RWQCB comment all the lands of that mitigation bank are existing wetlands that would be enhanced…there is no acreage available for creation in the amount required by this project. As a result the project could not achieve a "no net loss of wetlands" within the 10 miles noted in the EIR/FEIR as is required by the State.

The RWQCB in a comment letter responding to the FEIR states:

> While the Water Board and the City of Newark appear to be in basic disagreement over the level of detail necessary for the discussion of proposed mitigation measures in the FEIR, we would like to point out that the City itself set the parameters for off-site mitigation by specifying that "off-site locations

shall currently support wetlands of sufficient quantity and quality to satisfy mitigation requirements," and "wetland mitigation shall occur on lands located within 10 air miles of the current project site and shall be located along the eastern shore of south San Francisco Bay within the same geographic watershed." The FEIR fails to demonstrate that the City can achieve its own objectives for offsite mitigation, using either mitigation banks or other private lands. At most, the FEIR refers to a potential mitigation bank that may be capable of providing less than half of the mitigation necessary for impacts proposed to wetlands at Area 4 (RWQCB, June 23, 2010).

The RWQCB goes on to further state that:

> We would like to point out that the resource agencies have not concurred with this assessment. When the City of Newark teams with individual developers to implement the Specific Plan, the City and developers should be aware that mitigation as proposed in the FEIR would appear to be far short of the mitigation that will be necessary to secure permits from the resource agencies for the impacts proposed to wetlands in Area 4. Therefore, project-level CEQA documents will likely be necessary to support permitting of Specific Plan implementation projects.
>
> We would also like to reiterate that, by certifying the FEIR as written, the City should not assume that the Water Board or other resource agencies will allow the fill of the wetlands at Area 4 as proposed. Since Area 4 is one of the largest remaining areas of open space along the baylands, provides habitat for endangered species, and is adjacent to the Refuge, impacts to Area 4 will be regionally significant, and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Water Board is not likely to authorize fill of wetlands at Area 4, unless mitigation is demonstrably capable of providing equal habitat benefit for listed species.
>
> The City should recognize that large expanses of undeveloped uplands immediately adjacent to tidal sloughs are extremely rare in the south and central San Francisco Bay. Area 4 represents a rare opportunity to restore this complex of habitats in continuum with the bay, provide connectivity with the Refuge, and provide an area for tidal marsh species to transgress (move up slope) in response to sea level rise. The U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), the Bay Conservation and Development Commission (BCDC), and the Water Board have all expressed strong reservations about the potential fill of wetlands in Area 4…
>
> In summary, the FEIR as written does not demonstrate that impacts associated with the proposed fill of wetlands in Area 4 can be successfully mitigated to a less than significant level. Therefore, the FEIR is not likely to support the issuance of future permits from the Water Board for fill of waters of the State under the Specific Plan. We encourage the City of Newark to request an inter-agency meeting with the Army Corps, BCDC, CDFG, USFWS, and the Water Board (RWQCB, June 23, 2010).

Infeasibility of Mitigation Measures for Indirect Impacts to Wildlife Species:

The FEIR states:

> According to the professional opinion of the City's project biologist, *H.T.Harvey & Associates,* development of the golf course or residential areas on Area 3 will not result in substantial increases in the numbers of potential predators in natural habitats on Area 4, as the golf course will not provide substantially increased or improved resources for such species and Area 3 will be separated from on-site

> conservation areas by distance and existing and new development. The increase in potential predators as a result of residential development on Area 4 is not expected to be so great as to require trapping, predator-proof fences, or other such intensive measures, primarily due to the relatively limited number of new residences proposed on Area 4.
>
> Nevertheless, the Draft EIR acknowledged that an increase in predation by domestic and urban-adapted species may occur and could potentially affect burrowing owls, salt marsh harvest mice, salt marsh wandering shrews, and other sensitive species. In response to the suggestion that a predator management program be developed, the EIR has been revised to incorporate **Mitigation Measure BIO-4.7**, which requires the development and implementation of such a management program for new residential development in both Area 3 and Area 4. The program will **prohibit**, at a minimum, feeding pets outdoors so that pet food does not attract or subsidize the diets of nuisance species and **off-leash dogs in conservation areas** and **no free-roaming outdoor cats,** to prevent their entry into sensitive species habitat. Refer to Section 4.0 *Revisions to the Text of the Draft EIR*. This management program is being required as a mitigation measure to reduce impacts to burrowing owls, but it would potentially benefit other sensitive species such as salt marsh harvest mice, salt marsh wandering shrews, waterbirds, and other species as well.

The proposed mitigation sounds good on paper, but the City proposes "neighborhood associations" would be responsible for education and enforcement of this mitigation measure. There is no provision to ensure this measure will be enforced and frankly, how will the neighborhood association realistically ensure there are no free-roaming cats? This mitigation measure is therefore unenforceable and infeasible.

Additional "Feasibility" Concerns:

p. iii, Appendix E proposes the following mitigation measures:

> 4) incorporating design features to **minimize runoff** from the golf course and residential areas to natural habitats **during the summer months** to maintain seasonal patterns, 5) **limiting nuisance flows** generated by the project development **by conserving water**, and 6) **retaining any remaining dry-season nuisance flows** within the development footprint.

How is it possible to alter dry season flows without impacting flows that would normally be delivered to the wetland areas during the rainy season? How would "conserving water" be enforced within the residential development and who would be responsible?

Open Space and Conservation Goals and Policies:

Proposed specific plan is in conflict with the General Plan.

> *Policy b.* **Encourage** *private property owners* to **preserve unique open space areas** and natural features on their lands.
> *Program 10***:** Evaluate every land development proposal for potential contributions to the Newark open space system. **Identified unique open space, vegetation, animal habitat or natural resource areas should be protected where possible and appropriate.**

In contrast to this policy and program the FEIR Responds:

A-1 - The Boundary Expansion Area does not impose any restrictions on the use or development of Area 4. Instead, it merely identifies lands which the U.S. Fish and Wildlife Service could acquire and readily incorporate into the existing Refuge if it chose to do so. However, in the 20 years since this expansion area was identified, the USFWS has not pursued any such expansion onto Area 4 lands."

The Refuge Expansion Boundary identifies lands that are important to maintenance of bay biodiversity, lands that should be acquired and preserved because of their rarity and ecological value. The fact that the Refuge has not acquired these lands speaks to issues of costs of acquisition – not the ecological value of preserving these lands.

Inconsistencies in Describing the Biological Resources of the Site:

Page 81 of the EIR states:

> Depending on the ultimate Project design, the **majority of the upland agriculture, ruderal herbaceous field, developed habitats, and portions of the coastal scrub habitat could be lost through grading and construction of proposed Project elements, including housing and/or the golf course.** These habitat types are grouped together for the purpose of this impact discussion because **these upland habitats are not considered sensitive or regulated habitats** as are the wetland, aquatic, and marsh habitats, and because they are relatively abundant regionally. The development and construction of the Project components (which may include a golf course, housing, and associated infrastructure) could result in the loss of nesting, foraging, roosting, burrowing, and breeding habitat for a variety of wildlife species and the loss of habitat for many plant species and their associated plant communities. Due to the level of existing disturbance from agricultural use, these habitat types represent low-quality habitat for most native plants and wildlife. Few native plants are generally found in these non-sensitive habitats. Likewise, the lack of contiguity between these habitats in Areas 3 and 4 and undisturbed habitat elsewhere diminishes their value to native plants and rare wildlife species. **Wildlife that use these habitats, described previously under *Biotic Habitats*, are mostly relatively common, widespread species.** (emphasis added)

In contrast p. 12 of the same appendix states:

> While the City of Newark General Plan has identified development that is projected to occur within Area 4, **this area has also been identified for its ecological value by regional planning efforts**. The southern and western portions of Area 4 were included in the approved 1990 Refuge Boundary Expansion area of the Don Edwards San Francisco Bay National Wildlife Refuge (SFBNWR), indicating that these lands were pre-approved for addition to the Refuge in the future. The Baylands Habitat Goals Project (1999) includes recommendations to "protect and enhance the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the [former] Pintail Duck Club." Being situated between existing salt production ponds that were formerly tidal wetlands and vernal pool habitat east of the site, Area 4 **provides one of few areas in the South Bay with upland habitat transitioning between tidal wetlands and vernal pools, and the Goals Project identified the site's potential value in providing upland transition zones adjacent to tidal wetlands.** (emphasis added)

This language appropriately acknowledges the regional value of the former duck clubs site. Cumulatively the loss of upland diked baylands in proximity to tidal waters are extremely rare in the south bay and of great value in protecting species such as the endangered salt marsh harvest mouse and imperiled (but not listed) salt marsh wandering shrew. Upland areas will be of increasing importance to species such as these in the face of sea level rise. The assumption that these areas are "mostly relatively common, widespread" is not consistent with the

latest language from the State of California regarding the importance of preserving low-lying areas for wildlife escape habitat as sea level rises, or the Draft Tidal Marsh Ecosystem Recovery Plan that identifies upland transition ecotones as important habitat for the recovery of high marsh species.

It is evident the EIR for the Area 3 & 4 Specific Plan Project is fatally flawed.

- Inadequate information is provided at even the most conceptual level on how impacts to wetlands will be mitigated on-site
- the acreages of impacts are internally inconsistent between varying sections and appendices of the document
- there are inconsistencies in the statement of the values of the lands that will be impacted
- there is no mitigation provided for impacts to regionally significant upland habitat
- some mitigation measures proposed are infeasible or unenforceable
- the review of project impacts and mitigation will be piece-mealed as we are unable to determine the full extent of direct and indirect impacts at this point in time
- there are no requirements imposed on future developers to submit mitigation plans to the standards required by regulatory agencies (no requirement for discussion of mitigation feasibility, etc.) though there are monitoring requirements
- there is no certainty the federally listed endangered salt marsh harvest mouse can be sustained in the long-term based upon the proposal to create wetlands out of the remaining uplands in Sub Area E

These are but a few of the flaws we have identified. We urge the City to NOT approve the EIR in its current form, to provide the additional information requested by the public and resource and regulatory agencies, and to recirculate the EIR.

Thank you for the opportunity to provide comments.

Sincerely,
Carin High
CCCR Vice-Chair

CITIZENS COMMITTEE TO COMPLETE THE REFUGE

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Via Email September 27, 2013

Mr. Terrence Grindall
Community Development Director
37101 Newark Boulevard
Newark, CA 94560
Terrence.Grindall@newark.org

Re: Draft General Plan Tuneup (GPT) and GPT DEIR

Dear Mr. Grindall,

This responds to the Draft General Plan Tuneup (GPT) and GPT Draft Program environmental impact report (DEIR). The Citizens Committee to Complete the Refuge (CCCR) thanks you for the opportunity to review and provide comment. Based upon our review of the DEIR, we find that it contains serious omissions, inaccuracies, and flaws that must be rectified to comply with the California Environmental Quality Act (CEQA) requirements. For these reasons, as well as those articulated by our attorneys, Lippe Gaffney Wagner LLP, and Richard Grassetti of Grassetti Environmental Consulting, the DEIR must be corrected and re-circulated.

Newark General Plan "Tuneup"

The city held public workshops in late 2011 and early 2012, facilitated by graduate students from California Polytechinic State University San Luis Obispo. The City also held joint study sessions between the city council and planning commission, though these do not appear to have been widely advertised. Members of CCCR only found out about these joint workshops by perusing the planning commission and city council agendas.

Public participation is a required component of the general plan process California Government Code §65351, and public participation can:

- Educate the public about community issues.
- Increase the public's ability and desire to participate in the community.
- Enhance trust in government by strengthening the relationship between elected officials, government
- staff, and the public.
- Encourage working towards community consensus and creating a vision for the future.
- Lay the groundwork for community revitalization and increased investment in the community.
- Allow decision makers to obtain public input regarding plan policies and community issues and objectives.
- Provide the public with opportunities to evaluate alternative plans and to participate in developing
- and choose a plan that works for their community.
- Inform decision-makers about public opinion.

The characterization of this general plan update as a "tuneup" conveys to the public that there is actually little need for the public to participate in the process. That the purpose of this "tuneup" is to merely tie up a few loose ends. This impression is solidified with the following text:

> The effort leading to the adoption of a new General Plan in 2013 was referred to as a General Plan "Tune Up" rather than a major revision. This is because the values represented by the 1992 Plan remained valid and appropriate at the time of Plan adoption. By 2011, however, the 1992 Plan's data and maps were becoming dated and the absence of a discussion of recent planning efforts was becoming more apparent. The 1992 Plan did not reference regional planning initiatives and legislative changes, nor did it address emerging issues such as climate change and sustainability. The intent of the "Tune-Up" was to update baseline data and projections, refresh the narrative text which describes planning issues, and move the planning horizon forward by 20 to 25 years. [emphasis added]

And:

> The basic vision established by the 1992 Plan continues to guide this General Plan. This vision seeks to sustain Newark as a high quality community with attractive neighborhoods, great shopping, diverse workplaces, excellent public services and parks, and a healthy natural environment. Many of the areas identified for development by the 1992 Plan continue to be identified for development today—this General Plan provides greater detail on the types of uses and the issues to be addressed as such development takes place. [emphasis added]

It has been over twenty years since the crafting of the existing general plan. The Draft GP acknowledges that it carries forward many of the concepts of 1992 GP, including development of the city's western edge. However, significant new information has come to light since the early 1990's. As the general plan update indicates, new policies and strategies have developed over the intervening years, with different visions of how we should interact with the landscape, especially in low lying areas close to the edges of the bay. The general plan update process is an appropriate time to re-evaluate the long-term sustainability of the existing general plan's vision of land use.

As an example, the GPT carries forward the concept of a golf course and upscale housing on Area 4, the former Whistling Wings and Pintail duck clubs. A 2012 Wall Street Journal article[1] reported the financial woes of golf communities, describing how private golf course communities are "repurposing" golf courses by reducing the number of holes from 18 to 9 and then selling off the excess land. Property values in a number of golf course communities have plummeted. In South Carolina, lots that previously sold for $150,000, were on sale in 2012 for $1. In Florida, a lakefront home associated with an Arnold Palmer golf course sold for $795,000 in 2011, but had sold in 2007 for $1.6 million. In Bend, Oregon, a couple paid $500,000 for a lot in 2006. A similar-sized lot sold for $10,000 in early 2012. As of 2011, 2,000 golf courses of a total of 16,000 courses were in financial distress, and it was estimated an additional 4,000 to 5,000 would find themselves in a similar situation if their model of operation remained unchanged.

Jonathan Lansner [2] of the Orange County Register reports, during the period between 2005-2011, golf as a sport, lost 4.3 million golfers, and there were 37 million fewer rounds of golf were played in the period from 2005-2011. Lansner writes:

> Today, golf is largely out as a housing theme because developers have learned that golf courses are an expensive and narrow way to keep a new housing community green.
>
> "Lakes, walking paths and central amenities are used by all residents, as opposed to only about 15 percent to 20 percent of residents" for golfing, Boud says.

[1] Keates, Nancy. "Fore Sale." July 24, 2012. Wall Street Journal.

[2] Lansner, Jonathan. "Golf courses hit rough economics." April 13, 2012. Orange County Register. http://www.ocregister.com/articles/golf-349198-says-courses.html Accessed 9-26-13

> While builders could sell golf-course view homes at a steep premium, Boud says that "when costs are considered, open spaces and trails often overtake golf in terms of benefiting the master plan, and a lake -- which is relatively cheap and easy to maintain -- beats golf in view premiums. Though obviously, fewer homes tend to benefit from the view because a lake is generally much smaller than a course."

Lastly, Alicia Robinson[3] of the Press Enterprise exposes the difficulties the City of Riverside has encountered when operators who held contracts to run two of three golf courses in the city stopped paying their city leases.

The 1992 general plan, was its vision of a golf course and upscale housing was developed during an unprecedented boom in the construction of high end golf courses. The period of the 1990's to early 2000 was a period of rapid growth for golf course construction. But as described above, there has been a sharp course correction as the popularity of the sport has decreased. The evidence above, suggests a golf course would be anything but an asset to the city. Why does the city continue to incorporate the vision of a golf course in Area 4?

This is just one example of an instance where carrying forward the visions of the 1992 plan may be out of synch with reality, and an indication that more than a tuneup is warranted. Other more pressing issues, such as adaptive planning for sea level rise, have not adequately been incorporated into the vision of land use promoted by the draft general plan.

The GPT and the GPT DEIR are not user friendly:

The draft general plan and general plan DEIR are not user friendly, they do not encourage public participation in formulating a vision of growth for the city. Terms such as FAR (floor area ratio) have little meaning to the general public and housing unit densities are difficult to visualize. The Fremont general plan includes figures that help the reader visualize how the various housing densities or floor area ratios impact the landscape. Why can't the Newark GPT include similar figures?

The DEIR is inconsistent in providing information necessary to evaluate the adequacy of impact identification, identification of indirect impacts, mitigation and monitoring measures, etc. Impact assessment and mitigation and monitoring requirements are spread amongst at least four different documents - this DEIR, the HEU EIR, the Area 2 EIR, and the Area 3 and 4 EIR (refer to earlier comment regarding the inclusion of the suspended EIR). Rather than providing the actual wording of the mitigation measures from these other documents, the GPT DEIR provides one sentence summaries of the mitigation measure(s) in question.

p. 2-3 states: Whenever existing environmental documentation or previously-prepared documents and studies are used in the preparation of this Draft EIR, the information is summarized for the convenience of the reader and incorporated by reference.

As an example:

4.3-33 -

> Additionally, previous environmental review conducted for the Dumbarton TOD Specific Plan, the Area 3 and 4 Specific Plan, and the 2009-2014 Housing Element identified the following mitigation measures to address potential impacts to special-status plant and animal species. The Dumbarton TOD EIR identifies Impacts 4.3-1

[3] Robinson, Alicia. "Riverside: Cities rarely fare well in golf business." July 19, 2013. The Press Enterprise. http://www.pe.com/local-news/riverside-county/riverside/riverside-headlines-index/20130719-riverside-cities-rarely-fare-well-in-golf-business1.ece Accessed 9-26-13.

through 4.3-5 associated with impacts to the salt marsh harvest mouse, nesting raptors, the western burrowing owl, the tricolored blackbird, saltmarsh common yellowthroat, and other nesting passerine birds, as well as special-status plant species. These impacts would be mitigated to less-than-significant levels through the implementation of various assessment, survey, avoidance, buffer, preservation, and protection, and replacement measures specified in Mitigation Measures 4.3-1 and 4.3-5 from the Dumbarton TOD Specific Plan EIR.

The information contained in this summary is insufficient to determine what type of impacts are anticipated and whether the mitigation measures referred to are adequate to reduce the impacts to a level that is less-than-significant. Furthermore, the HEU DEIR doesn't appear to be online, making review of the severity of the impacts proposed by the GPT DEIR nearly impossible for anyone who doesn't have a copy of the document.

The GPT DEIR incorporate all mitigation measures in one document, ensure the measures are consistent, and then re-circulate the information for public review and comment.

The statement on p. 2-5 that "the Mitigation Monitoring Program for the proposed Plan will be completed as part of the FEIR and will be completed prior to consideration of the Plan by the Newark City Council." The typical comment period for an FEIR is 10 days. This delay in providing the MMP perpetuates the impression that the GPT and GPT DEIR are done deals and comments made by the public will not be considered seriously.

It is not possible to determine from the GPT DEIR the level of CEQA review or opportunities for public comment that will occur in the future.

[Please refer to the letters of LGW and Richard Grassetti regarding why it is improper for the GPT DEIR to rely on conclusions, mitigation measures, etc. from the Area 3 and 4 DEIR and specific area plan. This statement should be inserted anywhere Area 3 and 4 is discussed henceforth.]

The GPT has been described during public meetings as being "self-mitigating." Please explain what that means and the ramifications for future CEQA review and public comment opportunities.

p. 1-3 of the DEIR states:

> ...this Draft EIR has been prepared as a Program EIR for the General Plan Tune Up project, pursuant to Section 15168 of the CEQA Guidelines. As a Program EIR, it is not project-specific, and does not evaluate the impacts of specific projects that may be proposed under the Plan. Such subsequent projects will require a separate environmental review to secure the necessary development permits. While subsequent environmental review may be tiered off this EIR, this EIR is not intended to address impacts of individual projects. [emphasis added]
>
> However, if the Program EIR addresses the program's effects as specifically and comprehensively as possible, many subsequent activities could be found to be within the Program EIR scope and additional environmental documents may not be required (CEQA Guidelines Section 15168[c]). When a Program EIR is relied on for a subsequent activity, the lead agency must incorporate feasible mitigation measures and alternatives developed in the Program EIR into the subsequent activities (CEQA Guidelines Section 15168[c][3]). If a subsequent activity would have effects not within the scope of the Program EIR, the lead agency must prepare a new Initial Study leading to a Negative Declaration, Mitigated Negative Declaration, or an EIR. In this case, the Program EIR still serves a valuable purpose as the first-tier environmental analysis. [emphasis added]

This is passage describes the process normal process of tiering following the preparation of a program EIR. The GPT DEIR is confusing however, because it states that it incorporates by reference the analyses and mitigation measure

reporting programs of previously conducted EIRs. This makes it nearly impossible for the public to comprehend what will trigger future environmental review for the Area 2 (DTOD) and parcels covered by the HEU EIR (and Area 3 and 4 though that environmental review process is currently suspended). As an example:

p. 4.1-13:

> Furthermore, there are provisions in place to address light impacts from development located at the northwestern edge of the urbanized portion of Newark, where such impacts could potentially be most pronounced. Mitigation Measure 4.1-1 from the Newark Housing Element EIR requires that lighting plans containing specific measures to reduce the adverse impacts of additional light sources to less-than-significant levels for development in areas adjacent to the Don Edwards National Wildlife Refuge. Additionally, the proposed Plan incorporates a policy from the Dumbarton TOD Specific Plan requiring the incorporation of types of lighting and illumination that reduce glare and over-lighting impacts in the vicinity of the Dumbarton TOD Focus Area. [emphasis added]

What if any, additional CEQA and public review of aesthetics can be expected within the sphere of the Newark Housing Element and the DTOD? Does the determination that the adverse impacts of additional light sources are reduced to a level that the city has determined to be less-than-significant for development in areas adjacent to the Refuge, mean that light impacts will not be reviewed further, even at the project level? What about other aesthetics impacts? If further environmental review will occur will there be any opportunity for public comment?

What are the anticipated triggers and what elements of the statement the GPT DEIR has incorporated by reference previous EIRs for the Dumbarton Transit Oriented Development (DTOD), the Area 3 and 4, and the Housing Element Update.

The incorporation of those EIRs and in particular, their mitigation measures into the existing baseline is improper.

Inconsistencies:

Comparisons of the GPT and GPT DEIR are difficult because the two documents do not use consistent language.
GPT CS-18 Newark does not allow development within the 100-year flood zone and *requires development to be elevated at least 8 feet above mean high tide (11 feet for residential development).*
GPT DEIR p.4.8-32: Furthermore, any development within the Plan Area would be subject to the City's flood elevation standards for lands within Special Flood Hazard Areas (SFHAs), as defined by FEMA (Section 15.40.51 of the Newark Municipal Code). These standards require building pads of all residential structures to be a minimum of 11.25 feet elevation *National Geodetic Vertical Datum (NGVD*). In addition, *the City requires the top of curb grades for residential streets to be no less than ten feet above mean sea level throughout the City* (Section 16.08.06 of the Newark Municipal Code).

Aesthetics:

4.1-4 - This section discusses visual character of Newark and includes the views of Coyote Hills, the east bay hills, and low-lying wetlands fronting San Francisco Bay, but does not mention the views of the hills across the bay. Shouldn't that view be part of the existing conditions?
4.1-6 - Shouldn't the views across the bay be mentioned under the discussion of Area 4?
AES-1 - The proposed Plan would not have a substantial adverse effect on a scenic vista. Once Area 3 is constructed, you will no longer be able to see across the bay while driving along Cherry. The sense of openness will also be lost as there will be medium density development on both sides of the street.
Policy LU-4.13 - How is Newark's Bayfront Identity reinforced by building high density housing in Area 2 and importing 2.1 million cubic yards of fill into Area 4?
Policy LU-4.14- Views of the Peninsula Hills and San Francisco Bay will be obscured by development in Area 3 and 4 and in Area 2. One might have a view of the bay however, if one is perched in a high density housing unit?

AES-3 The proposed Plan would result in a significant impact to the visual character of the Southwest Newark Residential and Recreational Focus Area, as determined in previous environmental review. We concur that the proposed plan will have a significant adverse impact on the visual character of Area 3 and 4.

AES-4 States, "The Plan would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area." and rationalizes the conclusion with "future development under the proposed Plan would create new sources of light and glare; however, in the urbanized context of Newark this increase would not substantially and adversely affect daytime or nighttime views. Area 4 is isolated from development and in an area where there is no light at night. The introduction of lighting in this area will likely be visible from other parts of town.

AES-5 The proposed Plan, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to aesthetics.
How is it possible to reach this conclusion? High density housing is proposed in Area 2, a large area of existing open space will be built out in Area 3, 2.1 million cubic yards of fill will be imported into Area 4 raising the elevation 10'-14', taller buildings are proposed in the New Park Mall area, and high density housing is proposed at the site of the library and city hall. How can the Plan buildout not visually alter the character of Newark?

Air Quality:
p. 4.2-13 - Existing Ambient Air Quality - The DEIR states the air quality monitoring station closest to the City is the Hayward Monitoring Station. Why wasn't the monitoring station in Fremont on Chapel Way utilized? That station in air miles is only 3.32 miles away? The site is reported to have sensors for O3, PM2.5, PM10, CO, NOx, HC, and Tox.

p. 4.2-15 - The DEIR refers to recent case law and states: "...the Guidelines language in thresholds d and e (exposure of sensitive receptors to substantial pollutant concentrations and creation of objectionable odors), as they relate to the placement of sensitive receptors under the proposed plan, above are not examples of an environmental effect caused by the development, but instead is an example of an effect on the Project caused by the environment (and therefore according to bad case law, are not required to be analyzed under CEQA). From a public health and safety perspective, it would seem irresponsible not to analyze and mitigate these impacts.

p. 4.2-18. - The City of Newark is already largely developed. Future growth under the proposed Plan would be accommodated in infill sites and redevelopment of existing sites. [emphasis added] This description of proposed development under the draft general plan is inaccurate as development is proposed on Area 4. The statement is inconsistent with other portions of the DEIR and GPT:

> page 3-8 - Area 4 is one of the last undeveloped sectors of the city and is largely in agricultural use today.
> Page 4.8-21 - However, future housing sites will be primarily located on underutilized land, infill sites, and along transit corridors, most of which (excepting Area 4) have already been developed and currently have a high percentage of impervious surfaces.
> Page 4.4-10: Additionally, the Southwest Newark Residential and Recreational Focus Area contains a large area of undeveloped land, some of which would be developed with buildout of the Plan.
> GP EH-31 - In particular, [...] residential development in Southwest Newark will result in a larger population in areas that are presently vacant.
> GPT LU- 23-26: This is the largest area proposed for future development in Newark, comprising 636 acres [emphasis added]

p. 4.2-35: BAAQMD's CEQA Air Quality Guidelines do not require an evaluation of emissions from program-level planning activities such as the proposed Plan. Given the programmatic nature of the proposed Plan, specific operational information individual projects that would operate under the Plan is not known, and furthermore, subsequent environmental review of development projects would be required to assess potential impacts under BAAQMD's

project-level thresholds. Please clarify what additional environmental review would be required and would there be an opportunity to provide public comment?

p. 4.2-39 - States: Implementation of the above-listed policies would reduce operational emissions from development projects under the proposed Plan to the maximum extent practicable. Additionally, as noted above, future development projects under the proposed Plan would be subject to subsequent environmental review pursuant to CEQA and would be required to assess potential impacts under BAAQMD's project-level thresholds. Therefore, impacts associated with operational emissions of criteria air pollutant from the proposed Plan would be less than significant.

It is not possible to reach a conclusion of a less-than-significant impact. The policies are predominately advisory and there is no assurance they will be implemented. How is it possible to state impacts will be less-than-significant merely based on the requirement of future environmental review? As an example, what if significant impacts are identified, but there is a determination of "significant" followed by statements of over-riding concern? How would the adverse impacts of the project be less-than-significant? This same problem pertains to most of the impacts and mitigation measures discussed under the Air Quality section, e.g. AIR-3. With respect to AIR-3, it is unclear how a determination of less-than-significant before mitigation can be reached when there has been non-attainment for some constituents in previous years.

Action HW-1.F - Why locate sensitive receptors in areas of known "major sources" of air pollution at all?

p. 4.2-44 - New land uses in the City of Newark that are permitted under the proposed Plan that use trucks, including trucks with TRUs, could generate an increase in DPM that would contribute to cancer and non-cancer health risk in the SFBAAB. As identified in Table 4.2-6, impacts could occur at facilities that permit 100 or more truck trips per day or 40 or more trucks with TRUs within 1,000 feet of a sensitive land use. These new land uses could be near existing sensitive receptors within and outside the City of Newark. In addition, trucks would travel on regional transportation routes through the SFBAAB contributing to near-roadway DPM concentrations.
With implementation of Action EH-1.C, projects that would generate new sources of TACs would be required to reduce emissions to the BAAQMD's performance levels. Impacts would be less than significant.

The proposed development of Area 4 and the commiserate need for transport of fill to the site would require up to 100 trucks per day and this impact was not analyzed, nor mitigation proposed in the Area 3 and 4 EIR.

Please describe Policy EH-1.6 and Action EH-1.C. They do not appear in the DEIR or the GPT.

p. 4.2-45 - AIR-5 - "The Plan would not create or expose a substantial number of people to objectionable odors."
"There are two types of odor impacts: 1) siting sensitive receptors near nuisance odors, and 2) siting new sources of nuisance odors near sensitive receptors."
p. 4.2-46 -

> Sensitive receptors, such as the residential uses associated with planned development under the Proposed Plan, may be placed within the distances to these sources specified in Table 4.2-7. Additionally, sensitive receptors could be located in the vicinity of the salt ponds operated by Cargill Corporation, which produce odors due to the natural decay of organic matter such as algae that they contain. In general, the City's land use plan designates residential areas and commercial/industrial areas of the City to prevent potential mixing of incompatible land use types, with the exception of mixed-use areas that combine commercial with residential. BAAQMD Regulation 7, Odorous Substances, requires abatement of any nuisance generated by an odor complaint. Because existing sources of odors are required to comply with BAAQMD Regulation 7, impacts to siting of new sensitive land uses would be *less then significant*. [emphasis added]

Please clarify how the impacts of locating housing units and recreational facilities in proximity to the Cargill salt ponds was determined to be less than significant. There is no classification for the odors generated by the salt ponds or

appropriate distances to these sources on Table 4.2-7. Odors generated by the salt ponds can be particularly strong, but it is not clear how Cargill could be expected to abate the odor nuisance generated by the natural decay of algae, or by anaerobic mud. Additionally, wetlands can sometimes release the strong odor of rotten eggs due to the reducing conditions of the soils. There is nothing that can abate the smell, except for distance.

Biological Resources:

Figure 4.3-2 - Vegetation and Habitat Types - This figure grossly mischaracterizes the conditions on Area 3 and 4. Area 4 has a mosaic of uplands and wetlands across the site. Islands of uplands are surrounded by wetlands. To our knowledge the 78 undeveloped acres of Area 3 do not support wetlands habitat, yet nearly half the site is depicted as having wetlands. The area abutting the southeastern portion of Area 4, east of the railroad tracks is not cropland, but a vernal pool mitigation site, and should be depicted as a complex of grasslands and vernal pools. This figure needs to be amended to correctly reflect the habitats of Area 4.

p. 4.3-9 - Vegetation, Habitat Types, and Wetlands.

This section significantly downplays the significance of the mosaic of wetlands, waters and uplands that occur on Area 4. The tremendous potential to preserve and restore ecological functions on this site is of great significance. The Bay Goals Project[4] observed:

> Historically, moist grasslands existed in large expanses near Suisun Marsh, in the upper reaches of Sonoma Creek and the Petaluma River, and adjacent to much of the baylands in South Bay. Today, examples of large areas of this habitat exist near Fairfield and in the Petaluma River area. Smaller areas of moist grasslands with seasonal wetlands are in Marin at St. Vincent's/Silveira Ranch. In South Bay, development has destroyed most of the historical moist grasslands; notable exceptions exist east of Coyote Hills in the Ardenwood area and near the upper reach of Mowry Slough in Newark. [emphasis added]

The Bay Goals Project had the following recommendation for Area 4, "Protect and enhance the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the Pintail duck club. Similar habitat can be protected and restored at the upper ends of Newark, Plummer, and Albrae sloughs."

p. 4.3-10 - The DEIR states the Corps and CDFW generally exercise authority over the various wetland habitat types. The San Francisco Bay Regional Water Quality Control Board would also have authority over wetlands and waters of the state.

p. 4.3-11 -

> *Salt Ponds*
>
> The commercial salt ponds are large, open water areas ranging in salinity from similar to sea water at 32 parts per million to 135 parts per million, or more than four times more salty than sea water.22 These ranges of salinities allow for certain macro- and micro-organisms to thrive, resulting in brightly colored water.
>
> Salt ponds provide important habitat for a wide variety of bird species. Much of this use occurs as foraging habitat along the shorelines of ponds, but there is particularly high value of nesting and roosting habitat provided by remote or undisturbed locations along dikes between ponds and on islands. At least 19 different species of shorebirds use the Bay's commercial salt ponds for feeding, roosting, and breeding. These include long-billed curlew, Wilson's phalarope, American avocet, and black-necked stilt.23 Additionally, the area provides perches for raptors, which have special status, including peregrine falcon, northern harrier, and merlin.24 Threatened and endangered species using salt ponds include sites include the federally threatened snowy plover, federally endangered California clapper rail, and federally endangered California least tern.25

[4] Goals Project. 1999. Baylands Ecosystem Habitat Goals. A report of habitat recommendations prepared by the San Francisco Bay Area Wetlands Ecosystem Goals Project. U.S. Environmental Protection Agency, San Francisco, Calif./S.F. Bay Regional Water Quality Control Board, Oakland, CA

This description should be added to the description of salt ponds on page CS-6 of the GPT.

Figure 4.3-3 Special Status Plant Species and Sensitive Natural Communities - The figure neglects to include Point Reyes bird's beak that occurs in the LaRiviere Marsh of the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge).

Figure 4.3-4 Special Status Animal Species -

- Burrowing owl have been reported to occur within Area 4.
- Loggerhead shrike is listed as having been observed in Area 4 but does not appear on the map.

Table 4.3-1 Special Status Plant Species in the Newark Vicinity:

- Contra Costa goldfields - amend the table - confirmed occurrence in Area 2, refer to EIR.
- Point Reyes bird's-beak - amend the table - confirmed occurrence in the LaRiviere Marsh of the Refuge

Table 4.3-2 - Special Status Animal Species in the Newark Vicinity:

- Snowy egret - amend the table this species has been observed numerous times on the mitigation pond just east of Area 4 within Area 3. observations entered on eBird - (http://ebird.org/ebird/GuideMe?src=changeDate&getLocations=hotspots&hotspots=L827703&parentState=US-CA&reportType=location&monthRadio=on&bMonth=01&eMonth=12&bYear=2000&eYear=2013&continue.x=69&continue.y=8&continue=Continue)
- Western snowy plover - observed immediately adjacent to Area 2 (DTOD) (data from the Western Snowy Plover Pacific Coast Population Recovery Plan Volume 2 (Appendices)
- white-tailed kite - several observations at the Stevenson Blvd mitigation pond. See eBird link above
- salt marsh harvest mouse - has been trapped within Area 4 (letters provided in attachments). Many occurrences within Mayhews Landing close to Area 2. (map provided in attachments)

p. 4.3-31 - Please explain why Congdon's tarplant is not expected to remain for another five years. Does it have anything to do with how the site is currently managed?

p. 4.3-31 - Wildlife Corridors - The DEIR fails to recognize that levees provide movement corridors.

BIO-1 - Buildout of the proposed Plan would result in less-than-significant impacts to special status plant and animal species in the Plan Area.

As was mentioned above, the mitigation and monitoring requirements need to be condensed into one stand alone document, rather than expecting decision makers and the public to hunt down all the mitigation measures, and the public needs to be given adequate time to review all of the detailed mitigation measures in their entirety. Furthermore, the mitigation measures need to be reviewed holistically to ensure that while the individual impacts of the various focus areas may appear to be less-than-significant, adequate mitigation measures exist for the entirety of the "Project."

The Policies listed under BIO-1 are inadequate to protect biological resources within the City of Newark and on lands adjacent to the City of Newark.

- Policy CS-1.1: Ensure that development minimizes its impacts on Newark's environment and natural resources through sound planning, design, and management. The proposal to fill up to 86 acres of wetlands that have been deemed by the Bay Goals Project, the Refuge Expansion Boundary, etc. is not an example of "minimizing" impacts on natural resources.
- Policy CS-1.2: Support the conservation of environmentally sensitive areas and unique natural resources in the city. Refer to the comments above and the excerpts from the Bay Goals Project cited above.

- Policy CS-2.1: Preserve and protect Newark's plant and animal species and habitats, including wetlands, salt marshes, creeks and lakes. Ensure that land use decisions consider potential impacts on wildlife habitat. It is one thing to "consider" potential impacts on wildlife habitat and an entirely different thing to "avoid" impacts to wildlife habitat. The City of Newark has taken the former approach and then approved filling of wetlands. How is approval of a development that will fill up to 86 acres of wetlands without knowing where mitigation for those losses might occur protective?
- Policy CS2.2: Special status species - requiring mitigation "as development takes place" is not protective of special status species due to temporal losses of habitat and the uncertainty of whether the proposed mitigation will actually be successful. Requiring mitigation be completed prior to the initiation of impacts, is protective of special status species. Habitat is not lost before successful replacement habitat is provided.
- Policy CS-2.3: DESFBNWR - placing a transit center and medium density housing next to lands that might eventually become part of the Refuge (Hickory Street parcel, Plummer Creek parcel) is not protective of the Refuge.
- Policy CS-2.5: Development near wetlands - Placing housing and all the human disturbance factors including trash, invasive plants, nuisance species attracted to the housing, domestic pets, next to wetlands is not protective of wetlands. There are also concerns about accompanying changes to the wetland hydrological regime, siltation, etc.
- Policy CS-2.7: Coordination with agencies is already required. Coordination in advance of any proposed development so that the development can be designed to avoid or minimize impacts is a worthwhile effort.
- Action CS1.A - Use the development review and CEQA processes to ensure that sensitive natural areas are set aside as open space and are managed to ensure their long-term conservation. This certainly sounds good on paper, would that it were actually taken to heart. This has not been the practice to date. How would the approval of filling up to 86 acres of wetlands be considered consistent with this Action?
- Action CS-2C - The Action should be explicit that coordination with regulatory and resource agencies is necessary to ensure any measures undertaken will be effective and sufficiently protective.

The impacts of BIO-1 cannot be determined to be less than significant without comprehensive review of the mitigation measures the City plans to incorporate into the mitigation and monitoring program. Also, the policies and actions listed above are of no value unless they are actually implemented.

BIO-2 - Buildout of the proposed Plan would result in less than significant impacts to wetlands, riparian habitat, and sensitive natural communities in the Plan Area.

BIO-2 as currently worded, does not adequately capture the significant and adverse impacts that will result from buildout of the Plan. As mentioned earlier, restoration scientists, resource agencies, and regulatory agencies, regard the tremendous opportunities for restoration of the wetland/upland mosaic of Area 4 as extremely rare along the edges of the San Francisco Bay ecosystem. This is a site of regional significance. The uplands and seasonal wetlands, though continually degraded by manipulation of the land, have incredible restoration potential. In addition, the site is known to support the endangered salt marsh harvest mouse, burrowing owl, migratory and resident waterbirds, and birds that forage in uplands and seasonal wetlands. Not only will the filling of up to 86 acres of wetlands result in significant environmental harm, but the mitigations necessary to stabilize and 2.1 million cubic yards of fill could irreparably alter the hydrologic regime of existing wetlands. The adjacent development will expose the remaining habitat to all the negative impacts associated with human disturbance, and the wetland mitigation required to offset the filling of wetlands may result in the conversion of any undeveloped uplands to wetland mitigation.

86 acres is an unprecedented amount of wetlands fill. The developer of Area 4 will need to demonstrate that wetlands cannot be avoided, or impacts cannot be minimized. The City of Newark would be doing its residents a disservice if off-site mitigation (outside the City's boundaries) occurs, as the functions and values that wetlands provide will benefit another community and not Newark residents.

Policy CS-4 - Wetlands Delineation. This policy sounds good on paper - the question is whether there are any other remaining large potentially developable properties with wetlands other than Area 4? Have wetland delineations yet to be done for any other area of Area 4 not currently proposed for development (i.e. besides sub areas, b, c, d, and e?)

(4)(a) - The City should take into consideration that allowing the purchase of mitigation credits elsewhere (e.g. within 10 air miles of Newark) means that another community benefits from the functions and values wetlands provide, flood protection, erosion control, flood desynchronization, water quality aspects, groundwater recharge, etc. and not Newark residents.

(5) - The length of required monitoring should be dependent upon the habitat being mitigated. Also, the City should include language that would provide for additional monitoring should contingency measures be required. Usually the extension for monitoring is at least two years beyond any human intervention and the requirement for monitoring ceases only after success criteria have been met.

BIO-3 Buildout of the proposed Plan would result in less-than-significant impacts to as-yet undelineated waters of the U.S. in the Plan Area.

How can this determination be reached??? How does the performance of a wetland delineation, and verification that wetlands exist, help reduce the impacts of buildout to less than significant?
Delineating wetlands informs a property owner if they have a resource they need to deal with. However, he reduction of impacts occurs if wetland impacts are avoided or minimized to the maximum extent possible. Then, and only after an earnest attempt has been made to redesign a project to avoid and minimize impacts, should compensatory mitigation be considered.

The mitigation measures described under BIO-2 will not and cannot reduce the adverse impacts of Plan buildout in Area 4 to a level that is less than significant!

One of the mitigation measures for Area 4 MMBIO-1.2A is inconsistent with the stated and regionally documented need to preserve upland transition zones as retreat habitat for the recovery of listed species in the face of sea level rise. MMBIO-1.2A attempts to mitigate for the loss of filled wetlands by creating/enhancing wetlands out of other habitats of importance for survival of bay edge species. This measure would destroy the unique mosaic of habitats these lands currently host - a mosaic of wetlands and upland habitats that provide habitat resiliency and preserve regional biodiversity.

A conceptual mitigation plan still does not exist that would indicate the locations of proposed mitigation areas and their relationship to the existing mosaic of wetlands and transitional uplands scattered across Area 4. No attempt was ever made to offer this level of detail or even indicate conceptually what areas would be considered impacted by the direct placement of fill, by the indirect impacts of the changed conditions resulting from the fill, and the direct and indirect impacts of mitigation measures placed on the remaining landscape.

MM BIO-1.2B indicates**:** Alternatively, at the discretion of the project developer(s), and as approved by the City of Newark, all or a portion of the mitigation requirements for impacts to seasonal wetland habitats, may be satisfied through the acquisition and permanent preservation of existing wetlands at a ratio 1.5:1 (existing habitat: habitat impacted) at an approved wetland mitigation bank (i.e. off site) or other private lands. [emphasis added]

This decision should certainly not be left to the discretion of the project developers. In addition, there is no indication of where such private lands might exist, no indication of how the lands would be acquired, and no conceptual plan of how mitigation will occur on the site. Acquisition and preservation does not equal “no net loss” as is the policy of the State.

To date there is no way of knowing how this Area 4 will be developed, where mitigation will occur onsite and what it’s proximity will or won’t be to the development envelope. This is important with respect to indirect impacts of the development on the mitigation site and with respect to habitat continuity – patches of mitigation surrounded by the development envelope are unacceptable mitigation. Nor is it possible for the City to determine if the development project is feasible and/or would produce sufficient property tax revenues to offset public service liabilities associated with a development on the outskirts of the City.

The focus on mere replacement of wetland acres may jeopardize the local populations of salt marsh harvest mouse and salt marsh wandering shrew. The mitigation proposed (aside from the puzzling master response above) has been focused in Sub Area E – converting the uplands in this area to wetlands, presumably by soil removal to lower the topographic position and allowing the former uplands to be inundated by rainfall or springs. This would remove higher elevation escape habitat for the salt marsh harvest mouse and salt marsh wandering shrew, leaving only the developed areas as less than desirable escape habitat that would further imperil these species.

Goal CS-2 - Conserve Newark's wetlands and baylands. Well this sounds good on paper. Please explain how this is actually reflected in the GPT.

Action CS-E - Support acquisition of wetlands and other environmentally sensitive areas by land trusts and other environmental organizations for the purpose of mitigation banking and wetlands restoration, provided there are no other conflicts with other General Plan goals and objectives.

In general, we do not support the use of mitigation banks, particularly for waters of the U.S. as the wetlands functions and values are lost to the community in which the filling is occurring, and instead benefit some other community, often far from the impact site. Other than the Plummer Creek site, please explain where this policy is being implemented.

There should be a (1)(a) inserted between the requirement of a wetland delineation and requiring authorization from the Corps or the RWQCB, that requires the land owner to avoid filling of the wetlands. If that is not completely possible, then wetland fill should be minimized. The 404 (b)(1) Guidelines require avoidance and minimization before compensatory mitigation is even considered.

BIO-4 - We do not concur that the Plan will not interfere substantially with the movement of any native resident or migratory fish or wildlife species, or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The Plan will in fact build to the edge of Newark's "bayfront" and could disrupt the movement of species along the western edges of the city. The Plan could discourage the use of the duck pond on that remains on Area 4 by resident, migratory and nesting birds due to human and domestic pet disturbance.

BIO-5 - The proposed Plan would not conflict with the City of Newark tree preservation ordinance. It is impossible to determine if this if true or not as we do not know the footprint of the Plan buildout. Therefore, the City cannot conclude that the impacts are less than significant.

BIO -6 - The proposed Plan would result in significant impacts related to conflict with the Basin Plan and Habitat Goals. We have already described Bay Goals recommendation that the area at the head of Mowry Slough be preserved and restored. This area represents a unique opportunity at a regional level. The DEIR mentions the Bay Goals recommendations to protect and enhance marsh transition zones. Please note, there are exceedingly few locations along the edges of the bay where this could be accomplished so quickly and easily.

Regarding the Basin Plan - The SFBRWQCB responded to the Area 4 DEIR and FEIR. Their DEIR comments regarding the development proposal and Basin Plan:

> Section 3.5, Biological Resources, 3.5.3.2, Impacts and Mitigation Measures for Biological Impacts, Page 134 The DEIR states that:
> Most of the seasonal wetlands, aquatic habitats, and muted tidal salt marsh that would be directly filled by the implementation of the Specific Plan were determined to be of poor or marginal quality, primarily due to intensive and ongoing agricultural disturbance and the resulting effects on plant communities and wildlife use.
>
> The condition of these wetlands would be easily improved by discontinuing the agricultural disturbances in Area 4. The Basin Plan directs the Water Board to protect both existing and potential Beneficial Uses of waters of the State. In Area 4, the habitat value could be greatly enhanced by simply discontinuing agricultural disturbances. If these wetlands are filled under the proposed Specific Plan, then the potential for enhancing or restoring the wetlands will be lost. Mitigation for such an impact will require addressing the lost potential value of these wetlands. [emphasis added]

And:

> The *San Francisco Bay Area Wetlands Ecosystem Habitat Goals Project* recommended that the tidal marsh/upland transition zone of Area 4 be protected and enhanced, including the tidal marsh/upland transition at the upper end of Mowry Slough and in the area of the Pintail Duck Club (all located in Area 4). In addition, the Don Edwards San Francisco Bay National Wildlife Refuge (Refuge) has expressed strong interest in acquiring Area 4, because of its significance as habitat for endangered species and location adjacent to the Refuge, and the Bay Conservation and Development Commission (BCDC) has expressed interest in restoring the diked historic baylands in Area 4 to tidal action and enhancing the wildlife values of the onsite wetlands.
>
> The proposed mitigation quantities appear to be insufficient to compensate for the impacts associated with the fill of wetlands in Area 4. Since Area 4 is one of the largest remaining areas of open space along the baylands, provides habitat for endangered species, and is adjacent to the Refuge, impacts to Area 4 will be regionally significant and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Water Board is not likely to authorize fill of wetlands at Area 4, unless mitigation was demonstrably capable of providing equal habitat benefit for listed species. The proposal to convert some areas of uplands in Area 4 to wetlands is also problematic, since a combination of wetlands and associated uplands are essential to high habitat value.
>
> At present, the DEIR does not demonstrate that adequate mitigation is available. Onsite mitigation will be compromised by its proximity to the development envelope of the site, which will introduce noise pollution, light pollution, and domestic animals into the vicinity of preserved or enhanced habitats. The DEIR does not identify any feasible locations for offsite mitigation. There are very few parcels of undeveloped land in private ownership that are available for use as mitigation wetlands, and are in proximity to protected lands that currently provide habitat for listed species.

... The current DEIR does not demonstrate that it is feasible to mitigate all of the potentially significant biological impacts of the Project to a less than significant level.

In addition, the SFBRWQCB submitted comments to the FEIR:

The FEIR, as written, does not demonstrate that impacts associated with the proposed fill of wetlands in Area 4 can be successfully mitigated to a less than significant level. The mitigation quantities proposed in the FEIR appear to be insufficient to compensate for the impacts associated with the proposed fill of wetlands in Area 4. The mitigation proposed in the FEIR relies on a combination of onsite wetland creation/enhancement and offsite wetland preservation. Onsite mitigation, which is only proposed at a 1:1 ratio, would be compromised by its proximity to the development envelope of the site, which will introduce noise pollution, light pollution, and domestic animals into the vicinity of preserved or enhanced habitats. With respect to off-site mitigation, the FEIR does not provide sufficient detail to demonstrate that feasible locations exist for offsite mitigation.

On page 12 of the FEIR, the following statement is made:
The proposed mitigation measures for impacts to wetlands described in the Draft EIR treat wetlands as biological habitats and not State or Jurisdictional features. The City has determined based on extensive analysis by its biological experts that the mitigation requirements for wetland impacts (both in terms of amount and location of mitigation) described in the Draft EIR are more than adequate to mitigate the described impacts to a less than significant level.

We would like to point out that the resource agencies have not concurred with this assessment. When the City of Newark teams with individual developers to implement the Specific Plan, the City and developers should be aware that mitigation as proposed in the FEIR would appear to be far short of the mitigation that will be necessary to secure permits from the resource agencies for the impacts proposed to wetlands in Area 4. Therefore, project-level CEQA documents will likely be necessary to support permitting of Specific Plan implementation projects.

We would also like to reiterate that, by certifying the FEIR as written, the City should not assume that the Water Board or other resource agencies will allow the fill of the wetlands at Area 4 as proposed. Since Area 4 is one of the largest remaining areas of open space along the baylands, provides habitat for endangered species, and is adjacent to the Refuge, impacts to Area 4 will be regionally significant, and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Water Board is not likely to authorize fill of wetlands at Area 4, unless mitigation is demonstrably capable of providing equal habitat benefit for listed species.

The City should recognize that large expanses of undeveloped uplands immediately adjacent to tidal sloughs are extremely rare in the south and central San Francisco Bay. Area 4 represents a rare opportunity to restore this complex of habitats in continuum with the bay, provide connectivity with the Refuge, and provide an area for tidal marsh species to transgress (move up slope) in response to sea level rise. The U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), the Bay Conservation and Development Commission (BCDC), and the Water Board have all expressed strong reservations about the potential fill of wetlands in Area 4.

In summary, the FEIR as written does not demonstrate that impacts associated with the proposed fill of wetlands in Area 4 can be successfully mitigated to a less than significant level. Therefore, the FEIR is not likely to support the issuance of future permits from the Water Board for fill of waters of the State under the Specific Plan. [emphasis added]

Based on these comments it is unclear how the City thinks the significant adverse impacts of the Plan could be reduced to a level that is less than significant even with mitigation.

Bio-7 - The proposed Plan will not result in less-than-significant cumulative impacts related to biological resources. Please refer to all of the statements above.

The GPT DEIR itself acknowledges:

> In particular, the cumulative losses of seasonal wetland habitat around the South Bay are significant, and both direct and indirect impacts resulting from the development of the Area 3 and 4 Specific Plan and the Dumbarton TOD Specific Plan would be significant without mitigation.

But rather than heeding the strong language of the SFBRWQCB's comment letters, and those of the Refuge and CDFW, the DEIR erroneously concludes the mitigation it has proposed is sufficient to reduce the impacts of the Plan buildout.

The DEIR also makes the interesting statement: "Additionally, future development under the proposed Plan would be subject to separate project-level environmental review to identify and mitigate specific impacts to biological resources in these areas." Once again raising the question of what would trigger additional environmental review and will there be additional opportunities for public comment.

Geology:
According to California Geological Survey's 2003 seismic hazard report, the entire Plan Area has been mapped as a liquefaction hazard zone. Most of the soils that have been mapped within the Plan Area have a high shrink swell potential which can lead to heaving and cracking of concrete foundations or flatwork built on top of the soils. The western part of the Plan Area may contain unstable geologic units, which can lead to differential settlement.

The DEIR once again references two recent court cases that hold CEQA analyzes the impacts of the project on the environment and not the environment on the project. Once again we state, that bad case law aside, if, a city approves development in an area prone to seismic hazard then it should do due diligence to ensure the public is not put in harm's way.

GEO-1 The proposed Plan would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving surface rupture along a known active fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; and landslides.

> Policy EH-1.1: Development Regulations and Code Requirements.
> Policy EH-1.2: Considering Hazards in Project Location and Design. Policy EH-1.2: Considering Hazards in Project Location and Design. Prohibit development in any area where
> it is determined that the potential risk from natural hazards cannot be mitigated to acceptable levels.
> Action EH-1.A: Development Review. Review all development applications to ensure their compliance with all relevant building and safety codes, including those related to fire, flooding, soil, and geologic hazards.
> Action EH-1.B: Code Updates.
> Goal EH-2: Reduce risks to life and property associated with geologic hazards.
> Policy EH-2.1: Earthquake Safety in New Construction.
> Policy EH-2.2: Seismic Retrofits. Encourage the retrofitting
> Policy EH-2.3: Earthquake Awareness. Inform Newark residents
> Policy EH-2.4: Infrastructure Resilience. Maintain standards

Action EH-2.A: Geotechnical Studies. At the discretion of the Director of Public Works, require detailed investigations of ground shaking, liquefaction, soil stability, and other geologic hazards as specific development projects are proposed
Action EH-2.B: Geotechnical Staff Assistance. As needed, retain outside consulting
Action EH-2.C: Mandatory Seismic Upgrades. If feasible and appropriate
Action EH-2.D: Homeowner Education on Earthquake Safety
Action EH-2.E: Seismic Safety at Schools. Work with
Action EH-2.F: Earthquake Hazard Maps. Periodically update maps

With the exception of Policy EH-1.1, and Action EH-1.A and EH-1.2, there seems to be a lot of discretion in the degree to which these policies and action items are applied.

GEO-2 Implementation of the proposed Plan would not result in substantial soil erosion or the loss of topsoil.

This section mentions methods of erosion control and discusses Newark's Municipal Code. Isn't a Construction Activities Stormwater General Permit from the SFBRWQCB required for sites where more than an acre of land is being graded?

GEO-3 Development under the proposed Plan would not result in a significant impact related to development on unstable geologic units and soils or result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

- Action EH-2.A: Geotechnical Studies. At the discretion of the Director of Public Works, require detailed investigations of ground shaking, liquefaction, soil stability, and other geologic hazards as specific development projects are proposed. Such investigations shall be prepared by a qualified geologist or soils engineer, with appropriate mitigation measures identified and implemented.
- Additionally, Mitigation Measure 4.5-1, from the Dumbarton TOD EIR, requires future developers within the Dumbarton TOD area to perform a design-level geotechnical engineering investigation for their individual property or properties prior to development and as a condition for grading permit approval.

Since Newark is in a liquefaction hazard zone, why is the requirement for detailed investigations of ground shaking, etc. discretionary? Why isn't it mandatory for any development? How often are detailed investigations required? Are the detailed investigations of Action EH-2.A required prior to the issuance of a grading permit? One would certainly hope so. it should be so stated in the language of the Action.

Are detailed design-level studies required for Area 3 and 4? According to this DEIR Area 3 sits atop sand deposits that could be susceptible to liquefaction.

GEO-4 Development under the proposed Plan would not create substantial risks to life or property as a result of its location on expansive soil, as defined in Table 18-1-b of the Uniform Building Code (1994).
"Development within the Plan Area in almost all instances would be preceded by suitably detailed geotechnical evaluations, the scope of which would include tests to determine and quantify the presence of expansive soils. The need for such geotechnical evaluations are triggered by CGS-determined liquefaction hazard zones that embrace all of the Plan area, as well provisions of the CBC and related City of Newark building and grading permit requirements."
What are the situations under which such plans would not be required? Why not require detailed geotechnical evaluations for all development in Newark since the entire city appears to be within a liquefaction hazard zone?
And why are there no mitigation requirements for Area 3 and 4? Especially since a school site is proposed within Area 3?

GEO-6 The proposed Plan, in combination with past, present, and reasonably foreseeable projects, would result in less than significant cumulative impacts with respect to geology and soils.

Once again the discussion mentions additional mitigation measures for the DTOD and HEU, but not Area 3 and 4. Why?

Also, the discussion of impacts and mitigation measures never touch on the types of soil stabilization techniques that might be utilized. This information is critical as the City should consider whether there could be any direct or indirect impacts to any of the other elements of the DEIR and GPT. For example, dynamic deep compaction could require mitigation measures for noise or vibration impacts to sensitive receptors. Could any of the GEO mitigation measures have adverse impacts to groundwater, mobilization of toxic groundwater plumes, dewatering of wetlands, adverse impacts to levees, adverse impacts to biological resources, etc.

Hydrology:

The analysis of flood hazard is focused solely on the FEMA 100-year flood plain and the only means of addressing the risk of flooding is the requirement to construct new development atop building pads, requiring the import of millions of cubic yards of fill (Area 4).

page 4.8-17 states:

> Although some locations within the City are protected from flooding by levees, FEMA's policy is to disregard any flood protection benefit provided by a levee if that levee is not certified as meeting National Flood Insurance Program (NFIP) standards for freeboard and geotechnical stability.35 Most of the levees within the City of Newark are not certified. Therefore, the areas next to the levees are assumed to be subject to flooding should any of the levees fail during a large storm or high tide event. [emphasis added]

In other words, the majority of levees that currently provide some flood relief are not recognized as flood control levees. As an example, the levees on the bayward side of Area 4, are privately owned and maintained. The City is therefore, not relying on the existing levees to provide flood protection. Instead, the City has stated the requirement that new development be constructed atop building pads that are at minimum one foot above the 100-year flood elevation will be adequate to reduce potential flooding.

Conspicuously absent in the DEIR analysis of flood hazard, is any mention of the additive impacts of sea level rise on flood risk. Sea level rise inundation maps depict much of the Dumbarton TOD and Area 4 at risk of inundation with a 1 foot rise in sea level. See the attached map or visit http://www.csc.noaa.gov/slr/viewer/# to view inundation risk with just a 1-foot rise in sea level and under varying sea level rise scenarios.

The DEIR avoids meaningful analysis of the additive risk sea level rise may have on new development permitted within the existing 100-year flood plain (low lying areas along Newark's bayfront) with the following explanation:

> **The City notes that the purpose of this EIR is to identify the significant effects of the Plan (which is considered a Project under CEQA) on the environment, not the significant effects of the environment on the Plan.** (*South Orange County Wastewater Authority v. City of Dana Point (2011) 196 Cal.App.4th 1604, 1614-1618; City of Long Beach v. Los Angeles Unified School Dist. (2009) 176 Cal.App.4th 889, 905.*) While identifying the environmental effects of attracting development and people to an area is consistent with CEQA's legislative purpose and statutory requirements, identifying the effects on the Project and its users of locating the Project in a particular environmental setting is neither consistent with CEQA's legislative purpose nor required by the CEQA statutes.
>
> Appendix G of the Guidelines is a sample checklist form that is suggested for use in preparing an initial study, and which the City has employed to assist in the preparation of this Draft EIR (see *Guidelines, § 15063, subd. (f)*). However, a few of the questions on the form concern the exposure of people or structures to environmental hazards and could be construed to refer to not only the Project's exacerbation of environmental hazards but also the effects on users of

the Project and structures in the Project of preexisting environmental hazards. **To the extent that such questions may encompass the latter effects, the questions do not relate to environmental impacts under CEQA and cannot support an argument that the effects of the environment on the Project must be analyzed in a Draft EIR.** (*Ballona Wetlands Trust v. City of Los Angeles (2011) 201 Cal.App.4th 455, 473-474*.) **Accordingly, a discussion of flooding impacts associated with future sea level rise is not an example of an environmental effect caused by development, but instead is an example of an effect on the Project caused by the environment and is not required under CEQA.**

The DEIR references the issue of sea level rise, but goes no further. The language of the draft policies requires assessments and consideration of possible impacts related to sea level rise, but is silent as to whether that information, once collected will be utilized to ensure flood risk is reduced.

P. 4.2-28:

- Policy CS-5.8: Planning for Sea Level Rise. Require developments below 10' above mean sea level to include an assessment of possible impacts related to sea level rise.
- Policy S-3.9: Sea Level Rise. Consider the effects of rising sea level on the potential for flooding in low-lying areas, and participate in regional adaptation efforts for these areas.

P. 4.8-28:

Furthermore, City goals and policies under the proposed Plan would further reduce potential impacts to the existing storm drain infrastructure:

- Policy CS-5.8: Planning for Sea Level Rise. Require proposed development close to the Newark bayfront or in low-lying areas to include an assessment of possible impacts related to sea level rise.

P.4.8-33:

- Policy EH-3.9: Sea Level Rise. Consider the effects of rising sea level on the potential for flooding in low-lying areas, and participate in regional adaptation efforts for these areas.
- Policy CS-5.8: Planning for Sea Level Rise. Require proposed development close to the Newark bayfront or in low-lying areas to include an assessment of possible impacts related to sea level rise.

P. 4.12-24:

- Policy PR-5.7 Trail Sustainability. Consider long-term sustainability issues, such as projected sea level rise, surface durability, and the condition of levees, in the design of shoreline and wetland trail facilities.

As stated above, while these policies give the impression that measures will be taken to reduce risk from sea level rise inundation, there is no language within the General Plan Goals, Policies, or Actions that require that such risk will be reduced. The rationale, is reliance on the court cases mentioned above, "flooding impacts associated with future sea level rise is not an example of an environmental effect caused by development, but instead is an example of an effect on the Project caused by the environment and is not required under CEQA." This is irresponsible in terms of disclosure of impacts of a project and from a planning perspective a failure to incorporate meaningful analysis that could in fact lead to the permitting of projects that will impact the environment if sea level rise adaptation is not incorporated into the development design. As an example, if the only requirement to reduce flood risk is that new development is constructed at minimum, one foot above existing mean sea level (mean sea level at the time of permitting), and does not include sea level rise adaptation (not providing for estimates of sea level rise that could place the proposed development at risk of inundation), then the project may well have impacts to the environment that include the need for construction of flood protection levees, filling of adjacent wetlands to construct flood protection or from erosion of building pads, the need to re-engineer storm drain facilities, transportation facilities, etc.

The "State of California Sea-Level Rise Guidance Document"[5]states:

[5] "State of California Sea-Level Rise Guidance Document." March 2013 Update. Developed by the Coastal and Ocean Working Group of the California Climate Action Team (CO-CAT) with science support provided by the Ocean Protection Council's Science Advisory Team and the California Ocean Science Trust.

SLR potentially will cause many harmful economic, ecological, physical and social impacts and incorporating SLR into agency decisions can help mitigate some of these potential impacts. For example, SLR will threaten water supplies, coastal development, and infrastructure, but early integration of projected SLR into project designs will lessen these potential impacts.

The Guidance also addresses the importance of incorporating sea level rise adaptation into project design:

The consequences of failing to address SLR adequately for a particular project will depend on both adaptive capacity and the *potential* impacts of SLR to public health and safety, public investments, and the environment. Figure 1 in Appendix C illustrates how adaptive capacity and potential impacts combine to produce consequences.

Adaptive capacity is the ability of a system to respond to climate change, to moderate potential damages, to take advantage of opportunities, and to cope with the consequences.6 In most situations, adaptive capacity must be front-loaded, or built into the initial project; it cannot be assumed that adaptive capacity can be developed when needed unless it has been planned for in advance. A project that has high adaptive capacity and/or low potential impacts will experience fewer consequences.

The DEIR mentions BCDC and its regulatory authority over portions of Plummer Creek, Mowry Slough and portions of Area 4:

p.4.8-7:
As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change is use of any water, land, or structure within the Commission's jurisdiction. The BCDC has jurisdiction for Mowry Slough ending at the culvert at the Mowry Avenue bridge crossing, at the bend of the channel near Plummer Creek, and jurisdiction over managed wetlands in the Southwest Newark Residential and Recreational Focus Area. Projects in BCDC jurisdiction that involve Bay fill must be consistent with the Bay Plan policies on the safety of fills and shoreline protection. These policies state that adequate flood protection should consider future relative sea level rise and all proposed development should be above the highest estimated tide level for the expected life of the project or sufficiently protected by levees.

The DEIR should also note that BCDC's sea level rise policies, "Encourage preservation and habitat enhancement in undeveloped areas that are vulnerable to future flooding and contain significant habitats or species, or are especially suitable for ecosystem enhancement."[6]

The 2009 California Climate Change Strategy[7] states:

p. 51 Wetland habitats from the Sacramento Valley southward to the Salton Sea and the tidal marshes of San Francisco Bay also provide essential wintering habitat for hundreds of thousands of birds as they migrate north and south along the Pacific Flyway.
p. 52 Moreover, inland migration is frequently hindered by development such as bulkheads, seawalls, roads, and buildings. Continued growth and development in coastal areas will only increase the direct pressure on remaining habitats and make inland migration more difficult. Sea-level rise, especially at the increasing rates projected for the 21st century, may result in the loss of substantial areas of critical habitat for a variety of coastal species.

[6] New Sea Level Rise Policies Fact Sheet. San Francisco Bay Conservation and Development Commission. http://www.bcdc.ca.gov/planning/climate_change/SLRfactSheet.shtml Accessed 9-26-13.
[7]

p. 74 Habitat Protection – The state should identify priority conservation areas and recommend lands that should be considered for acquisition and preservation. The state should consider prohibiting projects that would place development in undeveloped areas already containing critical habitat, and those containing opportunities for tidal wetland restoration, habitat migration, or buffer zones.
The strategy should likewise encourage projects that protect critical habitats, fish, wildlife and other aquatic organisms and connections between coastal habitats. The state should pursue activities that can increase natural resiliency, such as restoring tidal wetlands, living shoreline, and related habitats; managing sediment for marsh accretion and natural flood protection; and maintaining upland buffer areas around tidal wetlands. For these priory conservation areas, impacts from nearby development should be minimized, such as secondary impacts from impaired water quality or hard protection devices.

The public law, policy, and strategy listed above emphasize the importance of Area 4 from a regional perspective. The mixture of wetlands, aquatic, and other habitats including uplands are important for sustaining current populations of waterfowl and listed and sensitive plant and wildlife species, as well as providing a hedge for these species and habitats in the face of sea level rise.

This is policy is pertinent to Area 4. The majority of Area 4 is within the Don Edwards San Francisco Bay National Wildlife Refuge expansion boundary. The site contains a rare mix of upland, seasonal wetland, muted tidal wetland, and a fresh water pond. The endangered salt marsh harvest mouse has been trapped on this site and the proposed development could fill up to 86 acres of seasonal wetlands.

Traffic:

Does the traffic analysis for account for the 600 student elementary school proposed in Area 3 or the truck traffic that will be required to transport 2.1 million cubic yards of fill to Area 4?

Are the dates of studies listed in the footnote on page 4.13-23 correct?

p. 4.13-24 states:

The traffic analysis assumed that the transportation network, including roadways and intersection lane configurations, would be the same in 2035 as that described above in section 4.13.1.2, Existing Conditions, of this chapter. New development projected within the Plan Area at buildout of the proposed Plan, including net increases over 2012 baseline conditions of 16,580 residents, 6,208 housing units, and 2,882 jobs, was input to the Alameda County Transportation Commission (ACTC) model in order to generate 2035 traffic forecasts. The resulting traffic volumes are shown on Figures 4.13-5a and 4.13-5b.

TRANS-1 With buildout of the proposed Plan, three signalized study intersections would operate at unacceptable LOS in 2035.
The analysis of TRANS-1 states:

With implementation of Action T-5.J from the proposed Plan, all seven impacted intersections would operate at acceptable LOS in 2035; however, the Cherry Street/Boyce Road and Stevenson Boulevard intersection and the Ardenwood Boulevard and SR 84 WB Ramps intersection are located in the City of Fremont, and additionally the Ardenwood Boulevard and SR 84 WB Ramps and Newark Boulevard and SR 84 EB Ramps intersections are under the jurisdiction of Caltrans. Therefore, implementation of improvements at these three intersections is outside the jurisdiction of the City of Newark, and as there is no implementation plan in place for improvements at these three intersections, it is not reasonably foreseeable at this time that impacts would be reduced to less-than significant levels with buildout of the proposed Plan in 2035. Consequently, impacts at these three intersections in 2035 would be significant prior to mitigation: Cherry Street/Boyce Road and Stevenson Boulevard; Ardenwood Boulevard and SR 84 WB Ramps; Newark Boulevard and SR 84 EB Ramps.

When will Newark begin coordinating with the City of Fremont and with Caltrans to implement the proposed mitigation measures at these three intersections?

It appears most of the policies and actions proposed to alleviate or reduce traffic congestion are purely volunteer, that is that they are totally dependent upon Newark residents altering their choices regarding transit. How will Newark determine if these policies are having any benefit and what will Newark do, if they are not?

TRANS-4 The proposed Plan would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Wouldn't pedestrian and bicycle at grade crossings be considered an incompatible use and why wasn't this issue analyzed under traffic? Especially since the traffic analysis includes a discussion of the Complete Streets Program?

Policy T-2.12: Trails Along Railroads and Utilities. Consider the use of railroad, flood control, and utility rights of way for jogging, biking, and walking trails, provided that safety and operational issues can be fully addressed.

Does this policy pertain to abandoned railroad right of ways? If not, it is difficult to understand how this would be compatible with biking, jogging, or walking trails.

TRANS-7 Implementation of the proposed Plan, in combination with past, present, and reasonably foreseeable projects, would not result in additional cumulatively considerable impacts.

> "Cumulative impacts to transportation and traffic resulting from implementation of the proposed Plan are addressed locally, through specific road improvements, as well as through implementation of the goals, policies, and actions of the proposed Plan itself. These policies seek to reduce existing vehicle trips, minimize the addition of new vehicle trips, and lower per capita VMT. Additionally, the potential cumulative impacts of the proposed Plan at the regional level are examined through analysis related to the Alameda CTC Congestion Management Program."

It is difficult to imagine the policies proposed will result in an appreciable reduction in VMT.
The proposal to build upscale housing in an area that has no shopping, medical, dining, or other amenities within easy walking distance would seem to only encourage the continued use of automobiles as a mode of transportation.
What are the current plans for providing mass transit in the DTOD? It seems any realization of Dumbarton Rail will be in the distant future if ever at all. What are the plans to provide a public transportation system for an area that is proposed to have an additional 2500 housing units?

Alternatives Analysis:

The Alternatives Analysis Chapter is inconsistent with the requirements of CEQA. The DEIR correctly states:

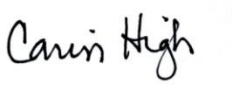
> The following discussion is intended to inform the public and decision makers of the feasible alternatives that would avoid or substantially lessen any significant effects of the Plan, and to compare such alternatives to the proposed Plan. Section 15126.6 of the CEQA Guidelines states that:
> An EIR shall describe a range of reasonable alternatives to the project, or the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation.

The DEIR provides an alternative, the Restricted Growth Alternative, that would preserve Area 4, but also restricts any development of the Dumbarton Transit Oriented Development. This is an alternative that has been structured to fail. The Area 2 (DTOD) has already been identified by the Association of Bay Area Governments as a Priority Development Area, so it would seem that in spite of the reduction in environmental impacts, an alternative that prohibits any development is unrealistic. The city must provide an alternative that preserves Area 4, facilitates clean-up of contaminated sites and provides for sustainable development in Area 2.

Conclusion:

The GPT DEIR has significant flaws as identified in the letters submitted by LGW LLP and Richard Grassetti. Therefore, the GPT DEIR will need to be revised and re-circulated. Please keep us advised of any time tables pertaining to this review process.

Sincerely,



Carin High
CCCR Vice Chair

Attachments to follow

cc: Mayor Nagy
Newark City Council
Newark Planning Commission
John Becker, City Manager
Anne Morkill, Project Leader, USFWS
Eric Mruz, Refuge Manager, USFWS
Cay Goude, Endangered Species Division, USFWS
Jane Hicks, Chief, Regulatory Branch, USACE
Cameron Johnson, South Section Chief, USACE
Jason Brush, Environmental Protection Agency
Marcia Grefsrud, CDFW
Bruce Wolfe, San Francisco Bay Regional Water Quality Control Board
San Francisco Bay Conservation and Development Commission
Brian Gaffney
Richard Grassetti
Florence LaRiviere
SF Baykeeper
Save the Bay
Ohlone Audubon Society
Sierra Club

September 19th, 2014

Terrence Grindall
Community Development Director
City of Newark
37101 Newark Boulevard
Newark, California 94560-3796

Dear Mr. Grindall,

The Friends of Coyote Hills is an environmentally focused group serving the Tri-Cities area. We are dedicated to the conservation and preservation of open space and the plant and wildlife habitats it supports, and to engaging public involvement with local and regional environmental issues through community outreach, education, collaborative efforts, and advocacy. Our group views the development of Area 4 development problematic on several fronts:

The potential of bankrupting the City of Newark

As evidenced by recent events across the country, the mistake of developing lands like Area 4 has the potential to bankrupt a city like Newark. Recent examples in the United States have shown that, if cities approve housing in an area likely for flooding, that city could be forced to pick up the tab.

For example, in October 2013, floods occurred in an Austin neighborhood. Five people died. More than 500 homes suffered moderate to severe damage. Frustrated victims stormed Austin City Hall. According to Austin's KEYE-TV website, the group of homeowners (wanted) "additional buyouts" of their homes – at the city's expense. Since 1999, the City of Austin has re-purchased 323 homes in these neighborhoods at a total cost of approximately $36.5 million. After the March, 2013 floods, an additional 116 homes were added to the list. The tab grew to $55.5 million.

Can't happen here? This plan could be identical to what is being proposed in Newark, CA. Newark wants to construct more than 1,260 homes on former diked baylands and meadows that are only 0 to 11' over sea level. The land is bordered by Mowry Slough and Line D at the interface between tidal flows and creek flows. This area is most apt to flood in the event of high tides and storm surges today and will be the first lands subject to sea level rise. Concerns about sea level rise and increasing storm surges have been met with "experts" stating that the "solution" is to transport 2.1 million cubic yards of dirt to elevate the Newark site. (That is more than 100 dump truck round trips daily along city streets, seven days a week, 365 days a year, for at least two years).

But what if the "experts" calculations are wrong and an Austin scenario happens here?

California's Department of Water Resources has increased forecasted sea level rise predictions to 55" by the end of the century. The Bay Conservation and Development Commission agree: predicting 16 inches of sea level rise at mid-century and 55 inches by 2099. Recently, a May 13th Argus Headline stated:

"Key Antarctic sheet irreversibly collapsing; scientists predicting faster increase in sea level rise." The article says "(we) see eventually 4 feet of sea level rise from the melt. But it could trigger neighboring ice sheet loss that could mean a total of 10 to 12 feet of sea level rise, the study in 'Science' said."

The occurrence of floods is the most frequent among all natural disasters globally. In 2010 alone, 178 million people were affected by floods (globally). The total losses in exceptional years exceed $40 billion.

1. *Has Newark considered the ramifications of having to reimburse those homeowners if the Austin scenario plays out in Area 4?*
2. *Newark's discretionary development approvals may put lives and property at risk. What amount can the city afford to reimburse before going bankrupt?*

The Loss of Newark's Protection from Flooding

Let's set aside the costs to replace these future homes (and lives). Newark's wetlands are natural buffers for the thousands of Newark's current residents who are at risk from water damage and injury. One of the best solutions is a healthy marsh separating the Bay from your house. Tidal marsh and wetland habitat absorbs excess water from high tides and storm surges.

If you cement over this protection, the water will find its way to your door. We must act now to protect and restore the Bay's wetlands to protect our homes and businesses from flooding. We need to face the fact that these places protect the houses already built and NEVER should development be permitted next to our Bay waters.

To quote a recent article in the (Menlo Park) Almanac:

"… The threat (of flooding) is not necessarily decades away, (said Maximilian Auffhammer, the UC Berkeley professor of environmental economics). Higher sea levels amplify the flooding potential of severe storms, as Hurricane Sandy demonstrated on the East Coast. Changes at the local level such as allowing homeowners to elevate their homes and rezoning areas vulnerable to extreme weather events are worthy of consideration, he said."

Wetlands, and their ability to absorb floodwater and wave energy, are crucial, said Mr. Goldzband (Larry Goldzband, the current BCDC executive director) and Mr. (Will) Travis, his predecessor at BCDC. 'Wetlands are about as close to magic as you're ever going to get when you're dealing with flooding,' Mr. Travis said. 'The wider the wetland is at the front, the lower the levee can be at the back.'

Supervisor (Dave) Pine said. "What has been a 100-year (flood) event could easily become a 10- or 20- or 30-year event. I think we need to start moving, like the Dutch, towards a longer time horizon."

3. *If sea levels rise, these land's flora and fauna natural retreat to "higher ground" very slowly. Has this been considered?*
4. *With all of the evidence of flooding throughout the country (and the world), why are Newark's leaders considering paving over the only protection Newark has to prevent a major flood to its current residents – its wetlands?*

Traffic

Newark's former mayor Dave Smith signed on to the U.S. Mayors Climate Protection Agreement. The agreement's goal is to conserve the nation's energy and reduce the greenhouse gas emissions that threaten our planet. Participating mayors make several commitments to greenhouse gas reduction in their own communities, the first of which is to take action in "anti-sprawl land-use policies."

The most important step a community can make to reduce greenhouse gases is the reduction of sprawl and the creation of transit-oriented development. We have no option but to get in our cars, pollute our air and crawl to work paying whatever price per gallon the oil companies wish to charge us. This is the legacy that our forefathers left us. But developments like those proposed for Area 4 places houses on the outer fringes of our cities and place huge developments in areas away from rapid transit. People who buy million-dollar houses will not ride buses. They will get in their cars and pollute our air. Newark is ignoring the cries on these legitimate concerns, and enthusiastically promoting the addition of over 1200 houses in Area 3 on Cherry Street and Area 4 west of the Union Pacific Railroad tracks.
The proposed Areas 3 and 4 Specific Plan project would generate 14,970 daily vehicle trips (1,429 project trips occurring during the AM peak hour and 1,676 project trips occurring during the PM peak hour) to our already congested roadways and freeways.

The Area 3 and 4 developments do not reduce emissions and traffic efficiency – but increases both. This development was conceived 40 years ago when Bay Area cities were sprawling outward with little concern for smart growth. Forty years ago, we did not have the traffic we have today. Forty years ago, the term telecommuting did not exist and few of us knew what global warming meant and what we were doing to increase it.

Smith pledged to support anti-sprawl land-use policies. ***Has Newark turned its back on this pledge?*** These houses are slated to be built on the farthest reaches of the city. This support cannot wait until after developments have been constructed. To quote Tom Cochran, executive director of U.S. Conference of Mayors: "The emerging threat of global climate change, due largely to widespread fossil fuel use, has made it clear that business as usual, as far as energy use is concerned, is not sustainable."

5. *Newark has pledged to be a part of the United States' Mayors Climate Protection Agreement. The agreement's goal is to conserve the nation's energy and reduce the greenhouse gas emissions that threaten our planet. Participating mayors make several commitments to greenhouse gas reduction in their own communities, the first of which is to take action in "anti-*

sprawl land-use policies." The development of Area 4 is placed on the outermost reaches of the city. Is Newark's current leadership reneging on this promise?

The Friends of Coyote Hills are against any development of the Area 4 lands. There is now precedence that this project puts the City of Newark at high financial risk if the facts are ignored and construction takes place. This area is incredibly unique as it contains a blend of uplands and wetlands; it has been recommended for preservation by the Bay Goals project and the Tidal Marsh Ecosystem Recovery Plan. And most important to your residents and businesses, these lands protect your citizens and businesses from catastrophic floods that other areas of the country have and are experiencing. The Friends of Coyote Hills request that you encourage contribution of lands to the USFWS so this treasure can be preserved and restored for all Newark residents.

Sincerely,

Dan Ondrasek
The Friends of Coyote Hills
(510) 789-5616

The Friends of Coyote Hills
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Terrence Grindall, Assistant City Manager
City of Newark, Community Development Dept.
37101 Newark Boulevard
Newark, CA 94560
Terrence.Grindall@newark.org
Sent via electronic mail

September 19, 2014

Re: Newark Area 3 and Area 4 Specific Plan Project, Recirculated Draft Environmental Impact Report

Dear Mr. Grindall:

On behalf of San Francisco Baykeeper and our over 3,000 members who use and enjoy the environmental, recreational, and aesthetic qualities of San Francisco Bay and its surrounding tributaries and ecosystems, we submit these comments in strong opposition to the proposed project, and the Recirculated Draft Environmental Impact Report ("DEIR") prepared for the project.

A. The RDEIR Piecemeals and Segments its Project Versus Program Level Review.

The RDEIR's categorization of itself at once as a project EIR and a program EIR is inaccurate, misleading, and must be revised to advance informed public decision-making. While the RDEIR states that it is not required to delineate which sections provide project-level review and which sections provide program-level review, the RDEIR nevertheless does purport to do so. (RDEIR S-6 to S-10.) To the extent that the RDEIR's assertions are inaccurate, they must be challenged and revised now lest the public risk losing the right to challenge such conclusions forever more. (See Pub. Resource Code § 21167.2 [an EIR not legally challenged "shall be conclusively presumed to comply with [CEQA]"].) Therefore, even if not required to articulate which approvals have been reviewed at a project versus program level, because the RDEIR has done so here, such conclusions must be revised or challenged if inaccurate, incomplete, vague, or misleading.

The RDEIR erroneously segregates future project approvals as being covered by project-level or program-level environmental review in this RDEIR, even where the future approvals would cover the same activities.[1] Indeed, the most common determinative factor the RDEIR appears to apply in making this distinction is whether the approval will be rendered by the City or by another agency: most future approvals the City must render are considered to have already received project-level review, while most all future approvals to be rendered by independent agencies have purportedly only received program-level review. (RDEIR S-7 to S-10.) This type of deferral of environmental review to independent agencies is impermissible. CEQA requires

[1] Note, however, that no draft or proposed Development Agreement has been including among the RDEIR appendices or otherwise among the documents for review on the City's website, precluding any actual review of whether its impacts have indeed been reviewed at a project-level as the RDEIR claims.

the lead agency to evaluate the whole of the project, which includes all future project approvals; environmental review on an approval-by-approval basis is not allowed.

B. The RDEIR Readily Rejects Feasible Alternatives That Would Avoid Wetland Fill.

The RDEIR's evaluation of the "No Development in Area 4 and Higher Density in Area 3 Alternative" simply perpetuates the poor land use practices that have resulted in sprawl and habitat conversion throughout the region in decades past. The RDEIR discounts this Alternative by noting that it would not meet project objectives to establish a new golf course, as well as "executive house types." (RDEIR 374.) The RDEIR's preference for executive residences over existing wetlands is poor public policy, and fails to adhere to CEQA's purpose "to afford the fullest possible protection to the environment." (*Laurel Heights Improvement Assn. v. Regents of Univ. of Cal*, (1988) 47 Cal.3d 376, 390.) An alternative should not be rejected under these circumstances. CEQA requires that alternatives be considered "even if these alternatives would impede to some degree the attainment of the project objectives" (CEQA Guidelines § 15126.6(b)), and should only be rejected for a "failure to meet most of the basic project objectives" (CEQA Guidelines 15126.6(c)). This alternative meets eight out of ten project objectives, and should not be rejected from consideration. (RDEIR 36.)

C. The Mitigation of Wetland Loss is Inadequate.

The RDEIR proposes numerous inadequate mitigation measures to reduce the impact of the permanent fill of at least 86 acres of wetlands. Unfortunately, the RDEIR's proposal to create 1 acre of new wetland for each acre lost, plus enhance 0.5 acres of existing habitat for each acre lost, will not actually mitigate the proposed loss of wetlands.

First, the notion that "enhancing" existing wetland habitat can be considered to offset the loss of other existing wetlands is wrong. Enhancing existing wetlands habitat will only generate that benefit between the existing benefits the wetlands provide, to that which they will provide with the so-called "enhancements." In other words, the total loss of an existing wetland acre is not equivalent to the partial improvement of an existing wetland acre. Moreover, the RDEIR fails to disclose exactly what the existing condition of the wetlands to be enhanced are. Could such enhancements actually be to the detriment of any established communities there? What existing forces are preventing this wetland area from "enhancing" itself, and what guarantees will be in place that those forces do not degrade the habitat once-enhanced? In the end, any "enhancement" area cannot be said to be new entirely new wetland habitat, and therefore does not offset the complete fill of any wetland acre at a 1:1 ratio.

By deferring the precise location and composition of wetland mitigation areas to some unknown future review of development applications, potentially for multiple pieces of the whole of the project, the RDEIR risks fragmenting its wetland mitigation projects in a way that fails to provide the level of environmental benefit that the in-tact wetlands provide now. Because the fill

and permanent loss of at least 86 acres of wetlands is foreseeable now, a cohesive and comprehensive plan must also be considered now.

For wetland mitigation banking to work, the RDEIR must show that wetlands created or acquired will provide at least the same value as the wetlands lost, but no such information is provided. For example, any species habitat destroyed by the project must be offset by the wetland mitigation parcels, but the RDEIR does not demonstrate that any new wetland mitigation area can be put in place where such impacted species already reside. Also, the present wetlands provide water quality benefits by filtering surface runoff from the urban environment, but the RDEIR does not show that any new, enhanced, or off-site wetlands will necessarily provide the same benefit. The RDEIR provides that, for wetland mitigation areas, "[t]hese off-site locations shall currently support wetlands of sufficient quantity and quality to satisfy mitigation requirements," but the RDEIR fails to provide any discussion of what those mitigation requirements might be. To these ends, a survey of available mitigation banks and parcels in the region should be included in the RDEIR to determine the feasibility of wetland mitigation.

The RDEIR repeatedly provides reasons to believe that the ultimate success of wetland mitigation is in question. As a result, it is imperative that any wetland mitigation projects be completed and their success assured *prior* to filling in of any existing wetlands. The RDEIR instead proposes that the Project and its mitigation measures commence simultaneously. This inevitably places the impact before the mitigation, as the impact will be felt immediately, while the mitigation measure will take an unknown length of time to develop. Therefore, the mitigation measures do not ensure actual offset of the project's impacts.

For example, the RDEIR provides for 5 years of monitoring to determine whether wetland mitigation measures have been successful. The reason for this timeframe is unclear. The RDEIR states that if success criteria are not met within 5 years "actions shall be required and monitoring will continue until the final success criteria have been achieved." This undefined and illusory deadline provides further rationale for requiring all mitigation measures to achieve total, if not at least some modicum of, success prior to beginning project construction.

The RDEIR fails to provide enough information to determine the impacts of the massive fill and grading proposed on seeps that occur on the site. One of the largest aquatic features is a seep that sustains a large body of open water that supports resident and migratory waterbirds. The RDEIR does not specific what impacts the project will have on the continued flow of this and other seeps.

Mitigation measure BIO-2.3 is also inadequate, purporting to "prevent any significant decrease in the amount of water entering preserved wetland habitats in Area 4 during the winter months." The measure simply requires that native grass species shall be used in the proposed golf course," stating that "[a] species list for use on the golf course (including outside of the turf area) shall be developed by a qualified biologist in concert with golf course designers and approved by the City of Newark." (RDEIR 178.) But nothing in the mitigation measure requires any consideration of,

or provides any performance standards to determine whether, any native species selected will actually prevent any significant decrease in water entering wetlands in winter months.

The RDEIR completely fails to consider the loss of wetlands in a cumulative impacts context (RDEIR S-67 to S-71), even though historic wetland loss in and around San Francisco Bay is well over 90%. The last remaining wetlands, therefore, are of the upmost importance. The RDEIR's 1.5 mitigation rate for new and enhanced wetlands fails to adequately overcome the loss of existing wetlands when considered from a historical perspective. The RDEIR does not clearly justify how a mitigation rate of 1.5 will offset the cumulative impact of loss of wetlands in the Bay.

D. Evaluation and Mitigation of Water Quality Impacts are Inadequate.

The RDEIR relies heavily on the San Francisco Bay Municipal Regional Stormwater NPDES permit to avoid or mitigate project impacts to water quality, but the RDEIR fails to demonstrate that the project will comply with all NPDES permit requirements. First, the RDEIR fails to disclose what municipal controls can be put in place over any given development project to this end. The regional stormwater permit requires that "[a]t a minimum each Permittee shall [h]ave adequate legal authority to implement all requirements of Provision C.3." Cities and counties typically have met this requirement though the adoption of a stormwater ordinance, or through incorporation into their general plan. Here, the RDEIR fails to indicate, in its regulatory setting section, what the City's general plan or municipal ordinances require. Therefore, there is no assurance that the City has adequate legal authority to require compliance with the regional municipal stormwater permit.

Indeed, elsewhere the RDEIR states that "[a]ll public landscaping areas within the Specific Plan shall follow the City of Newark's Bay Friendly Landscape Guide. Future homeowners associations or similar entity shall be encouraged to incorporate as many bay friendly landscape practices as appropriate and feasible." It would be equally feasible to require subdivisions and commercial development to implement these same standards.

In addition, the stormwater permit's c.3 provisions require permittees to "[e]valuate potential water quality effects and identify appropriate mitigation measures when conducting environmental reviews, such as under CEQA." Here, however, the RDEIR fails to actually evaluate potential pollutant concentrations and loads in stormwater discharges from the built project, instead, in a circular fashion, relying wholly on the stormwater permit itself to mitigate such impacts. The RDEIR states, in its entirety:

> Proposed projects within the Specific Plan Area would be required to comply with water quality standards as administered through the NPDES permit. Developers would be required to take enforceable measures that would reduce potential impacts from pollutants and sedimentation in stormwater runoff. Assuming compliance with these

> required measures, development under the Specific Plan would not violate any RWQCB water quality standards. **(Less than Significant Impact)**

(RDEIR 251.) Simply relying on the regional stormwater permit to mitigate project impacts cannot be the type of CEQA review the regional stormwater permit contemplated. Instead, the RDEIR must undertake a meaningful evaluation of (1) pollution generating activities within the project area, (2) pathways for such pollution to become entrained in stormwater, (3) types and concentrations of such contaminants, (4) beneficial uses of receiving water bodies impacted by this new pollution load, and (5) effectiveness of mitigation measures and alternatives to reduce or avoid these impacts.

The RDEIR asserts that the project will be required to implement the regional stormwater permit's c.3 provision requiring low-impact development to the maximum extent practicable. However, the permit's c.3 provision provides numerous compliance routes, and may be misinterpreted by the City. For example, the RDEIR requires that "BMPs shall be designed in accordance with engineering criteria in the California Stormwater BMP Handbook for New and Redevelopment (California Storm Water Quality Association, 2003, California Storm Water Best Management Practice Handbook – New Development and Redevelopment)," but this handbook predates adoption of the San Francisco Bay Municipal Regional Stormwater Permit by six years, and is now 11 years old. A more relevant guidance document that should be adhered to in a revised EIR would be the Governor's Office of Planning and Research: "Technical Advisory, CEQA and Low Impact Development Stormwater Design: Preserving Stormwater Quality and Stream Integrity Through California Environmental Quality Act (CEQA) Review."[2]

Moreover, the RDEIR must clarify that the whole of the project will be considered to be a "regulated project" for purposes of the c.3 provision: the City may not piecemeal or segregate distinct phases or areas of the project for purposes of determining c.3 compliance. Clarifying this point is especially important given the complicated and opaque program/project division the RDEIR has created for the whole of this project.

The RDEIR requires that "[t]he stormwater at the outlets leaving the site shall be sampled on a first flush basis, once a year for the lifetime of the project." (RDEIR 253.) This should require sampling of the first flush of the season to capture the most acute pollution impacts. Moreover, the monitoring plan fails to call for sampling of any metal constituents, such as copper, lead, or zinc, or bacteria, all of which are commonly found in municipal stormwater and should be sampled.

The RDEIR requires that, "[t]o prevent potential runoff of chemicals, the application of fertilizers, herbicides, and pesticides shall be avoided during periods of expected rainfall and immediately prior to schedule golf course irrigation." (RDEIR 253.) But this does not suffice to ensure that pesticides will not contaminate stormwater discharges in any significant amounts. For

[2] http://opr.ca.gov/docs/Technical_Advisory_LID.pdf

example, applications immediately prior to storm events could foreseeably contaminate stormwater discharges; as could any significant, cumulative buildup of pesticides and pesticide waste during the dry season. The RDEIR has not evaluated these impacts. To mitigate potentially significant impacts from pesticide contamination, the RDEIR should require the implementation of integrated pest management ("IPM") throughout the project site.[3] Any argument that the City does not have authority to regulate pesticide *applications* does not necessarily mean that the City may not require alternative approaches to pest prevention and management. The requirement that all development projects shall implement "outreach regarding appropriate fertilizer and pesticide use practices" is vague and wholly insufficient, as is the requirement that "[t]he design and maintenance documents shall include measures to limit vector concerns, especially with respect to control of mosquitoes." (RDEIR 254.) To ensure water quality impacts are minimized, the City must provide specific performance criteria for residents and commercial and industrial development to meet, and should require implementation of modern IPM techniques throughout the project.

E. The Proposed Project Fails to Incorporate Sea Level Rise Adaptation Principles.

The RDEIR purports to avoid the foreseeable impacts that would occur as a result of placing new development along the shoreline in an area likely to be impacted by projected sea level rise, by simply building the development at a higher elevation, or, in the alternative, constructing a sea wall. (RDEIR 361.) First, it should be noted that, the uncertainty the RDEIR posits as to whether a sea wall would be required, or would be built, does not support the kind of informed decision-making CEQA requires. These questions leave open the possibility of significant impacts to water quality, habitat, flooding, and greenhouse gas emissions, to identify just a few causes for concern.

In addition, the RDEIR fails entirely to evaluate any adaptation measures that could support development in a lower impact way than filling wetlands to above future sea level heights, or through construction of a sea wall. Part of the RDEIR's avoidance of the topic may be its erroneous conclusion that BCDC jurisdiction over the project is very limited, or, at best, should be determined by BCDC at the appropriate time (see *infra*, section H). Aside from the fact that the RDEIR should undertake a more complete evaluation of BCDC jurisdiction and consistency with its policies, CEQA still requires the RDEIR to evaluate and disclose these significant impacts, and implement feasible mitigation measures and alternatives.

Moreover, the RDEIR should consider the feasibility of commonly accepted adaptation strategies such as:

- develop strategic property acquisition programs to discourage development in hazard-prone areas;

[3] The University of California, Davis program provides a good example of effective IPM: http://www.ipm.ucdavis.edu/

- encourage relocation;
- allow inland migration of coastal habitats;
- discourage placement of shoreline armoring and encourage alternatives; and,
- encourage sustainable forms of development (such as clustered or higher density development in low-risk areas).[4]

The RDEIR provides no meaningful analysis of these or other climate adaptation strategies. While the RDEIR does include a No Area 4 Development alternative that would avoid most development in sea-level-rise prone areas, it dismisses this alternative as inadequate for its lack of executive estates. The RDEIR must be revised and recirculated to include a climate change adaptation strategy consistent with state and regional policies.

F. The RDEIR's Water Supply Assessment Must be Updated.

The RDEIR relies on the November, 2008, Alameda County Water District, "Water Supply Assessment for Newark Areas 3 & 4 Specific Plan EIR Project" to support its conclusion that the project would not result in any significant impact to groundwater or surface water supplies. The RDEIR states that since 2008, "[t]here have been no changes to existing conditions or the regulatory environment that would result in a new impact related to water supply or utilities, or an impact of substantially greater severity than was previously identified in the EIR." (RDEIR 301.) In fact, California is now in its third year of one of the worst droughts in the State's history. In April of this year, the California Department of Water Resources issued a 178 page "Central Valley Project and State Water Project Drought Operations Plan and Operational Forecast April 1, 2014 through November 15, 2014," outlining countless operational shortages and constraints.[5] Similarly, the California Resources Agency published, earlier this year, a new "California Water Action Plan."[6] The RDEIR cannot simply rely on pre-drought State Water Project supplies with no further review or discussion of potential impacts. Indeed, in light of the extreme water shortages faced throughout the state, any new demand on already strained supplies must be considered to be a significant impact.

G. The RDEIR's Biological Impact Mitigation Measures are Impermissibly Vague and Deferred.

The RDEIR fails to adequately mitigation impact BIO-10, which states that the proposed project would "indirectly" impact large numbers of foraging and roosting waterbirds, including species protected by the Migratory Bird Treaty Act in the wetland portions of the site. (RDEIR 194.) First, it is unclear why the RDEIR refers to this impact as "indirect," when the project's direct impacts on habitat will affect these bird species. Second, mitigation measure BIO-10.1 contains

[4] See, e.g., http://www.cacoastkeeper.org/document/adapting-to-sea-level-rise:-a-guide-for-california%27s-coastal-communities.pdf
[5] http://www.water.ca.gov/waterconditions/docs/2014-Operations-Plan.pdf
[6] http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf

numerous flaws: enhanced or newly created habitat is required at a 0.5:1 ratio, which still results in a 50% loss, and, falls short for each of the reasons the wetland mitigation measures, above, are inadequate. Moreover, the mitigation measure actually allows the wetland mitigation parcels to credit for bird habitat mitigation, despite the RDEIR failing to show that the bird habitat impacted is wholly coextensive with the wetlands lost.

Further, development of this mitigation measure is illegally deferred, requiring that "[a] mitigation plan shall be developed that outlines the proposed wetland creation/enhancement for indirect impacts to waterbird use of wetlands on the site. It will include a plan showing the target mitigation activities and a monitoring and reporting plan with success criteria. The plan shall include a recommended timeline for mitigation activities." (RDEIR 196.) Deferral to a future plan is only appropriate where the EIR provides clear guidelines and performance criteria that must be met. Here, the RDEIR simply defers creation of those criteria to the future plan itself.

Mitigation measure BIO-4.7 relies on private enforcement to curtail introduction of predator species, including pets. This is insufficient to guarantee the proposed mitigation measures will be effective. In essence, the RDEIR proposes that the very sources of introduction or support for new predator species will be required to police themselves, which would be entirely unlikely as it would require private, third-party rights of action against a household or neighborhood association not in compliance with these mitigation measures.

H. The RDEIR Fails to Evaluate Consistency with Applicable Regional Plans or the Public Trust Doctrine.

The majority of Area 4 lies within the Refuge expansion boundary, and should be preserved and protected to this end. Similarly, the Bay Goals project recommended preservation and enhancement of these lands, and the Tidal Marsh Ecosystem Recovery Plan recommended the entirety of Area 4 be restored to transition habitat. The RDEIR fails to evaluate consistency with these plans.

The RDEIR also acknowledges that the project must be reviewed for consistency with the Bay Conservation and Development Commission's ("BCDC") Bay Plan, but fails to evaluate this, despite numerous likely inconsistencies with the Bay Plan. For example, BCDC's Bay Plan states:

> **Maintain Wildlife Refuges in Diked Historic Baylands.** Prime wildlife refuges in diked-off areas around the Bay should be maintained and several major additions should be made to the existing refuge system. (Bay Plan at 4.)
> . . .
> The discharge of pollutants from urban areas can be controlled during site planning, construction, and post-construction. New development can be sited and designed to: (1) prevent pollutants from reaching waterways; (2) reduce impervious surfaces and maximize permeability; (3) protect important natural

> areas such as wetlands and riparian habitats; (4) minimize land disturbance to reduce erosion; and (5) minimize disturbance of natural drainage features and vegetation to reduce excessive sedimentation. (Bay Plan at 18.)

It is hard to see how the proposed project, on its face, could be consistent with these policies. Indeed, the RDEIR itself is unclear even to the extent to which it believes the project area will be subject to BCDC review and approval. The Bay Plan is clear that all diked marshes that once were part of San Francisco Bay remain under BCDC jurisdiction. (Bay Plan at 5.)

Similarly, marshes and wetlands that were once regularly inundated by the tides are protected by the Public Trust Doctrine, which requires that any permitted use of a trust resource either (1) results in the improvement of the public interest, or (2) will occur without detriment to the public interest in the lands and waters. (See *National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 455-456.) Clearly the proposed project would not benefit any traditional public trust use, and would seriously impair trust resources by filling in existing wetlands. The RDEIR has simply failed to take any Public Trust implications into account.

Instead, the RDEIR repeatedly elevates promoting the goals of the City's General Plan above these extremely important regional and state plans and policies. The RDEIR must be revised to consider the broader implications of the project.

I. The RDEIR Inadequately Evaluates Exposure to Hazardous Materials.

One unaddressed source of potentially adverse human health impacts is the use of utility poles treated with pentachloraphenol. These utility poles have been documented to drip dioxins and other carcinogenic materials into the surrounding environment, including human contact, resulting in likely violations of the federal Resource Conservation and Recovery Act, and substantial endangerment to public and environmental health.[7] These chemicals should also be evaluated for their potential to become entrained and discharge in stormwater runoff. The RDEIR should evaluate this exposure risk, and feasible mitigation measures and alternatives such as the use of composite, recycled material poles, buried utility lines, or other measures.

Elsewhere, the RDEIR requires the project area to be surveyed for potential surface or subsurface contamination that could become exposed through development, or that otherwise may adversely affect the built-out project. However, the RDEIR should conduct this investigation now. The RDEIR has a duty to perform a reasonable investigation into the existing environmental conditions of the project area, yet here, that evaluation is wholly deferred to an unknown later date. This deferral could result in serious human health hazards to future project occupants, as is evidenced by the recent citizen lawsuit filed against the City for similar circumstances.[8]

[7] See Attachments 1 and 2
[8] Attachment 3

J. Greenhouse Gas Mitigation Measures are Unduly Vague.

While conceding that the project will have the significant and unavoidable effect of worsening global climate change, the RDEIR offers the wholly misleading mitigation measure that "[a]ll residential subdivisions and new commercial buildings within the Specific Plan shall incorporate as many green practices as appropriate and feasible in buildings and structures constructed subject to approval of the City of Newark." (RDEIR 325.) Unfortunately, it is entirely unclear which practices are "appropriate" and "feasible." This section must be rewritten with an earnest attempt at evaluating greenhouse gas emission alternatives and mitigation measures, and the resulting benefits of each.

K. The RDEIR Illegally Defers Air Quality Impact Mitigation Measures.

The RDEIR improperly relies on numerous illegally deferred mitigation measures to lessen the Project's significant air quality impacts:

- Improve existing or construct new bus pullouts and transit stops at convenient locations along Cherry Street and Stevenson Boulevard. (RDEIR 119.)
  - Where will this occur? Are "convenient" locations available?
- Appropriate bicycle amenities shall be included. This would include bike lane connections throughout the project site. Off-site bicycle lane improvements shall be considered for roadways that would serve the project. (RDEIR 119.)
  - What standards guide whether bicycle amenities are "appropriate"? Will appropriate locations be available? Off-site improvements will merely be "considered," and this fails to provide any binding commitment to implement this mitigation measure, nor any proffered criteria by which to projects will be "considered."
- The City and project proponents shall explore and implement feasible means to bring transit or shuttle service to Area 4. (RDEIR 119.)
  - This measure fails to provide guiding criteria or a binding commitment.
- Consider providing pedestrian signs and signalization to make a pedestrian friendly environment. (RDEIR 119.)
  - This measure fails to provide guiding criteria or a binding commitment.

The DEIR considers Impact AIR-2, ROG and NOx emissions, to be significant and unavoidable. What mitigation measures or alternatives were considered to avoid this significant impact?

L. Conclusion

For each of the reasons stated above, we request that the RDEIR be revised to facilitate informed public decision-making and environmental policy, and to better reduce or avoid the project's

potentially significant impacts to wetlands, water quality, and water resources.

Sincerely,

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UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA

ECOLOGICAL RIGHTS FOUNDATION,

Plaintiff,

v.

PACIFIC GAS AND ELECTRIC COMPANY,

Defendant.

Civil Case No.: C10-00121 RS

DECLARATION OF WILLIAM J. ROGERS IN SUPPORT OF PLAINTIFF'S MOTION FOR PARTIAL SUMMARY JUDGMENT ON RCRA CLAIM

Hearing date: August 21, 2014
Time: 1:30 PM
Location: Courtroom 3, 17th Floor

I, William J. Rogers, hereby declare under penalty of law that the following is true and correct:

1. I have personal knowledge of the facts stated herein and would testify as to the truth of these facts if called to do so. I submit this declaration in support of Ecological Rights Foundation's ("ERF") Motion for Summary Judgment on its RCRA Claim

2. I am a Full Professor and Senior Researcher in Environmental Science at West Texas A&M University. I served until recently as Associate Dean of Academic and Research Environmental Health, Safety and Compliance responsible for all aspects of student and research faculty and staff health and safety. As shown in my attached curriculum vitae, I have a doctorate in Fish and Wildlife Science specializing in environmental and ecological risk assessment and modeling of contaminant effects. I also have a Bachelors of Science degree in Biology and Masters of Science degree in Biology. I am also a member of the Institute of Hazardous Materials Management and a Certified Hazardous Materials Manager at the highest level (Masters Level # 1694). I am also a member of the Society of Environmental Toxicologists and Chemists (SETAC), member of the Society of Risk Assessment, editorial board member and scientific and technical reviewer for the journal *Ecotoxicology* and a working member of the Texas Commission on Environmental Quality (TCEQ) Ecological Risk Working Group.

3. I have specific experience in human health, environmental and ecological risk assessment from exposure to heavy metals, chlorinated organic compounds including PCBs, Dioxins/Furans, PAHs and pesticides, hydrocarbons and industrial wastes. Specific work includes testing and evaluation, development of "ecological protective cleanup levels" and site remediation of those chemicals. I am the principal investigator for the TCEQ effort to develop ecological "protective cleanup levels" for chemical contaminants in specific habitats found in Texas. I have provided support to the United Nations Environmental Program, World Bank and United Nations Food and Agricultural Organization on environmental cleanup, human health risk assessment and environmental monitoring in Azerbaijan, Russia and Romania. I have served as an advisor to the Chlorine Manufacturers Association Board addressing human health and environmental effects of "persistent toxic bio-accumulating chlorinated chemicals (PTBs)" and have written a position paper on the risk and cleanup of "persistent organic

pesticides (POPs)" for the World Bank. I served as the southwest regional coordinator on the Secretary of Interior's Task Force on Selenium and Other Toxic Substances (with independent National Academy of Science panel oversight) and organized both screening level and detailed human health and environmental risk assessments for all Dept. of Interior water supply and irrigation projects in the Southwestern United States. I have managed large-scale human health and ecological risk assessments at such sites as the Department of Energy Pantex Nuclear Weapons Plant and Oak Ridge National Laboratories. I was the principle author of the Ecological Risk Assessment Program Plan for Evaluation of Waste Sites on the Department of Energy Savannah River Plant. I have over 35 years of experience in virtually all aspects of environmental risk assessment, restoration, and protection. I have publications and numerous presentations that deal directly with human, environmental and ecological risk assessment. A listing of my publications and technical papers are included in my attached curriculum vitae (Exhibit A). I have taught and continue to teach Ecological Risk Assessment at the university masters level and Agricultural Human/Environmental Health Risk Assessment at the doctoral level.

4. I am also qualified by the U.S. Fish and Wildlife Service in instream flow methodology, which studies the effects of scouring flows and maintenance of aquatic habitats. I have conducted numerous studies in sedimentation and basic scouring flow requirements and removal of sediments during my nine-plus years with the Bureau of Reclamation, which is an agency that builds dams and manages water and sediments. In addition, I have over twenty years of experience in modeling chemical fate and transport. For my doctoral research I developed an integrated contaminant fate and transport model based ecological risk assessment model. I have over twenty years of conducting human health risk assessments and the conduct of contaminant natural attenuation and both physical and biological fate and transport in the environment. I have conducted sediment load studies, sediment scouring and loading assessments, as well as flow effects on streambed morphology and sediment transport.

5. I am familiar with the procedures, methods and models used in environmental, human and ecological risk assessment as well as those used in laboratory analytical work and EPA accepted quality assurance and validation requirements. I am compensated at a rate of $150.00/hr for technical work and at a rate of $200.00/hr. for testimony.

6. I was retained as an expert by Ecological Rights Foundation ("ERF") to assess the pollutant characteristic and ecological impacts from storm water discharged from Pacific Gas and Electric ("PG&E")'s corporation yards located at: (1) 4801 Oakport Street, Oakland, California ("Oakport Facility"), (2) 24300 Clawiter Road, Hayward, California ("Clawiter Facility"); (3) 1099 West 14th Street, Eureka, California ("West 14th St. Facility"); and (4) 2475-2555[1] Myrtle Avenue, Eureka, California ("Myrtle Facility") (collectively "the Facilities"). I have performed a screening level risk assessment, comparing the levels of pollutants detected in sediment, soil and water samples collected at the Facilities to various regulatory benchmarks utilized by regulators and risk assessors as screening tools to determine whether pollutants are present at elevated levels in a fashion that warrants further investigation.

7. Ecological risk assessment is based on a weight-of-evidence approach using multiple lines of evidence. The benchmarks I used include various environmental screening values that are regularly used by EPA, the California Water Resources Control Board, Regional Water Quality Control Boards and other regulatory agencies as standards for screening level risk assessments for ecological risk and human health. These benchmarks were developed based upon supporting data showing that in many circumstances the presence of pollutant levels exceeding these benchmark values are correlated with adverse impacts on organisms ("eco-receptors"). I performed the comparisons as one step in my evaluation of whether various pollutants are present or are likely present in storm water discharges from the Facilities or in surficial sediments/grit at the Facilities that may be discharged from the facilities to San Francisco or Humboldt Bays.

8. For this screening-level ecological risk assessment, I reviewed selected historical documents on the properties as well as documents that provide needed background information on the site land use, surrounding sites land use, habitats found on site and expected aquatic and terrestrial

[1] PG&E operates a business office in addition to the service center at this address. The office, which is adjacent to and surrounded by the corporation yard are both on one contiguous parcel. PG&E apparently uses both addresses to refer to this facility.

species. I reviewed photographs and video images of the Facilities. I have reviewed peer-reviewed studies and toxicity testing and relied in part on the results of those studies. I have used standard scientific methods and procedures in the analysis of potential for environmental and ecological adverse risks that can be or have the potential to be attributable to contaminants found on and associated with activities at the PG&E Facilities. I have utilized specific literature sources from state, federal and scientific sources as referenced throughout the report. I have relied on the samples collected by SWAPE and analytical testing conducted by TestAmerica as referenced throughout the report. I reviewed climatic and precipitation data for the San Francisco Bay and Eureka, California areas. I also reviewed the expert report of Matthew Hagemann and his Declaration in Support of Plaintiff's Motion for Partial Summary Judgment on Clean Water Act Claim ("Hagemann Declaration") and the expert report of David Parker and his Declaration in Support of Motion for Summary Judgment, Clean Water Act Claims ("Parker Declaration").

9. Field samples of soil/sediment and surface water were collected by SWAPE at four PG&E sites that ultimately drain to either San Francisco Bay or Humboldt Bay as follows:

San Francisco Bay

4801 Oakport St., Oakland, CA (Oakport)

24300 Clawiter Rd., Hayward, CA (Clawiter)

Humboldt Bay

2475-2555 Myrtle Ave. Eureka, CA (Myrtle Ave)

14th St and Railroad Ave., Eureka, CA (14th Street)

10. I have reviewed the sampling protocol used by SWAPE, local and regional climatic data on the sampling dates, chain-of-custody and laboratory receipt of samples documentation, the laboratory quality assurance and control data documenting the usability of the collected data. I applied the EPA Contract Laboratory Program protocol for validating data and I conclude that the data in the packages

was usable for risk assessment. The Oakport site and Clawiter site samples were delivered to Test America on February 16th, 2011 and the Myrtle Ave. and 14th St. samples were delivered to Test America on March 19, 2011. A summary of the results is included as Exhibit B along with Clean Water Act section 303 water quality standards applicable to San Francisco and Humboldt Bays and their tributaries, U.S. Environmental Protection Agency ("EPA") Benchmark values, the San Francisco Bay Regional Water Quality Control Board Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater (ESLs), and the California State Water Resources Control Board General Industrial Permit Order 97-03-DWQ benchmarks to assist in identifying potential pollutant constituents. Additional screening benchmarks are included in the "Screening Benchmarks" section of this report which specifically addresses dioxins and furans as well as PCP along with discussion on the rationale for the use of those screening values. Screening benchmarks and the screening analysis was presented as background to identify potential pollutant constituents occurring in the sampled media.

Background and Environmental Setting

San Francisco Bay

11. San Francisco Bay and the Delta region of California form the largest estuary on the Pacific coast of the United States. It is a shallow, productive estuary that covers up to about 1,600 square miles and drains more than 40 percent of the state, or 60,000 square miles (OEHHA 2011 from California Academy of Sciences 2010). An estuary is a semi-enclosed coastal body of water which has a free connection with the open sea and within which sea water is measurably diluted with freshwater. San Francisco Bay consists of three parts: North, Central and South. The northern part, San Pablo Bay, is connected to Suisun Bay by the Carquinez Strait, which receives water from the Sacramento River and San Joaquin River. The water then flows into the central largest portion, San Francisco Bay and joins the Pacific Ocean by the Golden Gate. Salinity and water circulation patterns in the northern and central portions of the bay are controlled by freshwater from the Sacramento and San Joaquin Rivers. Circulation patterns and salinity of the southern part of the bay are regulated by a combination of ocean and northern bay waters (OEHHA, 2011 from California Academy of Sciences, 2010). The entire San

Francisco Bay estuary includes San Pablo Bay, Suisun Bay, San Francisco Bay and five other bays: Honker, Richardson, San Rafael, San Leandro and Grizzly (OEHHA, 2011 from BCDC, 2010).

12. San Francisco Bay is an important habitat for birds and marine mammals and acts as a staging and wintering area for approximately one million migratory waterfowl and one million shorebirds. It serves as a breeding habitat for many species of birds and contains a significant resident breeding population of Pacific harbor seals (Grigg 2003). California's Dungeness crab, California halibut, and Pacific salmon rely on the bay as a nursery. The bay also serves as habitat for populations of two of California's endangered birds, the California clapper rail (EPA 2010) and the California least tern (CDPR 2012). The bay is also home to the San Francisco Bay National Wildlife Refuge Complex, a collection of seven National Wildlife Refuges administered by the US Fish and Wildlife Service.

13. San Francisco Bay was listed in the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments for numerous contaminants including dioxin compounds (including 2,3,7,8-TCDD), furan compounds, PCBs and dioxin-like PCBs (SFRWQCB 2007). The Office of Environmental Health Hazard Assessment (OEHHA; 1994) issued fish consumption advisories for San Francisco Bay and limited fish consumption based on potential consumer risk. In 2000 EPA and the San Francisco Estuary Institute found concentrations of dioxins in white croaker, shiner surfperch, and striped bass that exceeded human health screening levels (EPA 2000b). Although PCBs accounted for 80% of the TEQ contamination, levels of dioxin alone exceeded levels considered to be safe for human health. In 2011 OEHHA issued a new Health Advisory and Safe Eating Guidelines for San Francisco Bay fish and shell fish which recommended further restriction based on species of fish and shell fish (OEHHA 2011). The 2011 advisory further expanded the list of species that should not be consumed under any circumstances and further restricted the weekly consumption of other species.

14. Polychlorinated dioxins (PCDDs) and polychlorinated furans (PCDFs); are produced via a number of processes including incineration of wastes, production of bleached wood pulp, herbicides, and chlorophenolic wood treatment products. There are very few sources of naturally occurring dioxins, forest fires being the primary source. The San Francisco Bay area has known background levels of PCDDs and PCDFs. In collaboration with NOAA, USEPA (2000a) sampled 99 locations in the San

Francisco Bay region and found a median and mean PCDD/F concentration (TEQ) of 2 and 5 parts-per-trillion (ppt) dry weight, respectively.

PG&E's San Francisco Bay Site Descriptions

15. 24300 Clawiter Rd., Hayward CA Site (Clawiter): The Clawiter site is located on the south side of San Francisco Bay, approximately 2 miles east of the shoreline. During a rainfall event, runoff from the Hayward site is discharged to a municipal storm sewer system which deposits storm water into a flood control channel near the intersection of West Street and Clawiter Road. The discharge channel discharges into San Francisco Bay just north of the San Mateo Bridge. Since the sites drains into the San Francisco Bay estuary which is dominated by saltwater from the Pacific Ocean, sediment and water concentrations were compared to benchmarks protective of marine organisms.

16. 4801 Oakport St.,Oakland, CA (Oakport site): The Oakport site is located on the north side of San Leandro Bay, directly adjacent to the East Creek Slough which drains into San Leandro Bay. During a rainfall event, runoff from the Oakland site is transported downslope into an outfall that feeds into the San Leandro Bay. Since San Leandro Bay is dominated by saltwater from the Pacific Ocean and is inhabited by saltwater/marine fauna, sediment and water concentrations were compared to benchmarks protective of marine organisms.

Humboldt Bay

17. Humboldt Bay is a natural bay and a multi-basin, bar-build coastal lagoon located along the rugged North Coast of California entirely within Humboldt County. It is second only to San Francisco Bay in size. It is the site of the largest commercial oyster production operation in the state. Humboldt Bay and its tidal sloughs are open to fishing year-around and the bay is home to a national wildlife refuge complex for the protection of wetlands and bay habitats for migratory birds. The bay is a source of subsistence and commercial fishing for a variety of saltwater fish, crustaceans and mollusks. The bay is also used by over 300 species of birds and is a key part of the Pacific Flyway. Large numbers of Great Egrets nest in colonies in and around Humboldt Bay, and rely on fish and aquatic invertebrates for sustenance. The bay is also listed as one of the most important stopovers for the Pacific Brant, which rest and feed on large eelgrass beds prior to their migration to their nesting grounds in Alaska.

18. Humboldt Bay was listed in the 2006 Clean Water Act Section 303(d) List of Water Quality Limited Segments for dioxin toxic equivalents and PCBs (Eureka Plain HU, Humboldt Bay; NCRWQCB 2007). This listing was based on multiple lines of evidence that indicated exceedance of OEHHA's screening level of 0.3 ppt dioxin TEQ in fish tissue. Mussels sampled in Humboldt Bay had dioxin concentrations ten to forty times higher than mussels collected outside the bay. A composite oyster sample collected in the bay contained a dioxin level of 10.9 parts-per-trillion, over 36 times the OEHHA screening value. In 2010, the California North Coast Regional Water Quality Control Board decided not to delist from the 303(d) list due to numerous exceedances of the OEHHA screening level in fish tissue (NCRWQCB 2010). The decision also noted a number of exceedances of sediment quality guidelines for protection of Marine Habitat Beneficial Use.

PG&E's Humboldt Bay Site Descriptions

19. 2475-2555 Myrtle Ave., Eureka CA (Myrtle Ave. site): The Myrtle Ave. site is located approximately one mile south of Arcata Bay, which is a tidally influenced estuary that makes up the north end of the larger Humboldt Bay. During a rainfall event, runoff from the Myrtle Ave. site is transported via the Humboldt County storm water System which discharges into Third Slough. Since the site drains directly into a estuarine system (freshwater/brackish stream), and flows into a saltwater estuary downstream, sediment and water concentrations were compared to benchmarks protective of both marine and freshwater aquatic organisms.

20. 1009 West 14th St. and Railroad Ave., Eureka, CA (14th St. site): The 14th St. site is located on the west side of Eureka, approximately one quarter mile east of Humboldt Bay. During a rainfall event, runoff from the 14th St. site is transported via the City of Eureka storm water system which discharges into Humboldt Bay through an outfall at the foot of West 14th Street. Since this area of Humboldt Bay receives tidal influx from the Pacific Ocean, sediment and water concentrations were compared to benchmarks protective of marine organisms.

Toxicological Profile of Dioxins and Furans

21. Polychlorinated dibenzo-p-dioxins (PCDDs or "dioxins"), dibenzo furans (PCDFs or "furans") (sometimes collectively referred to collectively as "dioxins"), and biphenyls (PCBs) constitute

a group of persistent environmental chemicals. Polychlorinated dibenzo-p-dioxins occur as 75 different isomers. There are 22 possible tetrachlorodibenzo-p-dioxin isomers, but only one isomer that contains chlorines at only the 2,3,7, and 8 positions. 2,3,7,8-TCDD is formed from the incineration of wastes and production of bleached wood pulp and paper. It also occurs as a contaminant in the manufacture of various pesticides (HSDB, 2012). Dioxins and furans are also common impurities in pentachlorophenol (PCP) wood treating products (Geomatrix, 2007). The California State Water Resources Control Board analyzed commercial PCP products and found high concentrations of dioxin and furan congeners in PCP products (Palmer et al. 1988). PCP is used as a heavy duty wood preservative (for telephone poles and railroad ties).

22. As reported in the ATSDR, utility telecommunication and railway right-of-ways may be contaminated by leaching of dioxins associated with chlorophenol-treated railway ties and utility poles. A study in British Columbia showed that PCDDs and PCDFs were not detected in parkland ditch sediments (control area), but were detected in farmland, utility, and railway right-of-way ditch sediments (Wan and van Oostdam 1995). Total mean PCDD concentrations (mainly OCDD and HpCDD) ranged from 18.8 to 277 ng/kg (ppt) (dry weight) in ditch sediments and ballasts respectively. Concentrations of PCDDs were much higher in ditch sediment adjacent to utility poles (mean 2,576 ng/kg (ppt) [dry weight]) than in sediment 4 meters downstream (14 ng/kg CDDs [dry weight]) or 4 meters upstream of the utility poles (not detected). CDD concentrations in ditch water were also higher close to the poles (mean 13,142 ng/L [ppt] than 4 meters downstream of the poles (mean 4,880 ng/L [ppt]). The authors concluded that utility poles and railway ties are a potential constant source of CDD/CDF contamination to both water and sediment in aquatic environments through ditch runoff. (ATSDR pp441-442)

23. Several PCDDs and PCDFs have been shown to cause toxic responses similar to those caused by 2,3,7,8-TCDD which is considered the most potent of the congeners. The toxic responses include dermal toxicity, immunotoxicity, carcinogenicity and adverse effects on reproduction, development and endocrine functions (WHO 1998). To facilitate both ecological and human risk assessment the World Health Organization (WHO) assembled a panel of experts to develop "Toxicity Equivalent Factors (TEFs)" which are applied to the specific congeners to provide a "Toxicity

Equivalent Quotient (TEQ)" to 2,3,7,8-TCDD. The TEFs were developed for Humans/Mammals, Fish and Birds due to the varied toxic response by the receptor groups. In 2005, WHO updated the TEF tables slightly modifying some of the TEFs. The TEF for each PCDD/PCDF congener is summed to give a total toxicity equivalency quotient (TEQ). Concentrations of PCDD/PCDFs are reported using the human/mammal TEQ unless otherwise noted. The EPA In its recent "Reanalysis of Key Issues Related to Dioxin Toxicity in Response to NAS Comments, Volume 1" (February 2012) reconfirmed the use of the WHO, 2005 TEQs for human/mammal receptors.

ATSDR Toxicological Profile for Chlorinated Dibenzo-p-Dioxins

24. Due to their hydrophobic nature and resistance toward metabolism, dioxins and furans accumulate in fatty tissues of animals and humans. The Department of Health and Human Services (DHHS) has determined that it is reasonable to expect that 2,3,7,8-TCDD may cause cancer. The EPA has determined that 2,3,7,8-TCDD is a probable human carcinogen when considered alone and when considered in association with phenoxy herbicides and/or chlorophenols. The EPA has determined also that a mixture of CDDs with six chlorine atoms (4 of the 6 chlorine atoms at the 2, 3, 7, and 8 positions) is a probable human carcinogen.

25. Due to the high likelihood that the dioxins and furans remain in the fatty tissues of the host organism, contaminants in the host will ultimately be passed on to upper trophic level predators in a process called biomagnification. This places high trophic level predators like game fish, marine mammals, eagles and humans that feed on the prey at the greatest risk. As such, compounds at sub-detectable levels in environmental media can be found at high levels in upper trophic level organisms.

26. The degree to which chemicals biomagnify in ecosystems can be estimated using bioconcentration factors. Bioconcentration factors are the ratio of concentrations in an organism to concentrations in environmental media. Chemicals with high bioconcentration factors are more likely to bioaccumulate to high levels in the organism. OEHHA (2000) reported water-to-fish bioconcentration values for 2,3,7,8-TCDD ranging from 2,670 to 635,000 with a recommended default value of 19,000. EPA (1999) reported bioconcentration factors of 1.59 for soil-to-soil invertebrates, .0056 soil to plant, 1,560 water to aquatic plant, 3,302 water to algae, 4,235 water to fish and 19,596 sediment to benthic

invertebrates. To determine the expected concentration of the 2,3,7,8-TCDD in higher trophic levels the bioconcentration factor (BCF) can be multiplied by a food chain multiplier (FCM). For example, a sediment to benthic organism BCF of 19,596 would be multiplied by a FCM of 27 (based on a Log K_{ow} =6.8) for a biomagnification of 529,092 to an upper trophic level 4 receptor. In this way, concentrations of dioxins/furans at relatively low levels in environmental media can biomagnify to unsafe levels in upper trophic level organisms such as marine mammals, salmon and eagles.

27. Dioxins do not move readily through soils and sediments because they generally attach to sediment particles. Soils and sediments represent the most significant "sink" for dioxins. Once dioxins, particularly 2,3,7,8-TCDD, enter the soil and sediments, they are very slow to degrade. 2,3,7,8-TCDD has a degradation half-life of ten years or longer (i.e., over 10 years the concentration of dioxin in a given medium is expected to decrease by one half). The half-life of dioxins that bioaccumulate in tissues of living organisms also have very long half-lives. The estimated volatilization half-life of dioxins from a model pond is 58 years if adsorption is considered. Hydrolysis is not expected to be an important environmental fate process since dioxins lack functional groups that hydrolyze under environmental conditions.[2] Due to the recalcitrance of dioxins, their tendency to adhere to sediments, and their long degradation half-lives, dioxins will adhere to sediment particles and be transported during rainfall and flood events along with suspended sediments picked up and entrained by storm water runoff flows. In this fashion, dioxins would necessarily be transported along with suspended sediments to wherever storm water flows ended up. In the case at hand, this means that storm water flows at the Facilities would tend to move dioxin contaminated surface sediments/grit from the Facilities into San Francisco and Humboldt Bays--the water bodies into which storm water from the Facilities flows.

Human Health Risks:

28. The Department of Health and Human Services (DHHS) has determined that it is reasonable to expect that 2,3,7,8-TCDD may cause cancer. The EPA has determined that 2,3,7,8-TCDD

[2] *See* ToxNet. Hazardous Substances Data Bank. National Institutes of Health, U.S. National Library of Medicine, published on the Internet at via: http://toxnet.nlm.nih.gov/

is a probable human carcinogen when considered alone and when considered in association with phenoxy herbicides and/or chlorophenols. The EPA has determined also that a mixture of CDDs with six chlorine atoms (4 of the 6 chlorine atoms at the 2, 3, 7, and 8 positions) is a probable human carcinogen.

29. According to the ATSDR, exposure to 2,3,7,8-TCDD can cause reproductive damage and birth defects in animals. Decreases in fertility, altered levels of sex hormones, reduced production of sperm, and increased rates of miscarriages were found in animals exposed to 2,3,7,8-TCDD in food. Rats and mice that were exposed to small amounts of 2,3,7,8-TCDD in food for a long time developed cancer of the liver and thyroid, and other types of cancer. The results of the oral animal studies suggest that the most sensitive effects (effects that will occur at the lowest doses) are immune, endocrine, and developmental effects. It is reasonable to assume that these will also be the most sensitive effects in humans.

Screening Level Benchmarks for Risk Assessment

30. In order to evaluate whether or not the levels of PCDD/PCDFs have the potential to cause adverse effects on wildlife, samples of soil, sediment and water were taken from the PG&E sites that drain directly into Humboldt or San Francisco Bay or into tributaries that drain into either bay. Sample results were compared to screening benchmarks compiled by Buchman (2008) and other sources. The on-site concentrations were compared to screening benchmarks in order to calculate a hazard quotient (HQ). EPA (2012a) guidance defines a "Hazard Quotient" as follows:

> **Hazard Quotient:**
>
> The ratio of an exposure level by a contaminant (e.g., maximum concentration) to a screening value selected for the risk assessment for that substance (e.g. LOAEL or NOAEL). If the exposure level is higher than the toxicity value, then there is the potential for risk to the receptor. (See Ecological Risk Assessment Guidance Step 2 for more details.)
>
> **Screening Level Risk Calculation (Hazard Quotient)**
>
> Ecological risk can be estimated numerically using the ***Hazard Quotient*** (HQ) approach. The HQ is a ratio, which can be used to estimate if risk to harmful effects is likely or not

due to the contaminant in question. The HQ is calculated using one of the following equations:

Hazard Quotient Equations

1. **HQ = Dose / Screening Benchmark**
2. **HQ = EEC / Screening Benchmark**

- *Dose* = an estimated amount of how much contaminant is taken in by a plant or animal, in terms of the body weight of the plant or animal (e.g., mg contaminant/kg body weight per day);
- *EEC* = estimated (maximum) environmental contaminant concentration at the site; how much contaminant is in the soil, sediment, or water (e.g, mg contaminant/kg sediment)
- *Screening benchmark* = generally a **No-Adverse Effects Level** concentration; if the contamination concentration is below this level, the contaminant is not likely to cause adverse effects.

After the calculation...

If...	*Then...*
HQ > 1.0	**Harmful effects are likely due to the contaminant in question**
HQ = 1.0	**Contaminant *alone* is not likely to cause ecological risk**
HQ < 1.0	**Harmful effects are NOT likely**

31. Site sediment/soil and water concentrations were compared to screening benchmarks compiled by Buchman (2008) and other sources. When feasible, two benchmarks were chosen to represent a more conservative/protective threshold (lower values) and a less conservative/protective

threshold (higher value) to more accurately determine the degree of toxicity in samples. Site concentrations were also compared to California Toxic Rule water quality criteria (Attachment B). The following summaries describe what each benchmark represents and how it was derived.

Dioxin Sediment Quality values Used as Screening Benchmarks

Sediment Benchmarks – Marine

1. **US EPA Region 5 Ecological Screening Levels for dioxins**:

USEPA Region 5 (2003) developed ecological screening levels for dioxins in soil based on exposure to a masked shrew (*Sorex cinerus*). This small burrowing mammal would be similar in exposure patterns to other small mammals found in coastal California such as the Pacific Shrew (*Sorex pacificus*) or Marsh Shrew (*Sorex bendirii)*. Levels of dioxins/furans and PCP found above the Region 5 Ecological Screening Level would therefore be expected to cause harm to small mammals, which are important prey for hawks, eagles, reptiles and large mammals. EPA Region V has published these ecological screening levels on the Internet at: http://epa.gov/region05/waste/cars/pdfs/ecological-screening-levels-200308.pdf

2. **Apparent Effects Threshold (AET):** The AET was used as a more protective (lower) benchmark for dioxins/furans and is based on empirically derived relationships between sediment concentrations and observed toxicity bioassay results, or benthic community impacts (Gries and Waldow 1996). Paired dose-response observations are ranked in increasing order. The highest nontoxic sample then sets the AET. The AET for the most sensitive species or endpoint is used, in order to be protective of the marine ecosystem as a whole. AETs were developed for species native to Pacific Northwest (Puget Sound, Washington), making them appropriate for use in studies at San Francisco and Humboldt Bay. The AET published in Buchman (2008) establishes the marine sediment TEQ at 3.6 ppt expressed as 2,3,7,8-TCDD.

EPA Region IX in a memo dated January 13, 2010 "*Compilation and discussion of sediment quality values for dioxin, and their relevance to potential removal of dams on the Klamath River*" recommended sediment screening values for the Klamath Basin Secretarial Determination. The document provides recommendations for ecological receptor protection as well as for human health

protection in both soils and sediments. A review of that memo supports the use of an area background level for San Francisco Bay at 2-5 ppt mean and median values respectively. It also supports the use of the following risk-based screening levels which are well below and supportive of the AET provided in the Buchman (2008) NOAA Squirts Tables as follows:

3. **Oregon DEQ Sediment Quality Value for the Protection of Human Consumers (ODEQ 2007):** These values are risk-based sediment guidelines for the protection of human seafood consumers. These screening-level values are suggested to determine the need for bioaccumulation testing or modeling. There are two values: The lower value, 0.0011pg/g dioxin TEQ represents the threshold for potential risk to subsistence human seafood consumers. The higher value, 1.1 pg/g (ppt) dioxin TEQ represents the threshold for potential risk to the general population of human seafood consumers. It should be noted that these values are 3,272 to 3.2 times lower than the AET.

This sediment quality value is relevant for a number of reasons. San Francisco Bay was placed on the State of California's 303(d) list of impaired waters for dioxins in 1998 as a result of elevated concentrations of dioxins and furans in fish. The San Francisco Estuary Institute's ("SFEI") Regional Monitoring Program has conducted studies of contaminants in Bay sport fish since 1994 and has found that dioxin concentrations have remained unchanged over this time period and, in some species, continue to greatly exceed screening values for human consumption. A San Francisco Bay seafood consumption study conducted by SFEI and the California Department of Health Services found that about one in ten anglers who consume Bay fish eat more than is recommended by the health advisory. Asians and African Americans were more likely to eat above the health advisory limits compared to other groups. Asians were also more likely to follow fish consumption practices such as eating skin that increase their exposure to dioxins. Many anglers reported that they share their catch with other members in their household. Many anglers reported that other household members ate some of the fish they caught from San Francisco Bay. About 40% reported women of childbearing age eat some of the fish they catch (In addition, about 5% of the fish-consuming anglers interviewed were themselves women of childbearing age).The study also found that awareness and understanding of the health advisory was

poor. (SFEI. 2000. San Francisco Bay Seafood Consumption Study. San Francisco Estuary Institute). An executive summary of the report can be found here: http://www.sfei.org/sites/default/files/Final%20Exec%20Summ%20v.15_0.pdf

4. **Oregon DEQ Sediment Quality Value for the Protection of Wildlife Consumers (ODEQ 2007):** These values are effects-based sediment guidelines for protection of wildlife consumers for mammals at 0.052-1.4 ppt dioxin TEQ and for birds 0.7-3.5ppt dioxin TEQ. The low and high values represent chemical concentrations in sediment at and below which chemicals are not expected to accumulate in the tissues of prey items (e.g. fish) above NOAEL/LOAEL based levels.

5. **Oregon DEQ Sediment Quality Value for the Protection of Fish (ODEQ 2007):** Effects-based protection of fish 0.56 ppt dioxin TEQ. For marine and freshwater, this benchmark value represents chemical concentrations in sediment at and below which chemicals would not be expected to accumulate in tissues of fish or other aquatic organisms above levels acceptable to the organisms.

After review of the EPA IX, 2010 recommendations, the Oregon DEQ effects-based sediment quality values for mammals (0.052-1.4ppt), birds (0.7-3.5ppt) and fish (0.56ppt) I found to be appropriate for use in this screening-level risk assessment. Values for birds and mammals were developed for both individuals (lower number; NOAEL) and population (higher number; LOAEL). Bird number is based on the lower of the great blue heron, eagle and osprey (for egg-based effects), whereas the mammal number is based on the mink. A rigorous and transparent risk-based approach was used to derive these numbers, using toxicity equivalency factors (TEFs) from Van den Berg et al. (1998) and (2006). Biota-sediment accumulation factors are 75th percentile values derived by the Washington Department of Health (1995). Although the source is not mentioned, food ingestion rates are comparable to those in the EPA (1993) *Wildlife Exposure Factors Handbook.* The TRVs are rigorous values used to

derive Great Lakes Water Quality Criteria and are based on the Nosek et al. (1992, 1993) study on pheasants[3] as well as the Tillitt et al. (1996) study on mink[4].

These effects-based values are well below the Buchman, 2008 AET of 3.6 for all but the upper bound for birds at 3.5. The Oregon effects-based levels for mammals and fish are 67 times lower than the AET values used in this assessment.

The Ecological screening level for fish is based on tissue residue levels from Jarvinen and Ankley (1999) and USACE (2013) Environmental Residue Effects Database-two widely used tissue residue level databases. The derivation of these values is transparent and it is reasonable to apply these values at other sites on the Pacific coast.

Source: http://www.deq.state.or.us/lq/pubs/docs/cu/GuidanceAssessingBioaccumulative.pdf

6. **Environment Canada – Effects-Based Protection of Benthos (Environment Canada 2002) 0.85-21.5 ppt.** These values represent threshold effect/probable effect levels based on benthic sediment toxicity data (with a safety factor of 10 applied). These values are for fresh water and marine. They are not intended to address bioaccumulation.

7. **Probable Effects Level (PEL)** – The PEL is the least protective (highest) benchmark in Buchman's (2008) tables for dioxins/furans. Similar to AET's, NOAA derived PEL values by comparing sediment concentrations of given pollutants and observations of whether these concentrations appear to be toxic in bioassay tests on both marine and freshwater species or in observations of marine and freshwater benthic communities (i.e., whether the indigenous benthic community that lives in sediments with given measured concentrations of pollutants appear to be suffering adverse impacts). PEL values represent the geometric mean of the sample results for which toxic effects were observed. Thus, the PEL represents a value at which adverse impacts on living organisms are considered probable, as PELs are designed to be the threshold between samples which

[3] Although this TRV is based on exposure via intraperitoneal injection, there are no other bird-based TRVs which incorporate effects on reproduction. EPA has allowed the use of this TRV in ecological risk assessments.

[4] TRV was derived using field-caught fish from Saginaw Bay Michigan which also contained trace levels of organic pesticides; however, this TRV has been used by EPA and others, and is comparable to other TRVs based on rodents.

were a) occasionally and b) frequently associated with adverse effects on aquatic marine life. Therefore, concentrations exceeding the PEL are likely to be associated with adverse effects. *See* NOAA, Office of Response and Restoration, frequently asked questions (FAQ s) about SQuiRTs, published on the NOAA website at: http://response.restoration.noaa.gov/environmental-restoration/environmental-assessment-tools/squirt-cards-faq.html.

8. **Upper Effects Threshold (UET)** – NOAA developed UETs using the apparent effects threshold (AET) methodology as described above. However, the bioassay toxicity tests relied upon were performed using freshwater species and benthic community endpoints. Again, UETs are equal to the highest concentration of a pollutant observed without having an observed adverse impact on the target species. *See,* http://response.restoration.noaa.gov/environmental-restoration/environmental-assessment-tools/squirt-cards-faq.html http://response.restoration.noaa.gov/sites/default/files/SQuiRTs.pdf

Sediment Benchmarks – Freshwater

1. **Upper Effects Threshold (UET)** – The UET is a more protective (lower) benchmark for dioxins/furans in Buchman's (2008) tables. UETs were developed using the apparent effects threshold (AET) methodology as described above. However, the toxicity tests were performed using freshwater species and benthic community endpoints. The final value is based on the concentration which results in toxicity to the most sensitive species.

2. **Probable Effects Level** - PELs were the least protective (higher) value for dioxins/furans compiled by Buchman (2008) in freshwater systems. PELs were developed and applied to freshwater ecosystems using the previously mentioned PEL methodology. The same benchmark for 2,3,7,8-TCDD TEQs in marine systems applies to freshwater systems (MacDonald et al. 2000). For 2,3,7,8-TCDD dioxin, this benchmark is based on toxicity to *Hyalella azteca*, a widespread and abundant species of amphipod crustacean. It is a favorite food source of waterfowl, small fish, amphibians and aquatic insects making them a keystone species in the aquatic ecosystem.

3. **Environment Canada – Effects-Based Protection of Benthos (Environment Canada 2002) 0.85-21.5 ppt.** These values represent threshold effect/probable effect

levels based on benthic sediment toxicity data (with a safety factor of 10 applied). These values are for fresh water and marine. They are not intended to address bioaccumulation.

Surface Water Benchmarks

1. **Ambient Water Quality Criteria** – USEPA (2002) developed ambient water quality criteria for the protection of human health. Although these values are based on the protection of humans, bioaccumulation of dioxins to fish tissue would also pose a substantial risk to higher trophic levels of organisms that eat fish, such as marine mammals (i.e. seals), eagles, and other upper trophic level organisms. The organism-only screening benchmark was used which assumes that the receptor is exposed through consumption of contaminated fish. This value was only applied to 2,3,7,8-TCDD dioxin equivalents due to the absence of screening criteria for dioxins/furans in aquatic systems.

2. **Region IV Chronic Screening Values** – USEPA Region IV developed chronic screening values for freshwater for a number of chemicals including 2,3,7,8-TCDD TEQs, which were used by Oak Ridge National Laboratory (1996) to screen contaminants of concern on their site. This screening value was only applied to 2,3,7,8-TCDD TEQ, and is protective of bioaccumulation to fish tissue.

3. **Great Lakes Water Quality Criteria** – EPA (1995) also developed water quality criteria for the Great Lakes after finding that a number of chemicals, including dioxins and furans, were accumulating to high levels in fish and shellfish (Whittle et al. 1992). The benchmark was therefore developed for the protection of bioaccumulation in higher trophic level organisms, and levels exceeding the benchmark would be expected to bioaccumulate significantly. This benchmark was only applied to 2,3,7,8-TCDD TEQs due to their bioaccumulative nature.

4. **EPA National Recommended Water Quality Criteria** – the EPA (2012b) recommended water quality criteria for aquatic life (saltwater chronic value) was used for PCP in marine receiving water bodies. The chronic value was used because after a runoff event marine organisms would be chronically exposed to runoff transported off-site.

Note: there are no marine/saltwater surface water benchmarks available for 2,3,7,8-TCDD dioxin equivalents. In the absence of marine/saltwater benchmarks, surface water benchmarks developed for freshwater systems were applied to evaluate water which drains into marine/saltwater receiving bodies.

Soil Benchmarks

Sediments in industrial areas can be become soil when they are transported via runoff to edge or riparian/coastal habitat where terrestrial vegetation has become established. Terrestrial organisms that forage and dwell in these areas could then be exposed to contaminants, which could in the case of dioxins, result in biomagnification up the terrestrial food chain. San Francisco and Humboldt Bay tidal marshes provide habitat for small mammals, including the Suisun shrew, salt marsh wandering shrew, and salt marsh harvest mouse. The endangered salt marsh harvest mouse and the Suisun shrew are totally dependent on wetlands. The salt marsh harvest mouse can be found in salt and brackish habitat and in diked and tidal areas. They hide in dense pickleweed, which they use for food and shelter.

1. **Region 5 Ecological Screening Level** – USEPA Region 5 (2003): USEPA Region 5 developed ecological screening levels in soil based on exposure to a masked shrew (*Sorex cinerus*). This small burrowing mammal would be similar in exposure patterns to other small mammals found in coastal California such as the Pacific Shrew (*Sorex pacificus*) or Marsh Shrew (*Sorex bendirii)*. Levels of dioxins/furans and PCP found above the Region 5 Ecological Screening Level would therefore be expected to cause harm to small mammals, which are important prey for hawks, eagles, reptiles and large mammals.

Results of Screening-Level Risk Assessment

32. ERF's sampling at the Facilities was intended to collect samples of water, sediment, surficial soils and other materials to determine the presence of pollutants in storm water flows and surficial materials that could be transported off-site from Facilities and ultimately into nearby San Francisco and Humboldt Bays via storm water runoff or motor vehicle tracking off-site where off-site storm water flows could then transport materials into municipal separate storm water systems that discharge into these Bays."

33. ERF's investigations were the functional equivalent of a robust RCRA Assessment (RFA), which is appropriate given that ERF is pursuing a RCRA claim for "corrective action," i.e., for remedial measures designed to address contamination from solid wastes.

Notably, EPA's RCRA RFA Guidance provides:

> The first step in the RCRA Corrective Action process is a RCRA Facility Assessment (RFA). The RFA is designed to identify all areas of potential release and includes the investigation of releases or potential releases to various media, including air, surface water, ground water, and soils. During the RFA, investigators gather information on areas of concern at the facility. They evaluate this information to determine whether there are releases that warrant further investigation and/or other action, such as interim measures to control pollutant releases.
>
> The RFA should identify all areas of potential release at RCRA facilities and include the investigation of releases to all media: air, surface water, ground water, and soils.
> EPA and/or State investigators should use the full complement of RCRA authorities to secure appropriate action. These include §7003 (actions to abate conditions that may present an imminent and substantial endangerment to human health or the environment). RFA Guidance 1-3.

There are three steps in the RFA process, each requiring the collection and analysis of data to support initial release determinations:

1. The preliminary review (PR) focuses primarily on reviewing or evaluating existing information, such as maps, aerial photographs, inspection reports, permit applications, historical monitoring data, and interviews with personnel who are familiar with the facility.

2. The visual site inspection (VSI) entails the on-site collection of visual information to obtain additional evidence of releases.

3. The sampling visit (SV) fills data gaps that remain upon completion of the PR and VSI by obtaining sampling and field data.

According to an EPA RCRA "Hotline training" document,

> "To issue a §7003 order…, EPA must possess evidence that the waste handling may present an imminent and substantial endangerment to human health or the environment. Evidence may be documentary, testimonial, or physical and may be obtained from a variety of sources, including inspections, investigations, or requests for production of documents or other data pursuant to §§3007, 3013, or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) §104. This evidence must be reliable enough to enable a reasonable person to conclude that the action is appropriate. The phrase "may present" indicates that the standard of proof does not require certainty. That is, an order may be issued if there is sound reason to believe that an endangerment exists; evidence of actual harm is not required." EPA Hotline training Chap. 8 Enforcement and Compliance, http://www.epa.gov/wastes/inforesources/pubs/training/enforc.pdf

34. ERF's sample results showed concentrations of dioxins, pentachlorophenol and other contaminants in settlements and storm water at the Facilities that exceeded screening benchmarks--and for dioxins in particular, by very large factors. Out of all four PG&E sites, only the Myrtle Ave. site in Eureka does not drain directly into a marine receiving water body. Therefore, samples from the Clawiter, Oakport, and 14th St. sites were screened using marine/saltwater benchmarks. The Myrtle Ave. site drains into freshwater and saltwater catchments, so samples from this site were screened using both freshwater and saltwater benchmarks.

San Francisco Bay Sites:

35. Both sites in the San Francisco Bay area discharge to the San Francisco Bay, a marine/estuarine habitat. Both sites in the San Francisco Bay region contained concentrations of 2,3,7,8-TCDD TEQs and PCP in sediment, soil and water that exceeded screening benchmarks.

Clawiter Facility (Hayward, CA):

36. The Clawiter Facility is located on the south side of San Francisco Bay, approximately 2 miles east of the San Francisco Bay shoreline. During a rainfall event, storm water runoff from the Clawiter Facility is discharged to the Hayward MS4. The Hayward MS4 deposits storm water into the Alameda County Flood Control Channel, which is located a short distance away from the Clawiter Facility near the intersection of West Street and Clawiter Road. The Alameda County Flood Control Channel is a tributary of San Francisco Bay. The point where storm water enters the Alameda County Flood Control Channel from the Clawiter Facility to the point where the Alameda County Flood Control Channel empties into San Francisco Bay is about 2 miles. The lower reaches of the Alameda County Flood Control Channel are tidally influenced, i.e., it receives tidal saltwater flow from San Francisco Bay during high tides. Since storm water discharges from the Clawiter Facility eventually drain into the lower Alameda County Flood Control Channel and San Francisco Bay, which are essentially saltwater environments, I compared concentrations of pollutants in samples taken from the Clawiter Facility to benchmarks for marine ecosystems.

37. At the Clawiter Facility, concentrations of dioxins in the HAYSED-4 sample exceeded the marine sediment AET by a factor of 2,722 and the marine sediment PEL by a factor of 456 (Exhibit E). This sample (HAYSED-4) was taken adjacent to the utility pole storage area. Similar to samples taken at the other Facilities, the analysis results showed that the sample contained high concentrations of two dioxin congeners, OCDD and Hepta-CDD, that are particularly known to be found in pentachlorophenol-treated wood--indication that the nearby utility poles were a source of the dioxins detected in the sample. This sample (HAYSED-4) also contained concentrations of pentachlorophenol which exceeded the marine sediment AET by a factor of 2,588. The remaining sediment samples taken by ERF at the Clawiter Facility (HAYSED-1, HAYSED-2, and HAYSED-3 also exceeded the AET for dioxins by factors of 128, 1667, and 2,056, respectively, and further exceeded the PEL for dioxins by

factors of 21.4, 279, and 344 times, respectively. Dioxin concentrations in the HAYSED-1, HAYSED-2, HAYSED-3 and HAYSED-4 samples also exceeded EPA Region V's dioxin soil screening level for the shrew by 2,312; 30,151; 37,186; and 49,246 times, respectively, indicating that the levels of dioxins detected in the samples were many times higher than levels known to exhibit the characteristic of toxicity to a mammal species. Storm water flows at the Clawiter Facility flow past the HAYSED-1, HAYSED-2, HAYSED-3 and HAYSED-4 locations and eventually into the storm water discharge pipe that transmits storm water flow from the Facility into the Hayward municipal separate storm water system that in turn discharges into the Alameda County Flood Control Channel. The Alameda County Flood Control Channel is a tributary to San Francisco Bay. Storm water flows at the Clawiter Facility would tend to pick up and entrain dioxin contaminated sediments at the HAYSED-1, HAYSED-2, HAYSED-3 and HAYSED-4 locations and transport these sediments off-site via the Clawiter Facility storm drain system into the Hayward MS4 and then into the Alameda County Flood Control Channel.

38. At the Clawiter Facility, concentrations of dioxins in the HAYWTR-1 & HAYWTR-2 storm water samples exceeded EPA ambient water quality criteria by 784,314 and 10,392 times, respectively; exceeded EPA Region IV chronic screening levels by 400 and 5.3 times, respectively; and exceeded EPA Great Lakes criteria by 1,290,323 and 17,097, respectively. As discussed in the Hagemann Declaration, ERF took the HAYWTR-1 sample in a storm water conveyance culvert located adjacent to pentachlorophenol treated utility poles. As with the OAKWTR-1 and OAKWTR-2 samples, the extremely high levels of dioxins detected in this sample demonstrated that dioxin present in the utility poles is being transferred into storm water that makes contact with the utility poles. As the culvert where the sample was taken conveys storm water into the Clawiter Facility storm drain system that eventually discharges storm water into the Hayward MS4, this sample also supports the conclusion that the Clawiter Facility discharges storm water containing high levels of dioxins into the Hayward MS4 that in turn discharges into the Alameda County Flood Control Channel. As also discussed in the Hagemann Declaration, ERF took the HAYWTR-2 sample from the last accessible point in the Hayward Facility storm water conveyance system before this conveyance system discharges storm water into the Hayward MS4. ERF took a sample of storm water that was still flowing and thus the sample was

directly indicative of the levels of dioxins in a discharge of storm water from the Clawiter Facility. ERF's sample results demonstrated that the Clawiter Facility is discharging elevated levels of dioxins to the Hayward MS4 which in turn discharges to the Alameda County Flood Control Channel.

39. Storm water discharge from the Clawiter Facility flows into the Hayward MS4 and from there into the Alameda County Flood Control Channel. Accordingly, before storm water from the Clawiter Facility reaches San Francisco Bay it will be diluted with storm water flows from the watershed that provides flow to the Hayward MS4 and the Alameda County Flood Control Channel. I have reviewed the declarations and reports of David Parker on this issue. David Parker has performed an analysis of the maximum dilution of storm water that will occur at the point where the Alameda County Flood Control Channel discharges into San Francisco Bay. As he points out, this dilution is 47 to 1. Even when so diluted, the levels of dioxins that will be transported from the Clawiter Facility to San Francisco Bay well exceed applicable benchmarks. In addition, when storm water from the Clawiter Facility is discharged into the Alameda County Flood Control Channel just north of the Facility, the dilution ratio is 9.3 to 1. My attached Exhibit C is a table comparing the levels of dioxins that will still be present after dilution of storm water at the point where storm water flows from the Clawiter Facility will reach San Francisco Bay as well as when the flows enter the Alameda County Flood Control Channel.

40. Both water samples (HAYWTR-1 & HAYWTR-2) taken from the Clawiter site exceeded at least one water quality benchmark (*See*, Exhibit K).

Oakport Facility, (Oakland, CA):

41. The Oakport Facility is located on the north side of San Leandro Bay, directly adjacent to the East Creek Slough which drains into San Leandro Bay. San Leandro Bay is an inlet of San Francisco Bay. During a rainfall event, storm water runoff from the Oakport site is transported downslope into an outfall located on the edge of San Leandro Bay. Since storm water discharges from the Oakport Facility drain directly into San Leandro Bay, which is essentially a saltwater environment, I compared concentrations of pollutants in samples taken from the Oakport Facility to benchmarks for marine ecosystems.

42. All three sediment samples (OAKSED-1, OAKSED-2 & OAKOUTSED-1) taken from the Oakland site exceeded the marine AET and PEL for dioxins in sediment (Attachment C-1). One sample (OAKSED-2) contained concentrations of 2,3,7,8-TCDD equivalents that exceeded the marine AET by a factor of 1,306 and the PEL by a factor of 219. The OAKSED-2 sample was taken adjacent to a utility pole storage area and contained high concentrations of OCDD and Hepta-CDD indicating a source of dioxin representative of that found in PCP-treated wood. PCP was also found in sample OAKSED-2 at concentrations which exceeded the marine AET by 2,705 times. Sample OAKOUTSED-1, which was a sample of San Francisco Bay sediments collected at the site's outfall location, contained concentrations of 2,3,7,8-TCDD dioxin equivalents which exceeded the AET by a factor of 13 and the PEL by a factor of 2, indicating the migration of dioxins from the pole storage area to the outfall where it flows into San Francisco Bay. Dioxin concentrations in samples OAKOUTSED-1, OAKSED-1 and OAKSED-2 exceeded the soil screening level for the shrew by 246, 13500 and 23,600 times the screening level (*see*, Exhibit D), indicating the likelihood for adverse effects on terrestrial organisms.

43. The levels of dioxins in the three sediment samples, OAKSED-1, OAKSED-2 & OAKOUTSED-1, that ERF took at or adjoining the Oakport Facility exceeded the marine AET and marine PEL for dioxins in sediment, as well as other screening values. (*See,* Exhibit E). The OAKSED-1 sample contained concentrations of dioxins that exceeded the marine sediment AEL by 750 times and the marine sediment PEL by a factor of 126. ERF collected the OAKSED-1 sample adjacent to a utility pole storage area. Analysis of the sample showed that the sample contained high concentrations of two dioxin congeners, OCDD and Hepta-CDD, that are particularly known to be found in pentachlorophenol-treated wood--indication that the nearby utility poles were a source of the dioxins detected in the sample. ERF also detected pentachlorophenol in the OAKSED-1 sample at concentrations which exceeded the marine AET by 271 times--an indication that because pentachlorophenol was detected at high levels that the source of the dioxins in the sample was the pentachlorophenol mixture in the treated utility poles. Storm water flows at the Oakport Facility move past the OAKSED-1 sample location and then flow into the Facility storm drain system that eventually discharges off-site into San Francisco Bay via the Oakport Facility outfall. Storm water flows on the

Oakport Facility would tend to transport sediments located at this sample location eventually off-site into San Francisco Bay.

44. ERF also took the OAKSED-2 sample (consisting of wood waste and sawdust generated by a PG&E worker cutting up a utility pole at this location) along the flow path of storm water at the Facility. Storm water flows past this sampling location would also tend to transport the sawdust at this location into the Oakport Facility storm water system and eventually off-site into San Francisco Bay via the Oakport Facility storm water outfall. ERF took the OAKOUTSED-1 sample at the location where the storm water outfall discharges storm water from the Oakport Facility. Notably, concentrations of dioxins at the OAKSED-2 sample location exceeded the marine sediment AEL by a factor of 1,306 and the marine PEL by a factor of 219.

45. The OAKOUTSED-1 sample consisted of San Francisco Bay sediments collected directly at the outfall (point of storm water discharge) from the Oakport Facility. OAKOUTSED-1 contained concentrations of dioxins which exceeded the AET by a factor of 13 and the PEL by a factor of 2, indicating the migration of dioxins from the pole storage area to the outfall area where the Oakport Facility discharges storm water into San Francisco Bay. As described above, NOAA's SQuiRT tables support a predictive conclusion that any pollutant concentrations exceeding an AET value will cause adverse impacts on living organisms inhabiting marine areas and pollutant levels less than AET values may (but will not necessarily) result in no adverse impacts on marine species. NOAA's SQuiRT tables support a predictive conclusion that any pollutant concentrations exceeding a PEL will probably have an adverse impact on benthic organisms.

46. Dioxin concentrations in samples OAKOUTSED-1, OAKSED-1 and OAKSED-2 also exceeded EPA Region V's dioxin soil screening level for the shrew by 246, 13,568 and 23,618 times, respectively, indicating that the levels of dioxins detected in the samples were many times higher than levels known to exhibit the characteristic of toxicity to a mammal species. While shrews do not inhabit the areas where these samples were taken, comparisons of the sample results to this EPA Region V screening value nonetheless provide useful information. It is common practice in the field of environmental risk assessment to rely on data showing toxicity to a given organism that does not

actually inhabit the target area being assessed to show risk to the wildlife that does inhabit the target area. The species so tested or assessed in given data are considered to be surrogates for other life forms--analogous to the use of canaries in coal mines to warn miners of the presence of potentially toxic levels of carbon monoxide or other gases. If a substance exhibits toxicity to one species, the assumption is made in the field of ecological risk assessment is the substance risks exhibiting toxicity to other species.

47. As discussed in the Hagemann declaration, ERF collected the OAKSED-1 and OAKSED-2 samples at locations within the pathway of storm water flows at the Oakport Facility that lead to the Oakport outfall that discharges storm water off-site into San Leandro/San Francisco Bay. As discussed above, dioxins detected at these sample locations will adhere to sediments. These sediments will then become suspended/entrained in and transported by storm water flows during rainfall and flood events. These dioxin-contaminated suspended sediments, during rainfall events, will be transported into San Leandro/San Francisco Bay. Evidence for this occurring is provided by the sample results for the OAKOUTSED-1 and OAKWTR-4 samples. These samples were taken off-site, of the storm water flowing from the Facility into San Leandro Bay, and of San Leandro Bay sediments at the Oakport Facility outfall. As noted, elevated dioxins were detected in both samples. In my opinion, dioxins and furans on the Oakport Facility are the primary source for the dioxins detected in the OAKOUTSED-1 and OAKWTR-4 samples. The sample locations are immediately down gradient of a known source of dioxins—stacks of utility poles freshly-treated with pentachlorophenol, as well as sawdust and other wood wastes from the treated poles and sediments contaminated by pentachlorophenol oils washing off the freshly-treated poles. Further evidence is that the storm water conveyance system where this sampling took place appears to service only the Oakport facility.

48. As described above, ERF collected the OAKWTR-4 sample from flowing storm water being discharged at the Oakport outfall. At high tide, the Oakport outfall is subject to tidal influx from San Leandro Bay. At low tide, however, the outfall is above the water level in San Leandro Bay. At low tide, freshwater flows of storm water in the Oakport Facility flushes out the influx of tidal water from San Leandro Bay into this outfall. ERF collected the OAKWTR-4 sample at low tide when the outfall had been flushed of tidal water-- this was confirmed by the low specific conductance reading that Ms.

Brady gathered from the discharge flow she sampled. Ms. Brady noted that the specific conductance level was 208 umhos. Specific conductance in freshwater ranges from 100 to 2,000 umhos, specific conductance in brackish water ranges from 1,301 to 28,800 umhos, and specific conductance in marine water is greater than 28,800 umhos.[5] The specific conductance reading that Ms. Brady noted in the field indicated that for all practical purposes the sample was 100% freshwater, *i.e.*, storm water runoff from the Oakport Facility undiluted by any meaningful amount of tidal influx from San Leandro Bay. In my opinion, the OAKWTR-4 sample is representative of a storm water discharge from the Oakport Facility and this sample demonstrated unquestionably that the Oakport Facility is discharging elevated levels of dioxins to San Leandro/San Francisco Bay.

49. At the Oakport Facility, concentrations of dioxins in the OAKWTR-1, OAKWTR-2, and OAKWTR-4 storm water samples exceeded EPA ambient water quality criteria by 160,784; 23,529; and 21,569 times, respectively; exceeded EPA Region IV chronic screening levels by 82, 12, and 11 times, respectively; and exceeded EPA Great Lakes criteria by 264,516; 38,710; and 35,484 times, respectively[6]. ERF took the OAKWTR-1 sample from standing water underneath utility pole storage racks at the Oakport Facility. The extremely high levels of dioxins detected in this sample demonstrated that dioxin present in the utility poles is being transferred into storm water that makes contact with the utility poles. As discussed in the Hagemann Declaration, storm water flows past the OAKWTR-1 sample location into a storm drop inlet located about 15 feet away. The drop inlet conveys to storm water flow into the Oakport Facility storm drain system that leads to the Oakport outfall that discharges

[5] Pure distilled water or purified water used in laboratory settings will have specific conductance values of significantly less than 100, but freshwater flows found in the field will typically have specific conductance values of 100 or more. *See* United States Geological Survey report published on the Internet at http://sofia.usgs.gov/publications/wri/93-4057/specificc.html; *see also* California State Water Resources Control Board, Electrical Conductivity/Salinity Fact Sheet published on the Internet at http://www.waterboards.ca.gov/water_issues/programs/swamp/docs/cwt/guidance/3130en.pdf.

[6] Most of the surface water benchmarks (EPA ambient water quality criteria, Great Lakes Criteria, EPA California Toxic Rule, and ESL's for estuary habitats) use the International Toxic Equivalents Factors (I-TEFs) developed by the North Atlantic Treaty Organization in 1989. In my evaluation, concentrations of dioxins in samples were calculated using the more conservative 2005 WHO TEFs. Use of the I-TEFs would result in approximately 10% higher dioxin concentrations (and higher hazard quotients) than those reported here. *See*: pg. 29 of NOAA SQuiRTs table, available on the internet at: http://response.restoration.noaa.gov/sites/default/files/SQuiRTs.pdf

to San Leandro Bay. ERF took the OAKWTR-2 sample of standing rainwater present in a storm water drop inlet located adjacent to the utility pole storage area. The extremely high levels of dioxins detected in the sample also demonstrated that dioxin present in or on the utility poles is being transferred into storm water that not only makes contact with utility poles but that flows into nearby storm water conveyances. While these two samples were not of flowing storm water, it is my opinion they nonetheless provide useful information establishing that dioxins would be present in flowing storm water past these two sample locations. There is no reasonable basis to conclude that dioxins would be present in ponded storm water at these two locations but would not be present in flowing storm water at these two locations given that the samples unquestionably show that dioxins can be transferred from the stacks of utility poles into storm water that flows past the utility poles. The samples collected by ERF should be viewed as likely providing more conservative estimates of the levels of dioxins than would be expected in at least the "first flush" (i.e., the first large pulse of storm water flow at the initial onset of a storm) storm water flows past these locations. These samples were taken shortly after the conclusion of runoff events. It is well-known that first flush storm water flows tend to be highest in the concentrations of pollutants. At the time that ERF took its samples, a significant amount of dioxins, pentachlorophenol and other pollutants would have already been transported off-site by the first flush flows. Thus, the pollutant concentrations presented in the ERF samples may actually underestimate the concentrations of dioxins, pentachlorophenol, and other pollutants present in storm water flows at the Oakport Facility.

Comparison of Clawiter and Oakport Site Concentrations to Background in San Francisco Bay

50. The EPA has officially determined that San Francisco Bay is contaminated with dioxins to a level that is deleterious to wildlife and that dioxins contamination exceeds applicable Clean Water Act water quality standards. The EPA has listed San Francisco Bay on the Clean Water Act section 303(d) list of water bodies that do not meet water quality standards due to dioxins contamination. The levels of dioxins detected in ERF 's samples taken within or just beyond the boundaries of the Oakport and Clawiter Facilities (OAKOUTSED-1, OAKSED-1&2 and HAYSED-1, 2, 3 &4) significantly exceed levels of dioxins generally recorded for San Francisco Bay. EPA Region 9 (2000a) establishes a

2-5 ppt background for San Francisco Bay. Samples from the Hayward (HAYSED-4) and Oakland (OAKSED-2) sites exceeded this level by a factor of 1,960 and 940, respectively. Sample OAKOUTSED-1, collected in San Francisco Bay sediments at the outfall from the Oakport site exceeds San Francisco Bay background levels by a factor of 10. Furthermore, high levels of the OCDD and Hepta-CDD congeners are indicative that the source of dioxin is the presence of PCP wood preservatives, which would not occur in dioxin transported through atmospheric deposition (Cleverly et al. 1997, Ogura et al. 2001). High levels of PCP in samples (HAYSED-3, HAYSED-4, & OAKSED-2) also indicate the presence of PCP-treated wood and wastes on site and are further evidence that the PCP is the source of the elevated dioxins and furans. As discussed above, repeated storm water flows will tend to transport contaminated sediments from these Facilities into San Francisco Bay, introducing a source of dioxins contamination that significantly exceeds existing levels of dioxins contamination in San Francisco Bay generally.

Humboldt Bay Sites

51. All samples taken at the Myrtle Ave. and 14th St. sites contained concentrations of 2,3,7,8-TCDD dioxin equivalents and PCP that exceeded screening benchmarks for sediment, soil and water.

Myrtle Ave. Site:

52. The Myrtle Facility is located approximately one mile south of Arcata Bay, which is a tidally influenced estuary that makes up the north end of the larger Humboldt Bay. During a rainfall event, runoff from the Myrtle site is transported via the Humboldt County MS4 which in turn discharges into a water body known as the Third Slough. The Third Slough is a freshwater stream which flows into a brackish marsh and eventually into Humboldt Bay, a marine/estuarine receiving water body. Since the Myrtle Facility discharges storm water into a freshwater stream that eventually flows into a saltwater estuary and then Humboldt Bay, I compared concentrations of pollutants in samples taken from the Myrtle Facility to benchmarks for both marine and freshwater ecosystems.

53. At the Myrtle Facility, concentrations of dioxins in the MYRTDUMPSED-1 and MYRTDUMPSED-2 samples exceeded the marine AET by 38.9 and 156 times, respectively and the

marine sediment PEL by 6.5 and 26 times, respectively. Additionally, concentrations of dioxins in the MYRTDUMPSED-1 and MYRTDUMPSED-2 samples exceeded the freshwater UET by 38.9 and 156 times, respectively and the freshwater PEL by 6.5 and 26 times, respectively. I compared dioxins concentrations in the sediment samples to both marine and freshwater benchmarks because storm water from the Myrtle Facility initially first flows to a freshwater stream which in turn flows into a saltwater estuary which is connected to a marine environment--Humboldt Bay. Thus, sediments that flow off-site from the Myrtle Facility have the potential to adversely impact both freshwater and marine/saltwater environments. Concentrations of dioxins in the MYRTDUMPSED-1 and MYRTDUMPSED-2 samples also exceeded the EPA Region V screening levels for the shrew by factors of 704 and 2,814, respectively. The analysis results also showed that samples contained high concentrations of two dioxin congeners, OCDD and Hepta-CDD, which are particularly known to be found in pentachlorophenol-treated wood--indication that the nearby utility poles were a source of the dioxins detected in the samples. The samples also had high levels of pentachlorophenol-- further indication that the source of dioxins in the samples was due to the presence of dioxins impurity in the pentachlorophenol used to treat the utility poles. ERF took the MYRTDUMPSED-1 and MYRTDUMPSED-2 samples from inside roll-off bins into which PG&E had deposited sediments gathered from the Myrtle Facility. The samples thus demonstrated that sediments present at the Myrtle Facility contained highly elevated levels of dioxins--a source for potential loading of dioxins into storm water flows discharged from the Facility.

54. At the Myrtle Facility, concentrations of dioxins in the MYRTWTR-1 & MYRTWTR-2 storm water samples exceeded EPA ambient water quality criteria by 862,745 and 215,686 times, respectively; exceeded EPA Region IV chronic screening levels by 440 and 110 times, respectively; and exceeded EPA Great Lakes criteria by 1,419,355 and 354,889 times, respectively. As discussed in the Hagemann Declaration, ERF took the MYRTWTR-1 sample from sheet flow flowing from a utility pole storage area across a paved area towards a nearby storm drop inlet. The presence of a thick and bright sheen in the water flowing from the utility pole storage area, and extremely high levels of dioxins and pentachlorophenol detected in the MYRTWTR-1 sample shows that dioxins are transferred from the utility poles into rainwater that falls upon the utility poles and then conveyed via storm water runoff into

the Facility's storm drain system that conveys flow into the local MS4 which in turn discharges into the Third Slough. ERF took the MYRTWTR-2 sample from the drop inlet at the northern boundary of the site (this drop inlet is marked "Drains to the Bay"). This drop inlet is located at the last accessible point for the Facility's storm drain conveyance underground piping system that flows off-site into the local MS4. Thus, given that this sample was taken from the last accessible point in the Facility storm drain system, the sample results from this location are representative of the storm water discharged by the Facility directly into the Eureka MS4 and show that the Facility discharges the pollutant dioxins into the Eureka MS4 and eventually into the Third Slough and Humboldt Bay. I further note that the sample results should be viewed as a conservative estimate of pollutant loading given that the sample was not taken during the first flush when pollutant levels would be at their highest. Mr. Hagemann observed a visible oily sheen in this sheet flow that originated at the pole storage area and extended to the drop inlet. According to Mr. Hagemann, and evidenced by the photos and video I have reviewed from the site inspection, the sheen was clearly visible on top of the flowing water in all of the drop inlets along the storm water drain line that runs to the southwest corner of the Facility. See, Exhibit F. This is consistent with observations of similar sheen during the inspections at the other three facilities. It is my opinion that the sheen is caused by waste pentachlorophenol/oil mix that washes off freshly treated poles, waste poles, and other Treated Wood Wastes that are stored at the facility.

West 14th St. Site:

55. The West 14th St. Facility is located on the west side of Eureka, approximately one quarter mile east of Humboldt Bay. During a rainfall event, storm water runoff from the West 14th St. Facility is transported via a City of Eureka MS4 which in turn discharges into Humboldt Bay through an outfall at the foot of West 14th Street. Since Humboldt Bay is essentially a saltwater environment, I compared concentrations of pollutants in samples taken from the West 14th St. Facility to benchmarks for marine ecosystems.

56. At the West 14th St. Facility, concentrations of dioxins in the EURSED-1, EURSED-2 & EUROUTSED-1 sediment samples exceeded marine sediment AEL by 5,556; 1500, and 556 times, respectively, and exceeded the marine sediment PEL by 930, 251, and 93, respectively. In addition,

concentrations of dioxins in the EURSED-1, EURSED-2 & EUROUTSED-1 sediment samples exceeded EPA Region V screening level for shrew by 100,503; 27,136; and 10,050 times, respectively. The analysis results also showed that samples contained high concentrations of two dioxin congeners, OCDD and Hepta-CDD, that are particularly known to be found in pentachlorophenol-treated wood--indication that the nearby utility poles were a source of the dioxins detected in the samples. The samples also had high levels of pentachlorophenol--further indication that the source of dioxins in the samples was due to the presence of dioxin impurity in the pentachlorophenol used to treat the utility poles. As discussed in the Hagemann Declaration, ERF took the EURSED-1 sample from beneath the treated utility pole storage area at the West 14th St. Facility. ERF took the EURSED-2 sample from inside an uncovered roll-off bin that contained sediments and treated wood waste collected from the West 14th St. Facility. ERF took the EUROUTSED-1 sample at the point where an outfall from the West 14th St. Facility discharges storm water into an off-site wetland drainage ditch. This ditch conveys flow into a pipe which in turn flows into the Eureka MS4. The Eureka MS4 then conveys storm water flow into Humboldt Bay.

57. Storm water flows at the West 14th St. Facility flow past the EURSED-1 location and eventually into the storm water discharge pipe that transmits storm water flow from the Facility into a ditch and pipe that direct flow to the Eureka MS4. Storm water flows at the Facility further flow past the area where the "treated wood waste" roll-off bin was located; the bin was leaking water that in turn was picked up by the storm water flow. Storm water flows at and from the West 14th St. Facility would tend to pick up and entrain dioxin-contaminated sediments at the EURSED-1 location and transport these sediments off-site via the West 14th St. Facility storm drain system into the Eureka MS4 and then into Humboldt Bay.

58. At the West 14th St. Facility, concentrations of dioxins in the EURWTR-1 & EURWTR-2 storm water samples exceeded EPA ambient water quality criteria by 121,569 and 843,137 times, respectively; exceeded EPA Region IV chronic screening levels by 62 and 430 times, respectively; and exceeded EPA Great Lakes criteria by 200,000 and 1,387,097 times, respectively. As discussed in the Hagemann Declaration, ERF took the EURWTR-2 from flowing storm water located down gradient of

the pole storage area at the Facility and slightly up gradient of a nearby storm drain drop inlet. Storm water flows at the Facility flow past the sample location into the drop inlet, which in turn conveys flow into the storm water conveyance system at the Facility which discharges storm water into a ditch and pipe which lead to the Eureka MS4 and then into Humboldt Bay. The presence of a large oily sheen present in the storm water flowing from the freshly treated pole storage area to the drop inlet, and the extremely high levels of pentachlorophenol, dioxins and furans found in the sample, clearly establish that rainwater which strikes the utility poles picks up these pollutants and conveys them in storm water flows that eventually lead off-site into Humboldt Bay. (Exhibit F).

59. The EURWTR-1 sample was taken immediately up gradient of the third chamber of an oil water separator, it is my opinion that the sample demonstrates that pollutants are being discharged from the West 14th St. Facility in elevated levels. Oil water separators, also known as water quality inlets ("WQIs"), trapping catch basins, or oil/grit separators, consist typically of one or more chambers that promote sedimentation of coarse materials and separation of free oil (as opposed to emulsified or dissolved oil) from stormwater.[7] As one authoritative study noted, a "WQI achieves slight, if any, removal of nutrients, metals and organic pollutants other than free petroleum products."[8] The study also indicated that sediment accumulation did not increase over time in the WQI, suggesting that the sediments become re-suspended during storm events. The authors concluded that although a WQI effectively separates free floating oil and grease from water, re-suspension of the settled matter appears to limit removal efficiencies. Actual removal only occurs when the residuals are removed from the WQI. In sum, the third chamber of the oil water separator might have provided some minimal removal of dioxins and other pollutants in the EURWTR-1 sample, but is unlikely to have significantly lowered the levels of emulsified waste treatment oils and the dioxin/furan contaminants. It can be stated as a virtual certainty that the third chamber of the oil water separator would not have reduced the concentrations of

[7] *See generally*, CASQA (2003) California Stormwater BMP Handbook 1 of 6, New Development and Redevelopment, published on the Internet at www.cabmphandbooks.com.
[8] *Id*.

dioxins to zero. This is also evidenced by the elevated levels of pentachlorophenol, dioxins and furans found present in the sediments off-site at the facility's outfall.

60. According to A.J. Doudna, PG&E's Senior Environmental Specialist who oversees environmental compliance at the West 14th Street facility, the oil/water separator where this sample was collected primarily operates as a catch basin for sediments. The oil/water separator does not appear to utilize a coalescer or skimmer. There is no carbon filtration. According to Mr. Doudna, any oil removed from this unit would have to be done manually, by pump truck. I have seen no evidence that the unit at the West 14th Street has been regularly maintained or pumped out. Oil that is left in the oil/water separator will likely become emulsified and then likely eventually pass through the unit.

61. There are storm water treatment options that could work effectively at this facility and other PG&E facilities where PCP treated poles and TWW are stored and handled. For example, at the L.D. McFarland utility pole treating facility located in Tacoma, Washington, the company has a dedicated treated lumber storage area that is paved. All storm water from the storage area is collected and routed to a treatment system. The storm water is treated using a mixed media filter, bag filters, and activated carbon polishing unit before it is discharged from the facility. In my opinion, this type of filtration system is a pollution control measure that PG&E should evaluate for its facilities where new utility poles are stored. (*see* Exhibit G). (Fact Sheet and NPDES Wastewater Discharge Permit Evaluation for L.D. McFarland Company, Ltd., Oregon Department of Environmental Quality).

62. At the 14th St. site in Eureka, all sediment samples (EURSED-1, EURSED-2 & EUROUTSED-1) exceeded screening benchmarks for 2,3,7,8-TCDD dioxin equivalents as well as PCP. The highest concentrations of 2,3,7,8-TCDD dioxin equivalents of all four sites was found in a sample of PCP-treated wood waste (EURWOOD-1) collected immediately outside the property boundary adjacent to the utility pole storage racks, (where there was visual evidence that the wood waste had been swept or shoveled offsite by PG&E employees) (Attachment E-7). This sample (EURWOOD-1) contained 36,000 ppt of 2,3,7,8-TCDD dioxin equivalents and the highest concentrations of PCP from all samples taken (1,400,000 parts-per-billion) indicating a likely source of contamination. Sediment samples taken from areas surrounding the pole storage racks indicate migration of dioxins and PCP to

other areas of the property including the outfall location. The sample at the outflow location (EUROUTSED-1) exceeded the marine AET for 2,3,7,8-TCDD dioxin TEQs by a factor of 555 and the marine PEL by a factor of 93 (Exhibit H) indicating migration of dioxins from the pole storage racks to the outfall. Other sediment samples taken from this location exceeded the AET over 5,500-fold (EURSED-1) and the marine PEL over 930-fold (EURSED-1). All samples taken from the location (EURWTR-1, EURWTR-2, EURSED-1, EURSED-2 & EUROUTSED-1) exceeded the screening benchmarks for both water and soil (Exhibits I and J).

63. Storm water discharge from the West 14th St. Facility flows into the Eureka MS4 and from there into Humboldt Bay. Accordingly, before storm water from the West 14th St. Facility reaches Humboldt Bay it will be diluted with storm water flows from the watershed that provides flow to the Eureka MS4. David Parker has performed an analysis of the maximum dilution of storm water that will occur in this fashion. As he points out this dilution is 69 to 1. Even when so diluted, the levels of dioxins that will be transported from the West 14th St. Facility to Humboldt Bay well exceed applicable benchmarks. See Exhibit C for a table comparing the levels of dioxins that will still be present after dilution of storm water at the point where storm water flows from the West 14th St. Facility will reach Humboldt Bay.

64. As discussed in the Hagemann Declaration, ERF took the EURWTR-1 sample from the second chamber of a three chamber oil water separator vault located down gradient from the Facility's pole storage area and immediately upgradient of the Facility storm drain conveyance outfall that discharges storm water into an offsite drainage ditch. ERF took this sample from the last location on site from which the Facility's subsurface storm drain system could be accessed, a point located a short distance away from the offsite outfall from which the Facility's storm water is discharged into an off-site drainage ditch that in turn conveys storm water flow to the Eureka municipal storm water system. Mr. Hagemann could not take a sample from the outfall discharge pipe that conveyed flows from this oil water separator off of the West 14th Street Facility because the end of the outfall pipe was partially submerged in an off-site vegetated channel. Thus any sampling effort at this end of pipe location would only have gathered a mixture of water in the channel and storm water running from PG&E's outfall pipe.

He also could not take a sample from the third chamber of the oil water separator, because an enclosed pipe blocked access to flow in this third chamber.

65. Even though the EURWTR-1 sample was taken immediately up gradient of the third chamber of an oil water separator, I think that the sample demonstrated that pollutants are being discharged from the West 14th St. Facility in elevated levels. Oil water separators, also known as water quality inlets ("WQIs"), trapping catch basins, or oil/grit separators, consist typically of one or more chambers that promote sedimentation of coarse materials and separation of free oil (as opposed to emulsified or dissolved oil) from storm water.[9] As one authoritative study noted, a "WQI achieves slight, if any, removal of nutrients, metals and organic pollutants other than free petroleum products."[10] The study also indicated that sediment accumulation did not increase over time in the WQI, suggesting that the sediments become re-suspended during storm events. The authors concluded that although a WQI effectively separates free floating oil and grease from water, re-suspension of the settled matter appears to limit removal efficiencies. Actual removal only occurs when the residuals are removed from the WQI. In some, the third chamber of the oil water separator might have provided some minimal removal of dioxins and other pollutants in the EURWTR-1 sample, but is unlikely to have significantly lowered the levels of dioxins. Furthermore, it can be stated as a virtual certainty that the third chamber of the oil water separator would not have reduced the concentrations of dioxins to zero. In sum, it is my opinion that the EURWTR-1 sample results can be relied on for a conclusion that the West 14th St. Facility is discharging significant levels of dioxins during storm events. This opinion is bolstered by the fact that the EURWTR-1 sample was taken well after the first flush of storm water flows at the Facility, i.e., well after the point at which pollutant concentrations would likely be at their highest.

66. Based on the above findings it is likely that the samples taken at the 14th Street Site oil/water separator are representative of post oil/water separation pollutant concentrations in the storm

[9] *See generally*, CASQA (2003) California Stormwater BMP Handbook 1 of 6, New Development and Redevelopment, published on the Internet at www.cabmphandbooks.com.
[10] *Id*.

water discharge. Evidence of 14th Street oil/water separator's ineffectiveness at removing dioxins and furans from storm water is also found in the sediment sample collected immediately beyond the Site boundary where the oil/water separator discharges into a wetland vegetated drainage ditch. As discussed above, the sampled sediments in the wetland ditch at the outfall pipe (EUROUTSED-1) contained elevated levels of pentachlorophenol, dioxins and furans. The dioxin TEQ levels in the sample exceeded the marine AET by a factor of 555 and the marine and fresh water PEL by a factor of 93.

67. The EPA, the California North Coast Regional Water Quality Control Board, and the State Board have officially determined that Humboldt Bay is contaminated with dioxins to a level that is deleterious to wildlife and that dioxins contamination exceeds applicable Clean Water Act water quality standards. The EPA has listed Humboldt Bay on the Clean Water Act section 303(d) list of water bodies that do not meet water quality standards due to dioxins contamination. Although low background levels of dioxins are present in Humboldt Bay, concentrations of dioxin equivalents in samples found at the Myrtle Ave. and 14th St sites far exceed these background levels. The City of Eureka (2005) sampled 55 locations at the waterfront moorage facilities and found maximum concentrations of 6.03 parts-per-trillion to as little as .78 ppt TEQ. These background levels are similar to those found in San Francisco Bay. In EPA's Environmental Monitoring Assessment Program (2000) sampled 56 sites in San Francisco Bay and found mean an median TEQs of 5ppt and 2ppt respectively which represents the San Francisco Bay background levels (EPA, 2010). Given the high levels of OCDD and Hepta-CDD in the samples from the Humboldt Bay Sites, as well as high levels of PCP, found in wood and sediment samples on the property, the most likely source of dioxin is PCP-treated utility poles and wood waste.

68. The Oakport Facility is located immediately adjacent to San Leandro Bay and discharges storm water from an outfall located immediately on the shoreline directly into San Leandro Bay. ERF took samples of storm water discharged from this outfall--which constituted direct measurement of the transport of polluted storm water from the Oakport Facility into San Leandro Bay (which is an inland feature of San Francisco Bay). (See, Declaration of Matt Hagemann In Support Of Plaintiffs' Motion For Partial Summary Judgment On Claim One, August 2, 2012 ECF 197-1).

69. ERF witness David Parker and I collectively have performed an analysis that has some quantitative basis concerning the movement of storm water and the pollutants entrained within it from the Clawiter, 14th Street, and Myrtle Avenue Facilities into San Francisco and Humboldt Bays. Based on field evaluation and the performance of certain equations, Dr. Parker analyzed the amount of dilution that storm water leaving these three facilities will undergo by the time this storm water comingles with other storm water runoff in the watersheds in which the Facilities are located. (Declaration of David B. Parker In Support Of Plaintiffs' Motion for Partial Summary Judgment On Claim One, ¶¶ 17-31; Expert Report of David B. Parker). I used Dr. Parker's conclusions concerning this dilution to reach conclusions concerning predicted concentrations of pollutants originating in storm water runoff from these Facilities.

70. As discussed above, dioxins and furans do not move readily through soils and sediments because they generally attach to sediment particles and are very slow to degrade. Soils and sediments represent the most significant "sink" for dioxins and furans. Hydrolysis is not expected to be an important environmental fate process since this compound lacks functional groups that hydrolyze under environmental conditions (HSDB, 2012). Based on these characteristics, dioxins and furans would be expected to adhere to sediment particles and to be transported during rainfall and flood events in runoff flow and transport of those particles to conveyance channels and ultimately to receiving waters. Due to the recalcitrance of these pollutants and the long degradation half-lives, transport from bed-load or source areas such as source area soils, accumulated sediments from those source areas into storm flow conveyances would be considered a significant transport mechanism for those pollutants into receiving waters such as Humboldt and San Francisco Bays.

71. It might take some time for sediments located at the Facilities to be moved by a series of storms into San Francisco and Humboldt Bays--but typically less than one day, due to the close proximity of the sites to the receiving waters. Transport of sediments from the Facilities into receiving waters is dependent upon the intensity and duration of the rainfall event--in average intensity storms the time would be within minutes. For example, assuming a conservative flow velocity of sediment transport during average intensity storm water flows of 4 feet per second (in my opinion, transport of

sediments within storm drain pipes would be at least 4 feet per second during a storm of average intensity. Note: 2 feet per second is typically considered the minimum velocity to keep sediments from accumulating in storm water conveyances, and storm drain pipe systems are usually engineered to generate average flow velocities of 4 ft. per second to ensure that sediments do not accumulate and block pipes.) and a distance of 525 feet from the Clawiter Facility to the Alameda Flood Control Channel, about 1400 feet from West 14th St. Facility to Humboldt Bay, and 5200 feet from the Myrtle Facility to the Third Slough, it would take 2 minutes for sediments to be transported from the Clawiter Facility into Alameda Flood Control Channel, 6 minutes for sediments to be transported from the West 14th St. Facility into Humboldt Bay, and 22 minutes for sediments to be transported from the Myrtle Avenue Facility to the Third Slough (distance/4/60 seconds=minutes). Storms of less than average intensity might not transport sediments from the Clawiter, West 14th St. Facility and Myrtle Facilities as rapidly and it might take more than one storm to transport sediments from these three facilities to receiving waters when storms are of very short duration (i.e., when storms last only a few minutes), but sediments at most will tend to be transported into receiving waters within a few days (in the case of a series of short storms spaced a few days apart during the typical California rainy season). Dioxins are of such long life that elevated levels of dioxins will still be present in sediments/grit originating on the Facilities that are eventually transported into San Francisco Humboldt Bays and other receiving waters. I would further note that while dioxins have a propensity to adhere to sediments, adherence is not 100%. This is evidenced, for example, by dioxins showing up in significantly elevated levels in water samples taken by ERF from the Facilities during or shortly after rain events. Some amount of dioxins that are present in utility poles or in sediments/grit located on the Facilities will tend to be partitioned or mixed into the storm water that flows past the utility poles or sediments. The amount of dioxins that partitions into storm water will tend to be rapidly (i.e., within minutes or at most hours) transported via storm water flows from the Facilities into San Francisco or Humboldt Bays.

72. An additional concern with the transport of high levels of dioxins from the PG&E Facilities into San Francisco and Humboldt Bay waters is that some dioxins congeners once deposited into the sediments of these Bays will serve as a cumulative reservoir of dioxins that may, through a

process known as dehalogenation, break down into even more toxic chemical compounds over time that will persist for many years before eventually breaking down into harmless compounds.

73. While I have focused my analysis on dioxins as the pollutants that pose the greatest pollution risks in storm water discharges in motor vehicle traffic from the Facilities, there are other pollutants present in sediments found at the Facilities and storm water discharges from the Facilities. Other pollutants besides dioxins detected in ERF's sampling of sediments and storm water flows at and off the Facilities include various polynuclear aromatic hydrocarbons, petroleum hydrocarbons and various heavy metals, including arsenic, copper, zinc and lead. Exhibit B summarizes the levels of these pollutants detected in excess of benchmark values for these pollutants. These pollutants are also persistent in the environment, i.e., do not break down into harmless compounds rapidly (or in the case of metals, at all). These other pollutants will be similarly subject to the fate and transport mechanisms described above for dioxins, i.e., Polynuclear aromatic hydrocarbons, petroleum hydrocarbons and various heavy metals absorbed onto sediments at the Facilities will tend to be transported along with suspended sediments in storm water flows from the Facilities. The portion of these pollutants that are partitioned into storm water flows at the facilities will tend to be transported by these flows rapidly off-site into San Francisco and Humboldt Bays.

Risk Characterization/Conclusions

74. My analysis demonstrates that the levels of certain pollutants, particularly pentachlorophenol, dioxins and furans, are highly elevated in wastes, soils and sediments on the Facilities as a direct result of these pollutants leaking or oozing from stored freshly-treated utility poles and from discarded used utility poles and other treated wood wastes that have been sawed up and/or stored uncovered on site, are present in storm water runoff from the Facilities, and, due to the runoff from the Facilities, are accumulating in San Francisco Bay and Humboldt Bay sediments. My analysis further demonstrates that while these pollutants, at some of the Facilities, will likely be diluted somewhat by the time storm water flows from the Facilities mixed with storm water runoff from surrounding areas reaches San Francisco or Humboldt Bays, storm water runoff from the Facilities will still cause pollutant loading into San Francisco and Humboldt Bays at elevated levels and that there is

reasonable cause for concern that human health and the environment may be seriously harmed from these discharges and the resulting pollutant accumulation. Due to the extreme toxicity of the chemicals being discharged from the Facilities, the ecological sensitivity of the bays in which the chemicals are being discharged, both of which are listed as impaired for dioxins and furans based on elevated levels in fish and shellfish, and the fact that bays are important sources of food for humans, I conclude that pollutants originating from the Facilities, particularly from the storage of freshly-treated utility poles, and storage and disposal of discarded used utility poles and other treated wood wastes, have accumulated and will continue to accumulate to dangerous levels in the San Francisco and Humboldt Bay environments. The presence and discharges of these chemicals from the Facilities into San Francisco and Humboldt Bays presents an imminent and substantial endangerment to human health and the environment. [11]

75. Specifically, observations made by Matt Hagemann and other ERF representatives in on-site inspections and off-site reconnaissance, review of aerial photography, and other information received from PG&E has all confirmed that each of the Facilities for years have stored significant quantities of new utility poles and discarded, used utility poles and treated wood wastes. It is well known that dioxins and furans are present as contaminants in pentachlorophenol wood treatment mixtures. Thus I would expect high levels of dioxins and furans in sediments located near stored utility poles treated with pentachlorophenol and in storm water runoff from areas where utility poles are stored. The data that I have discussed in this report confirms this and indicates that there are extremely high levels of dioxin and furans in sediments and storm water on and near the PG&E Facilities compared to background levels of dioxins and furans found in Humboldt and San Francisco Bays and in

[11] Storm water discharges from the Facilities typically involve co-mingled storm water runoff from both areas where new utility poles are stored and areas affected by the handling and disposal of treated wood waste, making it difficult to isolate in storm water sample results the level of pollutants added by storage of new poles versus handling and disposal of treated wood waste. It is my opinion from looking at the overall scale of the Facilities and scale of these two activities on the Facilities, plus the targeted measurements of sediments and materials in waste bins at the Facilities, that each significantly contributes to the levels of dioxins and furans in sediments at the Facilities and in storm water discharges from the Facilities. Thus, both activities pose an imminent and substantial endangerment to the health of persons and the environment in that both activities are leading to the off-site depositing of dangerous levels of pollutants in the environment.

uncontaminated areas generally. Moreover, the fact that high levels of pentachlorophenol, and the specific dioxin congeners OCDDs and Hepta-CDDs were detected in SWAPE's samples, and the consistency of the dioxin/furan and PCP levels found in samples from all four of the Facilities, indicate that the sources of dioxins and furans detected in these samples are pentachlorophenol-treated wood and wood wastes--not atmospheric deposition or combustion sources. As the stacks of new pentachlorophenol-treated utility poles and treated wood wastes were the only sources of pentachlorophenol-treated wood nearby the sample locations, the conclusion is unmistakable that PG&E's treated new and discarded wood is the significant source of the pentachlorophenol, dioxins and furans in ERF's samples.

76. I have reviewed a number of samples of treated wood waste (treated wood, such as poles and crossarms that are taken out of service or otherwise deemed no longer usable) collected at the Facilities. These include samples of wastes collected from uncovered treated wood waste roll-off bins (MYRTDUMPSED-1, MYRTDUMPSED-1, EURSED-2); a sample of sawdust collected from the pavement near where a PG&E employee was observed cutting waste poles into smaller pieces for disposal (OAKSED-2); a sample of surface soil collected from where out-of-service waste poles were stored for a number of years (HAYSED-2); and a sample of wood waste collected immediately outside the 14th St. Facility's property boundary adjacent to the utility pole storage racks, (where there was visual evidence that the wood waste had been swept or shoveled offsite by PG&E employees). It is my opinion that PG&E's handling, storage, transportation and/or disposal of treated wood wastes at the Facilities, by itself, results in the accumulation and discharges of high levels of pentachlorophenol, dioxins and furans, conditions that may present an imminent and substantial endangerment to human health and the environment.

77. ERF's observations of the physical layout of the Facilities and their storm drain systems and information provided by PG&E concerning the same, plus modeling analysis performed by Dr. Parker, establish that during rainfall events, the Facilities' storm drain systems regularly convey very large volumes of storm water runoff from the Facilities into Humboldt and San Francisco Bays. Storm water runoff from the Myrtle, West 14th St., and Clawiter Facilities are diluted somewhat before this

runoff reaches Humboldt or San Francisco Bays, but storm water from the Oakport Facility flows undiluted straight into San Francisco Bay. Even when diluted, the concentrations of dioxins and furans in storm water runoff from the Myrtle, West 14th St., and Clawiter Facilities exceed by vast magnitudes the benchmark values published by expert regulatory agencies concerning the levels of dioxins and furans that these agencies consider to pose risks. Additionally, the undiluted concentrations of dioxins and furans in storm water runoff from the Oakport Facility similarly exceed these benchmark values by vast magnitudes. Thus, by regularly transporting very large volumes of storm water from the Facilities shown to be contaminated with dioxins and furans above regulatory agency benchmark values into Humboldt and San Francisco Bays, I conclude that PG&E is creating an imminent and substantial endangerment to the health of persons and the environment and causing pollutants to accumulate to dangerous levels in the San Francisco and Humboldt Bay environments.

78. I further conclude that PG&E's storm water discharges from the Facilities pose an imminent and substantial endangerment to the health of persons and the environment because the storm water discharges also transport contaminated sediments from the Facilities into Humboldt and San Francisco Bays. ERF's samples of sediments on the Facilities show that they are heavily contaminated with dioxins and furans. The sediments sampled were also found within storm water flow pathways and thus inevitably will be entrained in storm water flows and carried off-site where they will be deposited into the sediments of Humboldt and San Francisco Bays. Corroboration of this risk is notably to be found in the OAKOUTSED-1 sample collected at the edge of San Francisco Bay right directly at the point where the Oakport Facility discharges storm water from an outfall. Dioxins and furans in this sediment sample were ten times above background and well above the ecological and human health risk benchmark levels set by expert regulatory agencies. This sample demonstrates that discharges from the Oakport Facility have caused pollutants to accumulate to dangerous levels in the San Francisco Bay environment.

79. I also conclude that motor vehicle traffic on and off the Facilities would tend to track the contaminated sediments found at the Facilities and transport these contaminants off-site where storm water runoff would tend to transport them into storm drains and other drainage pathways where they

would tend to end up in Humboldt and San Francisco Bays--further contributing to the endangerment risks identified above.

80. While dioxins and furans pose the most significant environmental threat at the Facilities, SWAPE's sampling data further establishes that storm water runoff and the sediment transported by the runoff from at least the Oakport and Clawiter Facilities also transports other heavy metal pollutants (arsenic, copper and zinc from the Oakport Facility and copper and lead from the Clawiter Facility) into Humboldt and San Francisco Bays at levels that significantly exceed expert regulatory agency benchmark values and thus pose significant environmental risk.

81. In evaluating ERF's samples of storm water runoff and sediments from the Facilities, I have considered SWAPE's samples to be conservative, i.e., if anything, to under estimate the levels of pollutants in PG&E's storm water runoff. SWAPE gathered its sediment and storm water samples during the latter part of runoff events or shortly after the runoff events. A significant amount of dioxin/furans, pentachlorophenol and metal pollutants (including sediments) would likely have already migrated off-site during the of storm water runoff near the commencement of the storm event; it is well known that first flush flows of storm water runoff tend to have the highest concentration of pollutants. For this reason, the sample concentrations presented in the SWAPE analyses may actually underestimate the volume and mass of dioxins and furans, pentachlorophenol and heavy metals present in storm water runoff and sediments at the Facilities resulting in an underestimation of the volume of pollutants entering the receiving waters.

82. In evaluating the risks posed by the environmental contamination being caused by PG&E's activities at its Facilities, it is important to take into account that dioxins, furans, and heavy metals degrade very slowly and some dioxin and furans congeners can degrade into even more toxic byproducts. Thus, the contaminants released from the Facilities will persist for a very long time in the environment, where they will add to existing contamination sources as an ongoing source of toxicity to organisms that can uptake dioxins and other pollutants into their tissues. Various lower trophic level receptors (life lower on the food chain such as marine worms, snails, and bivalves like mussels and oysters that serve as a food source for upper trophic life) and upper trophic level receptors (life higher on

the food chain) in the receiving waters of Humboldt and San Francisco Bays are at substantial risk of being further harmed by the added exposure to dioxins and furans and other pollutants posed by PG&E's release of pollutants from the Facilities. Furthermore, there is substantial risk that predator fish (such as striped bass and salmonid species such as salmon and steelhead), marine mammals, aquatic dependent predator bird species such as pelicans, heron, and egrets), and humans that consume shellfish and fish taken from these waters will have added levels of harmful dioxins and other pollutants added to their tissues. Notably, dioxins and furans are well known to bioaccumulate and biomagnify, i.e. to persist in the tissues of animals for long periods of time once they are absorbed and to continue to accumulate to higher levels in organisms higher up the food chain.

83. In evaluating whether the levels of dioxins in storm water discharges from the Facilities present an imminent and substantial endangerment to human health and the environment, I have also considered the findings and effluent limitations in the National Pollutant Discharge Elimination System (NPDES) permit issued by the California Regional Water Quality Control Board, San Francisco Bay Region ("Regional Board") to the Chevron refinery in Richmond, California. The Chevron Richmond refinery discharges wastewater to San Francisco Bay. The Richmond refinery NPDES permit Fact Sheet indicates that EPA has directed, and the Regional Board has agreed, that effluent limits on the levels of dioxins discharged from given facilities should be expressed using the World Health Organization TEQ methodology, the same methodology I have used to calculate the dioxins levels in samples from the Facilities. Chevron Products Company Richmond Refinery, Regional Board Order No. R2-2011-0049 (NPDES No. CA0005134) at F-34 (attached as Exhibit L). The Regional Board found that due to elevated levels of dioxins in the wastewater discharged by the Richmond refinery, that the Richmond refinery NPDES permit necessarily had to include limits on discharges of dioxins to try to protect the water quality of San Francisco Bay and the aquatic species that utilize San Francisco Bay. (Exhibit L at F-34, 35.) The Regional Board further found that because San Francisco Bay is already impaired for dioxins, it was impermissible to allow the Richmond refinery a "dilution credit," i.e. impermissible to conclude that the refinery's wastewater could contain higher levels of dioxins than is healthy for aquatic species because it will be diluted once it enters San Francisco Bay. Instead, to protect the Bay, the levels

of dioxins in the refinery's wastewater could be no higher than what species can tolerate without any dilution. (Exhibit L at F-30.) The Richmond refinery NPDES permit sets effluent limitations of 1.4×10^{-8} ug/liter(.014 pg/L) monthly average levels of dioxins and 2.8×10^{-8} ug/liter (.028 pg/L) maximum daily levels of dioxins. *Id*. at 13. The levels of dioxins in the storm water from the PG&E Facilities are many times higher than these permit limits. For example, the storm water flowing from the Oakport site directly into San Francisco Bay was found to contain 110 pg/L. That is 3,928 times higher than the Chevron Refinery NPDES daily maximum limit, and 7,857 times the monthly average limit. This comparison further corroborates my opinion that these discharges pose substantial risks to the aquatic wildlife of San Francisco Bay-- and Humboldt Bay as well given that the latter water body is also already impaired by excessive dioxins pollution and like San Francisco Bay has shellfish, fish, aquatic bird and marine mammal populations that are vulnerable to dioxins pollution.

84. Finally, in qualitatively assessing the risk posed by PG&E's release of pollutants from the Facilities, it is important to recognize that while the dioxin and furans discussed in this report alone pose substantial risks to the environment and human health, these pollutants can interact with other pollutants present in the environment from other sources and/or released from the Facilities (such as pentachlorophenol) to create additive risk. Given the substantial pollution of Humboldt and San Francisco Bays that already exists (and is reflected by, for example, the California State Water Resources Control Board and the U.S. Environmental Protection Agency identifying these waters as impaired water bodies due to excessive pollution by several pollutants), it is my opinion that the dioxin and furan releases from the Facilities are interacting with releases of other pollutants to create substantial additive environmental and human health risks.

85. There are numerous, strong lines of evidence to support my conclusion that PG&E's handling and storage of waste pentachlorophenol (PCP) wood treatment chemicals, and Treated Wood Wastes, at the Facilities, are the source of PCP, dioxins (PCDDs) and furans (PCDFs) in storm water and sediments flowing off the Facilities into Humboldt and San Francisco Bays.

1. It is notoriously known that PCP contains dioxins and furans, and that storm water running off sites where PCP-treated products and PCP-contaminated wastes are stored will

contain dioxins. The relationship between PCP and dioxins has been known for a long time. Among the many sources of this widely-known information, in a 1988 report, the California State Water Resources Control Board reported on the analysis of commercial PCP products and their findings of high concentrations of dioxin and furan congeners in the PCP. Another example is a 2005 report of a study conducted by the Oregon State University, Utility Pole Research Cooperative. That study evaluated the preservative migration from PCP-treated utility poles in storage yards. The study found that PCP solubilization and migration in rainfall runoff is "relatively predictable" that "increased rainfall was associated with an overall increase in total penta migration, but the runoff concentrations did not vary. These results suggest that migration from the poles is a function of water contact with the pole and penta solubility in the rainwater."

Methods for controlling the migration of PCP, dioxins and furans from utility pole storage areas are also well established. For example the McFarland Cascade Pole and Lumber Company, a supplier of PG&E's PCP-treated utility poles, collects storm water from its PCP-treated pole storage area and routes the storm water to a treatment system. The system is described in detail in the ("Fact Sheet for NPDES Permit WA0037953 (McFarland Cascade Pole and Lumber Company)". The storm water flows through catch basins equipped with inserts and/or hay bales to control floating and settleable solids. The storm water then flows to a four-compartment oil/water separator which removes sinking solids, oils and greases. From the final chamber of the separator, storm water is pumped through mixed-media filters consisting of layers of gravel, sand and garnet that remove fine solids from the storm water. After going through the mixed-media filters, the water passes through two granular activated carbon (GAC) adsorption units where dissolved contaminants in the storm water adsorb into the activated carbon media. The effectiveness of the treatment system "depends upon the contact time between the stormwater and the activated carbon media." The removal of sediments from the water, and the emphasis on the activated carbon filtration are two critical components of removing dioxins from contaminated storm water. This is because dioxins are highly sorbed to biological and sediment matrices. PG&E does not employ such storm water pollution prevention

measures at the Facilities--which alone is evidence that storm water runoff from the Facilities is likely to contain dioxins and furans. Because PG&E does not employ any comparable treatment to its storm water discharges, the dioxins and furans reasonably predicted to be transported in storm water runoff from the utility poles will inevitably remain in the storm water discharges from the Facilities.

2. The samples collected at the Facilities by Matt Hagemann for ERF showed extremely consistent results. ERF's sampling found comparable levels of PCP, dioxins and furans present in the storm water and sediment samples from each geographically unique facility. This corroborates that that it is reasonable to hypothesize that dioxins and furans in the samples are due to comparable factors at the Facilities, the presence of wastes oils from pentachlorophenol treated utility poles and TWW, and are not an artifact of sampling errors.

3. ERF's sampling shows that the levels of PCP, dioxins and furans, in both storm water and sediments, are highest in the areas where PCP-treated utility poles and Treated Wood Wastes are handled, stored or disposed of. The gradient of contaminant levels shows that these are the source areas of the waste pollutants.

4. There is a strong correlation between PCP levels and dioxin/furan levels in the ERF samples collected on and off-site of the Facilities. That is, the sampling generally found that higher PCP levels in the water and sediment sample corresponded with higher dioxin/furan levels.

5. The dioxin/furan congener profile ("fingerprint") of each of the samples collected at the Facilities, as well as the samples collected off-site at two of the facilities' discharge locations, is consistent with the profile for dioxins/furans associated with pentachlorophenol. The dioxin/furan congener profiles for the environmental samples (surface water/soils/sediments) collected at the Facilities also match the congener profile of a wipe sample collected from the surface of one of PG&E's PCP-treated utility poles stored at the Oakport Facility. Again, this is concrete evidence that PCP is the source of the dioxins and furans found on and around the Facilities. The attached Exhibit M shows: 1) a comparison of the

technical PCP congener profile (Clevery et. Al., 1997), with the OAKWIPE-1 sample collected at the Oakport Facility, 2) a comparison of PCP to Forest fire emissions. 3) an illustration of the comparison of Oak Wipe-1 to emissions from unleaded gasoline emissions and 4) an illustration of the comparison of Oak Wipe-1 to diesel truck emissions. It is my opinion that the congener profile comparisons for the samples collected at the Facilities, when looking at both the percentages of the 2,3,7,8 congeners in relation to each other, and also looking at the 2,3,7,8 congeners in relation to total PCDDs/PCDFs, clearly support the conclusion that the source of the dioxins/furans is PCP. The weight-of-evidence including, 1) the fact that the PCP was found on-site and migrating from the site in water and sediment samples, 2) the PCP and PCDDs/PCDFs found in the Oak Wipe-1 sample, and 3) the similarity of the congener signatures is compelling evidence that the PCP, PCDDs and PCDFs found in all of the ERF samples originates from the waste wood treatment oils and Treated Wood Wastes stored and handled at the PG&E Facilities. In addition, none of the PG&E experts have provided any evidence that the PCP found on-site is not originating from PG&E activities and the storage of treated poles.

6. ERF's investigations at the Facilities resulted in strong visual evidence (observations, photographs and videos) that stormwater runoff that flowed from from the utility pole and Treated Wood Waste storage areas into the storm water conveyance systems contained oily sheens. Visible sheens in stormwater runoff is indicative of waste oil that is being picked up and transported in storm water. Given that the stormwater runoff in issue was originating from areas where PG&E was storing wood treated with PCP oil mixtures, the oil causing the sheens in this stormwater was almost certainly PCP oil. A risk assessor following the standards of the risk assessment profession and relevant guidance from the United States Environmental Protection Agency would conclude that the practice of allowing stormwater containing oily sheens to runoff from areas where PCP-treated wood is being stored and then to discharge such stormwater in nearby waters without any treatment potentially poses risks of contaminating the environment with dioxins. A risk assessor adhering to the standards of the profession would follow EPA guidance for risk assessment (U.S. EPA, Ecological Risk Assessment Guidance for

Superfund: Process for Designing and Conducting Ecological Risk Assessments, June 1997, EPA 540-R-97-006) ("EPA Ecological Risk Assessment Guidance ") before concluding that such a discharge posed no risk. In keeping with the EPA Ecological Risk Assessment Guidance, a risk assessor being duly professional would not adopt a "no further action" conclusion, i.e., a conclusion that no further investigation was warranted and environmental risks could be ruled out, without storm water samples showing an absence of contamination in the storm water runoff. Notably, the EPA Ecological Risk Assessment Guidance stresses that a risk assessor must exercise great caution in reaching a no further action conclusion and only do so based on specific evidence warranting such a conclusion:

> At the screening level, it is important to minimize the chances of concluding that there is no risk when in fact a risk exists. Thus, for exposure and toxicity parameters for which site-specific information is lacking, assumed values should consistently be biased in the direction of overestimating risk. This ensures that sites that might pose an ecological risk are studied further. Without this bias, a screening evaluation could not provide a defensible conclusion that negligible ecological risk exists or that certain contaminants and exposure pathways can be eliminated from consideration.

EPA Ecological Risk Assessment Guidance at 1-2.

> It was in keeping with the EPA Ecological Risk Assessment Guidance and the standards of the ecological risk assessment profession for ERF to take samples of storm water on the Facilities and running off the Facilities and sediments in the pathway of storm water flows at the Facilities to further assess the risk that dioxins and furans are being transported from the PCP treated wood stored at the Facilities into the environment via the pathway of storm water flows. See, e.g., EPA Ecological Risk Assessment Guidance at 1-2.

86. ERF corroborated the hypothesis that oil sheens in storm water flows at the Facilities are indicative of the likely presence of elevated PCP, dioxins and furans in its taking of samples of storm

water flows at the Facilities. ERF's storm water samples where heavy sheen was present showed the highest levels of PCP, dioxins and furans. See, Matt Hagemann Report; Hayward Facility photos and videos (Plt's Bates 000205 – 000535, VIDEO0005.3gp, VIDEO0006.3gp, VIDEO0007.3gp); Myrtle Ave. facility photos and videos (Plt's Bates 000536 - 000698 ,DSCN1929.MOV and DSCN7449.AVI); Oakport Facility photos and video (Plt's Bates 000699 – 001122) and West 14th Street Facility photos and video (Plt's Bates 001126 – 001330, DSCN1925.MOV, DSCN1926.MOV, DSCN1927.MOV).

87. In my opinion, in order to abate the imminent and substantial endangerment these Facilities pose to human health and the San Francisco and Humboldt Bay environments, further site and off-site characterization should be conducted to fully characterize the lateral and vertical extent of pentachlorophenol, dioxins and furans contamination on the Facilities and the extent of off-site lateral and vertical migration of these contaminants from the Facilities. This characterization work should include substantial additional sampling of storm water runoff from the Facilities and sampling of soils and sediments at and near the Facilities for levels of pentachlorophenol dioxins and furans. It is also my opinion that a survey of the affected receptors in San Francisco and Humboldt Bays should be conducted. Specifically, studies should be performed to assess the exposures to the affected receptors to pentachlorophenol, dioxins and furans originating at the Facilities, and a full human health and ecological risk assessment should be completed for these facilities. The studies would include observing and identifying likely pathways of exposure to pollutants originating at the Facilities to specific species in the receiving environment, and taking tissue samples from organisms in the pathways to test hypotheses concerning likely exposures.

88. PG&E should implement short-term and long-term remedial measures. Short-term remedial measures should include commonly employed and feasible means to reduce the levels of polluted runoff in storm water. In my opinion, the following measures would likely decrease the pollutant levels on and being discharged from the Facilities:

1) Overhead coverage or other methods to prevent storm water from contacting treated wood wastes, stacks of freshly treated utility poles and other sources of PCP, dioxins and

furans, as well as area containment, such as impermeable berms in the areas where freshly-treated poles and treated wood wastes are handled and stored;

2) Avoiding stockpiling of utility poles at the Facilities by purchasing them on an as needed basis and conveying them to the field within a few days of storing them at the Facilities;

3) mandating in contracts with utility pole suppliers that utility poles purchased by PG&E that are treated with pentachlorophenol be treated in a fashion that minimizes or eliminates the dripping of pentachlorophenol from the utility poles and requiring utility pole suppliers to employ post treatment fixation to diminish the incidence of utility poles dripping pentachlorophenol;

4) Instituting new measures for sawing up utility poles or other treated wood waste whereby PG&E only saws up treated wood waste in either indoor locations or outdoor locations that are paved. PG&E should place plastic tarps underneath treated wood waste to be sawed up in any outdoor location to collect sawdust from sawing operations. PG&E should vacuum and/or otherwise clean the plastic tarps after sawing operations to remove any sawdust or debris that falls on the plastic tarps and ensure that sawdust or debris collected from the tarps is placed within containers for proper offsite disposal. Following thorough cleaning, PG&E should also reuse the plastic tarps to minimize waste generation. PG&E should not saw up treated wood waste in any outdoor location while it is raining or when on site winds exceed 10 mph;

5) Before the first forecasted storm event of the rainy season, inspecting all storm drain inlets at the Facilities. During this inspection, PG&E should clean as needed each drain inlet using a vacuum or other effective cleaning device/method in order to remove dusts and solids that have entered the storm drain inlets;

6) Cleaning out sediments collected in the drain inlets at the Facilities following each storm event and properly dispose of any dust, sediment, or other pollutants removed from storm drain inlets or catch basins;

7) Inspecting the drain inlets at the Facilities during the wet season at least weekly, and on the day of or prior to any forecasted storm event that may result in discharge from the Facilities, and checking that the drain inlets are not in a condition that would materially impair their efficacy;

8) Covering the inlets at the Facilities for the entirety of the summer dry months with a metal plate or some other solid material that will prevent dust and solids from collecting in the drain inlets;

9) Adopting and implementing site sweeping and cleaning plans for each Facility. These plans would specify: (i) sweeping and cleaning should be designed to minimize tracking and other dispersal of pollutants on paved areas of the Facilities, (ii) areas where mechanical sweeping is feasible, areas where manual sweeping only is feasible, areas where sweeping is not feasible (such as under material that is not reasonably movable), areas where daily sweeping is likely needed during the rainy season, areas where less frequent sweeping is likely to be adequate, some provision for some more limited dry weather sweeping and cleaning to keep pollutant accumulation down (and prevent dust from blowing into areas hard to clean later where storm water in the rainy season is likely to reach), (iii) triggers for more frequent ad hoc sweeping or cleaning such as visual accumulation of dust or debris, (iv) that regenerative sweepers or vacuum systems should be employed to sweep all areas where sweeping by machine, as opposed to manual sweeping, is feasible, (v), at least annually, conduct a thorough inspection of each Facility and to the extent warranted by this inspection perform additional comprehensive site cleaning as needed to keep levels of contaminated dust down (vi) no discharge of any waste fluids or solid wastes generated in site cleaning to storm drain inlets or waterways, and (vii) collecting and disposing of all wastes generated during Facility cleaning and sweeping in a manner that complies with all local, state, and federal laws;

10) Repairing or replacing all cracking pavement and concrete/asphalt berms on the Facilities. PG&E should routinely inspect paved areas and implement additional repairs

or replacement of pavement on an as needed basis to ensure that pollutants are not deposited in cracks and later re-suspended in storm water runoff and/or that storm water flow does not leave the Facilities in other than designated flow paths;

11) Maintaining structural devices for storm water management at the Facilities in good operating condition during the wet season and shall promptly repair any damaged or degraded structural devices; and

12) Conducting training for all appropriate employees to explain how to implement measures designed to reduce pollutants in storm water runoff from the Facilities; and

13) Monitoring storm water discharges for PCP, dioxins and furans to ensure the efficacy of the remedial measures and to determine the need for additional or different measures.

89. Long-term remedial measures should include such site and off-site cleanup work shown by the additional assessment work described above as warranted and appropriate to reduce pentachlorophenol, dioxins and furans loadings to levels below regulatory agency benchmark values – and thus address the imminent and substantial endangerment posed by the Facilities' release of contaminants.

Executed on April 16, 2014 in Canyon, Texas

William J. Rogers

EXHIBIT 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 12 2014

OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

MEMORANDUM

SUBJECT: Ninth Circuit Court of Appeals Decision in Ecological Rights Foundation v. Pacific Gas and Electric Company Regarding the RCRA Definition of Solid Waste

FROM: Susan Shinkman, Director
Office of Civil Enforcement

Rafael DeLeon, Acting Director
Office of Site Remediation Enforcement

TO: Regional Counsels
Regional Enforcement Division Directors
RCRA Enforcement Managers
RCRA Division Directors

This memorandum highlights issues raised by the decision in *Ecological Rights Foundation v. Pacific Gas and Electric*, 713 F.3d 502 (9th Cir. 2013) (*ERF*). The Office of Enforcement and Compliance Assurance (OECA) believes this decision relied on a problematic analysis of when a material may be a solid waste under the Resource Conservation and Recovery Act (RCRA). OECA is concerned that defendants in RCRA citizen suits and EPA enforcement actions may attempt to use this decision to narrow the definition of solid waste under RCRA. OECA therefore requests that the regions contact us if you suspect similar issues may arise in any future enforcement actions, citizen suits, or imminent and substantial endangerment actions under RCRA. In developing this memo, OECA conferred with the Office of Resource Conservation and Recovery and the Office of General Counsel.

The Ecological Rights Foundation (ERF) sued Pacific Gas and Electric and Pacific Bell Telephone Company, alleging that pressure-treated utility poles used and maintained by the defendants discharged wood preservative chemicals into waters of the United States in violation of the Clean Water Act (CWA). ERF argued that the discharged material constituted a solid waste that may present an imminent and substantial endangerment to human health or the environment under RCRA. The utility poles are pressure treated with an oil-pentachlorophenol (PCP) wood preservative mixture that is toxic, a probable human carcinogen, and an EPA registered, restricted-use pesticide under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).

The defendants filed a motion to dismiss, arguing under the CWA, that discharges of storm water from the utility poles are neither a "point source discharge" nor "associated with industrial activity." They also

argued that wood preservative that escapes from utility poles is not a "solid waste" under RCRA. The district court agreed, granting defendants' motion to dismiss both counts.[1]

The Ninth Circuit affirmed the lower court's decision to dismiss both the CWA and RCRA claims.[2] With respect to the RCRA claim, the court concluded that wood preservative that escapes from utility poles through normal weathering while those poles are in use is not automatically a "solid waste" under RCRA, because wood preservative "that is washed or blown away from utility poles by natural means, as an expected consequence of the preservative's intended use, has not been 'discarded.'" The court limited its holding, indicating that because the plaintiff did not allege "dangerous accumulations" of PCP, the court was not addressing whether escaping wood preservative could be a "solid waste" in that circumstance.

The statutory definition of solid waste under RCRA establishes the jurisdictional threshold for EPA's authority to regulate hazardous waste and also for the exercise of EPA's information gathering, corrective action, and enforcement authorities under RCRA sections 3004, 3007, 3008, 3013, and 7003. The section 7002 imminent and substantial endangerment provision at issue in the *ERF* decision contains the same language as EPA's authority under section 7003.

This memorandum is limited to EPA's view on the court's decision that the wood preservative alleged by plaintiff to be escaping from utility poles is not a solid waste under RCRA. EPA is not opining on whether the other elements of a RCRA section 7002 cause of action were met in this case, nor is EPA suggesting that the wood preservative escaping from poles in use is subject to EPA's hazardous waste regulations.

Analysis of Decision

The Ninth Circuit's decision in this case turned on the second element of a RCRA imminent and substantial endangerment claim under section 7002 (which has similar language to section 7003) – whether the material released into the environment was a solid waste. We believe the court made two fundamental errors in its analysis that led to the incorrect finding that the PCP released into the environment from utility poles is not a solid waste. First, the court incorrectly concluded that because the leaking, dripping or escaping of PCP to the environment by natural causes or human activity was an "expected consequence" of the PCP's intended use, it was not automatically a discarded material under RCRA's statutory definition of solid waste. Second, the court suggested that its conclusion may have been different if the plaintiff had alleged that the PCP releases had resulted in "dangerous accumulations" of

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[1] The district court held that PCP leaking from the poles due to natural means is not the type of discharge that is covered by RCRA section 7002. *See* 803 F. Supp. 2d, 1056, 1065 (N.D. Cal. 2011). The district court noted that ERF had not alleged any conduct by defendant resulting in discharge and that passive leaking from containers was not disposal. The district court's conclusion conflicts with the statutory language and the position the United States has taken in several actions under RCRA section 7003, but the Ninth Circuit did not rely on the district court's analysis in its decision.

[2] The Ninth Circuit also addressed two claims brought under the CWA's citizen suit enforcement provision. *See* 33 U.S.C. § 1365. The Plaintiff argued that the defendants had violated the CWA by discharging pollutants from point sources into waters of the United States without a permit. The court concluded that stormwater discharges from utility poles did not require a permit under the CWA because stormwater discharges from the poles are not associated with industrial activity, per EPA's regulations, and because the utility poles are not point sources. EPA agrees with the court that EPA has not defined stormwater discharges associated with industrial activity to include discharges from utility poles. *See ERF,* 713 F.3d at 515. Nothing in the decision limits EPA's authority to address these stormwater discharges in the future, if the Agency decides it is appropriate. With respect to the point source issue, the court acknowledged that it would normally defer to EPA, but that EPA has not spoken directly to whether utility poles are point sources. *Id.* at 509. Though we do not necessarily agree with the court's conclusion that utility poles are not point sources, this memorandum does not address this issue because we believe the court's decision acknowledges that the Agency remains free to interpret the term "point source" as appropriate.

the chemical. The court's approach improperly conflates when a material becomes a solid waste with the analysis necessary to determine when circumstances may present an endangerment. The court's decision also misinterpreted the Second Circuit's holding in *Connecticut Coastal Fisherman's Ass'n v. Remington Arms Co.*, 989 F.2d 1305, 1314-15 (2d Cir. 1993), and incorrectly construed and applied EPA regulations and guidance on when a product released to the environment may be a solid waste.

1. Releases that are "expected consequences" of a product's intended use may be "discard" of a "solid waste" under RCRA.

A product released to the environment as part of its intended purpose is not immediately a solid waste under RCRA, but may become a solid waste if left in the environment long enough. However, the court erred in holding that a product released into the environment as an "expected consequence" of the product's intended use is likewise not a solid waste. The court held that "wood preservative that is washed or blown away from utility poles by natural means, as an expected consequence of the preservative's intended use, has not been 'discarded.'" *ERF*, 713F.3d at 516. The court cited for support a Second Circuit decision which held that pesticides sprayed for the intended purpose of reaching and killing mosquitoes and their larvae were not discarded. *No Spray Coalition, Inc. v. New York*, 252 F.3d 148 (2d Cir. 2001). In analyzing the issue, the Second Circuit stated that "material is not discarded until after it has served its intended purpose." *Id.*

EPA agrees with the Second Circuit's statement that a material is not discarded so long as it is serving its intended purpose. However, PCP applied to utility poles can be distinguished from land-applied pesticides, such as those that were addressed by the Second Circuit. While land-applied pesticides may serve their intended purpose when dispersed into the environment, the Ninth Circuit noted in this case that the purpose of PCP applied to utility poles is to protect the poles. EPA believes that PCP ceases to serve this purpose at some point after it leaves the poles and is dispersed into the environment.[3] Despite noting that the PCP's purpose was to preserve the poles, the Ninth Circuit held that because dispersal into the environment is an expected consequence of this use, the PCP was not discarded.

The court did not define what it meant by "expected consequences." A broad reading of this language would represent a significant expansion of the Second Circuit's holding and could have unintended ramifications for the RCRA program. For example, with respect to the residue from spilled products, EPA's longstanding position is that absent a bona fide intent to recycle, such residue is a solid waste because the product has been abandoned.[4] The Ninth Circuit's opinion could have the unintended consequence of undermining EPA's established legal position because spills and leaks could be argued to be "expected consequences" of using products and there may be little room to distinguish PCP use on utility poles – where a product in use leaks material to the environment – from the spill scenarios upon which the Agency has opined. This decision could not only undermine EPA's use of Section 7003 but also its authority to ensure adequate cleanup at RCRA regulated facilities.

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[3] While the court noted that leaking, dripping or spilling PCP that comes to land in the soil immediately adjacent to the poles may still be serving its intended purpose of preserving the poles, EPA does not agree that this conclusion can be made without further factual development. *ERF*, F.3d at 515-16. First, the use of PCP in surrounding soils to preserve poles is not a registered use of the preservative under FIFRA. Second, it is not clear whether or to what extent leaked PCP may still be acting as a preservative and whether, at some point, the PCP is either rendered chemically inert (or diluted) or has moved too far away from the pole to accomplish this purpose.

[4] Land Disposal Restrictions for Third Scheduled Wastes, 55 Fed. Reg. 22,520, 22,671 (June 1, 1990).

2. Maintaining a distinction between the definition of solid waste and a potential endangerment.

It is well settled that a prima facie case for an imminent and substantial endangerment suit requires three elements: (1) the person (e.g., defendant) is contributing to or has contributed to the handling, storage, treatment, transportation or disposal (2) of a solid or hazardous waste (3) that may present an imminent and substantial endangerment to human health or the environment.[5] *See* 42 U.S.C. §6972(a)(1)(B) and § 6973(a). The only question to be answered in establishing the second element is whether the material has been "discarded" and thus meets the statutory definition of solid waste set forth in RCRA section 1004(27).

In purporting to limit its holding on "discard" to the facts of this case, the court improperly suggested that it might have reached a different conclusion had plaintiffs alleged "dangerous accumulations" of PCP. *ERF*, 713 F.3d at 518. The court's analysis was improper because the quantity of material and how toxic or dangerous it is has no bearing on the simple question of whether it has been "discarded." Once the "discard" element has been established, an evaluation of quantity, toxicity, or danger of the material is appropriate for an endangerment determination.[6] By conflating the two statutory elements, the court seems to have established a heightened standard for demonstrating whether a substance is a solid waste. This conclusion has no basis in the statutory language or existing case law.

In fact, the United States successfully advocated its position on this issue before the Second Circuit, when it argued that spent lead ammunition could become a solid waste at some point in time, if left to accumulate in the environment after serving its intended purpose. United States as Amicus Curiae at 25, *Conn. Coastal Fishermen's Ass'n v. Remington Arms Co., Inc.*, 989 F.2d 1305 (2d Cir. 1993) (Dockets 92-7191, 91-7193) ("the literal meaning of 'discarded' certainly can encompass shot and targets released into the environment and left to accumulate long after serving their intended purpose"). The Second Circuit adopted this position in its holding. *See Conn. Coastal Fishermen's Ass'n,* 989 F.2d at 1314-15. Neither the United States' brief nor the Second Circuit's decision referred to the amount or toxicity of the spent ammunition in analyzing whether it had been discarded, but instead focused on whether it was left to accumulate after serving its intended purpose.

3. The court's reliance on EPA's regulatory treatment of materials was incorrect in this case.

The court also looked to EPA's regulatory treatment of other materials for support, but this reliance was misplaced. *ERF*, 713 F.3d at 517. The court repeatedly erred by looking to EPA statements on what materials are exempt from *regulation* as solid or hazardous waste under RCRA rather than focusing on what materials fall within the broader statutory definition that applies to actions under RCRA sections 7002 and 7003.[7] EPA has consistently stated, both in its rulemakings and in guidance, that the statutory

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[5] The Ninth Circuit incorrectly states that the prima facie case under RCRA requires (1) the defendant has been or is a generator or transporter of solid or hazardous waste, or is or has been an operator of a solid or hazardous waste treatment, storage or disposal facility; (2) the defendant has "contributed" or "is contributing to" the handling, storage, treatment, transportation, or disposal of solid or hazardous waste; and, (3) the solid or hazardous waste in question may present an imminent and substantial endangerment to health or the environment, *ERF*, 713 F.3d at 514 (citing 42 U.S.C. Section 6972(a)(1)(B); *Prisco v. A&D Carting Corp.,* 168 F.3d 593, 608 (2d Cir.1999).

[6] "Dangerous accumulation" also appears on its face to present a more stringent standard than "may present an imminent and substantial endangerment." *See Price v. U.S. Navy*, 39 F.3d 1011, 1019 (9th Cir. 1994) (actual harm need not be shown).

[7] RCRA section 1004(27) defines "solid waste" to include "discarded material," whereas the regulatory definition at 40 C.F.R. § 261.2 narrows the term by defining "discarded material" as material that is abandoned, recycled, inherently waste-like or a military munition as those terms are further defined in the RCRA Subtitle C regulations. EPA and the courts have clearly stated that the two definitions apply for different purposes. The regulatory definition of solid waste is intended to apply only for

definition of solid waste is broader than the regulatory definition, and that the broader statutory definition is relevant for RCRA section 7003.[8] This position is consistent with Congressional intent.[9] The United States has also successfully advocated this position in litigation.[10]

The court also looked to EPA's hazardous waste listings of various types of PCP wastes as evidence of how PCP is governed by RCRA's statutory authorities. The court noted that four specific PCP-containing wastes were listed hazardous wastes and concluded that, because neither PCP in use nor soil contaminated with PCP is listed, it must not fall under the statutory definition of solid waste. This conclusion was erroneous because, logically, the absence of a regulatory hazardous waste listing is not determinative of what is covered by the regulatory or statutory definition of solid waste. The court also cited to a June 19, 1987 document describing the status of PCP wastes. "Regulatory Status of Various Types of Pentachlorophenol Wastes," RCRA Online No. 11256 (June 19, 1987). However, this document clearly states that it only addresses the scope of the hazardous waste listings.

The court also misinterpreted and took out of context statements by EPA regarding munitions and lead-based paint and failed to acknowledge more relevant statements that run counter to its decision, which actually support the proposition that the material is a solid waste for purposes of RCRA sections 7002 and 7003. For example, EPA's military munitions rule specifically states that munitions are solid wastes for purposes of RCRA sections 7002 and 7003 when munitions land off-range and are not promptly rendered safe and/or retrieved. *See* 40 C.F.R. § 266.202(d); 62 Fed. Reg. 6632 (analogizing this situation to a spill that goes unaddressed). Spent lead ammunition can be a solid waste under RCRA's statutory definition at private firing ranges although such ammunition is not subject to Subtitle C regulation. *See e.g., Conn. Coastal Fishermen's Ass'n*, 989 F.2d at 1314-15.

The court in *ERF* cited to EPA regulations and guidance on the regulation and disposition of lead-based paint wastes, noting that EPA regulates lead-based paint wastes generated and disposed of during renovation "but not lead-based paint that falls from houses through ordinary wear and tear." The court, however, again confused EPA's regulatory definition of solid waste with the statutory definition. In the memo cited by the court, EPA specifically states that although lead-based paint waste is exempt from the

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purposes of implementing RCRA Subtitle C. *See* 40 C.F.R. § 261.1(a), *see U.S. v Valentine*, 856 F. Supp 621, 627 (D.Wyo. 1994) and *Conn. Coastal*, 989 F.2d. 1314, 1315. The RCRA Subtitle C regulations govern the treatment, transportation, storage and disposal of regulated hazardous waste. The broader statutory definition, on the other hand, applies in other circumstances, such as for purposes of the imminent and substantial endangerment authorities in sections 7002 and 7003. A regulated solid waste is necessarily a solid waste under the statute -- the reverse is not true.

[8] *See* 40 C.F.R. § 261.1(b)(2) (stating that EPA may use RCRA section 7003 authority if the EPA has reason to believe that the material may be a "solid waste" and a "hazardous waste" as those terms are defined in the statute); 45 Fed. Reg. 33,084, 33,090 (May 19, 1980) ("unlike [sections 3002 through 3005 and 3010], Congress did not confine the operations of Sections 3007 and 7003 to 'hazardous wastes *identified or listed under this subtitle.*'"); 50 Fed. Reg. 614, 627 (Jan. 4, 1985) (stating that the statutory definitions of solid and hazardous waste would apply under RCRA sections 3007, 3013 and 7003).

[9] *See* H.R. Rep. 98-198 at 47 (EPA's authority under RCRA sections 3007 and 7003 includes all wastes that meet the statutory definition of hazardous waste).

[10] *See, e.g., U.S. v. Valentine*, 856 F. Supp. 621, 627 (D. Wyo. 1994) (*citing* 40 C.F.R. § 261.1 (b)(2)); *Military Toxics Project v. Envtl. Prot. Agency*, 146 F.3d 948 (D.C. Cir. 1998) and *Conn. Coastal Fishermen's Ass'n,* 989 F.2d at 1314-15. As the United States stated in its brief to the Second Circuit in the *Connecticut Coastal* case, "EPA applies a broader definition of solid waste for remedial purposes than for regulatory purposes in order to preserve the widest possible latitude for imminent threats to the public and the environment and to limit RCRA's prospective regulatory requirements to waste management activities that warrant comprehensive regulation from time of generation until final disposition." United States as Amicus Curiae at 23, *Conn. Coastal Fishermen's Ass'n v. Remington Arms Co., Inc.*, 989 F.2d 1305 (2d Cir. 1993) (Dockets 92-7191, 91-7193).

regulatory requirements under the household waste exclusion, this exclusion "does not affect EPA's ability to reach those wastes under its statutory authorities, such as RCRA § 3007 (inspection) and § 7003 (imminent hazard)." *See* "Applicability of the Household Waste Exclusion to Lead-Contaminated Soil" (March 7, 1995) and "Regulatory Status of Waste Generated by Contractors and Residents from Lead-Based Paint Activities Conducted in Households," at 3, *available at* http://www.epa.gov/lead/fslbp.html (Aug. 2000). EPA's regulations clearly exclude household waste from the definition of hazardous waste, but not from the definition of solid waste. *See* 40 C.F.R. § 261.4(b).

The court noted the potential broad implications if it found that leaking wood preservative constitutes a solid waste under RCRA, citing lead paint that naturally chips away from houses as an example of something that would also fall within RCRA's jurisdiction. Not only were the court's concerns misplaced, the court also misstated EPA's authority over lead-based paint. In fact, EPA has asserted its RCRA statutory authority over lead-based paint that falls from houses through ordinary wear and tear. EPA has issued two RCRA section 7003 orders to abate imminent and substantial endangerments from lead-based paint.[11] One order addressed the presence of lead-based paint which was in a deteriorating condition – it was chipping, peeling, and/or flaking – in 20 residential units on the property. Another order addressed the presence of lead dust in a commercial property from sandblasting activity during renovation.

As to pesticides, the Ninth Circuit found persuasive that EPA, under FIFRA, approved the use of PCP for preserving utility poles. The court erred in relying on EPA's approval of the use of PCP as a wood preservative as support for its conclusion that the material cannot be solid waste. Approval under the FIFRA registration process, which evaluates risks associated with use of pesticides does not answer the question of whether the material has been "discarded" and is thus a solid waste under RCRA's statutory definition.[12] Risk is not relevant with respect to the solid waste question, which is simply whether the material has been discarded. In fact, EPA has given notice that pesticides approved for use under FIFRA may be subject to RCRA at some point,[13] and the Agency's interpretation is that pesticides can become "discarded" for purposes of section 1004(27) under circumstances where they no longer serve their intended purpose.

Finally, in upholding the district court's refusal to grant the plaintiff's request for leave to amend the complaint, the court improperly suggested that a material is not a solid waste if its release was caused by human intervention, if that intervention is also an expected consequence of intended use (e.g., drilling into the utility poles). *ERF*, 713 F.3d at 520. Like many of the court's other statements, this conclusion could significantly broaden the concept of intended use. EPA does not agree that human intervention that may be part of a material's use can never result in the material becoming discarded and thus a solid waste under the statute. Referring back to our earlier example of product spills, if human intervention is a

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[11] *See* Unilateral Administrative Orders (UAO) issued to 17th Street Revocable Trust, John R. Redmond, New 4775 Huron L.L.C. and Argyle Properties, RCRA 3-2000-0001TH (April 8, 2002) regarding residential property in the District of Columbia, and UAO to Group I Management and M275, LLC (September 5, 2001) about a commercial property in Fall River, Massachusetts.

[12] EPA's approval of PCP was for use in the poles themselves, not the adjacent soil or areas beyond the utility poles. *See, e.g.* Letter from Jacqueline McFarlane, Office of Chemical Safety and Pollution Prevention, to Dr. Hubert R. O'Neal (March 15, 2012), *available at* http://www.epa.gov/pesticides/chem_search/ppls/061483-00003-20120315.pdf.

[13] *See, e.g.,* Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristic Revisions, 55 Fed. Reg. 11798, 11839 (March 1990) ("...the mandates of FIFRA and RCRA are different. EPA has previously stated that even if it were determined that certain ground *uses* of treated wood did not pose unreasonable risks, wood *wastes* might still be regulated under RCRA Subtitle C").

regular part of a product's use, yet results in a spill of the product, EPA would consider that spill to be discarded product and thus a solid waste under the statute. Furthermore, EPA has used its RCRA section 7003 authority to address similar human activity when lead-based paint is released through contractor renovation work. As stated earlier, however, a finding that a material is a solid waste under RCRA's statutory definition does not trigger RCRA regulatory obligations.

Legal Impact of the Decision

We are not aware of any other court that followed a similar rationale and found that the release of a chemical product that is no longer serving its intended purpose is not a "solid waste" so long as that release (1) is a "natural expected consequence" of its intended use, or (2) does not result in a dangerous accumulation of the material. Because the court neither defined "expected consequence" nor properly applied the holding of *Connecticut Coastal* (by suggesting that there may have been a different result if the plaintiff alleged a "dangerous accumulation" of PCP), the *ERF* decision appears to set a higher bar for establishing the presence of solid wastes under RCRA than currently exists under established case law and thus could limit EPA and citizen's use of RCRA Sections 7002 and 7003.

EPA's Position and Path Forward

When deciding whether a material such as the PCP in the instant matter is a solid waste, the court should have focused solely on whether the PCP was discarded. EPA agrees with the court that PCP applied to utility poles is not a waste since it is used for its intended purpose. However, EPA has also consistently stated its position that materials originally used for their intended purpose can become solid wastes under the RCRA statutory definition in certain circumstances such as where the material is no longer serving its intended purpose, is not able to serve its intended purpose, or cannot be reasonably recycled or used for other purposes.

We are seeking opportunities to address these issues in federal court in future judicial actions. We therefore request that you monitor the federal court docket in your region and alert OECA when a case or controversy could affect the analysis regarding the definition of solid waste. Please contact Leslie Oif at Oif.Leslie@epa.gov or 202-564-2291 in OCE or Mary Godwin at Godwin.Mary@epa.gov or 202-564-5114 in OSRE if you have any questions about this memo or have identified a case where this issue might be raised.

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Re: Notice of Intention to File Citizen Suit for Imminent and Substantial Endangerment pursuant to RCRA Section 7002(a)(1)(B)

Dear Sirs and Mesdames:

On behalf of Gallade Chemical Company ("Gallade"), 8333 Enterprise Drive, Newark, California, this letter provides the 90-day notice required for "citizen suits" for "imminent and substantial endangerments" pursuant to RCRA Section 7002(a)(1)(B), 42 U.S.C. Section 6972(a)(1)(B), and 40 C.F.R. Sections 254.2 and 254.3. As set forth in detail below, the conditions and circumstances at and involving the Jones-Hamilton site located at 8400 Enterprise Drive, Newark, California (the

"Site"), may present an imminent and substantial endangerment to health or the environment. Specifically, the "Responsible Parties" (identified below) have contributed to and/or are contributing to the past or present disposal of solid and/or hazardous wastes, and conditions relating thereto, which may present an imminent and substantial endangerment to health or the environment, including but not limited to the following: (1) they have caused, and continue to cause, allow, and/or fail to prevent or mitigate significant releases of dioxins, furans and other hazardous substances from the Site to the adjacent Gallade property and other adjacent parcels; and (2) their plans for residential redevelopment of the Site – including but not limited to their efforts to establish cleanup standards and a remediation schedule for the Site that are not sufficiently protective of public health – have been and are creating further significant potential endangerment.

As such, protection of public health and the environment requires federal court intervention and additional regulatory oversight by the U.S. Environmental Protection Agency ("EPA") and/or California Department of Toxic Substances Control ("DTSC"). Thus, not less than ninety (90) days after the service of this notice letter, Gallade intends to file a citizen suit in United States District Court (N.D. Cal.) to address the imminent and substantial endangerment, pursuant to RCRA Section 7002(a)(1)(B), 42 U.S.C. Section 6972(a)(1)(B).

1. Site History and Environmental Conditions

According to documents on file with the San Francisco Bay Regional Water Quality Control Board ("Water Board"), Jones-Hamilton's operations at the Site from 1956 to 2001 involved the blending, distillation, packaging and warehousing of a variety of chemical products. Particularly important, those operations included the blending and packaging of a wood preservative containing pentachlorophenol ("PCP"), which is known to contain highly toxic dioxins and furans. Moreover, those operations included the discharge of process wastewaters into two evaporation ponds at the site, resulting in the release of PCP and other hazardous substances to soil and groundwater underlying the site. When those evaporation ponds were "closed in place" and "capped" in 1989, substantial quantities of hazardous wastes, including dioxins and furans, were left in place beneath the cap.

In light of these and related conditions, at the direction of the Water Board, in or about 2005, Jones-Hamilton filed a deed restriction that prohibits anything other than commercial or industrial use of the Site, and prohibits any development activity in the vicinity of the capped evaporation ponds. Dioxins, furans and other hazardous substances (including but not limited to vinyl chloride, 1,2-DCA, TCE, arsenic and chromium) continue to be found in high concentrations at and about the Jones-Hamilton site. In addition, hazardous substances are and have been migrating from the Site to the Gallade property, located across the street from the Site, as well as to the residential neighborhood located directly adjacent to the Gallade property. Nonetheless, as discussed below, Jones-Hamilton now is seeking to develop the Site for residential use, including extensive excavation of impacted soils and development on and around the capped evaporation ponds, in direct contravention of the above-mentioned deed restriction.

2. Current Development Plans for the Site

The Jones-Hamilton plant closed in November 2001 and was de-commissioned between 2002 and 2004. When demolition and removal of all buildings and structures on the Site were completed in 2007, Jones-Hamilton began pursuing plans to develop a commercial project on the Site, including submittal of a health risk-based cleanup plan for the project. In 2011, however, the City of Newark adopted its Dumbarton Transit Oriented Development Specific Plan, identifying the Site (and several other "ongoing cleanup sites" in the area) as sites for future residential use.

Shortly thereafter, Jones-Hamilton changed its redevelopment plan for the Site, and entered into a joint venture with Trumark Homes, LLC ("Trumark") to pursue residential development of the Site. The joint venture entity – Newmark Enterprise Joint Venture, LLC ("Newmark") – apparently is managed and operated by Trumark, and now holds title to the Site.

Jones-Hamilton, Newmark, and Trumark (collectively, the "Responsible Parties") have been pursuing their plans for the residential redevelopment project (the "Trumark Project"). More specifically, they have been seeking entitlements and regulatory approvals for the project, particularly from the City of Newark and the Water Board. Among other things, Trumark has negotiated a series of agreements with the City of Newark that would allow for the construction of over 200 residential units at the Site.

As discussed below, the Responsible Parties also have been advocating a cleanup plan and remediation schedule for the Site that would save money and otherwise "expedite" the Project, but would create or exacerbate health risks to nearby residents and other persons. Thus, not only have the Responsible Parties caused, allowed, and/or failed to prevent or mitigate significant releases of dioxins, furans and other hazardous substances at and from the Site, the Responsible Parties' plans for residential redevelopment of the Site – and, in particular, their efforts to establish "watered down" cleanup standards and a dilatory cleanup schedule – have been and are creating further significant risks to human health and the environment.

3. The Responsible Parties' Efforts to "Expedite" the Trumark Project at the Expense of Creating or Exacerbating Health and Environmental Risks

As the following discussion shows, in the interest of controlling costs and otherwise "expediting" the Trumark Project, the Responsible Parties have been pressuring the Water Board to approve "watered down" cleanup standards and a dilatory remediation schedule for the Site that are not sufficiently protective of public health. As mentioned earlier, notwithstanding the deed restriction that prohibits anything other than commercial or industrial use of the Site, and prohibits any development activity in the vicinity of the capped evaporation ponds, the Responsible Parties now are seeking to develop the Site for residential use, including excavation of and development on and around the capped evaporation ponds, in direct contravention of the deed restriction. More troubling, the Responsible Parties have been pressuring Water Board staff to approve cleanup standards, particularly for dioxins

and furans, that are inconsistent with existing guidelines and standards, and insufficiently protective of human health. Moreover, planned construction activities at the Site pose grave health risks to employees working at the adjacent Gallade property, and to residents living in the single family homes next door to the Gallade property (i.e., on Aleppo Drive).

Among other things, the Responsible Parties plan to excavate almost 100,000 cubic yards of soils impacted with solvents, dioxins, furans, and metals at the Site. Some of these soils will be hauled off-site for disposal, and the balance will be stockpiled onsite for additional testing and handling. These planned activities create a significant potential for the migration of dioxins, furans, and other hazardous substances in airborne dusts to the Gallade property and the residences on Aleppo Drive.

These significant human health risks have been well documented and continue to be a source of significant concern to the Water Board. In a February 7, 2014 letter to the City of Newark, the Water Board offered its comments on a draft supplemental environmental report that had been prepared for the Trumark Project. As that letter explained, the Water Board's comments pertained specifically to "the specific potential human health impacts posed by hazardous materials present in soil, soil gas, groundwater, airborne dusts and vapors in connection with this Project and the extensive volume of contaminated soil that has to be excavated from the site and transported offsite through the City to the appropriate disposal facility." Specifically, in that letter (in "Attachment A" thereto), the Water Board expressly recognized that "[d]ioxins are considered to be among the most toxic man-made chemicals" and "[t]he magnitude and extent of the dioxin contamination [at the Site] is not yet known." More specifically, the Water Board states: "The responsible party has proposed to remove the concrete-asphalt cap that covers the two surface impoundments and to conduct an extensive soil excavation across the 21-acre site. The excavation poses potential risks for workers and for nearby residents. In addition, there are some concerns about proper risk mitigation while moving such a large volume of contaminated soil containing highly toxic chemicals (dioxins, furans, PCP, etc.)."

Apparently not content with creating just these risks, the Responsible Parties go further – they have been actively "lobbying" Water Board staff to approve "watered down" cleanup standards for dioxins, the most toxic substances at the site. Water Board records show that, for at least the past ten months, the Responsible Parties have been pressuring the Water Board to approve cleanup standards ***more than ten times higher*** than existing EPA guidelines would allow for dioxins in soil. Specifically, in or about October 2013, the Responsible Parties began lobbying the Water Board to agree to a cleanup standard of 50 parts per trillion (ppt) in soil at the Site. As the Responsible Parties were aware at that time, the relevant EPA guidance (EPA Region 9, Regional Screening Levels (formerly PRGs), updated November 2012) sets a cleanup standard of 4.5 ppt for dioxins in soil. The Responsible Parties were aware of, and originally had agreed to comply with, that 4.5 ppt Region 9 standard. However, since then, they have undertaken an aggressive campaign to pressure the Water Board to approve a 50 ppt dioxin standard for the Trumark Project.

In addition to trying to save time and money by advocating insufficiently protective cleanup standards at the Site, the Responsible Parties also proposed a dilatory remedial action schedule that

exacerbates the risks posed by their project. As set forth in Water Board documents, the Responsible Parties proposed to delay their above-mentioned excavation, stockpiling and hauling of impacted soils until mid-2015, even though there are plans in place for the construction of additional new homes on a nearby parcel (the "Torian site") beginning in August 2014. Thus, as set forth in a February 14, 2014 email from the Water Board to the Responsible Parties, there is a risk that the new homes and occupants will be in close proximity to hazardous dusts and vapors and other nuisance conditions generated by the Trumark Project.

In sum, in light of the magnitude of the risks to health and the environment posed by the Trumark Project, and the considerable resources, sophistication and resolve demonstrated by the Responsible Parties in their efforts to ignore, sidestep, or otherwise inadequately address those risks, it is clear that the Site and the Trumark Project pose a significant risk of endangerment to health and the environment. Thus, protection of health and the environment require federal court intervention, as well as additional regulatory oversight by DTSC and/or EPA.

4. The Imminent and Substantial Endangerment and Relief Available Therefor

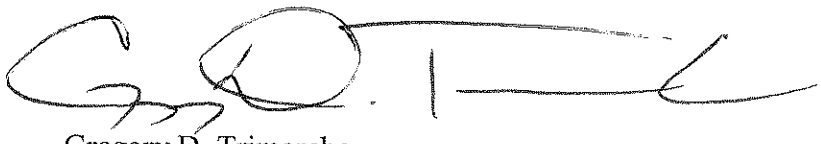
For all the reasons discussed herein, the existing conditions and circumstances described above may present an imminent and substantial endangerment to health or the environment, for purposes of RCRA Section 7002(a)(1)(B), 42 U.S.C. Section 6972(a)(1)(B). To summarize again, an imminent and substantial endangerment to health or the environment is presented by, among other things, the continuing migration of dioxins, furans and other hazardous substances from the Site onto adjacent parcels and, perhaps more significant, by Trumark's plan to excavate the former evaporation ponds at the Jones-Hamilton site – both of which could expose workers at the Gallade site, residents at the adjacent residential property, and possibly others, to significant levels of dioxins, furans and other hazardous substances (potentially in both indoor and outdoor air). Thus, a citizen suit is appropriate to address this imminent and substantial endangerment to health or the environment.

In addition, under the cost recovery and contribution provisions of CERCLA, as well as the state law principles of nuisance, trespass and negligence (among others), Jones-Hamilton (as the owner and operator of the Jones-Hamilton facility at the time of release of hazardous substances at and from the Site) and Newmark (as the current owner of the Site) are liable for any response costs and/or other losses or damages suffered by any adjacent property owners as a result of the presence of dioxins, furans and/or other hazardous substances at their properties that originated from releases at the Site. In addition, Trumark should be liable as the current "operator" of the site under CERCLA (as it appears to be exercising control over the management of hazardous substances at the site).

In sum, Jones-Hamilton, Newmark, and Trumark (collectively, the "Responsible Parties") have caused, and continue to cause, allow, and/or fail to prevent or mitigate significant releases of dioxins, furans and other hazardous substances from the Site to the Gallade property and other adjacent parcels. In addition, the Responsible Parties' plans for residential redevelopment of the Site – including but not limited to their efforts to establish a cleanup schedule and standards for the Site that are not sufficiently

protective of public health – have been and are creating further significant risks to health and the environment. As such, Gallade intends to file suit against the Responsible Parties, including claims under RCRA and CERCLA, as well as state law claims, not less than 90 days after this notice.

Sincerely,



Gregory D. Trimarche

cc: Rick Gallade, Gallade Chemical Company (via email)
Terrence Grindall, Assistant City Manager, City of Newark (via email)
Robert Doty, Cox Castle & Nicholson (via email)
David Lanferman, Rutan & Tucker (via email)
David Benoun, City Attorney, City of Newark (via email)
Veronica Vargas, Trumark Company (via email)
Alameda County Board of Supervisors, 1221 Oak Street, #536, Oakland, CA 94612
State Senator Ellen Corbett, State Capitol, Room 313, Sacramento, CA 95814
State Assemblyman Bob Wieckowski, P.O. Box 942849, Sacramento, CA 94249-0025
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September 19, 2014

Via Email

Mr. Terrence Grindall
Community Development Director
37101 Newark Boulevard
Newark, CA 94560
Terrence.grindall@newark.org

RE: Draft Recirculated EIR
Newark Areas 3 and 4 Specific Plan Project

Dear Mr. Grindall;

This office represents Citizens Committee to Complete the Refuge and its members in regards to the City of Newark's proposed Draft Recirculated EIR for the Newark Areas 3 and 4 Specific Plan Project. ("REIR"). Attached hereto please find detailed comments from this office about how the REIR violates CEQA.

In addition, please find attached (A) May 28, 2010 comments from Grassetti Environmental Consulting, (B) June 10, 2010 comments of the San Francisco Bay Regional Water Quality Control Board, and (C) Wildscape Engineering Services – each of which is still relevant to this REIR and which the City should provides responses to at this time.

Because the REIR is fundamentally and basically inadequate, meaningful public review and comment are precluded. Once the REIR is fixed it must be recirculated for public review and comment. Prior to the City Council's decision, if ever, that the REIR complies with CEQA and therefore may be certified, no action in furtherance of the Project should be permitted.

Thank you for your attention to this matter.

Sincerely,

Brian Gaffney

Brian Gaffney

cc: Citizens Committee to Complete the Refuge

I. Program or Project Level of Analysis.

In *Citizens Committee to Complete the Refuge v City of Newark,* Alameda Superior Case # RG10530015, the trial court was concerned with

(1) the 2010 EIR's clarity in stating whether the agency intends the EIR is complete by itself or anticipates further tiered environmental review affects the adequacy of the EIR as a disclosure document;

(2) an EIR's timing, purpose, nature, and other circumstances affect the level of scrutiny the court will require when evaluating compliance with CEQA; and

(3) an EIR's scope and specificity will affect a future agency decision whether future yet-to-be-defined actions were covered by the EIR and whether the agency can, or is permitted to, conduct supplemental environmental review.

The trial court found the proposed project is in the nature of a "program EIR" in that it concerns planning and zoning and does not describe the demolition or construction of specific buildings or infrastructure.

The trial court noted that the 2010 EIR stated that "[a]s explained on pages 2 – 3 of the [2010] Draft EIR, when future discretionary approvals related to the Project are sought from the City (as well as from any responsible agency) the City will consider whether there is a need for additional environmental review pursuant to CEQA Guidelines Section 15162."

The trial court found that "the EIR fails to meet its purpose as a disclosure document because it does not clearly state whether the City intends the EIR to be a sole-tier EIR or anticipates further tiered environmental review. The trial court held that "the public is entitled to be informed whether the approving agency considers the EIR to be a sole-tier document and does not anticipate any further environmental review absent a significant change (Pub. Res. Code § 21166; 14 CCR 15162) or considers an EIR to be a first-tier document regarding a "policy, plan, program, or ordinance" where the agency anticipates subsequent review (Pub. Res. Code §§ 21093, 21094; 14 CCR 15152, 15153)." The trial court held that "informed public discussion and analysis requires that the approving agency indicate whether it anticipates future environmental review." (Statement of Decision, p. 24)

1. The REIR equivocates on whether the City anticipates further environmental review, or if this REIR will be the sole-tier of environmental review.

The REIR states that "for elements evaluated at a program level, it is anticipated that the City and other responsible agencies will apply the tiering criteria of CEQA Guidelines section 15168, which includes a consideration of the factors under Section 21166 to determine whether and what level of additional environmental analysis is required." (REIR, p. S-5) However, Public Resources Code section 21166 only requires preparation of a subsequent or supplemental EIR when either:

(a) substantial changes are proposed in the project which will require major revisions of the EIR.
(b) substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the EIR.

(c) new information, which was not known and could not have been known at the time the EIR was certified as complete, becomes available.

2. Clarify what is meant by evaluation "at a program level" at REIR p. S-5. How would this analysis have been different if evaluated at a project level ?

3. The REIR also states that "[a]nalysis of detailed, site-specific information about the school in Area 3 and the residential and golf course development in Area 4 must await the future proposals about whether and how to proceed with those plans." (REIR, p. S-4)

4. Clarify if there will be further environmental review for the school in Area 3, the residential development in Area 4, and the golf course development in Area 4.

5. Explain what is meant by "analysis of impacts at a programmatic level" of the impacts from the construction and operation of an elementary school in Area 3. Clarify what analysis has been omitted from this REIR, and also what has been included.

6. Explain what is meant by the "programmatic level of analysis" of the environmental impacts from the construction of new houses in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

7. Explain what is meant by the "programmatic level of analysis" of the environmental impacts from the construction and operation of a golf course in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

8. Clarify what analysis has been deferred from this REIR. The REIR states that analysis of "detailed, site-specific information can be deferred until such time as the lead agency prepares a future environmental document in connection with a proposal of a more limited geographic scale or more specific improvement." (REIR, p. 3)

9. Explain what is meant by evaluation "at a programmatic level" of construction of the Stevenson Boulevard railroad crossing. Clarify what analysis has been omitted from this REIR, and also what has been included.

10. Explain what is meant by evaluation "at a programmatic level" of construction of the Mowry Avenue EVA access. Clarify what analysis has been omitted from this REIR, and also what has been included.

11. Explain what is meant by evaluation "at a programmatic level" of relocation of PG&E transmission lines in Area 4. Clarify what analysis has been omitted from this REIR, and also what has been included.

12. Explain how the REIR's programmatic analysis of the Area 3 construction/occupation of an elementary school and three-acre joint-use park has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual

action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

13. Explain how the REIR's programmatic analysis of the construction/occupation of residential units in Area 4 has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

14. Explain how the REIR's programmatic analysis of the development/use of a public golf course or other recreational facility in Area 4 has (A) provided a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action, (B) ensured consideration of cumulative impacts that might be slighted in a case-by-case analysis, and (C) allowed Newark to consider broad policy alternatives and program wide mitigation measures at an early time when the City has greater flexibility to deal with basic problems and cumulative impacts.

15. The trial court's Statement of Decision held that the 2010 EIR violated CEQA as the 2010 EIR did not specify if further environmental review was forthcoming. Does the City intend to invoke Government section 65457 to prevent further environmental review of residential development in Sub Areas A, B, and C ?

16. The REIR fails to include project-level analysis of the Alameda County Flood Control and Water Conservation District accepting maintenance/access easements along levees and/or approving permits to add/replace a flapgate at the Line D outfall in Area 3. The REIR, at section 1.3.1.3 "Program-Level Analysis in the Recirculated EIR," states that Newark anticipates "the need for subsequent environmental review" for the Alameda County Flood Control and Water Conservation District's acceptance of maintenance/access easements along levees and/or permit to add outfall(s) in Area 4. This contrasts with the REIR's claim that Newark "intends this Recirculated EIR to adequately address the environmental impacts that could result from the Alameda County Flood Control and Water Conservation District (ACFC&WCD) accepting maintenance/access easements along levees and/or approving permits to add/replace a flapgate at the Line D outfall in Area 3." (REIR p. 4.) The REIR summary also shows this project approval as subject to "project level" analysis in both Area 3 and in Area 4. (REIR pp. S-7 & S-8)

17. The Draft REIR is confusing and contradictory regarding the REIR's level of analysis of Newark's acceptance of park improvements and maintenance Agreement. The improvements and agreement are listed in the summary as subject to program level analysis. (REIR, p. S-8) However, REIR section 1.3.1.3 which details the program-level analysis in the Recirculated EIR does not mention Newark's acceptance of park improvements and maintenance agreement as subject to a program level analysis.

II. The REIR Does Not Properly Analyze Land Use Impacts.

1. The REIR considers an impact significant if the project will conflict with existing zoning for agricultural use. (REIR p. 49) "The existing zoning designation for Area 4 [is] predominantly Agricultural (A)."[1] (REIR p. 21, 49, 70) Sub Areas B, C and D in Area 4 will be rezoned pursuant to the project. (REIR, pp. 21, 70) Yet, the EIR fails to analyze land use impacts related to this conflict with existing zoning.

2. The REIR considers an impact significant if the project will conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. Despite this threshold, the REIR fails to analyze if the project will cross this threshold.

Elsewhere the REIR identifies the US Fish & Wildlife Service, the National Marine Fisheries Service, the Army Corps, the Regional Water Board, the California Department of Fish & Wildlife, and BCDC as agencies with jurisdiction over the project. Since LAFCO and Union Sanitary District are identified as agencies which the project will need to apply for Union Sanitary District Service Area permits, and Alameda County Flood Control and Water Conservation District will consider maintenance /access easements and/or permits to add outfall(s), these agencies have jurisdiction as well. There is no land use impact analysis of whether the project will "conflict with any applicable land use plan, policy, or regulation" for each of the above agencies.[2]

3. The REIR fails to analyze project conflicts with BCDC's Bay Plan. Even if subject to program level of review, the REIR is required to analyze reasonably foreseeable potential conflicts. The project is reasonably likely to include a golf course; this is not so speculative that the REIR can avoid any analysis of this potential conflict.

4. Further, neither the REIR's land use section or biological section analyze whether the project impacts will impact beneficial uses in Area 4, including but not limited to estuarine habitat; *preservation* of rare and endangered species; contact water recreation; non-contact water recreation; shellfish harvesting.

5. The REIR fails to determine consistency with Newark General Plan Policy HW-5.3 remediation of soil and groundwater contamination. (REIR, p. 69)

6. The REIR improperly defers formulation of mitigation measures as the REIR vaguely

[1] 471.5 acres are agricultural; 53% of project area. (REIR, p. 154) Most of the land within Areas 3 and 4 has been subject to long-term, dryland farming for 20 years, and in some areas outside of the historic duck club complexes south of the agricultural road, for as much as 100 years. When the duck clubs were closed in the 1970s and 1980s, dryland farming began across the most of Area 4 (outside of the former Pintail Duck Club area which remains perennially wet) and Area 3. (REIR p. 156, fn 45)

[2] Nor does the REIR properly analyze whether the project will result in significant water quality impacts as the REIR excludes analysis of whether the project will Regional Water Quality Control Board (RWQCB) water quality objectives (REIR, p. 244)

stats that “Hazardous materials in soil in Area 3 and 4 will be remediated to levels appropriate for the proposed residential and elementary school use,” without defining the standard to be utilized. The remediation plan shall be developed after project approval.

7. The REIR states that “[i]n terms of the cumulative analysis, land use compatibility can be divided into short-term and longterm impacts,” but the REIR fails to discuss long term cumulative land use impacts. (REIR, p. 330) This is troubling as the REIR warns that cumulative land use impacts could be substantial. (REIR p. 329),

8. While claiming that the thresholds of significance used in analyses of cumulative impacts are the same as those listed in Section 3 (REIR p. 329) the REIR fails to identify or discuss the thresholds at REIR section 3.1.4.1. Thus, there is no consideration of whether the proposed project in combination with past, present and reasonably foreseeable projects will either (A) conflict with existing zoning for agricultural use, or (B) conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project.

9. The REIR’s analysis of cumulative impacts is flawed. The REIR states that under CEQA an EIR should discuss cumulative impacts and consider them significant when the project’s contribution is “cumulatively considerable.” (REIR p. 328) Then, the REIR asserts, the analysis must determine what the project’s contribution to any cumulatively significant impact is cumulatively considerable, as defined by Section 15065(a)(3) of the CEQA Guidelines. (REIR, p. 328-329)

CEQA does not limit discussion of cumulative impacts to where the project’s “contribution” is cumulatively considerable. Instead, CEQA states that an EIR shall discuss cumulative impacts of a project when the project’s “incremental effect” is “cumulatively considerable,” as defined in section 15065(a)(3). (CEQA Guideline 15130) An agency shall find that a project may have a significant effect on the environment where the project has possible environmental effects that are “individually limited” but cumulatively considerable. “Cumulatively considerable” means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. (CEQA Guideline 15065)

Separately, an EIR may determine that a project's “contribution” to a “significant cumulative impact” will be rendered less than cumulatively considerable and thus is not significant IF the project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact, and the agency identifies facts and analysis supporting its conclusion that the contribution will be rendered less than cumulatively considerable.

The REIR’s flawed approach to analysis of cumulative impacts leads to a flawed analysis of both cumulative land use and cumulative biological impacts.

III. <u>The REIR Improperly Analyzes Traffic Impacts.</u>

1. The REIR fails to analyze if project site access and circulation impacts will be significant or adverse prior to application of proposed mitigations (REIR, pp. 100-01) This despite stating (REIR p. 101) that incorporation of measures into circulation plans are need to ensure less than significant impacts to site access and circulation.

2. The REIR impermissibly fails to compare project traffic impacts to existing conditions. (See REIR p. 73, § 3.2 Transportation) Project impacts were evaluated in the REIR by comparison to "background conditions," where "background conditions" are not existing traffic levels but the levels of "existing traffic volumes" plus "approved development-generated traffic volumes." "Traffic volumes for background conditions comprise volumes from existing traffic counts plus traffic generated by other approved but not yet constructed developments in the vicinity of the project site." The REIR determines project impacts by comparison to existing traffic plus the projects listed in Table 1 at REIR, Appendix A. Many of these projects are not currently operating, and thus can not constitute existing conditions.

By exclusively employing an analytic baseline of future conditions to assess likely traffic impacts, the EIR fails to disclose the project's effects on existing environmental conditions in the project area. (*Neighbors for Smart Rail v. Exposition Metro Line Construction Authority* (2013) 57 Cal.4th 439.) Further, the EIR does not attempt to show that an existing conditions baseline can be abandoned because it would be clearly misleading or without informational value to EIR users. (Id. at 457.) "The public and decision makers are entitled to the most accurate information on project impacts practically possible, and the choice of a baseline must reflect that goal." (Id. at 455.)

3. The REIR fails to analyze construction traffic impacts on the existing environment. The REIR only analyzes truck traffic impacts by comparison by project operational traffic. (REIR p. 102) This error precludes public and agency understanding of the impacts of the project, and what mitigations and alternatives should be considered.

4. The EIR utilizes an impermissible ratio approach in comparing cumulative traffic impacts to cumulative conditions without all other projects except this project. By utilizing this impermissible approach for its LOS or worse threshold, the REIR avoids concluding that cumulative traffic impacts are significant using "worse than LOS D" at least 4 intersections, including (1) Cherry & Thorton p.m.; (2) Ardenwood Blvd and SR 84 WB Ramps a.m., (3) Newark Blvd and SR 84 EB Ramps p.m., and (4) Grimmer Blvd and Auto Mall Pkwy p.m. See Table 4.2-1.1.

5. Likewise, using the threshold of delay increase of 4 seconds or more, the REIR never compares "cumulative with project" to existing conditions.

6. The REIR fails to analyze either project specific or cumulative traffic impacts at unsignalized intersections, despite that this analysis was feasible as indicated by its inclusion and disclosure to the public in the 2010 EIR.

IV. The REIR Fails to Properly Analyze Air Quality Impacts.

1. The REIR vaguely concludes emissions of ROG, NOx and PM10 are significant (REIR, p. 122-123), but fails to determine how adverse the impacts will be, thus not meeting CEQA's informational disclosure requirement and precluding formulation of feasible potential mitigation measures.

2. The REIR states that the REIR's air quality analysis was completed "in the same manner as the traffic report." This raises the possibility that the traffic report's failure to compare the project impacts to existing conditions also affects the air quality analysis. Please explain.

3. The REIR claims that PM10 emissions would be reduced to less than significant levels with the mitigation measures listed for MM AIR-1.1, but fails to provide any explanation as to how it reached this conclusion.

4. The REIR impermissibly fails to identify or consider any mitigation measure for significant Impact AIR-2, operational ROG and NOx emissions, simply concluding that there are no other reasonable and feasible mitigation measures that would reduce emissions. (REIR, p.123)

5A. The REIR fails to identify or consider any mitigation measures for significant Impact AIR-3, daily emissions for NOx and ROG which would exceed the BAAQMD significance threshold of 54 pounds per day. MM AIR-3.1 only states that "the project proponent and the City cannot control emissions from independent trucks used to haul fill material, therefore, there are no mitigation measures to reduce this impact, and it would remain significant and unavoidable." This approach violates CEQA as it ignores that the REIR will be used by other agencies for consideration of environmental impacts.

5B. The REIR does not explain why the City or other agencies can not condition fill importation on use of adequate air quality mitigation measures.

5C. The REIR fails to proffer substantial evidence to support its findings that the City cannot control emissions from independent trucks and thus no mitigation measures exist to reduce this impact.

5D. Here, as the lead agency, the City may impose conditions or enter into an agreement with the developer of the project to ensure that feasible mitigation measures be put into effect during construction of the project. Payment of fees and/or the purchase of offsets constitute a feasible mitigation measure when linked to a specific mitigation program. Another feasible mitigation measure that would both minimize and reduce air quality impacts related to construction activities would be the re-design of the project plan to lessen the amount of fill required.

5E. Moreover, the REIR completely failed to consider implementation of off-site mitigation measures that the City could undertake to mitigate air quality impacts of construction-related emissions (e.g., adopting an incentive program for sustainable transportation in the City of Newark or paying for retrofitting or elimination of other emission sources).

6. REIR section 3.3.4.5 acknowledges that there will be odors from construction phase diesel emissions. The REIR states that these odors will not be significant - simply because the REIR claims that the impacts will be "temporary." Short term impacts are not per se insignificant under CEQA, and therefore the REIR's approach is procedurally flawed.

7. The REIR fails to evaluate cumulative air quality impacts at section 4.3 under each of the air quality thresholds of significance at section 3.3.4.1.

8. The REIR determines that the proposed project, in combination with other projects, would result in a significant regional air quality impact (Impact C-AIR-3), but impermissibly fails to identify or discuss any potential mitigation measures. (REIR p. 340)

V. The REIR Fails to Properly Analyze Biological Impacts

Biological Environmental Setting

1. The REIR provides contradictory information regarding whether there are no ordinance trees present in Area 3, or whether no ordinance trees in Area 3 will be retained by the Project. REIR section 3.5.2.8 states that there are no trees (other than street-side landscape trees) "present" on Area 3, but doesn't disclose if the present Area 3 landscape trees are of the size requiring ordinance protection, or how many protected trees exist on Area 3. Further confusing the issue of impacts from tree removal and ordinance conflict, REIR section 3.5.3.5 states that there are no trees on Area 3 proposed to be "retained" by the Specific Plan, other than the street trees along Cherry Street and Stevenson Boulevard.

Biological Impacts

2. The analysis of tree preservation and transplanting should not be deferred until the time of project development, but should be analyzed in this REIR. REIR section 3.5.3.5 states that "Possibilities for tree preservation and suitability of transplanting appropriate trees will be considered at the time of development and shall be based upon tree sizes, health, structure, locations, and species."

3. The REIR changes the disclosure from the 2010 REIR. The 2010 REIR disclosed that "several" ordinance size trees located within "both Areas 3 and 4" will require removal. Now, the REIR (at p. 171**)** states that only a "few" protected trees will be affected, and that these affected trees are only in Area 4. The REIR does not explain the reason for either of these two changes. On what basis were these two changes made ?

4. For Area 4, the REIR does not disclose the "reasonably foreseeable" number of trees to be removed.

5. The REIR's biological thresholds of significance states that an impact will be considered significant if the project will conflict with any local ordinance protecting biological resources, such as a tree preservation policy or ordinance. (REIR, section 3.5.3.1) The REIR has not disclosed the number and location of protected trees (trunk diameter of six inches measured at four feet above ground level) that will removed, and thus does not analyze how adverse impacts

will be.

6. The REIR does not disclose how adverse impacts will be to retained trees in Area 3. The REIR does not disclose for Area 3 the number, age, size, condition, and species of the trees to be removed, despite revealing (REIR p 229) that construction activities could damage retained trees in Area 3 along Cherry Street and Stevenson Boulevard.

7. The REIR at section 4.6 fails to analyze cumulative biological resources pursuant to the thresholds of significance identified at section 3.5.3.1.

8. The REIR does not include any meaningful discussion of cumulative biological resources impacts. The REIR identifies 15 project-specific significant biological impacts (Impacts BIO-1 through BIO-15), yet the REIR does not even attempt to consider each of these impacts as part of the cumulative biological impact analysis. Instead, the REIR only vaguely states that other projects may impact "some" of the biological resources that will be impacted by the Areas 3 and 4 Specific Plan.

9. CEQA's cumulative analysis procedure require that minimized impacts must be considered in the context of similarly "minimized" impacts of "other closely related past, present, and reasonably foreseeable probable future projects" in order to assess whether the aggregated cumulative "change in the environment" may be significant. The REIR fails to follow this required procedure, particularly where it writes off any potential cumulatively considerable impact by characterizing impacts as "negligible" or "minimal."

10. The REIR's analysis of indirect biological impacts is hampered because in "Area 3, only the northeastern corner (area proposed for development) was included in the biological analysis for the project." (REIR p. 154)

Biological Mitigation Measures

10. MM BIO-14.1 states that implementation of the Specific Plan shall incorporate preservation of existing trees with emphasis on ordinance-size or larger native species and in good or better condition, to the maximum extent practicable, to the satisfaction of the City's Community Development Director. This measure impermissibly defers formulation of mitigation. The REIR does not include a performance standard the Development Director will utilize, or how maximum extent practicable will be determined, or whether incorporation of preservation will mean actual preservation of all existing trees or some fraction of existing trees.

11. MM BIO-14.2 states that in locations where preservation of existing trees is not feasible due to site constraints, trees to be removed by the project shall be replaced at a 3:1 ratio unless the City's Community Development Director determines that a higher ratio is required. Trees greater than 18 inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has first been approved for the removal of such trees. The REIR does not state the standard to be used to determine if preservation is infeasible.

12. The REIR does not why trees trees greater than 18" require a permit where the Newark Tree ordinance requires a permit for the removal or relocation of any tree with a trunk diameter of 6 inches or greater measured at four feet above ground level.

13. MM BIO-14.3 does not state what performance criteria shall be used to determine the species and number of trees to be planted.

14. The REIR (p. 172) states that mitigation ratios for impacts to sensitive habitats are based on those required or commonly required under applicable policies, laws, and regulations. Please identify each such policy, law and regulation for each impact.

15. The REIR fails to include any discussion of the feasibility of prohibiting free-roaming outdoor cats in MM BIO-4.7.

16. The REIR fails to explain the contradiction between MM BIO-8.3 requirement that "any individuals already in the impact areas shall be salvaged and translocated to the exterior of the construction exclusion area" and yet same mitigation statement that "we are <u>not</u> proposing to require trapping and relocation."

17. The REIR violates CEQA by concluding without meaningful discussion that implementation of unspecified mitigation measures will "adequately mitigate" cumulative biological impacts.

18. The REIR fails to properly analyze potentially significant impacts of MM BIO 11.1 which includes application of herbicides. Elsewhere the REIR acknowledges that construction-phase pollutants that could contribute to the degradation of surface-water quality include pesticides and herbicides, and that this construction phase impact is significant. This analysis of Impact HYD-2 and the mitigations are limited to the construction phase. There is no analysis of the impacts of MM BIO 1.1 as required by CEQA, including which herbicides will be used, the volume of herbicides to be used and which will run-off and the likely impacts.

19. The REIR fails to cite to substantial evidence to support mitigations, including but not limited to MM BIO-1.2A's creation of "high quality wetland and aquatic habitat within Area 4 within upland habitat" and "enhancement of existing seasonal wetland habitat that is currently within agricultural production." The REIR fails to supply any evidence demonstrating that the proposed creation of wetland habitat within the upland portion of Area 4 and in portions of Area 4 currently in agricultural production (which both have divergent characteristics from the tidal marsh transitional portions of Area 4), will minimize the adverse impacts of filling the "tidal/marsh upland transition" wetlands.

20. The REIR fails to specify the on-site location where wetland mitigation will occur, but instead improperly defers that determination.

<u>Mitigation for Long-Term Survival of Remaining Trees</u>

In *Citizens Committee to Complete the Refuge v City of Newark,* Alameda Superior Court

Case # RG10530015, the trial court's statement of decision held that the Newark Areas 3 and 4 Specific Plan Project Environmental Impact Report (hereinafter "2010 EIR") improperly deferred mitigation of impacts to trees. The court found that the 2010 EIR's tree mitigation plan did not identify any "specific performance criteria." That plan failed to address the threats to the long-term survival of remaining trees from restrictions on sunlight and root growth, and/or altering groundwater conditions.

The REIR discloses that "the potential for preserved trees to continue to grow and thrive could be affected by the new more intense development. This intense development could adversely affect the long-term survival of trees to remain by restricting sunlight and root growth, and/or altering groundwater conditions." The REIR thus concludes that "Impact BIO-15: The health of the trees to be preserved could be significantly impacted in the short-term by construction activities and in the long-term due to the proposed Specific Plan development."

The REIR is different than the 2010 EIR, as Mitigation BIO-15.1 now details that the Tree Preservation Plan will include:

- Tree Protection Zones
- Protection of Tree Root Systems
- Installation of Wood Bark Mulch
- Installation and Maintain of Protection Zone Fencing
- Pruning Tree Roots and Crowns Only as Necessary, and
- Irrigation of Trees within the Protective Zone

Further, the REIR claims that Tree Protection Zone shall: (1) ensure that no structures or buildings, that might restrict sunlight relative to the existing condition, will be constructed in close proximity to the trees; and (2) that no improvements are constructed on the ground around the tree within the Tree Protection Zone.

Pursuant to new Mitigation BIO-15.2, the Mitigation BIO-15.1 Tree Preservation Plan measures may be determined not to be feasible and thus the remaining trees will not be preserved.

1. The REIR fails to disclose what criteria will be used to determine such "infeasibility," and thus avoidance of the Mitigation BIO-15.1 Tree Preservation Plan.

2. In addition, the REIR does not analyze whether the significant impact will still be lessened to insignificant - if BIO-15.2 tree replacement substitutes for BIO-15.1 tree preservation.

Mitigation of Impacts to Sensitive Habitats and Special Status Species from Invasive Species

In *Citizens Committee to Complete the Refuge v City of Newark*, Alameda Superior Case # RG10530015, the trial court's statement of decision held that the 2010 EIR improperly deferred mitigation of impacts to sensitive habitats and special status species. (Statement of Decision, p. 15) The court found that Mitigation Measure BIO-11.1 was not at issue, but "MM BIO-11.2 states generalized performance criteria for the anticipated Invasive Species

Management Plan and that the as yet undeveloped management plan 'will contain details regarding ... success criteria.'" The court found that the City improperly deferred mitigation of impacts to sensitive habitats.

1. The 2010 EIR concludes that incorporation of mitigation measures (MM BIO-11.1 and MM BIO-11.2) would reduce native plant and wildlife species impacts to a less than significant level. The REIR includes only one mitigation measure, a new BIO-11.1. REIR mitigation measure BIO-11.1 does not include "removal concentrations of invasive species" which was considered and adopted in the 2010 EIR and approvals. The REIR does not explain why this previous mitigation measure was eliminated. (REIR p. 221)

2. The REIR does not explain how impacts to sensitive and special status species will be less-than-significant given that "removal concentrations of invasive species" is no longer a mitigation measure. (REIR p. 221)

3. The REIR does not disclose what the "Best Management Practices" to be applied to all upland areas to be graded. (REIR p. 221)

4. The REIR does not disclose what criteria the City of Newark will use in reviewing and approving weed control methodologies. (REIR p. 221)

5. The REIR does not disclose the manual and mechanical methods to be used, or what criteria will guide when manual and mechanical methods are used rather than herbicide application. (REIR p. 221)

6. The REIR does not disclose what impacts may result from planned spraying of pesticides.

7. The REIR does not disclose the timing of the weed control treatments. The REIR does not disclose how will the City determine that weeds are about to encroach into adjacent areas from shoots. (REIR p. 222)

8. Once grading ceases, monitoring of weeds will cease outside sensitive habitats. (REIR p. 222) The REIR does not disclose the location of these area "outside of sensitive habitats" or why weed monitoring will cease at this time.

9. The REIR does not disclose how the City will determine that weeds are about to encroach into adjacent areas from shoots without post-grading monitoring of areas "outside of sensitive habitats."

10. Under the REIR, weed control measures will not be implemented in sensitive habitats in any monitoring year that the size of weed populations within sensitive habitats have expanded less than 20% from the baseline. (REIR p. 222) Is this intended to be a success criteria?

11. Further, the REIR does not specify if the 20% increase will be measured as a gross of all

weed populations or if 20% will be determined by increase in individual plant species - i.e. if there is a 20% increase in fennel in a particular year, but overall the weed population increase in sensitive habitats was only 18% would weed control measures be implemented.

12. The REIR does not disclose why no control measures will be implemented where there is a 19% increase in weed expansion in sensitive habitats.

13. The REIR does not disclose the success criteria for treatment of weed populations in areas to be developed which do not qualify as sensitive habitat.

14. Environmental setting. The REIR does not disclose the size and location of invasive plants species. The public is referred to Table 5 of the Draft EIR Appendix E. That document is not provided as an attachment or referenced in the REIR references at the end of the REIR. If that information exists elsewhere, it should be included in this REIR; the public should not have to ferret out the environmental setting.

15. The REIR does not disclose if "fill" material required to elevate building sites will be subject to weed evaluation and/or treatment prior to fill placement on the project site. This disclosure is important as the Specific Plan discloses that:
-importation of fill material can cause the spread of invasive non native plant species, of particular concern being fennel, pampas grass, perennial pepperweed, and smallflower tamarisk;
- ground disturbance associated with construction would create vast new areas suitable for recruitment of these non native species (e.g., along the fill embankments), many of which form dense, monotypic stands, eliminating any natural habitat that the area previously supported;
- expansion of these invasive plant populations on the site will also increase the seed bank on the site allowing spread to unimpacted natural habitats on the site;
- in Areas 3 and 4, fill material for the proposed residential construction may contain seed from nonnative plant species not already found on the site, and site grading will likely spread non native, invasive plant species imported in fill or already present on the site.

VI. <u>The REIR's Analysis of Impacts from Greenhouse Gas Emissions Is Inadequate</u>.

1. Since Newark considered the 2010 REIR the CEQA Guidelines have changed to add 14 CCR § 15064.4 - Determining the Significance of Impacts from Greenhouse Gas Emissions. The REIR does not even mention this CEQA Guideline.

2. The REIR identifies four "major" greenhouse gases: carbon dioxide, methane, nitrous oxide, and fluorinated gases. (REIR, p. 341) The REIR acknowledges project emissions of methane and nitrous oxide, and that these emissions are more potent green house gas emissions.[3] Yet, the REIR fails to calculate emissions from either methane or nitrous oxide. (REIR, p. 352) These omissions violate CEQA Guideline 15064.4, subd. (a) which requires that Newark make a good faith effort to describe, calculate or estimate the amount of greenhouse gas emissions

[3] Methane has a global warming potential 23 times that of carbon dioxide, while nitrous oxide is 296 times that of the same amount of carbon dioxide.

resulting from this project. These omissions also violate CEQA Guideline 15064.4, subd. (b) which requires that Newark consider the extent to which the project may increase greenhouse gas emissions as compared to the existing environmental setting.

3. The REIR fails to provide substantial evidence to support its conclusion that no mitigation measures will reduce the significant unavoidable impacts of the Project on global climate change.

VII. The REIR's Hydrology and Water Quality Impacts is Flawed.

1. The REIR does not explain how it can conclude the project would not create or contribute runoff water that would exceed the capacity of existing stormwater drainage systems given that both Area 3 and Area 4 will be drained via new underground storm drain lines.

2. The REIR fails to disclose outfall locations, despite acknowledging (at p. 177) that erosion or channelization may occur if outfalls and transition culverts are not correctly placed. Thus, a full analysis of erosion impacts is thwarted.

3. The REIR discussion of cumulative hydrology and water quality impacts fails to analyze such impacts under the criteria at REIR section 3.8.3.1.

4. With respect to cumulative hydrology and water quality impacts in Area 4, the EIR impermissibly presumes, without analysis or evidence, that as long as every project complies with City, State and federal regulations and implements mitigations similar to the proposed Project, there will be no significant cumulative hydrologic and water quality impacts.

VIII. The REIR's Analysis of Visual Impacts is Inadequate.

1. The REIR fails to analyze any potential mitigation measures for significant Impact VIS-1. The REIR impermissibly avoids this CEQA requirement and summarily states that "There are no feasible mitigation measures that would mitigate for the significant change in visual character, which would result from the development of Area 4. (Significant Unavoidable Impact)."

2. The REIR fails to adequately analyze potential mitigation measures for significant cumulative visual impacts. The REIR concludes under Impact C-VIS-5 that the cumulative projects would result in cumulatively significant visual and aesthetic impacts, and the proposed Specific Plan project would make a cumulatively considerable contribution towards this cumulative impact. The EIR mentions parks and open space areas, use of architectural features in building designs, and the installation of landscaping, but fails to discuss any of these measures as required by CEQA. Instead, the REIR summarily concludes that such significant impacts are simply unavoidable.

3. The REIR fails to provide substantial evidence to support its conclusion that no mitigation measures will reduce the above identified significant unavoidable impacts.

IX. Additional Unlawful Deferral of Mitigation Measure Formulation

Formulation of mitigation measures may not be deferred until some future time. However, measures may specify performance standards which would mitigate the significant effect of the project and which may be accomplished in more than one specified way. (CEQA Guideline 15162.4) "An agency violates CEQA by deferring the formulation of mitigation measures without committing to specific performance criteria for judging the efficacy of the future mitigation measures." (*POET, LLC v. California Air Resources Board* (2013) 218 Cal.App.4th 681, 698-99.)

1. The REIR violates CEQA as measures AM ENR-1.1, MM C-GCC-4.1, Land Use, and Cumulative Land Use each defer formulation of mitigation measures without performance standards by vaguely stating that "as many green practices as appropriate and feasible" will be incorporated.

X. The Project Description is Vague and Confusing.

1. The REIR vaguely claims that "additional detail has been provided with respect to the location of approximately 600 residential lots in Area 3. (REIR, p. 2) Clarify what additional detail is provided in the REIR regarding these residential lots.

2. The REIR is vague and confusing regarding technical characteristics and permits/approvals by the Alameda County Flood Control and Water Conservation District (ACFC). The REIR claims that since the 2010 EIR was certified, there have been no significant changes to the project description. (REIR, p. 2) The 2010 EIR referenced the ACFC acceptance of maintenance/access easements along levees and/or permit in order to "move tide gate(s)." In contrast the REIR does not reference moving tide gates. Instead, the REIR refers to adding or replacing a flapgate at the Line D outfall in Area 3, and adding outfalls in Area 4. (REIR pp. 4-5, also pp. S-7 to S-8). Further, there is no analysis in the REIR of the impacts of adding/replacing a flapgate in Area 3, and adding outfalls in Area 4.

XI. Documents Not Made Available to the Public

On September 19, 2014, a member of Citizens went to the Newark Community Development Department (see Attachment D hereto), and requested to review the "Appendices to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs" which the REIR claims are available at the City of Newark Community Development Department. (REIR, p. S-3) Only, Appendix A was available in Newark as of this date.

Thus, the public does not have access to (1) a traffic impact analysis claimed to exist at Appendix B of the Draft EIR (REIR, pp. 73 & S-73); (2) air quality studies claimed to exist at Appendix C of the Draft EIR (REIR, p. 104); (3) noise assessments claimed to exist at Appendix D of the Draft EIR (REIR, p. 135); (4) a site-specific biological report claimed to exist at Appendix E of the Draft EIR (REIR, pp. 150& 172); (5) a geotechnical feasibility evaluation

claimed to exist at Appendix F of the Draft EIR (REIR, p. 223); (6) a hydrology and water quality impact analysis claimed to exist at Appendix G of the Draft EIR (REIR, p. 237); (7) Conceptual Land Use Plans, Hazardous Materials Review, Phase I Environmental Site Assessments, and a Preliminary Soil, Soil Gas, and Ground Water Quality Evaluation claimed to exist at Appendix H of the Draft EIR (REIR, p. 258), and (8) a Water Supply Assessment claimed to exist at Appendix I of the Draft EIR (REIR, p. 302) Thus, any incorporation by reference of these unavailable appendices is invalid.

Mr. Terrence Grindall
Community Development Director
37101 Newark Boulevard
Newark, CA 94560

May 28, 2010

SUBJECT: REVIEW OF FINAL ENVIRONMENTAL IMPACT REPORT FOR NEWARK AREAS 3 AND 4 SPECIFIC PLAN PROJECT

Dear Mr. Grindall;

Grassetti Environmental Consulting (GECo) has been retained by the Citizens' Committee to Complete the Refuge to review the Environmental Impact Report (EIR) on the Newark Areas 3 and 4 Specific Plan and relevant background documentation for technical adequacy and compliance with the California Environmental Quality Act (CEQA) and its implementing Guidelines. GECo submitted comments on the Draft EIR in our January 17, 2010, letter. We have reviewed the City's responses to those comments and offer the following comments on the Final EIR (FEIR). This review was conducted by Richard Grassetti, the firm's principal, and is based on my 25 years of experience in CEQA document preparation, review, and training. My comments are summarized below.

Uses of the EIR (Response I-1)

As discussed in our January letter, the DEIR is vague as to its use with respect to future projects. The City's response to comments continues to fail to recognize that this DEIR is a programmatic analysis that neither describes nor assesses project-specific impacts of implementing any specific components of the project. Therefore it cannot assure, absent subsequent CEQA documentation, that full disclosure, analysis, or mitigation was included for as-yet undesigned specific project components. Although the response to Comment I-1 is vague, the response to Comment J-1 unequivocally states that the "The EIR for the Specific Plan is a project- level EIR". Given that the subject EIR includes no site-specific development plans, it fails to meet even the most basic requirements of a project-level document. Specifically, it has no lotting plans (other than conceptual sketches); no roadway plans for internal circulation (again, other than conceptual sketches); no internal traffic analysis, including analysis of school loading areas, parking adequacy, and intersection operations; no design plans for homes (other than conceptual sketches), commercial structures, or schools; no analysis of hauling of fill materials or construction materials/equipment; no landscape plans (other than a few conceptual

sketches); no detailed site assessments for cultural resources; and no detailed infrastructure plan (other than a minimal drainage "plan" for the major subareas). Therefore the EIR is clearly programmatic and cannot be relied upon for future approvals absent subsequent CEQA review. The requirements for this review are clearly detailed in Guidelines section 15152.

Given that this document is programmatic in scope and content, the City's response continues to erroneously rely on CEQA Guidelines section 15162, which applies to subsequent or supplemental EIRs on the same project, and not tiering from a program EIR, which is what would be required under CEQA when approving a specific development project within a program, such as a Specific Plan. The CEQA section that applies to future use of this EIR, as well as necessary subsequent CEQA documentation, is Section 15152, not 15162. Specifically, Guidelines section 15152(b), states that, "Tiering is appropriate when the sequence of analysis is from an EIR prepared for a General Plan, policy, or program to…..a site-specific EIR or negative declaration."

Project Description (Response I-2)

The comment noted that the project description defers the development of a number of plans the contents of which are critical to identifying the magnitude of potential project impacts. The response mysteriously refers the reader to response I-1, which does not specifically address any of these missing items. Compounding this deficiency is Response I-1's failure to acknowledge the CEQA requirement for subsequent CEQA review if and when these plans are completed. This appears to be setting the stage for a shell game, where a major project item necessary to identify impacts is deferred to subsequent CEQA review, which then does not occur. This is impermissible under Guidelines Section 15152, which state, "Tiering does not excuse the lead agency from adequately analyzing reasonably foreseeable significant environmental effects of a project and does not justify deferring such analyses to a later tier EIR or negative declaration." If this EIR is supposed to be a project-level EIR, it is clearly missing key project description components necessary to completing an adequate analysis. If it is a program-level EIR, it also is not excused from providing these key elements for impact assessment. The response is off-point and inadequate.

Project Description (Response I-3)

The comment requested a description of the additional quantities of fill required to protect the project from sea level rise anticipated during the project live span (100 years?). The comment noted that the 50-year project life assumed in the Sea Level Rise discussion is illogical in the context of houses, which typically are in use far longer than that (at least 100 years; by the EIR's logic, houses built in 1960 would have no useful life left). The response directed the reader to Master Response 1, regarding sea level rise. A

review of that response found no mention of 100-year sea level rise impacts to the proposed project; the FEIR continues to rely on the 50-year sea level rise in its impact assessment. It then discusses 100-year flood events in addition to the 50-year sea level rise. This fails to address the comment, which requested an analysis of the 100-year flood event added to the 100-year sea level rise estimate.

This deficiency is further compounded by the Master responses mischaracterization of the conclusions of the Vermeer, Martin, and Rahmsdorf study. That study concludes [emphasis added]:

> "If our method presents a reasonable approximation of the future sea-level response to global warming, then for a given emission scenario sea level will rise approximately three times as much by 2100 as the projections (excluding rapid ice flow dynamics) of the IPCC AR4 (2) have suggested. ***Even for the lowest emission scenario (B1), sea-level rise is then likely to be (approximately) 1 m; for the highest, it may even come closer to 2 m.***
>
> "Uncertainties remain, however. While the thermal expansion response has been tested on simulated data, it is less clear whether the information contained in the 120 years of observational data about the ice response is sufficient to describe the future ice-melt contribution out to the year 2100. The key question then is: will the ice-melt response observed so far, as captured in our dual model, overestimate or underestimate future sea-level rise? On one hand, the surface area of mountain glaciers vulnerable to melting will decrease in future as glaciers disappear. However, more ice higher up in mountains and particularly the big continental ice sheets will increasingly become subject to melting as temperatures warm. The net effect, an increasing or decreasing surface area subject to melting, is not easily determined without detailed regional studies. In addition, highly nonlinear responses of ice flow may become increasingly important during the 21st century. ***These are likely to make our linear approach an underestimate. Therefore, we have to entertain the possibility that sea level could rise faster still than suggested by the simple projection based on Eq. 2."***

Further, the FEIR correctly notes that the updated CEQA Guidelines section 15126.2 requires that the EIR assess flooding in the future, and that the "future" to be evaluated should be based on the life of the project. The 50-year analysis included in the FEIR fails to address the fact that the specific plan may not be built out for 10-20 years, and that the houses and commercial structures would have a lifespan of far greater than another 30-40 years.

The EIR's reliance on the "speculative" exception for analysis fails to hold water in light of the availability of detailed maps of sea level rise in the Bay referenced in our

comments on the DEIR, and acknowledged in the FEIR. This erroneous impact assessment of long-term seal level rise results in an inadequate and incomplete analyses of site flooding and drainage issues raised in the comments. Please note that we have provided other detailed comments on the EIR's failure to address flooding impacts to the project associated with sea level rise in our discussion of response I-11, below.

Project Objectives and Alternatives (Response I-4)

The comment noted that CEQA requires that that project objectives may not be so narrow as to unreasonably restrict the range of alternatives considered in the EIR or preclude other feasible alternatives that may be environmentally superior. This EIR includes Project Objectives that unreasonably restrict the range of alternatives considered in the document. Specifically, the project objectives set forth on p. 26 of the DEIR are little more than a regurgitation of the project description. The City's response asserts that the project objectives reflect the goals of the General Plan. This response fails to address the substance of the comment, which is that the objectives unreasonably restrict the range of alternatives that can be deemed to be 'feasible". This objective is also in conflict with itself, given that the stated goals apply only to Area 4, but not Area 3, which has an industrial technology park designation in the General Plan. Given that the project proposes to amend the General Plan for Area 3, it is unclear why all alternatives must be beholden to the goals for Area 4.

The comment also stated that the overall level of analyses of impacts of the alternatives is insufficient to permit decision makers to seriously consider the relative merits of the alternatives. There is less than one paragraph of impact analysis for each of the "Build" alternatives (factoring out the General Plan compliance language), which fails to comply with the Laurel Heights I case dictum regarding alternatives, that the EIR provide "meaningful detail" and "sufficient information to the public to enable it to understand, evaluate, and respond" to the agency's conclusions. The comment requested a discussion comparing each impact of the alternative with that of the project, or explaining why they would be the same. Response I-4 has no language at all responding to this key deficiency in the document. Therefore this response fails to meaningfully respond to the comment.

Technical Issues

GECo also provided specific comments on technical deficiencies in the DEIR. Responses to those comments are assessed for adequacy below:

Response I-5

Traffic: The comment requested an analysis of the traffic impacts of hauling fill material from the BART tunneling project to the site, and requested analysis of the traffic impacts if BART fill were not available. The response is that the construction truck traffic would be less than operational traffic from the project. While this may be true, it is not an impact analysis but rather a relative comparison. In addition, the EIR assesses project traffic assuming a number of major roadway improvements are constructed prior to project completion, however it is likely that project filling would occur prior to those improvements being constructed. Therefore the EIR remains deficient in failing to analyze truck impacts (600 trucks/day) on the existing roadway system.

Response I-6

Air Quality: The comment states that DEIR fails to correctly address emissions associated with trucks hauling fill. The EIR assumes that 100 truckloads of material would be transported each day. Given that the EIR states that "all grading activities were assumed to occur in the first two years", the EIR air quality assessment (and traffic assessment, too) should have assumed over 600 haul-trucks per day (or more, if no weekend work is to occur).

The response continues to assert that all grading vehicles were assumed to occur in the first 2 years, but does not correct the apparent model input from 100 trucks/day to the correct 600-700 trucks/day. If the latter number is, in fact, correct, as implied by the text of both the DEIR and the Response, the EIR remains deficient.

Response I-7

Noise: The comment states that the EIR construction noise analysis fails to include any analysis of the 600 or more haul trucks required to transport fill to the project site each day for over two years. What route would those trucks use? Please identify sensitive receptors along that route? What would the noise impacts be? The response also requests an analysis of the effects of repeated single event truck noise as required by the *Berkeley Keep Jets Over the Bay v. Board of Port Commissioners* decision (2002).

The response states, with no supporting evidence, that the 600+ truck trips/day would result in "no noise impacts" because truck traffic would make up a small percentage of total traffic volume along area roadways. This is a conclusion, not an analysis. In addition, the response fails to address the request for consideration of repeated single-event truck traffic noise.

Response I-8

Biological Resources: The comment requests that the EIR investigate whether eviction

of burrowing owls as proposed in mitigation BIO-4.2 may result in those evicted owls being depredated at a higher rate than if not evicted, or otherwise suffer population losses as a result of this eviction. The comment notes that, if no such studies exist, impacts to owls should be considered significant and unavoidable.

The response states that the EIR biologists are not aware of any studies showing that depredation would increase, therefore the EIR analysis is adequate. Please note that the document, "Status of Burrowing Owls in Southern California," published by the nonprofit Institute for Bird Populations, found that the owl population in western Riverside County continues to drop despite a sweeping habitat conservation plan that is supposed to protect the birds and 145 other species of animals and plants. As reported in the Riverside Press Enterprise, January 14, 2008:

> The study's authors found that one-fourth of the owl habitat in western Riverside County was destroyed in the first three years after the habitat plan went into effect. "As long as we treat the mitigation efforts the same, it is very likely burrowing owls will become extinct from the local area," said the study's lead author, Jeff Kidd, a wildlife biologist who lives in the Lake Mathews area of Riverside County. Developers in Riverside County most often use "passive relocation" when owls stand in the way of development. In passive relocation, one-way doors are installed at burrow entrances to keep the owls from re-entering and being killed when the land is graded, said Kidd, a licensed wildlife biologist. Kidd said he calls the process "active eviction." "They usually have no other home to go to, so they die. They get predated or they get hit by vehicles," he said.

This expert opinion directly contradicts the admittedly unsupported conclusion of the EIR.

Please note that the CDFG, the state agency with expertise and responsibility for species of special concern, in its letter of January 14, 2010, also identified the burrowing owl mitigation as non-protective of the species, stating that the mitigation habitat acreage is inadequate.

Response I-9

Geology: The response acknowledges that, "the EIR discussion of building design is relatively general in nature, commensurate with the amount of project detail available at the Specific Plan level". Please refer to responses I-2 and I-3; this response acknowledges that the EIR is being done at a program level, and is not appropriate for consideration of project-specific impacts.

Response I-10

Aesthetics: The comment noted that the visual drawings of post-project conditions included in the Aesthetics section do not accurately portray post-project conditions, but are actually an artist's rendition of a buildings obscured by full-grown trees. The comment requested actual photo-simulations showing the views in the photos both upon completion of the project and, if desired, after 10 years. The response fails to provide the requested information, and instead implies that, because significant impacts were found, that no additional supporting evidence is required. This runs counter to prevailing CEQA case law and logic. CEQA does not consider unsupported conclusions as adequate impact assessment.

Response I-11

Flooding: The comment stated that assessment of flooding impacts inappropriately relies on 2009 FEMA 100-year flood maps that don't include any sea level rise component and incorrectly concludes that, "the proposed Specific Plan development would not subject housing to 100-year flood hazards." CEQA case law cautions against use of significance criteria that are not protective of the environment, and inappropriate limiting of an EIR's scope to only questions posed in the IS checklist. The DEIR insistently relies on flood hazard maps that are intended not for impact assessment but rather for insurance purposes and refuses to extend its review past the IS checklist questions. The FEMA maps relied on in the EIR are especially deficient because they ignore the greatest source of flooding in the project area, namely sea level rise.

The response quotes CEQA's requirement that an EIR consider existing conditions as the baseline for impacts assessment, and mentions the use of flood hazard maps for that use. While we generally agree with that assertion, it is not relevant to the comment. The comment is not that the DEIR inadequately described the 100-year flood hazards as they exist today, but rather that the EIR inadequately described the 100-year flood hazards that would affect the project during its lifetime. As described above, the FEIR's Master Response on sea-level rise also fails to address the 100-year flood hazard impacts to the project.

This EIR's approach is in clear conflict with the newly revised CEQA Guidelines, section 15126.2(a), which includes a new sentence that adds further examples, as follows:

> *Similarly, the EIR should evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions (e.g., floodplains, coastlines, wildfire risk areas) as identified in authoritative hazard maps, risk assessments or in land use plans addressing such hazards areas.*

The BCDC maps cited in our original comments on the DEIR constitute such authoritative hazard maps. The EIR's Hydrology and Water Quality Report (EIR Appendix G) Climate Change Impact Addendum (p. 10) acknowledges the authoritative nature of the BCDC maps, stating:

> *The ADEIR concluded that the only quantifiable flood risk impact to Newark due to climate change is the increase in sea level rise, and a wide range, with no assigned certainties or upper bounds to that range, is projected. While this update does not change that basic conclusion, reports specific to the state of California as well as the BCDC have now adopted specific values for sea level rise projections: 16 inches (1.3 feet) by 2050 and 55 inches (4.6 feet) by 2100.*

The EIR also has arbitrarily revised the criteria of significance in its Global Climate Change section (FEIR p. 276) for sea level rise from from "two to three feet" in the DEIR to "4.6 feet" the FEIR. This revision seems to have been engineered to allow the EIR's conclusions of about 2 feet of sea level rise by 2050 to slip under the EIR's significance level. The EIR provides no analysis or justification for this change in its significance criteria. Oddly, the criteria matches the BCDC sea level rise projections noted in the EIR's Climate Change Impact Addendum, which suggests that only sea level rise greater than that the highest level projected by BCDC would be considered to significantly affect the project.

This approach is in direct conflict with the EIR's own Hydrology and Water Quality Report (EIR Appendix G) Climate Change Impact Addendum (p. 6), which states, "For the 'high' sea level rise scenario, the one-percent surge would inundate the Project by nearly one foot." Therefore, the EIR is ignoring its own technical report's flood hazard projections for the project site, and inexplicably assumes that one foot of flooding over much of the site would not constitute a significant impact.

That Appendix further concludes (p. 10), "If the 'high' sea level rise scenario proves to be true, adaptive strategies to improve flood protection (for example levees or floodwalls) may prove to be necessary in the future." Yet the EIR fails to describe such facilities in its mitigation measures, and fails to address the potential impacts of constructing those facilities (or further raising the site to mitigate for sea level rise impacts).

It is my professional opinion that the EIR's continued failure to assess impacts of the project in light of this acknowledged standard renders the assessment substantially deficient.

Response I-12

Water: The comment stated that the EIR water supply assessment (WSA) uses the wrong baseline in assessing project impacts. The response states that because the ACWD UWMP already includes the project's water demand, the project would have no impact on the acknowledged drought period water supply shortfalls. CEQA Guidelines section 15125(e) prohibits a "plan-to-plan" assessment, which is exactly what the EIR analysis does in comparing the project demand to a plan that includes the project demand. Although the project is included in the UWMP, the drought period water supply remains inadequate.

Response I-13

Schools: The response acknowledges that the high school will be over capacity with the project-generated students and notes that the school fee will mitigate this impact. However, the response fails to address whether new facilities will be required as a result of the project, and what the potential physical impacts on the environment (indirect impacts of the project) might occur. It also should be noted that payment of school impact fees may not be adequate to provide sufficient new schools, resulting in a potentially significant lack of educational facilities. As noted in our discussion of response to comment I-1, above, site-specific school construction impacts, including traffic, have not been analyzed in this document.

Response I-14

Parks: The comment noted that the EIR calculates a project demand of about 12 acres of park and then stated that provision of 5.5 acres of parks and trails not meeting the City's minimum park size would meet the project's needs. It also indirectly suggests that use of the school field and golf course, neither of which would be dedicated parks land, would somehow offset this shortage. The response reiterated the EIR analysis and conclusions, but provided no additional information as to how these inadequate acreages and golf course/school would comply with the City's General Plan requirements. This response also neglects the EIR's stated possibility that a golf course might not be constructed.

The project also conflicts with General Plan Recreation Policy a, programs 1 and 2, and Policy b, program 7, which specifically requires that any project "Develop a new Neighborhood Park in conjunction with any residential development of Area 4." This standard was included in the General Plan because that Area is "well removed from the existing neighborhood park system and accessible park space will be important to the qualities of development called for in the land use chapter [of the general Plan] for this area." (General Plan, p. 7-10, item 2) The project proposes a 2.5-acre park in Area 4; this fails to meet the General Plan's minimum 3.5-acres size for a Neighborhood Park.

Provision of funding for parks elsewhere in the City under the Quimby Act would not alleviate the parks shortage for residents in Area 4.

Other Issues

The California Regional Water Quality Control Board, San Francisco Bay Region, which has regulatory jurisdiction over wetlands on the site, commented that the DEIR failed to include even a conceptual mitigation plan for wetlands. The FEIR response was that no such plan was required because it could be developed as part of future studies. Yet, the responses to comments I-1 and I-2, referenced above, fail to commit to any future CEQA review. CEQA requires that EIR's contain an adequate level of information for regulatory agencies to make informed assessments of the potential impacts, including the effectiveness of mitigation. Given that the RWQCB is the agency with expertise and jurisdiction over the affected resource, and that the RWQCB has expressly stated that the level of information on wetlands mitigation is inadequate for their review purposes, the EIR fails to meet CEQA requirements for disclosure.

Response I-15

The comment concluded that the DEIR has a number of substantive flaws that fail to comply with CEQA analysis and disclosure requirements, and that these flaws must be rectified and the DEIR recirculated. A review of the responses indicates that most of the major deficiencies identified in our original letter remain. Further, a number of new mitigation measures have been added to the EIR in response to agency letters commenting on the adequacy of mitigation for biological resources. We continue to advise remediation of the substantive defects and recirculation of a revised DEIR as necessary for CEQA compliance.

Please feel free to contact me at 510 849-2354 if you have any questions regarding the comments herein.

Sincerely

Richard Grassetti
Principal
Grassetti Environmental Consulting

California Regional Water Quality Control Board
San Francisco Bay Region

1515 Clay Street, Suite 1400, Oakland, California 94612
(510) 622-2300 • Fax (510) 622-2460
http://www.waterboards.ca.gov/sanfranciscobay

Linda S. Adams
Secretary for Environmental Protection

Arnold Schwarzenegger
Governor

June 23, 2010
CIWQS Place ID No. 748275

Sent via electronic mail: No hardcopy to follow

City of Newark
37101 Newark Boulevard
Newark, CA 94519]

Attn: Terrence Grindall (Terrence.Grindall@newark.org)

Re: Comments on the Final Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan
SCH No.: 200705205

Dear Mr. Grindall:

The San Francisco Bay Regional Water Quality Control Board (Water Board) appreciates the opportunity to review the April 2010 *Final Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan* (FEIR). On January 12, 2010, Water Board staff provided comments on the *Draft Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan* (DEIR) for the proposed Areas 3 and 4 Specific Plan, which would allow for development of up to 1,260 housing units of various densities, an elementary school, a golf course, and open space areas, as well as retention of existing light industrial and institutional uses. Water Board staff have reviewed the FEIR's responses to our comments on the DEIR, and would like to take this opportunity to express our continuing concern with those aspects of the Specific Plan proposed in the FEIR that may result in the loss of up to 85.6 acres of wetland/march/aquatic habitat in Area 4 of the Specific Plan.

The FEIR, as written, does not demonstrate that impacts associated with the proposed fill of wetlands in Area 4 can be successfully mitigated to a less than significant level. The mitigation quantities proposed in the FEIR appear to be insufficient to compensate for the impacts associated with the proposed fill of wetlands in Area 4. The mitigation proposed in the FEIR relies on a combination of onsite wetland creation/enhancement and offsite wetland preservation. Onsite mitigation, which is only proposed at a 1:1 ratio, would be compromised by its proximity to the development envelope of the site, which will introduce noise pollution, light pollution, and domestic animals into the vicinity of preserved or enhanced habitats. With respect to off-site mitigation, the FEIR does not provide sufficient detail to demonstrate that feasible locations exist for offsite mitigation.

While the Water Board and the City of Newark appear to be in basic disagreement over the level of detail necessary for the discussion of proposed mitigation measures in the FEIR, we would like to point out that the City itself set the parameters for off-site mitigation by specifying that "off-site locations shall currently support wetlands of sufficient quantity and quality to satisfy mitigation requirements," and "wetland mitigation shall occur on lands located within 10 air miles of the

current project site and shall be located along the eastern shore of south San Francisco Bay within the same geographic watershed." The FEIR fails to demonstrate that the City can achieve its own objectives for offsite mitigation, using either mitigation banks or other private lands. At most, the FEIR refers to a potential mitigation bank that may be capable of providing less than half of the mitigation necessary for impacts proposed to wetlands at Area 4.

Also, as we noted in our comments on the DEIR, any mitigation plan that relies exclusively, or heavily, on the preservation of wetlands, as is currently proposed in the FEIR for off-site mitigation, would not be consistent with the State's "no net loss" policy. No net loss can only be achieved through avoidance of habitats or the successful creation of new habitats. Since preserved habitats are already in existence, the use of preservation results in a net loss of wetland habitat. Therefore, our comment on the DEIR noted that the proposed ratio of 1.5:1 is far too low for a mitigation measure that relies on preservation. The FEIR retains this proposed mitigation ratio, which would not be adequate to support permits required by the Water Board.

On page 12 of the FEIR, the following statement is made:

> The proposed mitigation measures for impacts to wetlands described in the Draft EIR treat wetlands as biological habitats and not State or Jurisdictional features. The City has determined based on extensive analysis by its biological experts that the mitigation requirements for wetland impacts (both in terms of amount and location of mitigation) described in the Draft EIR are more than adequate to mitigate the described impacts to a less than significant level.

We would like to point out that the resource agencies have not concurred with this assessment. When the City of Newark teams with individual developers to implement the Specific Plan, the City and developers should be aware that mitigation as proposed in the FEIR would appear to be far short of the mitigation that will be necessary to secure permits from the resource agencies for the impacts proposed to wetlands in Area 4. Therefore, project-level CEQA documents will likely be necessary to support permitting of Specific Plan implementation projects.

We would also like to reiterate that, by certifying the FEIR as written, the City should not assume that the Water Board or other resource agencies will allow the fill of the wetlands at Area 4 as proposed. Since Area 4 is one of the largest remaining areas of open space along the baylands, provides habitat for endangered species, and is adjacent to the Refuge, impacts to Area 4 will be regionally significant, and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Water Board is not likely to authorize fill of wetlands at Area 4, unless mitigation is demonstrably capable of providing equal habitat benefit for listed species.

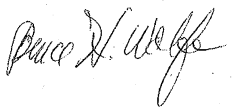
The City should recognize that large expanses of undeveloped uplands immediately adjacent to tidal sloughs are extremely rare in the south and central San Francisco Bay. Area 4 represents a rare opportunity to restore this complex of habitats in continuum with the bay, provide connectivity with the Refuge, and provide an area for tidal marsh species to transgress (move up slope) in response to sea level rise. The U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), the Bay Conservation and Development Commission (BCDC), and the Water Board

have all expressed strong reservations about the potential fill of wetlands in Area 4. While the City has not yet identified sufficient mitigation opportunities for impacts associated with the implementation of the Specific Plan, Area 4 itself presents significant opportunities for use as mitigation for other projects. Successful wetland mitigation sites require a unique combination of hydrology and topography, which Area 4 possesses. We encourage the City to consider the potential use of Area 4 as a mitigation bank. There are significantly fewer regulatory and physical barriers to creating a mitigation bank at Area 4 than there are to placing fill in Area 4 and seeking to create adequate mitigation for that fill.

In summary, the FEIR as written does not demonstrate that impacts associated with the proposed fill of wetlands in Area 4 can be successfully mitigated to a less than significant level. Therefore, the FEIR is not likely to support the issuance of future permits from the Water Board for fill of waters of the State under the Specific Plan. We encourage the City of Newark to request an inter-agency meeting with the Army Corps, BCDC, CDFG, USFWS, and the Water Board as soon as possible, in order to discuss permitting issues related to jurisdictional waters in Area 4.

If you have any questions, please contact Brian Wines of my staff at (510) 622-5680, or via e-mail at bwines@waterboards.ca.gov.

Sincerely,



Digitally signed by Bruce Wolfe
Date: 2010.06.23 18:54:14 -07'00'

Bruce H. Wolfe
Executive Officer

cc: State Clearinghouse, P.O. Box 3044, Sacramento, CA 95812-3044 (by fax: 916-323-3018)
USACE, San Francisco District, Attn: Regulatory Branch, 1455 Market Street, San Francisco, CA 94103–1398 (cameron.l.johnson@usace.army.mil, jane.m.hicks@usace.army.mil)
CDFG, Central Coast Region, Attn: Marcia Grefsrud, P.O. Box 47, Yountville CA 94599 (mgrefsrud@dfg.ca.gov, sbrunson@dfg.ca.gov)
United States Department of the Interior, Fish and Wildlife Service, Sacramento Fish and Wildlife Office, 2800 Cottage Way, Room W-2605, Sacramento, CA 95825-1846 (Ryan_Olah@fws.gov, cay_goude@fws.gov, Winnie_chan@fws.gov, joseph_terry@fws.gov, james_browning@fws.gov)

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January 19, 2009

Terrance Grindall
Community Development Director
City of Newark
37101 Newark Blvd
Newark, CA 94560
E-mail: terrance.grindall@newark.org

TO: Terrance Grindall
SUBJECT: Comments Regarding Newark Areas 3 and 4 Specific Plan Project Draft Environmental Impact Report

Wildscape Engineering Services (WES) was contracted by the Citizen's Committee to Complete the Refuge to review and comment on the adequacy of hydrology and water quality assessments provided in the Draft Environmental Impact Report (DEIR) and related technical reports for the Newark Areas 3 and 4 Specific Plan Project.

The comments are organized under the following five categories, (1) General, (2) Floodplain Modification, (3) Drainage Modification, (4) Wetland Impacts and (5) Climate Change and include the relevant significance criteria.

1. General

There is a general concern regarding the emphasis given to the City of Newark General Plan's (Plan) goals for Area 4 to have a high-quality, low-density use and an 18-hole golf course. The Plan was adopted almost 20 years ago and therefore didn't take into consideration more recent evidence of climate change and sea level rise expectancy and its related impacts to shoreline development and the importance of wetland and salt marsh habitat to water quality and special status species. The 1999 community rejection of the ballot measure to change Area 4's designation to conservation, open space and agriculture was also many years prior to recently developed information regarding climate change and predicted sea level rise.

Since the City of Newark (City) is willing at this time to consider re-designating Area 3 from R&D High Tech Business Park (i.e. Special Industrial) to residential use for the purposes of the proposed project, we ask that the City also consider re-designating Area 4 from low density residential to either open space, conservation or a combination thereof given the potential for substantial environmental and hazardous impacts resulting from developing in such a hydrologically sensitive and flood prone area.

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2. Floodplain Modifications

Significance Criteria

- *Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;*
- *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.*

It is understood the vast majority of Area 4 is located within the FEMA 100-year floodplain with a general base flood elevation of 8 feet NGVD. The existing levees are not certified and would likely not meet certification requirements since much of their length doesn't provide the required freeboard.

For improved representation it is recommended that the FEMA base flood elevation contours be included on the Flood Zone Map (Figure 3.8-2). Also the DEIR references the 2000 FEMA maps, however a new FEMA map for the area became effective in August 2009 and should be incorporated into the analysis and the 100-year flood boundary shown on the figure should be corrected (i.e. some of the boundary lines on the north and east side of Area 4 are shown as straight when those on the 2009 FEMA maps are curved).

In order to avoid any potential significant flooding impacts, the project proposes to use up to 2.1 million cubic yards of fill in Area 4 to raise the building pad elevations 10 to 14.5 feet in order to reach a minimum elevation of 11.25 feet NGVD to be out of the designated floodplain per City code requirements. This is a substantial alteration of the landscape in order to allow for residential buildings within an existing floodplain. The constructed drainage release points from the built out areas in Area 4 would be at elevations around 10 feet NGVD and there would be a continual reliance upon the pumping mechanism at the Area 4 outlet to Mowry Slough.

It was established in the DEIR that since all housing would be placed on fill above the FEMA base flood elevation that there would be no significant impact due to flooding. However, given the likelihood of the levees to fail in the near future combined with the potential for the raised building pads to settle over time and the reliance on mechanical means to continuously circulate water out of Area 4, a more comprehensive analysis should be undertaken. The supplemental analysis should examine the potential impacts to the integrity of the building pads if inundated and exposed to standing water for periods of time due to overtopped or breached levees, the potential for the proposed storm drain outlets in Area 4 to no longer function as a result of inundation and backwater under flood conditions, and the ability of the pumping mechanism to continuously operate under high water conditions.

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3. Drainage Modifications

Significance Criteria

- *Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on-or off-site*;
- *Substantially alter the existing drainage pattern of the site or area, including the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site:*
- *Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff;*

The proposed project plans to use the existing 42-inch diameter storm drain outfall that currently collects runoff from Sub-Area A within Area 3 and releases it to the Alameda Flood Control and Water Conservation District (ACFC/WCD) Line D. It doesn't appear that adequate analysis has been done to confirm that the existing storm drain and outfall has the remaining capacity and necessary outfall protection to accommodate increased runoff due to the roughly 65% increase in impervious area within Sub-Area A. Further analysis is recommended to determine if the existing pipe and infrastructure could accommodate the increased runoff and peak flows from the proposed development within Area 3 under different high tide and rainfall events and predicted sea level rise with or without additional modifications.

Drainage for Area 4, including Sub-Areas B and C assumes that approximately five storm drain outlets will be used to release water to Sub-Area E and ultimately convey to Mowry Slough via the existing ditches on the inboard side of the levee and interior drainage pump on the southwest end. There is no evidence of investigation as to whether the increased runoff from the proposed development can be adequately conveyed into Area E and ultimately pumped into Mowry Slough. Recommend that an analysis be done considering the increased impervious area's impact on peak runoff and runoff volumes under high groundwater conditions and what that may mean to proposed wetland habitat surrounding the developed areas (i.e. potential to create continuous aquatic conditions in more areas than existing) and whether or not a pump system will continue to work adequately under such an increased demand and alternating high tide conditions.

It is stated in Appendix G the Hydrology and Water Quality Report that development in Area 4 would have a less than significant impact to on-site flooding since increased flows from increased impervious areas are released directly to the Bay and won't affect Bay tides, which are the source of the 100-year flood elevation. But, has consideration or analysis been done over whether increased runoff from the impervious areas in Sub-Areas C and B could overrun the pumping system, particularly during extreme high tide or flood events and potentially back up into the wetland areas

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and even into the storm drain outfalls to Sub-Area B and C, in turn resulting in detrimental flooding of the mitigated wetlands and residential areas?

Appendix G also states that an adequate system will be designed to utilize the existing pump outfall in Area 4 with possibly a different size and type of pump and therefore there will be a less-than-significant impact downstream of the outfalls. Increased pump capacity was also analyzed to determine feasibility to retain existing water levels in the ditches. What is not clear is if those analyses were also done in the context of extreme tidal events and whether there may be a significant impact to the areas upstream of the outfall in Area 4 if the pump is tasked with removing runoff during high groundwater and extreme tidal events.

4. Wetland Impacts

Significance Criteria

- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;*
- *Have a substantial adverse impact on federally protected wetlands as defined by Section 404 of the Clean Water Act (including but not limited to: marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrologic interruption, or other means.*

It is understood that an array of wetland types and shallow groundwater conditions occur in Area 3 and predominantly Area 4 due to the low elevations and proximity to the Bay and aquifers.

These existing freshwater and brackish wetlands and adjacent upland transitional zones are important habitat and are currently supported by sheet flow and groundwater seeps. The proposed exorbitant amount of fill, particularly in Sub-Areas B and C in Area 4, redirection of drainage patterns and pumping of groundwater in Sub-Area D in order to facilitate site development and support the golf course is expected to significantly alter the location, type, extent and duration of wetland areas that now exist and support several plant and animal species. Concern is therefore over the ability to "design" adequate mitigation wetland to replace what is lost given the significant number of variables that will be changed and could affect the type and size of wetland lost or modified. For example, given the large increase in impervious surface areas in Sub-Areas B and C there could be substantially more runoff volume that collects within Sub-Area E that does not infiltrate through the low permeability soils and high water table and results in more aquatic habitat or larger areas with standing water for longer periods of time and possibly less salt marsh habitat important to the salt marsh harvest mouse than may be desired. Additionally, there may be a reduced opportunity for water quality BMPs given the inability to rely on infiltration within Sub-Area E and minimal available footprint within the created building pads.

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The statement under MMBIO – 1.1, *"Temporary disturbance to and permanent loss of all wetland and aquatic habitat in Area 4 will be avoided to the maximum extent feasible"* is subjective and vague in regards to how temporary disturbance and permanent loss will be avoided and in what relative proportion to the existing wetland and aquatic habitat.

Mitigation measure MMBIO – 1.2A proposes creating wetlands and aquatic habitat within upland habitat that is currently disked and graded within Area 4 in order to mitigate for existing wetlands and aquatic habitat that are eliminated. It has not been demonstrated that adequate analysis has been done to show that the upland areas have the necessary soil composition, groundwater depths and hydrologic regime to make the pledge that this tactic will provide sustainable high quality wetland and aquatic habitat as required in order to provide adequate mitigation at a ratio of 1:1 and prevent any net loss of habitat functions or values. Additionally mitigation measure MMBIO-1.2 proposes enhancement of existing seasonal wetland habitat that is currently within agricultural production at a ratio of 0.5:1 by terminating farming activities, seeding and possibly grading. The question is will this area be able to truly be restored if pumping operations are continued in a similar fashion as present in order to provide vector and/or flood control?

There are two concerns regarding MMBIO-1.2A, *"A detailed mitigation plan shall be developed by a qualified biologist under contract to each future developer for individual development projects within the Specific Plan areas which result in direct impacts to wetland habitats. This plan will be submitted to and approved by the City of Newark prior to the initiation of grading within wetlands"*. (1) The first concern is in regards to the timing of the mitigation plan, given the significance of potential wetland loss and degradation and indirect impacts to the special status species that depend upon them. Approval of the Specific Plan insinuates that adequate wetland replacement and enhancement can be provided on site, however investigation and proof of that doesn't occur until after the plan is approved and just before grading is to begin. This is too late in the process and a more developed analysis and mitigation plan should be enacted before the Specific Plan is approved. (2) The second concern is regarding the designation of a qualified biologist, given the critical and underlying factors to support high quality wetland and aquatic habitat and intricate balance in terms of freshwater and brackish water inputs, it is crucial that a qualified hydrologist is also involved in the analysis and development of a mitigation plan and that the plan also include a hydrologic analysis in order to determine that site selection, wetland basin size and depth will result in adequate and sustainable support for the 1:1 replacement qualification and/or targeted plant and animal species required.

In regards to mitigation measure BIO-2.4, how will the measures described to minimize perennial ponding within the existing seasonal wetlands be enforced? For example the measure states that nuisance runoff will be minimized and controlled, proper irrigation using only the amount of water that can be taken up by the plants shall be implemented and water shall be applied at dawn to limit evaporation. How will these mandates, particularly for the private residential housing be enforced to ensure compliance?

Under MM BIO-2.5 the golf course will be designed to drain internally in order to confine nuisance flows to the salt marsh habitat during the dry season. This will also disrupt overland flows from reaching these areas during the wet season and is a change from existing conditions, therefore has analysis been done to determine that cutting off wet season surface flows to these areas won't damage them over time?

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Given the golf course will be irrigated via an existing onsite well has analysis been done as to whether groundwater pumping during the dry season may have a negative effect on the adjacent wetlands and marsh habitats in Area 4?

There appears to be disagreement between what is proposed under mitigation measure MM BIO-2.1 and what is shown in the drainage plan and conceptual grading plan, Figure 2.4-5. Mitigation measure MM BIO 2.1 states that storm water runoff for the proposed residential development and golf course within Area 4 will drain from multiple discharge points to simulate a more natural flow via a more dispersed discharge of collected runoff so that the existing hydrologic condition is not substantially altered. However the drainage plan shows only three storm water outlets for Sub-Area B and two for Sub-Areas C and D. Please provide more explanation and representation on a figure for how flow dispersal will be achieved.

5. Climate Change

Significance Criteria

- *Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.*

Future sea level rise is considered under the cumulative impacts section of the DEIR and the resultant flooding significance due to climate change is determined by whether the project would be adversely impacted by sea level rise of two to three feet. The DEIR acknowledges that future sea level rise would considerably increase flooding along areas of the proposed development currently shown to be in the 100-year floodplain which equates to most of Area 4. Analysis was then conducted, however a less than significant cumulative impact was assigned given there would be sufficient freeboard along the building pads for up to the 100-year event under a 50-year planning horizon. The caveat is also provided that if the "high" sea level rise scenario proves to be true (i.e. would inundate the minimum building pad elevation of 11.25 feet NGVD by 10.2 inches) adaptive strategies to improve flood protection (i.e. levees or floodwalls) may prove necessary in the future. These conclusions are viewed as inadequate for the following reasons:

a) Given the permanency of residential homes and associated buildings placed on an elevated pad and the high level of risk to life and property the overall approach and 50-year window are inadequate. More analysis is warranted in terms of outlier effects such as drainage impacts, and it would be more appropriate to consider a 100-year planning horizon.
b) Additional geotechnical analysis may be warranted to determine that the raised building pads could be designed to tolerate periodic flooding without undergoing deterioration.
c) Given the compressible soils and unknown nature of imported fill, it is not clear whether the proposed 10 to 14 feet of fill compensates for the predicted amount of settlement over time

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(i.e. 12 inches over the 50 year post construction period). In other words, is enough fill being placed so that the minimum 11.25 feet elevation will remain once settlement has ceased?

d) The proposed plan is dependent upon raised building pad elevations, however fails to consider impacts to the storm drain outlets proposed to release at 10 feet elevation and the ability of the pump to function properly and adequately drain Area 4 under higher tide levels that would result from predicted sea level rise.

e) Given the permanency of the building pads, the "adaptive strategy" component (as recommended by the Army Corps of Engineers and Department of Water Resources) relies heavily on the uncertain option to build taller levees or floodwalls as sea level rise becomes more evident. This puts a significant amount of merit on the ability to construct an adequate levee or floodwall without investigating whether the right structural conditions are there or can be attained. It is recommended that preliminary analysis be done to demonstrate that there is adequate foundation stability, settlement avoidance and interior drainage for a "future" flood levee or wall, so that reliance upon it can be trusted. The analysis should also examine whether such a structure would have direct impacts on the preserved or created wetlands within Area 4 and the fringe wetlands on the outboard side of the existing levee.

f) The approach doesn't necessarily follow the San Francisco Bay Conservation and Development District's (BCDC) preliminary recommendations for the Bay Plan amendments mentioned in the DEIR that include; discourage new projects that will require new structural shoreline protection during the expected life of the project; determine whether alternative measures that would involve less fill or impacts to the Bay are feasible; require that where shoreline protection is necessary, ecosystem impacts are minimized.

g) Given the potential risk to life and property in the long term and the range of sea level rise estimates by several reliable sources, recommend that the DEIR examine the potential flooding impacts due to sea level rise using a bracketed lower and higher sea level rise estimate in order to demonstrate a conservative scenario and a "worst-case" scenario.

h) Given the recent education that the state and nation have undergone in regards to flood hazard and catastrophe to developments constructed behind levees and the recent state legislation that is now trying to correct those issues for the Sacramento and San Joaquin River watersheds in California, has it been seriously considered if development within an existing floodplain, particularly Area 4 is appropriate? Currently the state of California is requiring any new development in nearby San Joaquin County to provide a 200-year level of flood protection. Has the proponent analyzed whether more is needed or higher building pad elevations would be required to provide the proposed development with a 200-year level of protection if mandated in the near future?

With the considerable amount of potentially significant hydrologic, wetland and flooding impacts in Area 4 that require multiple intensive and thoughtful mitigation actions to alleviate, we ask that you seriously reconsider the two alternatives, "No Development in Area 4 and Higher Density in Area 3" and "Reduced Housing Alternative" that would remove the residential building footprints and excessive fill required within Area 4.

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We look forward to receiving your responses to further clarify and speak to the proposed project and its potential impacts. If you have any questions regarding our comments, please feel free to contact me at 415-924-6970 or wildscape_eng@sbcglobal.net.

Sincerely,

Carol Beahan, P.E.
Owner, Wildscape Engineering Services

Subject: Draft Recirculated EIR
Date: Fri, 19 Sep 2014 11:37:03 -0700
From: Dean & Margaret Lewis <lewis2@earthlink.net>
To: terrence.grindall@newark.org

Dear Terrence,

The REIR at pdf p. 5 states that "Appendices to the Newarks Areas 3 & 4 Specific Plan Draft and Final EIRs are hereby incorporated by reference and are available at the City of Newark Community Development Department. Today I went to the Newark Community Development Department, and the only appendix to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs that was available was Appendix A.

The city employee working the counter searched the filing cabinet and all she could find was Appendix A. She said the other appendices were available on the city web site.

Therefore I conclude that the other appendices are not available at the Community Development Department and the statement in the REIR that they are available is incorrect.

Sincerely,
Margaret Lewis

Peter R. Baye, Ph.D.
Coastal Ecologist, Botanist
33660 Annapolis Road
Annapolis, California 95412

(415) 310-5109 baye@earthlink.net

Terrence Grindall
terrence.grindall@newark.org
Assistant City Manager
City of Newark
Newark, California 94560-3796

SUBJECT: Comments regarding wetland-related impacts and mitigation in Recirculated Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan

Dear Mr.Grindall:

Please consider the following comments on portions of the Recirculated Environmental Impact Report for the Newark Areas 3 and 4 Specific Plan, and corresponding portions of the EIR and its appendices, regarding impacts and mitigation related to wetlands and wetland hydrology, including groundwater. I am a professional ecologist specializing in management, conservation planning, and restoration of coastal ecosystems, particularly wetlands of the San Francisco Estuary and California coast. My comments reflect my independent professional opinion. They are submitted in behalf of the Citizen's Committee to Complete the Refuge. An abbreviated statement of my qualifications to comment as a wetland expert is attached. My conclusions and recommendations close each section of the comment letter.

My comments analyze groundwater-related impacts to wetlands and wetland mitigation feasibility, and wetland mitigation feasibility and adequacy overall. The first section of my comments (1.1) integrates the various 'existing conditions' and impact statements of the EIR and REIR and its appendices, and the second (1.2) critically re-analyzes wetland impacts and mitigation related to them. The final (2.0) section integrates all wetland mitigation issues in terms of adequacy and feasibility, and consistency of assumptions or statements in the EIR and REIR.

1.0 Wetlands and Groundwater Hydrology impacts

1.1. The EIR describes existing conditions of wetlands hydrologically connected and supported by groundwater over the entire Area 4, especially near the proposed golf course and Pintail Duck Club.

Consistent with The EIR's Appendix G (Hydrology), the EIR's Appendix E clearly identifies in general terms the importance and wide distribution of shallow groundwater influence on the wetlands of Area 4, in addition to the influence of direct rainfall and surface runoff on the site's wetland hydrology. Groundwater is identified as one of the three *primary* sources of hydrology acting on the site, indicating the significance of this hydrologic support of wetland functions.

> p. 8. The site is fairly mesic, and especially in portions of Area 4 closer to San Francisco Bay, wetland **hydrology is influenced by high groundwater tables** and muted tidal fluctuation as well as runoff from precipitation.
>
> p. 11. There are **three primary sources of hydrology acting on the site, including** incidental rainfall, **groundwater** table fed by springs, and lateral seeps.

Appendix E describes the strongest (perennial) groundwater influence on wetland hydrology in and bordering the Pintail Duck Club, but it also identifies widespread significant contribution of shallow groundwater to wetland hydrology of shallow depressions elsewhere on the site, particularly east and south of the proposed golf course. It even concludes that groundwater influence in some areas exceeds that of runoff or rainfall.

> p. 11 …the presence of surface and **subsurface water deriving from underground seeps** appears to **influence seasonal wetland habitat within Area 4 east and south of the proposed golf course**. The **remaining areas on the site are influenced by a combination of these hydrologic features**.
>
> p. 92 …habitats adjacent to the golf course are fed by groundwater rather than surface runoff.
>
> p. 92 …particularly in the summer…the only existing sources of water are the freshwater seeps (groundwater) located in the central portion of Area 4…
>
> p. 93 …areas near the golf course are supported by groundwater seeps…

Appendix E also describes the widespread shallow lateral subsurface flow of water from farmed (disced) wetland depressions as sufficient to drain them by ditch pumping, again confirming the widespread (not just local) influence of lateral subsurface flows through soils (in this case, shallowest soil groundwater).

> p. 11 ….The depressional wetlands filled with subsurface flow within disked soils also allows water to move generally towards the pump mentioned previously, draining the site slowly.

The description of "agricultural field" vegetation (farmed wetlands) on p. 18 of Appendix E confirms that influence of groundwater connectivity with the site's wetlands also extends over the allegedly "low quality" wetland in terms of wildlife habitat.

> p. 18. Sources of hydrology are numerous and varied throughout Area 4, with some areas that are influenced by freshwater seeps or saline groundwater, as well as other depressional areas which accumulate surface precipitation.

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The Appendix G description of hydrology states that groundwater is shallow and exposed at the surface throughout Area 4, and shallow groundwater is connected subsurface to the ditches that are pumped to drain the site.

> p. 19 The **groundwater table is shallow and exposed at the ground surface in locations throughout Area 4**.
>
> p. 22 It may even be determined that the increase in ditch inundation could benefit groundwater saturation and potentially the quality of nearby groundwater driven wetlands and that the pump outflows should not be increased.

Appendix G affirms that the golf and residential development types differ in their relative influence on surface and subsurface hydrology: residential development has relatively more hydrologic impact on *surface* water hydrology (storm runoff), and golf development has relatively more potential hydrologic impact on *groundwater*:

> p. 6…Sub-Area C may develop as residential units and/or golf course. If the entire sub area
> develops as residential, there may be more potential impact to stormwater runoff; whereas if the entire sub area is a **golf course, there may be more impact in terms of short-term on-site groundwater use and therefore groundwater hydrology.**

1.2. Both the EIR and REIR fail to analyze any potential impacts of development on groundwater support of wetlands, and wetland ecosystem services provided to maintain groundwater quality.

Despite affirming the substantial influence of groundwater on wetlands of Area 4 (Appendices E and G, cited above), and despite explicit statements that golf development in particular may impact groundwater hydrology (p. 6, Appendix G), both the EIR and REIR fail to analyze any potential impacts of Area 4 development on groundwater support of wetlands hydrology in undeveloped areas that may include the projects wetland compensatory mitigation.

The EIR's Appendix G addresses only groundwater in terms of quantity (use, depletion of supply), but omits analysis of water quality impacts associated groundwater flows between the golf course and wetlands. Appendix G, p. 22) states that it performs no analysis of water quality impacts of the golf course based only on runoff.

> p. 22 Proposed golf course development has not been analyzed in numeric detail since the Alameda County Drainage Manual indicates identical runoff coefficient values for both undeveloped land and golf courses, and there would be no change in runoff volumes due to development.

But without explanation, Appendix G (and the EIR and REIR) also omit any analysis of water quality impacts of golf course development on shallow groundwater, *despite the assertion of Appendix E that groundwater in the vicinity of the golf course is substantial* (pp. 11, 92-93), and the assertion of Appendix G (p. 6) that golf course development is more likely to influence *groundwater* hydrology than residential development (p. 6).

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The most likely types of potentially significant groundwater quality impacts from golf development on wetlands would be nutrient pollution (particularly soluble, highly mobile nitrates, regardless of the form of nitrogen directly applied to turfgrass) and herbicide pollution. Appendix E (p. 6) states that rates of nitrogen applications for golf turfgrass areas would occur in the range of 2-3 lbs/1000 square feet (per year?...ambiguously stated), but fails to analyze or estimate the proportion of that nitrogen load that is assimilated by turfgrass, and the proportion that is exported to runoff or groundwater infiltration. Nitrate loading of shallow groundwater may occur from leaching of turfgrass fertilizers during the winter rainfall season, when accumulated applied nitrogen fertilizer in soil (remaining after turgrass uptake) is transformed by microbial action to nitrate, and is transported by infiltration (winter rainfall) to shallow groundwater. Residual herbicide is potentially transported to groundwater by the same process. The EIR fails to disclose or analyze the types of herbicides or the rates of application conventionally used to maintain golf turf free of broadleaf weeds.

The EIR and REIR also fail to identify any thresholds for significance for nitrate pollution of wetlands potentially affected by golf-polluted groundwater (either in terms of eutrophication or amphibian larvae populations). Nitrates and herbicides can impact the development and mortality of amphibian tadpoles and cause or significantly contribute to amphibian declines (Hecnar, S.J. 1995. Env. Tox. & Chem. 12:2131-2137; Griffis-Kyle, K.E., 2007 Aquat Ecol 41:119–127; Griffis-Kyle and Ritchie 2007, Oecologia 152:633–642) in seasonal wetlands of Area 4 connected by groundwater to proposed golf development. Even trace amounts of the surfactants (additives) in herbicide formulations approved for use in non-wetlands (but which may be transported hydrologically from uplands to wetlands through groundwater or runoff) may significantly impact sensitive amphibian populations. (Relyea, R. A. (2005) *Ecol Applic 15*(2), 618-627). The EIR and REIR fail to assess such potentially significant ecological impacts to amphibians that are not themselves "special status" species but may be seasonally significant for the ecology of the wetland complex. Pacific tree frogs and western tadpoles are described as "likely" to occur on the site's wetlands (Appendix E p. 27), and they are likely to have an ecologically significant role in seasonal wetland ecosystems of the site. For example, abundant amphibian larvae may be important seasonal grazers of algae (water quality function), and provide an important prey base for wading birds (present foraging on the site's wetlands; REIR p. 158, EIR Appendix G pp. 27, 62) and other wildlife, including garter snakes. Potentially significant population-level and community-level ecological impacts of fertilizer (nitrate) and herbicide/surfactant contaminant impacts to amphibians are not addressed or mitigated in the EIR or REIR.

The EIR and REIR also fail to analyze potential impacts of development on groundwater flow patterns or rates that supply down-gradient wetlands of Area 4. There is no analysis of the degree to which placement of pad fills or surcharged fills to compact soils (engineering clay soils to prevent subsidence after fill addition). The REIR (p. 231) confirms that the magnitude and extent of fill placement to mitigate subsidence (and cause potential soil compaction-induced impacts to groundwater flow rates and patterns) is not yet analyzed, and is deferred to subsequent development projects:

> Imported soil placed to raise site grades in Area 4 *will cause the ground surface to settle significantly over a period of 30 to 50 years*. The total settlement *will need to be accounted for* in the design of finished surface grades for roadways, utilities including

> PG&E tower modifications, and building pads. Therefore, the total quantity of imported fill will be greater than anticipated to account for long-term ground subsidence and to maintain site elevations above flood levels. The current estimated fill for Area 4 *totals 2.1 million cubic yards*. This estimate *cannot account for long-term settlement* because the timing of import is undetermined at this time. The exact amount of fill will be dependent on the rate of import and the amount of fill brought in over a period of time because the *settlement could be accelerated* and more or less dirt could be needed. [REIR p. 231.]
>
> Based upon the grading plans, the project proposes pl*acement of 10 to 14 feet of fill on the*
> *residential area of Area 4*, to raise planned improvements above flood elevation. [REIR p. 233]

Geotechnical mitigation measures for subsidence (settlement) clearly confirm the lack of any EIR or REIR analysis of potential fill settlement and clay compression impacts on shallow groundwater (deferred to subsequent individual project studies; all such analysis is explicitly deferred, and wetland groundwater impacts is not included in the scope of deferred studies. Nor is wetland hydrology expertise or agencies proposed in the review of such deferred studies. Wetland hydrology impacts are not considered at all in context of settlement mitigation or anywhere else in the EIR or REIR. Mitigation for geotechnical impacts, such as options to mitigate by *surcharging* soils (compressing soil rapidly with oversize heavy fill before placement of final fill volumes) or *wick drains* (direct removal of shallow groundwater in upper 20 ft; direct potential significant impact to wetland groundwater sources) have potential significant impacts to wetland hydrology that are nowhere analyzed or mitigated in the EIR or REIR, and not even deferred to subsequent studies, but merely to "coordination" with Alameda County Water District, which d*oes not manage groundwater for wetland hydrology, does not have wetland ecology expertise, or enforceable criteria for wetland groundwater hydrology protection* (not their mandate):

> MM GEO-1.1: Prior to issuance of grading permits, *construction-level study will be required*
> to characterize the lot-specific lateral extent and magnitude of potential liquefaction-induced settlement for design of new structures and improvements within Areas 3 and 4. The project geotechnical engineer *shall coordinate with ACWD prior* to beginning any soil improvement measures to ensure impacts on groundwater resources are minimized. The results of the
> investigation shall be submitted to the Director of Public Works for review and approval. Structures will need to be supported on rigid foundations designed to tolerate the anticipated total and differential settlements….

> MM GEO-1.1: Prior to issuance of grading permits, *construction-level study will be required*
> *to characterize* the lot-specific lateral extent and magnitude of potential liquefaction-induced *settlement* for design of new structures and improvements within Areas 3 and 4. The project geotechnical engineer prior to beginning any soil improvement measures to ensure impacts on groundwater resources are minimized. The results of the investigation shall be submitted to the Director of Public Works for review and approval. Structures will need to be supported on rigid foundations designed to tolerate the

anticipated total and differential settlements. …Ground improvement techniques could also be used to mitigate liquefaction-induced differential settlement.

> • *Wick drains* shall be confined within the *compressible clay zone (upper 20 feet of soil profile*). Additional subsurface exploration during the design-level geotechnical investigation shall confirm the depth of the compressible soil zone.
>
> • *Wick drains* shall extend no further than 10 feet from the top of slope of the planned areal fill. This will provide at least 5 feet of soil between final grade and the tops of the wick drains, which would be installed prior to areal fill placement. This will reduce the potential for surface water to access the wick drains.
>
> • Horizontal strip drains that are placed at the surface to collect water from the wick drains shall be connected to solid pipes that extended beyond the toe of the areal fill slopes. The horizontal strip drain/solid pipe transitions shall be at the outer row of wick drains. At the completion of the surcharge program, the solid pipes shall be grouted in place to abandon them. The settlement mitigation approach shall be reviewed and approved by the Director of Public Works, prior to issuance of grading and building permits and the process for implementation of the settlement mitigation will be included on all construction bid documents.

Compaction of clay subsoils is likely to reduce saturated hydraulic conductivity of shallow groundwater. It is precisely shallow groundwater (not deeper aquifers) that directly underlie and seep to Area 4 wetlands, as shown in Appendix G Figure 6. Alteration of groundwater flow patterns in developed, filled portions of Area 4 to reduce subsidence impacts to less-than-significant levels may cause significant wetland hydrology impacts, causing some groundwater-dependent perennial wetlands to suffer reduced subsurface inflows (drier), or causing other seasonal wetlands to become wetter and more perennial. Changes in groundwater discharge patterns in Area 4 wetlands retained as mitigation may impair long-term wetland functions, and may develop gradually and long after the (perfunctory, ineffective) 5 year monitoring period for mitigation wetlands proposed in BIO MM-1.2A.

None of the mitigation measures proposed in BIO-2.3 or 2.4 (REIR mitigation measures aimed at controlling nuisance flows rather than surface water or groundwater pollution of wetlands) restrict application rates or timing of herbicides, and none contain enforceable, feasible mitigation restricting the type, rate of application, or seasonal timing of nitrogen fertilizers. The component of MM BIO 2.4 to implement "University of California Integrated Pest Management Plan recommendations to maximize irrigation efficiency" merely states "do not overfertilize", which is vague, generic, and unenforceable, lacking any measurable criterion or monitoring of nitrate concentrations in winter or spring when rainfall-driven leaching of nitrates is most likely to occur. Thus, the EIR and REIR mitigation measures fail to reduce potential significant indirect impacts of golf fertilizer and herbicide contamination of groundwater and surface water that may affect adjacent wetlands.

Similarly, the mitigation measures of BIO-2.1 address only stormwater runoff and point discharge or drainage impacts of development on wetlands, limited entirely to surface hydrology. This is not consistent with the EIR/REIR's acknowledgement of the substantial influence ("primary"; p. 11 Appendix E) of groundwater hydrology on Area 4 wetlands. It indicates an unexplained omission of all hydrology impacts of development on either excessive local augmentation of shallow groundwater (especially near the golf course), pollution of shallow groundwater (again, especially near the golf course), or interference with rates or patterns of groundwater flows to wetlands due to site development (e.g. compaction and reduction of saturated hydraulic conductivity of underlying substrates below surcharged pad fills; installation of subsurface drains, etc.).

The EIR and REIR also fail to identify the potential significant impacts of the project on important wetland biogeochemical processes that beneficially reduce nutrient pollution of groundwater. The EIR and REIR assess wetland losses and impacts only in terms of "habitat" and "habitat quality" (for wildlife or plants). The wording of Impact BIO-1 identifies wetland impacts only as wetland "habitat" impacts, to the exclusion of all other wetland ecosystem service impacts. The EIR/REIR neglects wetland ecosystem services such as microbial-mediated nutrient transformations and degradation of contaminants or pesticides. This is inconsistent with the EIR's threshold of significance for ""substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act". Section 404 wetland impacts are defined by EPA regulations (40 CFR Section 230) to include not only fish and wildlife habitat, but equally important ecosystem service capacity to "assimilate nutrients, purify water…productivity, stability…." Wetlands with purportedly low "habitat quality" (arbitrarily evaluated solely in terms of habitat, not other wetland ecosystem services) may provide significant water quality functions, including denitrification, immobilization and sequestration of excessive nutrients or contaminant loads, and carbon sequestration in wetland soils.

The EIR and REIR provide no reasonable explanation for the failure to assess potential significant impacts to these scientifically accepted important wetland ecosystem services, particularly to the very extensive farmed wetlands (purportedly "low quality" in terms of habitat). The large area and soil volume, and extensive potential groundwater interaction of the farmed wetlands provides a reasonable presumption that they have significant potential to perform important biogeochemical functions at a large scale, and that their outright elimination is a potentially significant impact to water quality. Indeed, the statements that shallow groundwater from the site's depressional wetlands is drained subsurface by pumps to ditches connected to San Francisco Bay (Appendices E p.11 Appendix G p. 22), suggest potential on-site wetland water quality impact connections that may reach off-site to the San Francisco Estuary.

Conclusions regarding wetland groundwater impacts: The EIR and REIR arbitrarily analyze only surface water impacts to wetlands even though they confirm that active subsurface hydrology – groundwater flow and surface seeps – are among "primary" wetland hydrology sources. The EIR and REIR fail to analyze or mitigate potentially significant impacts to quality and quantity of groundwater supplies to the site's wetlands (which may include potential on-site wetland mitigation). Related mitigation measures that may affect surface runoff water quality are inadequate mitigation for groundwater impacts.

2. The compensatory wetland mitigation measures are fundamentally inadequate, infeasible, impermissibly deferred in planning, and laden with unreasonable and contradictory assumptions.

The purely programmatic, formulaic wetland mitigation proposal is not commensurate with the specificity of the fill/development envelope and project types (residential and/or golf course development) proposed. Both the U.S. Fish and Wildlife Service (USFWS) and Regional Water Quality Control Board (RWQCB) correctly identify fundamental flaws in the mitigation proposal, which are not addressed in the RDEIR, which basically reiterates and reformats the original EIR proposal without adding needed specificity and substantial evidence or planning content to address fundamental type, location, landscape position, hydrologic and soil suitability, and long-term management of wetland restoration and enhancement actions, sufficient for objective assessment of their feasibility and enforceability. Several probably fatal flaws are inherent in the vague and mostly deferred wetland mitigation planning.

2.1. **The proposed off-site compensatory mitigation component basically fails to mitigate the type (long-term transition zone for the foreseeably rising estuarine wetlands), landscape setting, of the most significant wetland functions (ecosystem services) of existing wetlands in the long-term, and arbitrarily considers only wetland "habitat" functions**. The EIR acknowledges the existing conditions of unique wetland ecosystem functions inherent in the landscape position of Area 4 wetlands in the geomorphically embedded "transition zone" between the San Francisco Estuary and terrestrial habitats:

> Being situated between existing salt production ponds that were formerly tidal wetlands and vernal pool habitat east of the site, Area 4 provides one of few areas in the South Bay with upland habitat transitioning between tidal wetlands and vernal pools, and the Goals Project identified the site's potential value in providing upland transition zones adjacent to tidal wetlands. [Appendix E p. 233]

The USFWS and RWQCB EIR comments concur with the importance of this setting-dependent wetland value, and the long-term ecosystem services it provides. But the EIR and REIR wetland mitigation fail to compensate for the magnitude of estuary-upland transition zone wetland loss, and reduce wetland value to generic "habitat" without the primary context of wetland ecosystem setting in the landscape. It then devalues the "quality" of wetland solely in terms of "low quality habitat" out of context with landscape position, wetland sustainability, and long-term sea level rise. The EIR and REIR fail to provide any reasonable explanation for why only wetland "habitat" quality is analyzed, but not other wetland services related to the admittedly important long-term transition zone. The wetland mitigation plans fail to compensate for potentially significant losses of important non-habitat wetland functions, such as shallow groundwater quality improvement (e.g., denitrification, sequestration or transformation of contaminants).

In fact, it is not physically possible to compensate off-site for the magnitude of lost wetland transition zone space caused by development of Area 4, as these resource agencies affirmed; this type of undeveloped wetland transition zone function (whether "degraded" in terms of short-term wildlife "habitat quality" or not) is extremely scarce regionally (see 2.2. below). That is why RWQCB urged the City to consider alternative wetland mitigation banking land uses for Area 4. The REIR persists in failing to mitigate the loss of this wetland transition zone habitat type and function, either in programmatic criteria or identification of potentially adequate and available

off-site locations. The burden of demonstrating at least potential feasibility and availability of off-site compensatory wetland mitigation remains.

2.2. **Off-site compensatory mitigation areas are not available within the geographic area specified by mitigation criteria**. The USFWS and RWQWCB comments on the EIR both correctly affirmed that off-site compensatory mitigation is *not available* within the geographic area required by MM BIO 1.2. The mitigation criteria cannot be met, and so off-site compensatory mitigation meeting this criterion is not feasible or enforceable. Thus, any significant wetland impacts that cannot be mitigated on-site are unmitigated. The REIR fails to substantively analyze or correct this basic defect; the mitigation for wetlands essentially makes false options for off-site mitigation it can't possibly obtain, which places all the burden on wetland mitigation on on-site mitigation options. As shown above (2.1), on-site mitigation is not feasible, either.

2.3. **The explicit hydrological assumptions of long-term on-site wetland mitigation sustainability related to direct and indirect effects of sea level rise are unreasonable, unexplained, and incorrect**. The feasibility of on-site wetland "enhancement" proposed as mitigation depends on some extravagant and unjustified assumptions regarding the sustainability of wetland hydrology in relation to sea level rise. These assumptions are *inconsistent* with the REIR's claims about flood control capacity and sustainability of Mowry levees.

> We assume that impacts to biological resources in the Project vicinity due to rising sea level related to global warming will not substantially affect this biological resource impact analysis as the existing outboard levee and pumps that are currently in use to drain the site will continue to be managed to maintain current hydrological conditions within the Project areas. For example, any Project features, including any required mitigation, in the southeastern part of Area 4 will still require pumping to move water into Mowry Slough, whether under existing conditions or under conditions of higher sea levels. If necessary, *pumping capacity will be adjusted to maintain suitable hydrologic conditions to maintain existing and mitigation wetlands as designed*. If any levee improvements are required in the future to offset sea level rise, the environmental effects of those improvements will be determined separately (i.e., for that specific levee improvement project). [Appendix E, p. 78]

First, these assumptions about forseeable levee maintenance and sustainability of function are inconsistent with the REIR geotechnical impact assessment of Mowry levees, which clearly states that they have *never been evaluated and would need to be if relied on for any flood protection* (regardless of the purpose of flood protection). The REIR, however, fails to consider the fact that the entire on-site wetland mitigation is predicated on the assumption that these levees are not only feasible to maintain and function in perpetuity, but that the wetland mitigation as proposed depends on their flood protection. The levee flood protection feasibility question (along with further studies) is dismissed because the residential development does not depend on them, leaving the wetland mitigation hydrologic feasibility ignored entirely, just like the geotechnical impacts of subsidence mitigation on wetland groundwater hydrology.

> In addition, the long-term stability of the [Mowry] levees *has never been evaluated*… Area 4 development will not depend upon the levees to provide flood control. Since the Area 4 development will not rely on the levees for flood control and protection, no

> further evaluation of the levees is necessary for implementation of development in Area 4. ….*Since the Area 4 development will not rely on the levees for flood control and protection, no further evaluation of the levees is necessary* for implementation of development in Area 4….*If these levees were to be relied upon for flood protection, additional studies would need to be completed* to characterize the levee materials, analyze the existing static and seismic stability, and determine possible stabilization alternatives if mitigation is required. As noted above, the Specific Plan does not rely up the levees for flood protection. [REIR p. 233]

Second, the untenable assumptions about sea level rise having no long-term foreseeable adverse effect on wetland hydrology if levees and pumps are maintained is not justified, and is not a reasonable interpretation of groundwater hydrology bordering estuaries affected by pumping. Rising sea levels influence groundwater elevations upslope. Increasing pumping to lower freshwater (terrestrial) groundwater elevations within gradients adjacent to a salt water estuary predictably would cause highly significant salinity intrusion. This is not analyzed either in the "assumptions" discussion of Appendix E on p. 78, or anywhere else in the EIR or REIR. Salinity intrusion and progressive salinization (or hypersalinization) of mitigation wetlands is a foreseeable significant impact of long-term maintenance of wetland mitigation relying on ever-increasing pumping to compensate for ever-increasing reverse groundwater gradients due to sea level rise. In addition, these assumptions are inconsistent with the EIR and REIR deferred analysis (failure to analyze in relation to wetland mitigation) of geotechnical settlement mitigation and groundwater (see 1.2 above).

Thus, the entire on-site wetland mitigation proposal depends on fundamentally flawed and unanalyzed assumptions about groundwater hydrology and levee maintenance. There is no feasible long-term maintenance option for the types of on-site wetlands proposed in their current location, as sea level rises. Sea level rise will drive groundwater changes and levee flooding (overtopping, breaching) that must either (a) submerged the low elevation wetlands in their current locations, or (b) require progressive increases in pumping to offset overtopping and rising groundwater, causing instead salinity intrusion that would risk generating hypersaline (non-target, not meeting wetland objectives) wetlands or non-wetland "other waters" or special aquatic sites like salt pans and nontidal salt ponds. This is consistent with the essential nature of the Area 4 wetlands as transition zones. The wetland gradient naturally should shift position upslope with sea level rise. Forcing it to stay in place and in kind (for static mitigation) is simply infeasible during accelerated sea level rise, even if levee maintenance or upgrades were feasible.

Conclusions regarding wetland mitigation feasibility and adequacy to reduce impacts to less-than-significant levels: The REIR and EIR propose wetland mitigation that cannot meet its own geographic criteria for off-site compensatory mitigation, making all wetland mitigation depend on the feasibility and adequacy of on-site mitigation. The on-site mitigation depends on false assumptions about wetland sustainability, contradicting the REIR's claims about levee maintenance feasibility, and failing to address salinity intrusion impacts of pumping that it proposes to maintain wetland hydrology. Furthermore, the on-site wetland hydrology feasibility fails to account for development and geotechnical mitigation impacts on "primary" groundwater sources for on-site wetlands. Overall, the wetland mitigation proposed is vague, unreasonably deferred, infeasible as proposed even programmatically, contradictory with the rest of the EIR/REIR, and inadequate on its own terms. As urged by resource agency comments, a specific (conceptual level at least) wetland mitigation plan specifying location, type, hydrologic

feasibility, long-term maintenance and sustainability, and management would be minimally required for adequate mitigation. My professional opinion, based on decades of knowledge and work on San Francisco Bay area wetlands, concurs with that of USFWS and RWQCB in this case: wetland mitigation as proposed is basically inadequate, and wetland mitigation banking should be evaluated instead of development with compensatory mitigation that isn't feasible.

Please contact me if you have any questions regarding these comments. Thank you for your attention.

Respectfully submitted,

Peter R. Baye, Ph.D.

ATTACHMENT A – SUMMARY STATEMENT OF QUALIFICATIONS

Following my Ph.D. research in coastal ecology, I worked for the U.S. Army Corps of Engineers, San Francisco District, where I served as a senior environmental scientist and regulatory project manager conducting endangered species consultation, wetland jurisdictional determinations, wetland assessments, preparing Environmental Assessments and managing joint NEPA/CEQA Environmental Impact Statements/Reports. My Corps regulatory projects included sites adjacent to Port Sonoma (Sonoma Baylands, Carl's Marsh). Subsequently I worked for the U.S. Fish and Wildlife Service (Sacramento, CA), where I prepared endangered species recovery plans (including comprehensive plans covering South Bay tidal marshes and adjacent uplands) and endangered species biological opinions. I was a contributing author and participant in the Baylands Ecosystem Habitat Goals Report (Goals Project 1999), its companion volume on Bayland species and community profiles (2000), and its 2014 update (in preparation), for which I developed many Marin bayland recommendations, with emphasis on estuarine-terrestrial transition zones. Since 2002, I have prepared or co-authored many wetland restoration and management plans in the San Francisco Estuary, including Sears Point preliminary wetland restoration project, Oro Loma Ecotone Project (in preparation), Bahia Wetland Restoration Project, and the wetland and upland management/enhancement plan for Rush Ranch in Suisun Marsh.

-----Original Message-----
From: Dean & Margaret Lewis [MAILTO:LEWIS2@EARTHLINK.NET]
Sent: Friday, September 19, 2014 11:37
To: TERRENCE GRINDALL
Subject: Draft Recirculated EIR

Dear Terrence,

The REIR at pdf p. 5 states that "Appendices to the Newarks Areas 3 & 4 Specific Plan Draft and Final EIRs are hereby incorporated by reference and are available at the City of Newark Community Development Department. Today I went to the Newark Community Development Department, and the only appendix to the Newark Areas 3 & 4 Specific Plan Draft and Final EIRs that was available was Appendix A.

The city employee working the counter searched the filing cabinet and all she could find was Appendix A. She said the other appendices were available on the city web site.

Therefore I conclude that the other appendices are not available at the Community Development Department and the statement in the REIR that they are available is incorrect.

Sincerely,
Margaret Lewis

COMMENTS TO THE REVISED ENVIRONMENTAL IMPACT REPORT (REIR) OF AUGUST 2014 FROM THE CITY OF NEWARK, CA.

From:

Wayne W. Miller
36505 Bridgepointe Dr.
Newark, CA 94560

September 19, 2014

To:

Mr. Terrence Grindall, Community Development Director
Planning Commission Members and City Council of Newark
37101 Newark Boulevard
Newark, CA 94560

Re: Comments primarily reference Climate Change and Sea Level Rise, as presented in the REIR of August 2014 from the City of Newark, CA (Referenced in particular to pages 358 to 362 of the REIR).

A. SUMMARY:

Critical Concerns:

Quotations in the 2014 REIR (EIR in the Rears) on the sources of climate change and sea level rise and their impacts on the proposed development in Area 4 are already outdated. The REIR does not incorporate into their plans to account for accelerating changes that are continuously raising the bar on the forecasts and projections of climate change and sea level rise. The acceleration of changing impacts from self-feeding activities, alone, are expected to increase the magnitude of risk from their effects on developments near sea level, even by 2050, and increasing far beyond that date. The REIR report admitted that acceleration is likely, despite uncertainty in forecasts. However, the worst is likely to come, based on global trends and lack of corrective action in a cooperative and timely manner. Newark's environmental documents also have been criticized by various governmental agencies having jurisdiction, and by consultants and the public, to name a few. Permits have been withheld to date. Legal

issues with CEQA law also are being continuously challenged for corrective action against the numerous faults within the EIRs, including General plan updates and other related City plans.

Despite references to certain current data, the City does not incorporate acceptable corrective measures, only to confuse and complicate issues, with forward and reverse arguments and dates that incorrectly tier from one document to the other. Attempts are made to appear in compliance, but input from the public, consultants, agencies, CEQA law representatives, and State and federal environmental regulations and policies continue to severely expose the faults.

Science-based Impacts:

Current scientific reports present other forces of nature as having additional and accelerating impacts to climate change and sea level rise, not previously included in EIRs. Greenhouse gas emissions tend to be emphasized in forecasts, primarily from the large increase in CO2 from fossil fuels that produced an anthropogenic increase in temperatures during this industrial revolution. But arguments in the REIR must emphasize other factors, and that temperature is only one part of the contribution to climate change and sea level rise, despite its prevailing emphasis. Other forces that are surfacing are contributing significantly to accelerating climate change and sea level rise. Only some of those forces and expected impacts are presented herein, due to the voluminous literature and global concerns voiced by many scientists and their research organizations. Significant impacts from these contributions also need to be incorporated when evaluating environmental concerns.

B. REIR REFERENCES:

The REIR discussions regarding climate change and sea level rise quote data that historically has been conservative, but those concerns have been increasing in impact as current data surfaces. The projections in the REIR include citations from a number of sources, mostly with outdated estimates, also referenced in a complex mix of reports and data, appearing disorganized and disconnected. The confusing order also incorporates quotes with more current dates that are actually using calculations and data in reverse order, in order to select for older dated information to appear to be current, thus confounding the reader.

Some examples in the 2014 REIR, with references and dates:

(1) NOAA (2001); (2) IPCC (Intergovernmental Panel on Climate Change) projection for Table 4.4-1 (2007); (3) ASCE (2007); (4) USACE (2009); (5) BCDC from the Pacific

Institute for CCCC (2009), but based on an empirical formula developed in 2007 that only relates global mean sea level rise to global mean surface air temperatures—therefore a limited physical relationship, mainly accounting for temperature; (6) BCDC projection in 2011, developed by the California Climate Action Team (CAT) in 2010, but produced from IPCC (2007) data and old methods of limited data and calculations; and (7) only tidal gauge measurements to produce the low end projections, with intermediate and high end estimates developed from a NRC report in 1987, that was utilized and modified to produce the IPCC projections (2007). The methods from the 1987 report and the IPCC projections of 2007 were conservative methods argued in the REIR for Newark, providing a sea level rise of only 1.4 feet in 2050 and 4.6 feet in 2100. As cited in reports, discussed below, the IPCC even admitted that their data was too conservative, as influenced by governments, climate deniers and corporate media.

The REIR report states: "Table 4.4-2 identifies the range of sea level rise potential for the City of Newark, assuming adaption of the Presidio gauge for the local historic sea level trend and construction of a given forecast in 2010". The table projects a USACE method of the high of 1.4 feet for 2050 and 4.6 feet (55 inches) for 2100. Some recent reports for California forecast sea level rise north of Cape Mendocino, with highs of 1.57 feet in 2050 and 4.69 feet for 2100; south of Cape Mendocino (towards Bay Area) forcasts highs up to 2.0 ft for 2050 and **5.48 ft (66 inches) for 2100**.

A BCDC projection, as far back as 2010, forecasts the high of **5.75 ft (69 inches)**, as it attempted to adjust to an uncertainty as you forecast further into the future. Unfortunately, these projections were derived from the older IPCC greenhouse gas emission scenarios and used by CAT. Furthermore, greenhouse gas emissions are only one part of the contribution to climate change. The likelihood of increasing concentrations of greenhouse gasses are potentially greater, while global corrective action still appears to diminish. In addition, as referenced later, melting of Greenland and Antarctic ice sheets are not well reflected in current sea level rise projections, but are known to have a profound effect on sea level rise. Therefore, due to newer data, uncertainty prevails, yielding a higher level of potential inundation.

As stated in the REIR, "an extreme storm surge equal to the extreme mean sea level rise would create a storm surge water surface elevation of 12.1 feet, which would inundate the minimum project elevation of 11.25 feet by 10.2 inches". *Furthermore, "the **weight** of additional fill accelerates ground settlement", which you must know has occurred in similar with terrain close to shorelines in the East Bay, e.g. Union City, Hayward, etc., and along the West Bay where similar developments already exist and new ones are being futilely attempted*

Increasing the fill to higher amounts such as 14 feet only attempts to raise an island or peninsula-type development above a surrounding flood zone--in an effort to circumvent

the effects of near-term climate change and sea level rise. However, the underlying fill is on soft ground near sea level, with the influence of wetlands and marshes, and numerous other hydrologic forces that were not stressed in the Specific Plans or the EIRs. Environmental impacts to Area 4: 1. Eventually, the area will become inundated through erosion of the underlying fill, due to the upsurge imposed by rising water-soil saturation levels as the shoreline permeates into the soil and ground water from sea level rise; 2. Lifting pressure, absorption and desorption, and permeation from water tables forces water upward into soils through rising and encroaching seas--thus inducing a settling, sinking effect, or subsidence, with potential flooding of the housing that rests upon the fill; 3. Liquefaction zones, coupled with earthquakes, will exacerbate the saturation, settling and stratification of soils, whether compacted or not; 4. Contamination of ground water from salt intrusion into surrounding geological structures can fracture and destabilize the soil strata; and 5. Over-pumping, whether drilling for water or from efforts to remove contaminants, can draw more salt water into collapsing areas near sea level, also further contaminating ground water.

Levees and hard structures are not acceptable as long-term protective methods because of the hydrologic forces impacting shorelines and adjacent soils, as described above.

Protective levees and hard in-ground barriers, as suggested but not planned in the EIRs, already have been shown to be unsuccessful in protecting against these hydrologic process in vulnerable soils, even without significant impacts of sea level rise, e.g. Foster City, San Mateo, Redwood City and various other vulnerable parts of the globe.

The City of Newark must realize and incorporate these described [significant forces of impacts] when planning, and avoid ignoring the issue of their known existence. Knowing this alone would inspire questions and hesitance from anyone in purchasing land and housing in that area of Newark.

Susceptibility to these described natural forces compounds the impacts and risk to life from earthquakes and settling, exacerbated by floods from storm surge and sea level rise. *Do you realize that the proposed project, its spurious agreement and the evolution of its flawed environmental documents will eventually establish a scourge and a legacy of culpability for the City of Newark, the land owners and the developers?*

C. NEED FOR CURRENT SCIENCE-BASSED DATA

REIR calculations and projections historically tend to utilize limited methods of evaluation, where many have produced outdated results, by omitting more recent

scientific techniques to obtain additional reliable data that can affect the calculations. Overall, more recent and credible scientific methods are being used by climate scientists for updates, which present an ominous scenario for near-future climate change, concomitant with sea level rise and inundation at various parts of the globe.

Scientists and development projects such as those in Area 4 in Newark must answer the question: *"Why does the 2014 REIR not take into account most current data and projections to realistically demonstrate their impact, whether or not they expect that because the projections are beyond the 2010 EIR they should be rejected? Does this truthful realism not show the impact of risk from the development?* The EIRs and REIRs have often discounted public input of peer-reviewed science, but the City utilizes [current] peer-reviewed science (when selectively convenient, of course) to support their goals of development, while omitting the best environmental alternative, completely.

D. PROTECTION OF NEW DEVELOPMENTS, OR THE ALTERNATIVE

The California Climate Adaptation Strategy (CCAS) realizes that the high financial, ecological, social and cultural costs of protecting everything may prove to be impossible. In the future, protection of everything may be both futile and environmentally destructive. The strategy discourages planning, development and building any NEW significant structures in places where that structure will require significant protection from sea-level rise, storm surges, or coastal erosion during the expected life of the structure.

Area 4 inherently includes these vulnerabilities for limited adaptation. The REIR even admits a regional area-wide adaptive strategy against sea level rise, which might include an earthen levee or structural floodwall.

Do you realize that responses from the City of Newark consistently state that protection is not their problem, that it is a regional problem, contrary to adaptation strategy policies? Consequently, the imposition of risk is thrust upon the new property owners, despite short-term protections of fill for the sake of sprawl into low lying exterior areas of Newark, far from transportation and with much uncertainty for its future existence.

As stated in the REIR: "If the "high" sea level rise scenario proves to be true, adaptive strategies to improve flood protection (for example levees or floodwalls) may prove to be necessary in the future". *Based on these statements, how does the REIR expect that there will be economic incentive or even feasibility to protect with levees or by other means?* Or, as stated in California Adaptation Strategy reports, abandonment may be required during the life of the project, since sea level rise is expected to accelerate. *Do you not agree that developments typically exist beyond the calculated life of a project?*

Certainly you must agree that most developments rebuild and repair beyond your 50 year previously projected life of project, in order to continue their survival in lands where space is limited, such as in the Bay Area and throughout the world? Do you realize that projects in BCDC jurisdiction must be consistent with the Bay Plan and are ***expected to last until 2100****? (See BCDC comments below)*

E. BCDC COMMENTS:

BCDC describes the need for shoreline protection if flooding is a potential risk. The REIR quotes BCDC's October 2011 Bay Plan Amendments for evaluation of each project on a case by case basis, generally discouraging developments in low-lying areas that can be inundated by floods or sea level rise. A number of sequential letters, up to 2014, from BCDC evaluated the specific case of the environmental documents for Area 4, and have a number of concerns for agency reviews and permits: 1. BCDC (letter of September 27, 2013) to Newark regarding environmental impacts to Area 4:

"BCDC grants or denies permits for fill in any water, land or structure within their jurisdiction. Areas diked off from the Bay are also inclusive, such as Area 4 with managed duck clubs, specifically cites the Pintail and Whistling Wings Duck Clubs. Consistent with the MPA wetland policies, the purpose is to restore to tidal or subtidal haitat…for benefit of multiple species…with surface area retained to include a variety of subtidal and wetland habitat types including diked areas managed for wildlife or restoration of managed wetlands to tidal action". Therefore, these are managed wetlands under the BCDC umbrella. BCDC policy also states: "To address the regional adverse impacts of climate change, undeveloped areas that are both vulnerable to future flooding and currently sustain significant habitats or species, or possess conditions that make the areas especially suitable for ecosystem enhancement, should be given special consideration for preservation and habitat enhancement and should be encouraged to be used for those purposes. Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies….structures within the Specific Plan would be expected to **last until 2100."**

The EIR could consider the use of open space as a flood zone buffer area. Realize that open space wetlands and marsh accretion have been reported as preferential and natural buffering towards flooding and for simultaneous habitat enhancement, instead of planning for special fill of wetlands, flood walls or levees.

Do you acknowledge that BCDC and the MPA should be addressed as having [correctly] incorporating these jurisdictions and policies in your REIR, including your prior EIRs and General Plans as well?

In the REIR statement, you claim that the BCDC Bay Plan Amendment (2011) …encourages development in low-lying areas…However, in this specific case, a contradiction is that Area 4 tends to be preferentially viewed by BCDC as an area that should be managed for wildlife and for restoration, with managed wetlands restored to tidal action. Flood protection with wetlands and habitat restoration is clearly preferential. Apparently, the REIR did not adequately analyze the conditions of Area 4, without bias. The area is unique for restoration, but vulnerable to environmental destruction if filled for the sake of developments, especially a golf course*. Please consider the policy of "no wetland loss" from environmental policies of jurisdictional agencies, especially when there is little or no local or outside mitigation areas available that could be effective to compensate for wetland and habitat losses in Area 4.*

2. BCDC (letter of April 18, 2014) to Newark regarding environmental impacts to developments in Area 4. (Reiterates much of the same concerns from BCDC in their letter of September 27, 2013):

"Climate Change and Safety of Fills. Staff recommends that a robust analysis of the effects of sea level rise based on the **latest data** from the **National Oceanic Atmospheric Administration (NOAA) Coastal Services Center** on sea level rise vulnerability be used, and that the **latest science-based** sea level rise projections for the area be utilized when considering the vulnerability of the project areas to sea level rise".

The latest science-based sea level rise projections for the area have not been effectively utilized in the 2014 REIR, as demonstrated by the outdated citations. More current science-based reports that are surfacing in the literature are revealing collective forces that are additive and are accelerating impacts. There is no reason to avoid this contribution to near-future sea level rise, which, for some reason, is avoided in the REIR. Examples of some science-based reports are described later.

"Projects in BCDC jurisdiction that involve Bay fill or fill within managed wetlands must be consistent with the Bay Plan policies on the safety of fills and shoreline protection, and it is likely that many of the proposed structures within the Specific Plans would be expected to **last until 2100"**.

As stated previously, the Area 4 development proposed is expected to have a life of 50 years, which will not last to 2100 as ascribed to BCDC's expectations.

According to BCDC, a condition for fill in the San Francisco Bay, from Section 66605 of the McAteer-Petris Act, states that "no upland alternative location is available for the project purpose, that the fill should be constructed in accordance with sound safety standards, and the fill will minimize harmful effects to the Bay such as discharge of pollutants." *According to developable lands in Newark, do you*

agree in addressing the goals of the REIR in that there are many appropriate locations for housing, near transportation, in vacant lands within the city, to accommodate true infill in safer, more protected areas that are not vulnerable and also do not require excessive land fill? In addition, please realize that the intentions of the REIR in Area 4 development will result in imposing harmful effects to the Bay because of its close proximity to the Bay, with runoff, erosion, and discharge of pollutants into wetlands and the Bay--followed by destruction of habitat for wildlife and shorebirds that cannot be reversed.

F. SAN FRANCISCO BAY REGIONAL WATER QUALITY BOARD:

A series of responses from the Water Board (2010 to 2013, possibly in 2014 as well) has criticized the impact of developments in Areas 2, 3 and 4 in Newark's proposed developments and EIRs.

1. SF Water Board Letter of February 13, 2013:

The letter from the Water Board of February 13, 2013 critiques the General Plan Tune Up. As stated, "The project could cause substantial impacts to jurisdictional waters that the Regional Water Board is charged with protecting pursuant to State and federal laws and regulations." As stated, "Areas 3 and 4 focus on fill of up to 85.6 acres of wetland/marsh/aquatic habitat." "The California Wetlands Conservation Policy and Senate Concurrent Resolution No. 28 require no net loss and a long-term net gain in the quantity, quality, and permanence of wetlands in California, including SF Bay region". "Avoiding and minimizing fill should be the project alternatives, including smaller projects than those proposed."

The Water Board states that "it does not incorporate alternatives that provide for significant avoidance of fill of waters of the State." Alternative analyses such as these "are not acceptable to the Corps or the Water Board." *Do you realize that Waters of the State includes isolated wetlands, subject to the Water Board's jurisdiction, as well as water discharge requirements?*

A number of alternatives to the proposed development were presented by the Water Board, such as wider buffers between wetlands and development, smaller sites, higher densities, reduced fill, etc. On-site and off-site mitigation was not justified. The proposals were not consistent with the State's "no net loss" policy. "No net loss can only be achieved through avoidance of habitats or the successful creation of new habitats." The Water Board noted that "the ration of 1.5:1 is far too low for a mitigation measure that relies on preservation, for no net loss of habitat, since preserved habitats are already in existence."

As stated, "Area 4 represents a rare opportunity to restore this complex of habitats in a continuum with the Bay, provide connectivity with the Refuge, and provide an area for tidal marsh species to transgress (move up slope) in response to sea level rise**."** "The USFWS, BCDC and the Water Board have all expressed strong reservations about the fill of wetlands in Area 4."

Recent evidence demonstrated that wetland preservation and marsh accretion for long-term flood protection and sea level rise is a more desirable alternative, also realized and implemented in other countries. The Water Board was also concerned about "cumulative impacts on the use of waters and wetlands as wildlife habitat, including for rare, threatened, and endangered species"--as they have been previously found and reported in the area. The Water Board proposed that "Area 4 should be used as a mitigation ban."

Furthermore, the USFWS has included Area 4 in its acquisition boundary, due to its value to the Refuge in providing connectivity, preservation, restoration and long-term resilience to the area. *Consequently, how do you expect to down-size or eliminate this development in Area 4 in order meet these proposals and criteria of the various agencies? Or, better yet, why does the City of Newark avoid that environmental option by flippantly using the illogical excuse that this option simply does not meet the desired alternative of their development plan, against the environmentally preferable alterative? Are you aware that the Area 4 Specific Plan, which is tiered backwards to fallaciously incorporate itself into the General Plan Tune Up, is even contrary to CEQA law and to regulations and policies in agency reviews of Area 4?*

2. SF Water Board Letter of December 9, 2013:

The Water Board previously criticized the developments of Areas 3 and 4, as well as Area 2, and again the Board has reiterated and strengthened its concerns to the City of Newark. The Board provided statements criticizing the proposed Specific Plan developments of Areas 3 and 4--unlikely granting permits due to the flaws inherently incorporated into the Plan by the City of Newark. In other words, the Specific Plan has ignored the needed corrections, and the REIR does not correct these flaws, but only contains some generic references, as in the prior EIRs.

For example, the Water Board cited some important concerns that are summarized:

a. "It appears that the Specific Plans for the Area 3 and 4 are directing project proponents to develop project proposals that have very low likelihoods of being authorized by the Corps or the Regional Water Board."

b. "The Regional Water Board has consistently noted in its CEQA comment letters that the amount of fill in the preferred alternatives in the Specific Plans for the TOD and Area 3 and 4 is not considered to be consistent with existing State laws and regulations."

c. "Even if federal and State agencies were to approve of the proposed amount of fill, the Specific Plan EIRs referenced in the FEIR have not established the existence of sufficient mitigation for these impacts**.**"

d. "The Regional Water Board has consistently pointed out the flaws in the proposed mitigation in those EIRs, and no commenting federal or State agency with jurisdiction over waters or wetlands has indicated approval of the proposed mitigation measures."

d. "Finally, we would like to reiterate that the City of Newark should not assume that the resource agencies will be able to permit the fill of the wetlands at Area 4. Since Area 4 is one of the largest remaining areas of open space along the Baylands, provides habitat for endangered species, and is adjacent to the Don Edwards San Francisco Bay National Wildlife Refuge, impacts to Area 4 will be regionally significant, and mitigation for any impacts that are allowed to occur at Area 4 should reflect the significance of the lost habitat. In order to protect the Beneficial Uses of preservation of rare and endangered species and wildlife habitat, the Regional Water Board is **not likely to authorize fill of wetlands** at Area 4, unless mitigation is demonstrably capable of providing equal habitat benefit for listed species."

f. "The Regional Water Board continues to encourage the City of Newark to consider the potential use of Area 4 as a mitigation bank. There are significantly fewer regulatory and physical barriers to creating a mitigation bank at Area 4 than there are to placing fill in Area 4 and seeking to create adequate mitigation for that fill."

G. MORE RECENT CONTRIBUTIONS FROM OTHER SOURCES OF SCIENTIFIC DATA:

Scientific results from peer-reviewed science articles, news releases, UN Climate Change, National Academy of Sciences, Paris Climate Summit meetings, and numerous reports from many other countries have revealed more recent 2014 contributions towards climate science. More current data is continuously evolving and reveals more ominous predications and projections that demonstrate an accelerating pace of climate change and climate disruption.

Based on the changes occurring already throughout the world, from the effects of climate disruption on land, ocean and the atmosphere, economies and resources are being continuously disrupted as population expands and attempts to search and migrate into more desirable areas—hence, global disruption of human populations. Our lack of

addressing or correcting our global anthropogenic contributions to date, and that even stopping our contribution completely would still be difficult to implement.

1. IPCC 2013, AR5 REPORTS:

The outdated 2007 IPCC report has been reported to be influenced by the climate deniers, political pressure and other sources, in order to provide conservative estimates of impacts of climate change and sea level rise. The AR5, 2013 assessment still focuses on much uncertainty and still appears to be reticent to include a variety of other impacts that can accelerate climate change and sea level rise.

Citations of IPCC impacts are mostly out of date since there is a long time lapse between collection and evaluating data and reporting it for 2013. Most data appears to stop at 2010, with some at 2012, although it is often a confusing mix of information, where it is difficult to determine the exact dates associated with much of the reporting.

The IPCC reports tend to forecast on global mean impacts such as sea level rise. Calculations using a mean tends to be conservative and are not specific for California shorelines such as that of Area 4. Mean values tend to lower expectations of true effects on specific shoreline areas.

Many other sources of science-based reports are more revealing and more current as they immediately become exposed to the public. Other current reports take into account a variety of cumulative impacts that emphasize future climate change and sea level rise.

Despite lack of more current data, including absence of incorporating the effects of other forces of nature, AR5 2013 at least provided some important findings illustrating the acceleration of climate change, in comparison to the 2007 IPCC release used in the Newark EIRs.

IPCC 2013 Publication: Climate Change. The Physical Science Basis, Summary of Policymakers:

a. Warming of the climate system is unequivocal, and since the 1950s, many of the observed changes are unprecedented over decades to millennia. The atmosphere and ocean have warmed, the amounts of snow and ice have diminished, sea level has risen, and the concentrations of greenhouse gases have increased.

b. Ocean warming dominates the increase in energy stored in the climate system, accounting for more than 90% of the energy accumulated between 1971 and 2010 (*high confidence*).

c. Cryosphere: Over the last two decades, the Greenland and Antarctic ice sheets have been losing mass, glaciers have continued to shrink almost worldwide, and Arctic sea ice and Northern Hemisphere spring snow cover have continued to decrease in extent (*high confidence*).

d**.** Carbon and Other Biogeochemical Cycles: Carbon dioxide concentrations have increased by 40% since pre-industrial times, primarily from fossil fuel emissions and secondarily from net land use change emissions. The ocean has absorbed about 30% of the emitted anthropogenic carbon dioxide, causing ocean acidification.

e. Continued emissions of greenhouse gases will cause further warming and changes in all components of the climate system. Limiting climate change will require substantial and sustained reductions of greenhouse gas emissions.

f. Human influence on the climate system is clear. This is evident from the increasing greenhouse gas concentrations in the atmosphere, positive radiative forcing, observed warming, and understanding of the climate system.

g. Observational and model studies of temperature change, climate feedbacks and changes in the Earth's energy budget together provide confidence in the magnitude of global warming in response to past and future forcing.

h. Human influence has been detected in warming of the atmosphere and the ocean, in changes in the global water cycle, in reductions in snow and ice, in global mean sea level rise, and in changes in some climate extremes. This evidence for human influence has grown since AR4. It is *extremely likely* that human influence has been the dominant cause of the observed warming since the mid-20th century.

i. Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions.

j. The global ocean will continue to warm during the 21st century. Heat will penetrate from the surface to the deep ocean and affect ocean circulation.

k. Global surface temperature change for the end of the 21st century is *likely* to exceed 1.5°C relative to 1850 to 1900 for RCP8.5 scenarios (2081-2100), and *likely* to exceed 2°C. Warming will continue beyond 2100. Plots of a 1%/yr CO2 contribution showed cumulative total anthropogenic CO2 emissions producing temperature anomaly of about 4.5C for 2100**.** It is virtually certain that global mean sea level rise will continue beyond 2100, with sea level rise due to thermal expansion to continue for many centuries**.**

l. It is *very likely* that the Arctic sea ice cover will continue to shrink and thin and that Northern Hemisphere spring snow cover will decrease during the 21st century as global mean surface temperature rises. Global glacier volume will further decrease.

m. Global mean sea level will continue to rise during the 21st century. Under all RCP scenarios, the rate of sea level rise will *very likely* exceed that observed during 1971 to 2010 due to increased ocean warming and increased loss of mass from glaciers and ice sheets.

n. Climate change will affect carbon cycle processes in a way that will exacerbate the increase of CO2 in the atmosphere (*high confidence*). Further uptake of carbon by the ocean will increase ocean acidification.

o. Cumulative emissions of CO2 largely determine global mean surface warming by the late 21st century and beyond. Most aspects of climate change will persist for many centuries even if emissions of CO2 are stopped. This represents a substantial multi-century climate change commitment created by past, present and future emissions of CO2.

p. Additional calculations were made with updated atmospheric chemistry data and using the RCP prescribed emissions of the chemically reactive gases (CH4, N2O, HFCs, NOx, CO, NMVOC). These simulations enable investigation of uncertainties related to carbon cycle feedbacks and atmospheric chemistry. (Note: These gases, although currently smaller than CO2 contribution, are considerably more effective in increasing atmospheric heating. Emissions of these gases may increase from a variety of sources, including melting of permafrost and warming ocean bottoms.)

Technical References for 2013 IPCC Specific Effects of Climate Change

IPCC 2013 Publication: Technical Summary:

a. Glacial/Ice Sheets: There is very high confidence that, during the last decade, the largest contributions to global glacier ice loss were from glaciers in Alaska, the Canadian Arctic, the periphery of the Greenland ice sheet, the Southern Andes and the Asian mountains. Together these areas account for more than 80% of the total ice loss. There is high confidence that current glacier extents are out of balance with current climatic conditions, indicating that glaciers will continue to shrink in the future even without further temperature increase. There is very high confidence that the Greenland ice sheet has lost ice during the last two decades.

b. Changes in Sea Level: The primary contributions to changes in the volume of water in the ocean are the expansion of the ocean water as it warms and the transfer to the ocean of water currently stored on land, particularly from glaciers and ice

sheets. Water impoundment in reservoirs and ground water depletion (and its subsequent runoff to the ocean) also affect sea level. Change in sea level relative to the land (relative sea level) can be significantly different from the global mean sea level (GMSL) change because of changes in the distribution of water in the ocean, vertical movement of the land and changes in the Earth's gravitational field.

c. Methane: The concentration of CH4 has increased by a factor of 2.5 since pre-industrial times.

d. Nitrogen Oxides: Since pre-industrial times, the concentration of N2O in the atmosphere has increased by a factor of 1.2.

e. Oxygen: High agreement among analyses provides medium confidence that oxygen concentrations have decreased in the open ocean thermocline in many ocean regions since the 1960s. The general decline is consistent with the expectation that warming-induced stratification leads to a decrease in the supply of oxygen to the thermocline from near surface waters, that warmer waters can hold less oxygen and that changes in wind-driven circulation affect oxygen concentrations.

f. Acidification of Oceans: Oceanic uptake of anthropogenic CO2 results in gradual acidification of the ocean. The pH of ocean surface water has decreased by 0.1 since the beginning of the industrial era (high confidence), corresponding to a 26% increase in hydrogen ion concentration.

g. Cryosphere: The reductions in Arctic sea ice extent and NH snow cover extent and widespread glacier retreat and increased surface melt of Greenland are all evidence of systematic changes in the cryosphere. All of these changes in the cryosphere have been linked to anthropogenic forcings.

h. Thresholds for sea level rise of 7 meters (22 feet) and 2C temperature rise: The available evidence indicates that global warming beyond a threshold would lead to the near-complete loss of the Greenland ice sheet over a millennium or longer, causing a global mean sea level rise of approximately **7 meters**. Studies with fixed present-day ice sheet topography indicate that the threshold is greater than **2°C but less than 4°C** (*medium confidence*) of global mean surface temperature rise above pre-industrial.

i. Projected Long-term Changes in the Ocean: Over the course of the 21st century, the global ocean will warm in all RCP scenarios--throughout the globe.

j. Sea Level Extremes: In the future it is *very likely* that there will be a significant increase in the occurrence of sea level extremes and similarly to past observations, this increase will primarily be the result of an increase in mean sea level.

2. 2013 IPCC REPORT: PEER-REVIEWED SCIENTIFIC AND PUBLIC COMMENTS:

In 2013: "The IPCC has moved in the right direction this time by at least trying to account for the key contribution to sea level rise from melting ice sheets***",*** director of Pennsylvania State University's Earth System Science Center Michael Mann told The Huffington Post in an emailed statement, explaining that it was ignored in the previous IPCC report from 2007***.*** ***"***However, the projections they provide are still overly conservative, with an upper limit of roughly one meter by 2100, when there is published work that suggests the possibility of as much as two meters (six feet) sea level rise by 2100*,"* he added. "This fits a pattern of the IPCC tending to err on the side of conservative, in part--I believe---because of fear of being attacked by the climate change denial machine."

Describing the IPCC's projections, Climate Progress' Joe Romm wrote, "Like every IPCC report, it is **an** instantly out-of-date snapshot that lowballs future warming because it continues to ignore large parts of the recent literature and omit what it can't model**."** (Other scientific projections indicate that **six feet in 2100 is insignificant** if ice sheets slide off the terrain that supports them, into the ocean, leading to ocean water displacement--far greater than effect of melt on floating Arctic icebergs).

The IPCC even acknowledges governments influenced their projections, and they still persist. For example, a more current IPCC projection (September, 2013) only presents a 10-32-inch rise in sea level, which had to be upgraded from the prior 7-23 inches. The report predicts global temperatures could reach 0.5-8.6F, *leading to possible catastrophic changes to climate, and above all, to warming oceans*. The higher numbers are more likely, due to lack of agreements between governments: Only the lowest scenario, which was based on major cuts in CO2 emissions and is considered unlikely, came in below limit that countries have set as their target in the climate talks to avoid the worst impacts of warming (3.6F) before the industrial revolution. At this point, emissions keep rising mainly due to rapid growth in China and other emerging economies. But those nations say rich countries should take the lead on emissions cuts because they've pumped carbon into the atmosphere for longer."

Therefore, we have circular arguments of blame, and no government wants to put environment before economy, hence higher limits of sea level rise and climate temperatures are likely to occur. The IPCC still errs on the conservative and does not take into account other forces of climate change. IPCC projections become a moving target, as they will be forced to at least consider the impact of the accelerating

expansion of economics from the uncorrected growth of human population and lack of corrective action.

3. NATIONAL ACADEMY OF SCIENCES, 2013: CLIMATE CHANGE, EVIDENCE OF CAUSES (OVERVIEW FROM THE ROYAL SOCIETY AND THE US NATIONAL ACADEMY OF SCIENCES):

"Taken together, all model projections indicate that Earth will continue to warm considerably more over the next few decades to centuries. If there were no technological or policy changes to reduce emission trends from their current trajectory, then further warming of 2.6 to 4.8C (4.7 to 8.6F) in addition to that which has already occurred would be expected during the 21st century (2100 projection)." The effect of temperatures at a 2C increase is consistently reported as a tipping point, where at the pace of human contribution, climate change will accelerate and expose the environment into irreversible catastrophic events.

4. GREENLAND AND ANTARCTICA'S ACCELERATING ICE LOSS (DATA FROM CRYOSAT SATELLITE), BY ROBERT MCSWEENEY, AUGUST 25, 2014.

"The researchers used data from the European Space Agency's CryoSat -- a **satellite** that passes over the earth at 700km above the surface and measures the thickness of polar ice. The satellite was launched in 2010 and has been collecting data on sea ice and ice sheets ever since. By comparing data with other satellite missions, scientists can see how quickly the ice sheets are changing.

A series of satellite maps published to date show Greenland and Antarctica are losing more ice than at any time since satellite records began. Scientists found the two vast ice sheets are losing a total of 500 cubic kilometers of ice per year, contributing to rising global sea levels.

The study, just published in the journal The Cryosphere, reveals that since 2009, the volume of ice loss has tripled in West Antarctica and more than doubled in Greenland. This is the highest rate of ice loss since satellite records began 20 years ago.

Regional differences: Their satellite maps show that Greenland is losing around three times more ice than Antarctica, including thinning of the entire western ice sheet and further losses in the southeast and northwest ice sheets. In Antarctica, the maps show thinning of the West Antarctic Ice Sheet and the Peninsula. East Antarctica shows some increases in thickness, though this doesn't outweigh the losses elsewhere. **Overall, more ice is being lost than gained."**

5. EARTH INSIGHT--IN THE GUARDIAN, MARCH 2014:

March 2014: The paper by James Hansen, a frequent contributor to the science, confirms the "crossing of the tipping point into catastrophic climate change". "Other recent scientific studies show the current global emissions trajectory could within three years guarantee a 2C rise in global temperatures, in turn triggering irreversible and dangerous amplifying feedbacks. Conventional models suggest that 1.5C is just 10-30 years away". The implication is that policymakers are riding blind—we do not really know how close we are to a tipping point into catastrophe."

6. URGENT CLIMATE MEETING OF SEPTEMBER 21, 2014 (MOST RECENT) AND NEXT YEAR'S PARIS CLIMATE SUMMIT:

Opportunities are to be presented for implementing mitigation and program changes to climate impacts. The need is to rectify the impacts of tipping points, the feedback loops, where climate change feeds back on itself and causes rapidly accelerating, catastrophic consequences. Temperature changes alone are indicating this potential.

7. ACCELERATING CHANGES AND TIPPING POINTS:

In the case of planetary climate, there are cumulative forces that can interact and can be self-feeding when a tipping point is past. *You must contemplate on the meaning of tipping points, which are feedback loops when climate change and disruption of the planet feeds back on itself causing rapidly accelerating, catastrophic consequences.* Unfortunately, most people interpret change as velocity or constant change, as opposed to acceleration, which is mathematically a rate change on velocity, or an exponential or logarithmic function when it applies to increasing changes in climate.

Accelerating factors that include all significant existing and future forces of nature, as well as those that are continuously being pulled into action, have clearly not been taken into account in calculating all impacts, as the REIR must incorporate. Those forces need to be utilized, in particular with the IPCC predictions that are outdated when published, as they do not factor all significant forces into the equation, thus producing very conservative forecasts.

8. GLOBAL TEMPERATURE RISE AND IMPACT ON PLANT SPECIES AND GREENHOUSE GASSES:

"The length of the dry season in the southern Amazon is the most important climate condition controlling the rain forest. Scientists think that a longer dry season will stress trees, raising the risk of wildfires and forest dieback. If the dry season is too long, the rain forest will not survive. The Amazon rain forest's dry season lasts three weeks longer than it did 30 years ago, and the likely culprit is global warming, a new study finds. The new findings forecast a more parched future for the Amazon rain forest than the recent climate report released by the Intergovernmental Panel on Climate Change

(IPCC), the study authors said. The IPCC models predict the Amazon dry season will last 3 to 10 days longer by 2100. This means the IPCC models likely underestimate future predictions of rain forest climate change effects, the researchers concluded at the University of Texas at Austin's Jackson School of Geosciences. The climate models used by the IPCC do a poor job representing these processes."

The IPCC is immediately outdated on these issues, as usual. Normally there are extensive and significant contributions to CO2 absorption by the rain forest during respiration and growth. Loss of those forests could result in less greenhouse gas absorption (CO2), thus accelerating warming climate and even faster loss of the forests. In addition, if drought is severe enough, the loss of rainforest could cause the release of large volumes of the greenhouse gas, carbon dioxide, into the atmosphere, as life cycles could be disrupted to reverse normal trends from CO2 absorption into CO2 release to the atmosphere. Simultaneous to this reversal of trend is the loss of oxygen production during respiration of forests, exacerbated by oxygen uptake and oxidative decay of biomass, followed by more intense losses from drought and wildfires. The impact could cause an accelerated reversal of normal life cycles and disrupt plant and animal communities in world forests and especially in one of the regions of highest biodiversity in the world. The result would add a significant increase in global air, land and ocean temperatures, with sea level rise and potential inundation of shoreline developments.

9. GRAVITATIONAL INFLUENCE—PEER-REVIEWED SCIENCE:

a. Gravity/Mass and Sea Level Rise.

Normally there is gravitational pull that tends to raise sea level near large masses of ice and land. However, warming climate and warming oceans are causing break-up and melt of large masses of ice. As the ice melts and is lost, gravitational influence is diminished and oceans tend to move outward and change circulation patterns. The result is added ocean volume, temperature changes and thermal expansion in areas away from the dwindling ice. A larger contribution to sea level rise becomes evident in other areas of the planet. Some areas may counterbalance this effect to some extent, depending on global location, land-based connections, and the retention or extent of loss of ice mass.

From: “The Sea-Level Fingerprint of West Antarctic Collapse” (as far back as 6 February 2009) *Science* 323 (5915), 753: They reported that the impact of glacial melting would not be distributed evenly around the world, because each glacier’s individual gravitational pull affects the sea level nearby. The article showed illustrations for the melting of the West Antarctic Ice Sheet. Sites in the Northern

Hemisphere showed sea levels rise more than the worldwide average. Equations included a shift of the earth's axis of rotation and other geological changes that would follow the glacial melt. The graphs show an even **bleaker situation for the United States, where the new distribution of sea-level rise indicates factors of multiplication and a significant percentage difference against the worldwide average**.

b. Gravity--Findings in *Nature Geoscience*.

"The ice sheets covering Antarctica and Greenland contain about 99.5 per cent of the Earth's glacier ice which would raise global sea level by some 63 meters if it were to melt completely. The ice sheets are the largest potential source of future sea level rise – and they also possess the largest uncertainty over their future behavior. Since 2002, the satellites of the Gravity Recovery and Climate Experiment (GRACE) detect tiny variations in Earth's gravity field resulting from changes in mass distribution, including movement of ice into the oceans. Using these changes in gravity, the state of the ice sheets can be monitored at monthly intervals."

"Dr. Bert Wouters, currently a visiting researcher at the University of Colorado, said: In the course of the mission, it has become apparent that ice sheets are losing substantial amounts of ice – about 300 billion tonnes each year – and that the rate at which these losses occurs is increasing. Compared to the first few years of the GRACE mission, the ice sheets' contribution to sea level rise has almost doubled in recent years."

Note that the reported 63-meter rise in sea level is about 205 feet.

10. LEARNING EXPERIENCES FROM THE DUTCH IN THE NETHERLANDS:

Reports from the Netherlands: Moving developments up and away mimics the California Adaptation Strategy of 2009.

Regarding comments about the interrelationship of flooding, climate change, sea level rise, and the learning experiences of the Dutch over the years:

a. http://e360.yale.edu/feature/to_control_floods_the_dutch_turn_to_nature_for_inspiration/2621/

"The new Dutch technology has promise, and flood management agencies in the U.S. are keeping an eye on it, said Jason Needham, a consequence specialist with

the U.S. Army Corps of Engineers' Risk-management Center in Davis, Calif., who recently spent a year in the Netherlands on a staff-exchange program. But sophisticated devices like Smart Dikes are expensive, and haven't yet proven their worth, he said. As for natural defenses, Needham said the concepts are good, and '**everyone agrees our wetlands need to be restored**.'"

"The two countries have different approaches to flood control, Needham acknowledged, with the Dutch focusing mainly on prevention, while Americans emphasize emergency preparedness and recovery. In the face of an uncertain future climate, however, the objectives are now converging. The goal, as Needham puts it, is "how to get people safer without putting a big wall up there."

b. http://www.nytimes.com/2013/02/17/arts/design/flood-control-in-the-netherlands-now-allows-sea-water-in.html?_r=0

"And now the evidence is leading them to undertake what may seem, at first blush, a counterintuitive approach, a kind of about-face: The Dutch are starting to let the water in. They are contriving to live with nature, rather than fight (what will inevitably be, they have come to realize) a losing battle."

"Why? The reality of rising seas and rivers leaves no choice. Sea barriers sufficed half a century ago; but they're disruptive to the ecology and are built only so high, while the waters keep rising. American officials who now tout sea gates as the one-stop-shopping solution to protect Lower Manhattan should take notice. In lieu of flood control the new philosophy in the Netherlands is controlled flooding."

"Governor Cuomo's plan would turn properties in Queens, Brooklyn and Staten Island into parks, bird sanctuaries and dunes that could act as buffer zones for inland development. The idea is to give homeowners an incentive (perhaps up to $300,000) to move voluntarily out of areas where, in hindsight, single-family houses shouldn't have been built in the first place. The Dutch have pursued a more aggressive and complex relocation strategy".

The Dutch have discovered through long experience indicated in the California Adaptation Strategy of 2009: Best alternative is to move developments up and away from hazard areas when economics and environment dictates…not to develop new structures that are at risk in vulnerable areas from hazards such as flooding and sea level rise. *Why does Newark not incorporate these impacts and risks, and follow science regarding protective measures with wetland management?*

c. Even the popular Scientific American and National Geographic (Sept 2013 and Oct. 2013) have been continuously publishing numerous, extensive maps and articles on the impact of global climate change and sea level rise).

For example:

As far back as 2008: Scientific American. The Unquiet Ice, Feb. 2008 (extensive article addressing many sources): "Loss of [land-based ice] of Antarctic and Greenland could add **200 ft of global sea level rise**—*has happened before with high C02 levels*. The National Geographic (www.climate.ngm.com) and the special issue as far back as June 2008: "The Science Is In", states "…ice sheet [collapse] in both Greenland and Antarctica would raise sea level **20 feet, inundating many coastlines**".

Realize: The 20-foot rise represents "collapse" and the 200-foot level represents "loss of land-based ice", or a smaller change verses a major melt-down of sub-glacial ice, which from international studies looks ominous, either way, since we are approaching the tipping point. And the world is too concerned about impact on economy to adjust, where environment is on the bottom of the priorities list, like Area 4 developments.

11. WATER SOURCES NOW AND IN THE FUTURE:

The thirsty elephant in the room.... Whether or not we continue to develop in any area, our future water supply is no doubt going to become an increasingly larger issue, for many reasons, especially as population increases and demand for water increases with concomitant production of new housing. We may be in a drought for many long years, since certain scientific evidence shows that dry and wet years have occurred in long-term multi-century-cycles. Climate disruption, from uncorrected human influence is additive to this changing cycle and is exacerbating the water problem.

12. MORATORIUMS ON WATER USAGE:

In the past, in some other cities, when severe droughts or when a lack of a sufficient water source occurred, a moratorium on water hookups was implemented, meaning no permits or a long wait-list for limited hookups. Otherwise, water supplies for existing housing could become next to nothing. Therefore a moratorium in Newark, and other cities, should be implemented before it is too late, or our water supply as well as what is left of the economy could easily dry up. Some towns, suburban areas and farms have already run out of water, with vain attempts to drill for more, despite the inevitable potential collapse of ground water reservoirs. However, if you listen to the developers and the cities that look for short-term expanding growth and immediate benefits, you will hear wishful thinking and unscientific excuses, which will not allow us to be prepared in the long run.

Conservation practices on water usage, as proposed in new developments, still results in increased usage, and expands the need for more water from additional hookups, thus diluting sources even more so. Limiting hookups, controlling further development and "mitigating" population expansion are the immediate viable solutions, despite human ignorance to blindly make excuses to search for other reasons.

Cities may continue until conservation and water sources are exhausted, but by then those responsible for planning may likely be long-gone or moved to higher ground. State agencies are already proposing conservation and limitations in water consumption. If the drought continues, which is indicated by climate change, the future will require even more cutbacks. California reports have indicated a potential 9-year drought, and possibly considerable more years of drought as shown by tree rings, from as far back as 1400 AD to present.

We cannot create water. We obtain water from the dictates of weather, coupled with the impact of planetary forces on local and distant aquatic systems, including the oceans. But water must be continuously available and even increase as we demand more and more, assuming our climate can provide replenishment as climate disruption commences.

H. ADVANTAGES OF RESTRICTED GROWTH ALTERNATIVE (ENVIRONMENTAL PREFERENCE), AS PREVIOUSLY PRESENTED TO NEWARK BUT HAVE STILL BEEN IGNORED, BEGGING THE QUESTION AS TO WHY?

As previously discussed in prior EIRs and GP responses, the small quantitative differences between restricted and unrestricted growth simply means that they both could equate, if the goal is to obtain the housing and job objectives that the city consistently claims must be met. However, the all-encompassing impacts between the two alternatives in the long-run are different. In fact, the restricted growth alternative, as stated by the city to be environmental preferred, is the best option for the public because of the following:

(1) the alternative can meet the housing and jobs growth projections by focusing most development into already safer or protected areas, such as within the inner city;

(2) provides centralized walkable communities for a highly desired socially enhancing inner city focal point for the community--and for cultural exchange and entertainment within the city;

(3) supports inner city focused development that will be near existing businesses and facilities that will foster further expansion and improvements with true infill (many inner city buildings and lots, still empty and waiting)--as

demonstrated by the improved quality of life and desirability in other Bay area cities such as Palo, Mt. View and Pleasanton. Improved quality of life becomes an attraction that enhances economics, real estate value and the successful schools that follow;

(4) inner city areas are closer to existing and already centralized transportation and infrastructure, with economic benefits for improvements (promoted by greenhouse gas regulations, other regulations, government agencies and policies);

(5) minimizes traffic that would occur, in comparison to excessive sprawl into outer regions of the city that would increase noise and reduction in air quality. Outer areas also do not have infrastructure or support for transportation. (Recall that the Area 2 economics for the TOD rail proposal is defunct.);

(6) does not promote sprawl into vulnerable areas subject to liquefaction, climate disruption, sea level rise, flood inundation followed by erosion, etc.;

(7) inner city development will be much further from harm's way that may eventually exist at the exterior of the city.

(8) other than economic benefits of jobs and housing that the city promotes, environmental benefits of avoiding development in vulnerable areas such as Area 4 provides potential flood protection through wetlands management, retention of biological resources (endangered species in particular), negating need for disruptive fill, non-disturbance of cultural resources, and promotes view resources and open space near the bayfront--to name a few benefits to the public;

(9) the environmentally preferred alternative promotes the desired outcome of the city to develop Area 3 with residences, which also supports the balance of jobs and housing expected. In contrast, the unrestricted growth alternative encourages sprawl in Area 2 and 4, and is in conflict with California State policies and recommendations for inner city growth;

(10) overall quality of life is improved according to public wants and needs; and

(11) many other benefits, as referenced by other public comments.

Specifically, the environmentally preferred alternative and zoning of Area 3 for residential, and avoiding residential development in Area 4, supports the potential for flood protection for Area 3 and the rest of the city. Wetland expansion and restoration in most, if not all of Area 4, then becomes a wiser path for flood protection. An additional

benefit would result in open space and view preservation, environmental protection and enhancement of wildlife habit in Area 4 and adjacent lands--as existed many years ago. Otherwise, development of Area 4 would hamper potential protections from wetland management within that area of excessive landfill and housing, since the ability to implement significant protections would be mostly lost. Restoration of Area 4 becomes a more desirable alternative to prepare for climate disruption and sea level rise and what, if anything, we can even realistically do to prevent catastrophe in the outer fringe and even within the city.

“Embracing Newark’s Bayfront”, as defined by the city of Newark, with development in Area 4, realistically produces a destructive impact to the bayfront-- not one of fostering protection of wetlands, vistas, open space and other benefits to the city. Area 4 development will become a disruptive process of landfill and earth-moving that will actively impact all the wetlands in the area. Encroachments would allow development to be only within 100 feet of any remaining wetlands—proven to have serious detrimental disturbances to wildlife and shorebird habit, their foraging abilities and their migrations.

Therefore, the conclusion from the city that the Restricted Growth Alternative was determined to be the environmentally superior alternative--is correct. However, city arguments evolved into a simplified quantitative invalidation of that alternative, which was flawed and misleading, simply because the city claimed that the restricted growth alternative fully meets only seven of the eleven (but still a majority) objectives identified in the prior EIR. As stated previously, the city objectives do not include all the advantages of the environmentally preferred restricted growth alternative, and is biased to exclude many of those advantages, as cited by other sources as well. The restricted growth alternative is actually not restricted and should be named according to its actual benefits. The misnomer (“restricted” alternative) should be renamed as its purpose identifies, as described previously, i.e. as a “Focused Development Alternative”, or even as another type of unrestricted growth such as “Inner City Alternative” versus the “Outer City Alternatives” for Area 2 and 4. *Therefore, as the evidence prevails, why not implement the wiser path of the environmentally preferable option?*

I. CONCLUSIONS:

Development of vulnerable exterior areas such as Area 4 will not enhance the term the city documents used in their policy to "embrace Newark's bayfront location". *On the contrary, won’t Area 4 development translate into environmental loss of open space, wetlands and wildlife habitat—degrading what little actually is present in the city of*

Newark? (Newark is basically surrounded by Fremont.) Exterior sprawling development in Area 4 also would be contradictory to the city policies of "no loss of wetlands" and "not building in 100-year flood plains". Instead, the city attempts short-term mitigations to circumvent those policies. Furthermore, another contradiction is the city policy of creating "balance" (between open space and development), which will evolve towards an "imbalance" and loss of open space with development of Area 4.

The goal of distracting and focusing city resources and staff time towards expensive developments in land-filled sprawl near the Bay will draw an increase in population from outside sources, for only those who can afford these exclusive upscale residences. Quality of life for existing populations will be diminished by excessive traffic, loss of open space, wetland and upland degradation, loss of wildlife habit including endangered species and migratory waterbirds--and exposure of those developments to flood hazards, sea level rise and the eventual need for expensive tax-payer funded protections—if even feasible.

Therefore the restricted growth alternative is far superior in every major heading cited in the EIR and in the application of regulations and policies that the city should be focusing upon. Protection and restoration of Area 4 becomes the preferred alternative to include within the Fish and Wildlife Refuge expansion boundaries, also recommended by the Bay Goals project. The development will require excessive landfill and will seriously diminish the benefits of wetlands, wildlife and open space and views, forever.

The public has consistently voiced their opinion over the years for inner city walkable small town developments, with a focal point, similar to that of other cities. Therefore the General Plan and associated Specific Plans, with their EIRs, should focus more on the need for inner city infrastructure and walkable communities that would be close to available transportation--not the exterior sprawl into vulnerable areas close to bayfront. *So why not focus on inner city improvements and potential protections for the future to mitigate for accelerating climate disruption and sea level rise, if nothing more, as a more responsible city plan? Why not at least concentrate on existing populations and resources for those who have lived here, paid their taxes and made their contribution towards city growth, long-term establishments and built their community over a period of many years for their desired quality of life?*

Sincerely,

Wayne W. Miller, Newark, CA

Jana Sokale
7788 Hazelnut Drive
Newark, California 945600

September 19, 2014

Sent via electronic mail to terrence.grindall@newark.org: No hardcopy to follow.

Mr. Terrence Grindall
Community Development Director
37101 Newark Boulevard
Newark, CA 94560

Subject: Comment Letter on the Recirculated Draft EIR
Newark Areas 3 and 4 Specific Plan Project

Dear Mr. Grindall,

I am writing as a Newark resident for over 20 years, as a biologist conducting wildlife research around San Francisco Bay and as a member of the Citizens Committee to Complete the Refuge. This letter provides comments on the REIR for the proposed Specific Plan for Areas 3 & 4 in Newark, CA. Areas 3 and 4 comprise approximately 850 acres of land located at the western edge of the City of Newark and bounded on the north by Mowry Avenue, to the east by Cherry Street, to the south by Stevenson Boulevard, and to the west by Mowry Slough, which flows to San Francisco Bay.

The REIR continues to contain omissions, inaccuracies and flaw analyses that must be rectified to comply with California Environmental Quality Act (CEQA) requirements. These flaws must be addressed and Newark must re-circulate a revised document.

1. Transportation
The REIR Fails to Analyze the Safety of a Multi-Use Trail Adjacent To A Golf Course.

The REIR describes "A combined emergency vehicle access (EVA) and pedestrian/bicycle trail is proposed across Area 4, with northerly EVA access to the site planned at Mowry Avenue just west of the railroad tracks. The access roadway will be locked and gated to allow only emergency vehicles; however, the gate will allow passage of pedestrians and bicycles. The EVA roadway/multi-use trail will be 20 feet wide. Along the east side of the trail, a vandal-resistant fence will separate the trail from the railroad right of way, and along the west side of the trail, a post and rail fence is proposed to separate the trail from the golf course (refer to Figure 2.4-3) (p. 30).

The REIR fails to evaluate the safety concerns of aligning the multi-use trail adjacent to the golf course. A post and rail fence will provide no protection to trail users from golf balls. Please provide analysis and feasible mitigation measures to address injury to trail users from golf balls.

2. The REIR Fails To Analyze the Safety Of An At-Grade Crossing of the UPRR Line by a Multi-Use Trail.

The REIR fails to analyze the safety of an at-grade crossing of the UPRR line by a multi-use trail (SF Bay Trail) that has the potential to serve both as a recreation route and transportation route for residents traveling to the Silliman Center and area schools. Please provide analysis and feasible mitigation measures to address the safety of an at-grade pedestrian/bicycle crossing of UPRR line.

3. The REIR Fails To Analyze The Safety Of Future Residents Of Area 4 Who Will Be Limited To A Single Point Of Ingress/Egress At Stevenson Boulevard If The EVA Is Gated, Locked and Accessible Only To Police And Fire Personnel As Planned.

The REIR states, "In addition to the new Stevenson Boulevard overcrossing into Area 4, emergency vehicle access (EVA) for police and fire service would be provided via Mowry Avenue. The EVA access to Area 4 will improve the safety of the railroad crossing and the connection to the golf course and residential units is planned just west of the railroad tracks. The access roadway will be locked and gated to allow only emergency vehicles (p. 326)."

The REIR fails to explain how the EVA parallel the UPRR line will "improve the safety of the railroad crossing and the connection to the golf course and residential units…"

The REIR notes the 2013 General Plan "Land Use Policy T-5.9 Emergency Access. Improve the street system as necessary to facilitate emergency vehicle response and to provide multiple route options in the event a road is blocked by an emergency or is otherwise made impassable (p. 46)." No analysis is provided of the single point of egress/ingress for residents to Area 4.

Please provide analysis of the safety of residents in the event of an emergency in Area 4 should the Stevenson overpass be blocked.

4. Air Quality
Local Air Quality – Local Air Pollution Sources
The REIR Fails To Analyze The Impact Of The New Cherry Logistics Truck Distribution Center on the School Site in Area 3.

In the REIR Appendix B Illingworth & Rodkin, Inc. writes "the location of the school was reviewed to identify sources of toxic air contaminants (TACs) that could adversely affect users of the school, primarily children." This memo notes "Only one stationary source of TAC emissions was identified within 1,000 feet: Source 18728, which is a standby diesel generator located at the campus of Ohlone College." However, the 2011 Bay Area Air Quality Management District CEQA Air Quality Guidelines (2011 BAAQMD CEQA Guidelines) indicated that:

"Exposure of receptors to substantial concentrations of TACs and PM2.5 could occur from the following situations:
1. Siting a new TAC and/or PM2.5 source (e.g., diesel generator, truck distribution center, freeway) near existing or planned receptors; and
2. Siting a new receptor near an existing source of TAC and/or PM2.5 emissions.
BAAQMD recommendations for evaluating and making a significance determination for each of these situations are discussed separately below."

The REIR fails to analyze the recently completed Cherry Logistics Center located at 38811 Cherry Street. This 120 loading dock, 575,000 SF distribution center was leased to a full-building tenant at shell completion and is the largest industrial/warehouse lease deal in the East Bay in more than 10 years and largest in the Bay Area in over five years. The cross-dock facility will provide 120 dock doors, full-size truck courts and on-site parking for 175+ trailers. Truck distribution centers are known to increase concentrations of TACs and PM2.5.

The 2011 BAAQMD CEQA Guidelines state that:

"When evaluating whether a new source of TAC and/or PM2.5 emissions would adversely

affect existing or future proposed receptors, a lead agency should examine:

- the extent to which the new source would increase risk levels, hazard index, and/or PM2.5 concentrations at nearby receptors,
- whether the source would be permitted or non-permitted by the BAAQMD, and
- whether the project would implement Best Available Control Technology for Toxics (T-BACT), as determined by BAAQMD.

The incremental increase in cancer and non-cancer (chronic and acute) risk from TACs and PM2.5 concentrations at the affected receptors should be assessed. The recommended methodology for assessing community risks and hazards from PM2.5 and TACs follows a phased approach, within which progressively more advanced techniques are presented for each phase."

The REIR states, "The project (Area 3 and 4 Specific Plan) would not be a permanent source of air pollution that would expose the public to substantial pollutant concentrations. However, the Specific Plan area is located near industrial sources of air pollution. Air pollution sources within one-quarter mile of new housing or a school were considered to have a potential impact (page 148)."

The REIR states, "The California Air Resources Board (CARB) has recommended that lead agencies avoid locating new residences near truck distribution areas that accommodate more than 100 trucks per day (page 148)." Newark is currently proposing locating two schools near the new Cherry Logistics Center – the public elementary school proposed in Area 3 and the private Stratford School at the former Agilent facility located between Area 3 and the Cherry Logistics Center. The REIR also notes that, the "prevailing winds in the area are mostly from the northwest. This would place both schools downwind of the Cherry Logistics Center and the associated truck route.

The REIR must analyze this local air pollution source on the school proposed in Area 3 and the associated housing development.

5. Impacts to Western Burrowing Owls
The REIR Fails To Adequately Describe The Existing Environmental Setting Of Western Burrowing Owls.

The environmental setting should use the 2012 Staff Report on Burrowing Owl Mitigation developed by the California Department of Fish and Wildlife ("the Owl Report"), a copy of which is submitted herewith. The Owl Report requires that habitat assessments be conducted to evaluate the likelihood that a site supports burrowing owl, and adequate surveys. The Owl Report also requires that only individuals meeting detailed minimum qualifications should perform burrowing owl habitat assessments, surveys, and impact assessments. The Report also states that occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the last three years.

The REIR failed to discuss the environmental conditions for the western burrowing owl from a local and regional perspective. The REIR only described owls within the project area and did not describe the environmental setting of owls adjacent to the project area or in satellite burrows.

Over the past decade I have personally observed burrowing owls in areas adjacent to Areas 3 and 4.

SE Corner of Stevenson and Cherry – Breeding Pair fledged 6 young

Along Line D, Area 3 observed from Cherry Street – Single Owl
Former Agilent Building, Cherry Street – Single Owl
Sportsfield Park, Mowry Avenue – Breeding Pair
US Post Office, Clark Avenue – Single Owl

I also have knowledge of an owl at:
Former Agilent Building, Cherry Street – Single Owl

Significant new information has been learned about the continuing decline and habitat needs of this species. The REIR fails to adequately describe existing habitat conditions, quantify the acreage of suitable burrowing owl breeding and foraging habitat.

The REIR misrepresents the environmental setting. The REIR's statement (p. 183) that "Suitable nesting and roosting habitat is somewhat limited by the intensive agricultural disturbance and existing development on much of the site" mischaracterizes the existing conditions in Area 4. In fact, there is no existing development within Area 4 and no agricultural crop is harvested from the site.

6. The REIR Fails To Adequately Analyze Project Impacts To The Western Burrowing Owl.

The REIR fails to identify the number of habitat acres to be impacted by development consistent with the current guidance contained in the Owl Report.

The California Department of Fish and Wildlife requires that both burrowing owl foraging and construction/development impacts be quantified in acres. Please quantify the total number of acres of foraging habitat available to owls. Please describe the habitat qualities of the landscape.

Impact BIO-4 (p. 183): The REIR fails to quantify the loss of burrowing owl habitat. The California Department of Fish and Wildlife requires quantification of the impact to burrowing owl habitat. How many acres of foraging and nesting habitat will be impacted by this project?

7. The REIR Fails To Adequately Analyze Mitigation Measures for Impacts To The Western Burrowing Owl.

The REIR fails to identify mitigation measures consistent with the current guidance contained in the Owl Report.

MM BIO-4.2 (p. 184): The REIR recommends nest buffer zones ranging from 150 feet to 250 feet depending upon the season. These buffer zones are inadequate according to research cited in the 2012 Staff Report on Burrowing Owl Mitigation. DFW recommends buffer zones ranging in distance from 200 meters (656 feet) to 500 meters (1,640 feet) during peak breeding season.

MM BIO-4.3 (p. 184): The 2012 Staff Report on Burrowing Owls states "Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA." Eviction and exclusion has failed to stem the continuing decline of the local (South Bay) burrowing owl population. Any use of exclusion must include the elements listed below as described in the 2012 Staff Report on Burrowing Owl Mitigation. The REIR does not include these measures.

- A Burrowing Owl Exclusion Plan (see Appendix E of the 2012 Staff Report on Burrowing Owl Mitigation) is developed and approved by the applicable local DFW office;

- Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the Mitigating Impacts sections below. Temporary exclusion is mitigated in accordance with the item #1 under Mitigating Impacts below.
- Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for one week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.
- Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

"Mitigating impacts. Habitat loss and degradation from rapid urbanization of farmland in the core areas of the Central and Imperial valleys is the greatest of many threats to burrowing owls in California (Shuford and Gardali, 2008). At a minimum, if burrowing owls have been documented to occupy burrows (see Definitions, Appendix B) at the project site in recent years, the current scientific literature supports the conclusion that the site should be considered occupied and mitigation should be required by the CEQA lead agency to address project-specific significant and cumulative impacts. Other site-specific and regionally significant and cumulative impacts may warrant mitigation. The current scientific literature indicates the following to be best practices. If these best practices cannot be implemented, the lead agency or lead investigator may consult with the Department to develop effective mitigation alternatives. The Department is also available to assist in the identification of suitable mitigation lands.

1. Where habitat will be temporarily disturbed, restore the disturbed area to pre-project condition including decompacting soil and revegetating. Permanent habitat protection may be warranted if there is the potential that the temporary impacts may render a nesting site (nesting burrow and satellite burrows) unsustainable or unavailable depending on the time frame, resulting in reduced survival or abandonment. For the latter potential impact, see the permanent impact measures below.

2. Mitigate for permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the information provided in Appendix A. Note: A minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area.

3. Mitigate for permanent impacts to nesting, occupied and satellite burrows and burrowing owl habitat with (a) permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals. The mitigation lands may require habitat enhancements including enhancement or expansion of burrows for breeding, shelter and dispersal opportunity, and removal or control of population stressors. If the mitigation lands are located adjacent to the impacted burrow site, ensure the nearest neighbor artificial or natural burrow clusters are at least within 210 meters (Fisher et al. 2007).

4. Permanently protect mitigation land through a conservation easement deeded to a nonprofit conservation organization or public agency with a conservation mission, for the purpose of conserving burrowing owl habitat and prohibiting activities incompatible with burrowing owl use. If the project is located within the service area of a Department approved burrowing owl

conservation bank, the project proponent may purchase available burrowing owl conservation bank credits.

5. Develop and implement a mitigation land management plan to address long-term ecological sustainability and maintenance of the site for burrowing owls (see Management Plan and Artificial Burrow sections below, if applicable).

6. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.

7. Habitat should not be altered or destroyed, and burrowing owls should not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to Department-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.

8. Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present.

9. Where there is insufficient habitat on, adjacent to, or near project sites where burrowing owls will be excluded, acquire mitigation lands with burrowing owl habitat away from the project site. The selection of mitigation lands should then focus on consolidating and enlarging conservation areas located outside of urban and planned growth areas, within foraging distance of other conserved lands. If mitigation lands are not available adjacent to other conserved lands, increase the mitigation land acreage requirement to ensure a selected site is of sufficient size. Offsite mitigation may not adequately offset the biological and habitat values impacted on a one to one basis. Consult with the Department when determining offsite mitigation acreages.

10. Evaluate and select suitable mitigation lands based on a comparison of the habitat attributes of the impacted and conserved lands, including but not limited to: type and structure of habitat being impacted or conserved; density of burrowing owls in impacted and conserved habitat; and significance of impacted or conserved habitat to the species range-wide. Mitigate for the highest quality burrowing owl habitat impacted first and foremost when identifying mitigation lands, even if a mitigation site is located outside of a lead agency's jurisdictional boundary, particularly if the lead agency is a city or special district.

11. Select mitigation lands taking into account the potential human and wildlife conflicts or incompatibility, including but not limited to, human foot and vehicle traffic, and predation by cats, loose dogs and urban-adapted wildlife, and incompatible species management (i.e., snowy plover).

12. Where a burrowing owl population appears to be highly adapted to heavily altered habitats such as golf courses, airports, athletic fields, and business complexes, permanently protecting the land, augmenting the site with artificial burrows, and enhancing and maintaining those areas may enhance sustainability of the burrowing owl population onsite. Maintenance includes keeping lands grazed or mowed with weedeaters or push mowers, free from trees and shrubs, and preventing excessive human and human-related disturbance (e.g., walking, jogging, off-road activity, dog-walking) and loose and feral pets (chasing and, presumably, preying upon owls) that make the environment uninhabitable for burrowing owls (Wesemann and Rowe 1985, Millsap and Bear 2000, Lincer and Bloom 2007). Items 4, 5 and 6 also still apply to this mitigation approach.

13. If there are no other feasible mitigation options available and a lead agency is willing to establish and oversee a Burrowing Owl Mitigation and Conservation Fund that funds on a competitive basis acquisition and permanent habitat conservation, the project proponent may participate in the lead agency's program."

MM BIO- 4.4 (p. 184): A total of 6.5 acres of foraging habitat per pair or single owl is no longer a recommended acreage. The 2012 Staff Report on Burrowing Owl Mitigation indicates, "the current scientific literature supports the conclusion that mitigation for permanent habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow." The report further indicates that "A minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area." This mitigation measure must be updated to reflect quantifiable habitat conditions and anticipated habitat loss due to development.

The REIR provides for the opportunity to manage for "burrowing owls on and off-site (p.184)." Off-site mitigation would contribute to the decline of the local South Bay burrowing owl population. The REIR provides no analysis of the significance of this form of mitigation to the local South Bay burrowing owl population.

MM BIO-4.7 (p. 186): Aspects of this mitigation measure are simply infeasible and therefore ineffective at reducing the project impacts on the California burrowing owl. The concept that "Pets will be prohibited from ranging freely (off-leash dogs will be prohibited in conservation areas and no free-roaming outdoor cats will be permitted), to prevent their entry into sensitive species habitat" is unenforceable.

8. The REIR Fails To Adequately Analyze Cumulative Impacts To The Western Burrowing Owl.

The REIR provides no analysis of the cumulative biological impact resulting from the loss of local South Bay burrowing owl breeding and foraging habitat. Area 4 is approximately 560 acres of which approximately one half has been delineated as wetlands by the US Army Corps of Engineers. The remaining land is level, low-lying transitional grassland habitat ideally suited to burrowing owls. Loss of this large acreage should be reviewed as a cumulative impact to the burrowing owl. The REIR does not even address cumulative impacts to the species.

9. Impacts to Roosting Bats
The REIR Fails To Adequately Analyze Cumulative Impacts To Bats.

The REIR states, "Several bat species including the pallid and Yuma myotis bats have the potential to roost in existing structures and eucalyptus trees within Area 4 (p. 190)." Figure 3.5-2 identifies structures and trees with potential for roosting bats (page 187). Upon review of GoogleEarth images of the site it appears as though two of the buildings identified as having potential for roosting bats have been demolished and removed from Area 4. These buildings appear in the October 2012 image and are no longer present in February 2014 image.

These structures were removed during the Citizens Committee to Complete the Refuge's (CCCR) legal action for judicial review of the 2010 EIR's compliance with CEQA (Alameda County Superior Court, Case No. RG10-530015). Explain why these potential habitat

structures were removed prior to resolution of the court challenge. Explain if and how the City of Newark required implementation of MM BIO-7.1 through MM BIO-7.6. Please provide the biologist survey report available for public review.

This loss of bat habitat on site must be included in a revised bat cumulative impact analysis.

10. The REIR Fails To Provide Mitigation Measures for Maternity Bat Roosts.

The REIR provides no mitigation measure for bat maternity roosts, although the REIR indicates "The Area 4 project could result in significant impacts to nesting colonies of pallid bats, a California species of special concern, and Yuma myotis bats, a rare species in the South Bay." Pallid bat roosts are very susceptible to human disturbance, and urban development has been cited as the most significant factor contributing to their regional decline (Miner and Stokes 2005). Pallid bats were likely present throughout the South Bay historically, but they are slowly being extirpated from the area due to urban development and habitat loss. Please provide mitigation measures for bat maternity roosts.

11. The REIR Fails To Adequately Describe The Existing Environmental Setting of Bats.

Further, the REIR's environmental setting is flawed as it fails to discuss the environmental conditions for bats from a local and regional perspective. The California Bat Working group is preparing a conservation plan for California bat species. The State of Washington recently released Draft Washington Bat Conservation Plan and covers many of the California species (Hayes and Wiles 2013). This plan notes, "The most important habitats for Washington's bats are those used for roosting and foraging." The REIR fails to address the importance foraging habitat. The Washington report notes, "Adequate foraging habitat is a second primary requirement of bat populations. A number of bat species in Washington concentrate their feeding near fresh water (especially in riparian areas) and along edge habitats, where insect availability is commonly high and vegetational clutter is reduced." "Availability of drinking sites is another key component of bat foraging habitat, especially in drier regions of the state where water sources may be limited." These are landscape features of Area 4. The open lands, freshwater seeps and freshwater ponds in Area 4 provide ideal foraging habitat for bats. The REIR must address both roosting and foraging habitat for bat species of special concern.

12. Indirect Impacts on Waterbird Use of Wetlands
The REIR Mitigation Measure for Indirect Impacts to Waterbirds is Inadequate.

The REIR states, "the perennial wetlands within the former Pintail Duck Club were documented to consistently support much higher numbers of waterbirds. Specifically, waterbirds were concentrated within an area of approximately 18 acres providing a mosaic of open water, exposed mud, and emergent vegetation. In a number of areas in the South Bay, large numbers of waterbirds feed, loaf (e.g., during high tides), preen, and even nest in close proximity to high levels of human activity (p. 219)."

The REIR offers "MM BIO-10.1 Indirect impacts of residential and golf course development on birds using the undeveloped wetlands on the site shall be mitigated by the creation or enhancement of waterbird habitat on the site at a 0.5:1 ratio for a total of 9 acres of mitigation. Mitigation wetlands for these indirect impacts shall be located at least 300 feet from any development, to the maximum extent possible. The mitigation areas shall provide perennial or near-perennial water with a variety of depths ranging from very shallow water or exposed mud to water up to several feet deep to support the bird species currently using the former Pintail Duck Club. This mitigation can occur within the same wetland areas created as mitigation for permanent loss of wetlands as long as it is located at least 300 feet from any

residential or golf course development."

In research conducted for the South Bay Salt Pond Restoration Project (SBSP Project) by my colleague and I determined that waterfowl responded strongly to new trail use at non-trail sites. Responses included fewer birds near trail levees compared to before disturbance, fewer species, and over 75% of birds responding by swimming or flying away from the levee in response to trail walkers. Pease, et al. (2005) noted that a single person walking is a highly disturbing activity and that both trail walkers and bicyclists cause significant flight responses by waterfowl. Our results at the non-trail sites support this statement. As the SBSP Project converts salt ponds used by waterfowl to tidal marshes, perennial wetland habitat for waterfowl will be reduced making the freshwater ponds in Area 4 an even more important resource for waterfowl on the Pacific Flyway. Findings of our waterfowl research indicate that trail use is also reducing the habitat available to ducks. A significant number of waterfowl avoided pond habitat up to an estimated 120 meters from the levee trail. Some waterfowl species consistently stayed 150 meters away from elevated levee trails. This new research suggestions both the importance of the freshwater ponds and the need for adequate buffer distance between human activity zones and habitat areas.

The mitigation ratio and the distance of mitigation lands to the potential housing and recreational developments should be further analyzed to reflect the growing body of research on human disturbance impacts on waterfowl and shorebirds.

13. The REIR Fails To Analyze The Feasibility, And Therefore The Potential For Success, Of The Combined Biological, Geological and Hydrological Mitigation Measures.

The REIR includes a range of mitigation measure for biotic resources. Is there adequate land within Area 4 to effectively preserve the existing wetlands and mitigate for the multitude of significant impacts to wildlife resources? Will the remaining lands maintain hydrological connections to the shallow groundwater that supports the mosaic of perennial wetlands, seasonal wetlands and transitional upland habitats? No analysis or plan is provided to convey the potential feasibility of MM BIO-1 through MM BIO-15. No analysis is provided to ensure the substantial ground disturbance activities will allow the remaining lands in Area 4 to support the ecological functions and values of the biological mitigation measures. The geological and hydrological measures are likely in direct conflict to the feasibility of retaining subsurface water flows the feed the natural seeps and ponds in Area 4. Analysis must be provided to assess the feasibility of the mitigation measures. Some of the significant ground disturbance actions required to support the development include:

- the placement and engineering of 2.1 million cubic yards of fill to raise the building pads,
- ground improvement measures including such as surcharging, rammed aggregate piers, or soil/cement mixing, to compensate for liquefaction,
- underground improvements to reduce the potential hydrostatic uplift pressures on the housing,
- soil corrosion measures to avoid degradation of foundations and public infrastructure including utilities, bridges, soundwalls, etc. in this aqueous environment, to list just a few of the ground disturbance actions.

14. The REIR Fails To Adequately Analyze Mitigation Measures For Impacts To Wetlands.

The REIR notes, "The project would result in the loss of up to 85.6 acres of wetland/ marsh/aquatic habitat in Area 4. This would result in a substantial adverse effect on riparian

habitat and on federally protected wetlands through the loss of these habitats (p. 198)."

The REIR offers "compensatory mitigation for impacts to these habitats shall consist of two parts: (1) creation of high quality wetland and aquatic habitat within Area 4 within upland habitat at an acreage ratio of 1:1 (habitat created/enhanced: habitat impacted) to prevent any net loss of habitat functions or values, and (2) enhancement of existing seasonal wetland habitat that is currently within agricultural production (mapped as agricultural field/seasonal wetland habitat) at an acreage ratio of 0.5:1 (such enhancement will include cessation of farming activities, seeding with appropriate seasonal wetland plant seeds, and may include minor earth moving activities) (p. 198).

The mitigation measure provided by the REIR fails to adequate address the importance of the existing wetland complex within Area 4. Area 4 has been identified in the 1999 Baylands Ecosystem Habitat Goals Project and 2013 Tidal Marsh Recovery Plan and were designated by Congress in 1991 as within the expansion boundary of Don Edwards San Francisco Bay National Wildlife Refuge. The mitigation ratios are too small and do not reflect the importance of this landscape or the current mitigation ratios used by the regulatory agencies. The California Coastal Commission's "preferred procedure is to use the results from the functional capacity analysis, which provides for the preservation of both wetland acreage and functional capacity, in evaluating the adequacy of compensatory mitigation and mitigation ratios. In determining if functional capacity is maintained, both the adverse impacts and the proposed mitigation must be evaluated. In order to maintain functional capacity and wetland acreage, a mitigation plan should at least include the following:

- A wetland mitigation ratio in excess of one to one (i.e., one wetland acre must be restored or created for each acre lost through development). Many coastal development permits have required a ***mitigation ratio of four to one*** to compensate for wetland acreage and functional capacity lost during the re-establishment and maturation of the mitigation area. In some cases, larger mitigation ratios have been required to ensure that at least some compensation occurs in the event the mitigation project is only partially successful. Enhancement of degraded habitat may be included as a **component** of a mitigation plan if the total package results in an acceptable mitigation ratio.
- Wetland creation projects should be located adjacent to existing wetland habitat whenever possible, to increase the probability for success.
- Wetland creation projects should replace the same habitat type, preferably in the same watershed or area. However, if a regional management plan has been prepared for the area that demonstrates the need for a specific habitat type, the CCC **may consider** replacement with the identified critical habitat, provided that this replacement is endorsed by the appropriate fish and wildlife management agencies."

The mitigation measure for wetlands is wholly inadequate and must be evaluated against current regulatory practices and the significance afforded the land through the congressional designation.

The flaws of the REIR need to be rectified and the document recirculated for public review and comment.

Thank you for the opportunity to comment on REIR. Please keep me apprised of all future notifications and opportunities for public comment regarding this project.

Sincerely,

Jana Sokale

References:

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Trulio, T., White, H., Sokale, J, and K. Tokatlian. 2012. Report on Waterfowl Response to Trail Use in the South Bay Salt Pond Restoration Project.

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San Francisco Bay Conservation and Development Commission
Native American Heritage Commission
Alameda County Flood Control District
Alameda Creek Alliance
California Native Plant Society
Citizens Committee to Complete the Refuge
Ohlone Audubon Society
Sierra Club

Staff Report on Burrowing Owl Mitigation

State of California

Natural Resources Agency

Department of Fish and Game

March 7, 2012[1]

[1] This document replaces the Department of Fish and Game 1995 Staff Report On Burrowing Owl Mitigation.

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INTRODUCTION AND PURPOSE

Maintaining California's rich biological diversity is dependent on the conservation of species and their habitats. The California Department of Fish and Game (Department) has designated certain species as "species of special concern" when their population viability and survival is adversely affected by risk factors such as precipitous declines or other vulnerability factors (Shuford and Gardali 2008). Preliminary analyses of regional patterns for breeding populations of burrowing owls (*Athene cunicularia*) have detected declines both locally in their central and southern coastal breeding areas, and statewide where the species has experienced modest breeding range retraction (Gervais et al. 2008). In California, threat factors affecting burrowing owl populations include habitat loss, degradation and modification, and eradication of ground squirrels resulting in a loss of suitable burrows required by burrowing owls for nesting, protection from predators, and shelter (See Appendix A).

The Department recognized the need for a comprehensive conservation and mitigation strategy for burrowing owls, and in 1995 directed staff to prepare a report describing mitigation and survey recommendations. This report, "1995 Staff Report on Burrowing Owl Mitigation," (Staff Report) (CDFG 1995), contained Department-recommended burrowing owl and burrow survey techniques and mitigation measures intended to offset the loss of habitat and slow or reverse further decline of this species. Notwithstanding these measures, over the past 15+ years, burrowing owls have continued to decline in portions of their range (DeSante et al. 2007, Wilkerson and Siegel, 2010). The Department has determined that reversing declining population and range trends for burrowing owls will require implementation of more effective conservation actions, and evaluating the efficacy of the Department's existing recommended avoidance, minimization and mitigation approaches for burrowing owls.

The Department has identified three main actions that together will facilitate a more viable, coordinated, and concerted approach to conservation and mitigation for burrowing owls in California. These include:

1. Incorporating burrowing owl comprehensive conservation strategies into landscape-based planning efforts such as Natural Community Conservation Plans (NCCPs) and multi-species Habitat Conservation Plans (HCPs) that specifically address burrowing owls.
2. Developing and implementing a statewide conservation strategy (Burkett and Johnson, 2007) and local or regional conservation strategies for burrowing owls, including the development and implementation of a statewide burrowing owl survey and monitoring plan.
3. Developing more rigorous burrowing owl survey methods, working to improve the adequacy of impacts assessments; developing clear and effective avoidance and minimization measures; and developing mitigation measures to ensure impacts to the species are effectively addressed at the project, local, and/or regional level (the focus of this document).

This Report sets forth the Department's recommendations for implementing the third approach identified above by revising the 1995 Staff Report, drawing from the most relevant and current knowledge and expertise, and incorporating the best scientific information

available pertaining to the species. It is designed to provide a compilation of the best available science for Department staff, biologists, planners, land managers, California Environmental Quality Act (CEQA) lead agencies, and the public to consider when assessing impacts of projects or other activities on burrowing owls.

This revised Staff Report takes into account the California Burrowing Owl Consortium's Survey Protocol and Mitigation Guidelines (CBOC 1993, 1997) and supersedes the survey, avoidance, minimization and mitigation recommendations in the 1995 Staff Report. Based on experiences gained from implementing the 1995 Staff Report, the Department believes revising that report is warranted. This document also includes general conservation goals and principles for developing mitigation measures for burrowing owls.

DEPARTMENT ROLE AND LEGAL AUTHORITIES

The mission of the Department is to manage California's diverse fish, wildlife and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. The Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and habitats necessary to maintain biologically sustainable populations of those species (Fish and Game Code (FGC) §1802). The Department, as trustee agency pursuant to CEQA (See CEQA Guidelines, §15386), has jurisdiction by law over natural resources, including fish and wildlife, affected by a project, as that term is defined in Section 21065 of the Public Resources Code. The Department exercises this authority by reviewing and commenting on environmental documents and making recommendations to avoid, minimize, and mitigate potential negative impacts to those resources held in trust for the people of California.

Field surveys designed to detect the presence of a particular species, habitat element, or natural community are one of the tools that can assist biologists in determining whether a species or habitat may be significantly impacted by land use changes or disturbance. The Department reviews field survey data as well as site-specific and regional information to evaluate whether a project's impacts may be significant. This document compiles the best available science for conducting habitat assessments and surveys, and includes considerations for developing measures to avoid impacts or mitigate unavoidable impacts.

CEQA

CEQA requires public agencies in California to analyze and disclose potential environmental impacts associated with a project that the agency will carry out, fund, or approve. Any potentially significant impact must be mitigated to the extent feasible. Project-specific CEQA mitigation is important for burrowing owls because most populations exist on privately owned parcels that, when proposed for development or other types of modification, may be subject to the environmental review requirements of CEQA.

Take

Take of individual burrowing owls and their nests is defined by FGC section 86, and prohibited by sections 3503, 3503.5 and 3513. Take is defined in FGC Section 86 as "hunt, pursue, catch, capture or kill, or attempt to hunt, pursue, catch, capture or kill."

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the United States and Canada, Japan, Mexico, and Russia for the protection of migratory birds, including the burrowing owl (50 C.F.R. § 10). The MBTA protects migratory bird nests from possession, sale, purchase, barter, transport, import and export, and collection. The other prohibitions of the MBTA - capture, pursue, hunt, and kill - are inapplicable to nests. The regulatory definition of take, as defined in Title 50 C.F.R. part 10.12, means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to hunt, shoot, wound, kill, trap, capture, or collect. Only the verb "collect" applies to nests. It is illegal to collect, possess, and by any means transfer possession of any migratory bird nest. The MBTA prohibits the destruction of a nest when it contains birds or eggs, and no possession shall occur during the destruction (see Fish and Wildlife Service, Migratory Bird Permit Memorandum, April 15, 2003). Certain exceptions to this prohibition are included in 50 C.F.R. section 21. Pursuant to Fish & Game Code section 3513, the Department enforces the Migratory Bird Treaty Act consistent with rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Treaty Act.

Regional Conservation Plans

Regional multiple species conservation plans offer long-term assurances for conservation of covered species at a landscape scale, in exchange for biologically appropriate levels of incidental take and/or habitat loss as defined in the approved plan. California's NCCP Act (FGC §2800 et seq.) governs such plans at the state level, and was designed to conserve species, natural communities, ecosystems, and ecological processes across a jurisdiction or a collection of jurisdictions. Complementary federal HCPs are governed by the Endangered Species Act (7 U.S.C. § 136, 16 U.S.C.§ 1531 et seq.) (ESA). Regional conservation plans (and certain other landscape-level conservation and management plans), may provide conservation for unlisted as well as listed species. Because the geographic scope of NCCPs and HCPs may span many hundreds of thousands of acres, these planning tools have the potential to play a significant role in conservation of burrowing owls, and grasslands and other habitats.

Fish and Game Commission Policies

There are a number of Fish and Game Commission policies (see FGC §2008) that can be applied to burrowing owl conservation. These include policies on: Raptors, Cooperation, Endangered and Threatened Species, Land Use Planning, Management and Utilization of Fish and Wildlife on Federal Lands, Management and Utilization of Fish and Wildlife on Private Lands, and Research.

GUIDING PRINCIPLES FOR CONSERVATION

Unless otherwise provided in a statewide, local, or regional conservation strategy, surveying and evaluating impacts to burrowing owls, as well as developing and implementing avoidance, minimization, and mitigation and conservation measures incorporate the following principles. These principles are a summary of Department staff expert opinion and were used to guide the preparation of this document.

1. Use the Precautionary Principle (Noss et al.1997), by which the alternative of increased conservation is deliberately chosen in order to buffer against incomplete knowledge of burrowing owl ecology and uncertainty about the consequences to burrowing owls of potential impacts, including those that are cumulative.
2. Employ basic conservation biology tenets and population-level approaches when determining what constitutes appropriate avoidance, minimization, and mitigation for impacts. Include mitigation effectiveness monitoring and reporting, and use an adaptive management loop to modify measures based on results.
3. Protect and conserve owls in wild, semi-natural, and agricultural habitats (conserve is defined at FGC §1802).
4. Protect and conserve natural nest burrows (or burrow surrogates) previously used by burrowing owls and sufficient foraging habitat and protect auxiliary "satellite" burrows that contribute to burrowing owl survivorship and natural behavior of owls.

CONSERVATION GOALS FOR THE BURROWING OWL IN CALIFORNIA

It is Department staff expert opinion that the following goals guide and contribute to the short and long-term conservation of burrowing owls in California:

1. Maintain size and distribution of extant burrowing owl populations (allowing for natural population fluctuations).
2. Increase geographic distribution of burrowing owls into formerly occupied historical range where burrowing owl habitat still exists, or where it can be created or enhanced, and where the reason for its local disappearance is no longer of concern.
3. Increase size of existing populations where possible and appropriate (for example, considering basic ecological principles such as carrying capacity, predator-prey relationships, and inter-specific relationships with other species at risk).
4. Protect and restore self-sustaining ecosystems or natural communities which can support burrowing owls at a landscape scale, and which will require minimal long-term management.
5. Minimize or prevent unnatural causes of burrowing owl population declines (e.g., nest burrow destruction, chemical control of rodent hosts and prey).
6. Augment/restore natural dynamics of burrowing owl populations including movement and genetic exchange among populations, such that the species does not require future listing and protection under the California Endangered Species Act (CESA) and/or the federal Endangered Species Act (ESA).
7. Engage stakeholders, including ranchers; farmers; military; tribes; local, state, and federal agencies; non-governmental organizations; and scientific research and education communities involved in burrowing owl protection and habitat management.

ACTIVITIES WITH THE POTENTIAL TO TAKE OR IMPACT BURROWING OWLS

The following activities are examples of activities that have the potential to take burrowing owls, their nests or eggs, or destroy or degrade burrowing owl habitat: grading, disking, cultivation, earthmoving, burrow blockage, heavy equipment compacting and crushing burrow tunnels, levee maintenance, flooding, burning and mowing (if burrows are impacted), and operating wind turbine collisions (collectively hereafter referred to as "projects" or "activities"

whether carried out pursuant to CEQA or not). In addition, the following activities may have impacts to burrowing owl populations: eradication of host burrowers; changes in vegetation management (i.e. grazing); use of pesticides and rodenticides; destruction, conversion or degradation of nesting, foraging, over-wintering or other habitats; destruction of natural burrows and burrow surrogates; and disturbance which may result in harassment of owls at occupied burrows.

PROJECT IMPACT EVALUATIONS

The following three progressive steps are effective in evaluating whether projects will result in impacts to burrowing owls. The information gained from these steps will inform any subsequent avoidance, minimization and mitigation measures. The steps for project impact evaluations are: 1) habitat assessment, 2) surveys, and 3) impact assessment. Habitat assessments are conducted to evaluate the likelihood that a site supports burrowing owl. Burrowing owl surveys provide information needed to determine the potential effects of proposed projects and activities on burrowing owls, and to avoid take in accordance with FGC sections 86, 3503, and 3503.5. Impact assessments evaluate the extent to which burrowing owls and their habitat may be impacted, directly or indirectly, on and within a reasonable distance of a proposed CEQA project activity or non-CEQA project. These three site evaluation steps are discussed in detail below.

Biologist Qualifications

The current scientific literature indicates that only individuals meeting the following minimum qualifications should perform burrowing owl habitat assessments, surveys, and impact assessments:

1. Familiarity with the species and its local ecology;
2. Experience conducting habitat assessments and non-breeding and breeding season surveys, or experience with these surveys conducted under the direction of an experienced surveyor;
3. Familiarity with the appropriate state and federal statutes related to burrowing owls, scientific research, and conservation;
4. Experience with analyzing impacts of development on burrowing owls and their habitat.

Habitat Assessment Data Collection and Reporting

A habitat assessment is the first step in the evaluation process and will assist investigators in determining whether or not occupancy surveys are needed. Refer to Appendix B for a definition of burrowing owl habitat. Compile the detailed information described in Appendix C when conducting project scoping, conducting a habitat assessment site visit and preparing a habitat assessment report.

Surveys

Burrowing owl surveys are the second step of the evaluation process and the best available scientific literature recommends that they be conducted whenever burrowing owl habitat or sign (see Appendix B) is encountered on or adjacent to (within 150 meters) a project site

(Thomsen 1971, Martin 1973). Occupancy of burrowing owl habitat is confirmed at a site when at least one burrowing owl, or its sign at or near a burrow entrance, is observed within the last three years (Rich 1984). Burrowing owls are more detectable during the breeding season with detection probabilities being highest during the nestling stage (Conway et al. 2008). In California, the burrowing owl breeding season extends from 1 February to 31 August (Haug et al. 1993, Thompsen 1971) with some variances by geographic location and climatic conditions. Several researchers suggest three or more survey visits during daylight hours (Haug and Diduik 1993, CBOC 1997, Conway and Simon 2003) and recommend each visit occur at least three weeks apart during the peak of the breeding season, commonly accepted in California as between 15 April and 15 July (CBOC 1997). Conway and Simon (2003) and Conway et al. (2008) recommended conducting surveys during the day when most burrowing owls in a local area are in the laying and incubation period (so as not to miss early breeding attempts), during the nesting period, and in the late nestling period when most owls are spending time above ground.

Non-breeding season (1 September to 31 January) surveys may provide information on burrowing owl occupancy, but do not substitute for breeding season surveys because results are typically inconclusive. Burrowing owls are more difficult to detect during the non-breeding season and their seasonal residency status is difficult to ascertain. Burrowing owls detected during non-breeding season surveys may be year-round residents, young from the previous breeding season, pre-breeding territorial adults, winter residents, dispersing juveniles, migrants, transients or new colonizers. In addition, the numbers of owls and their pattern of distribution may differ during winter and breeding seasons. However, on rare occasions, non-breeding season surveys may be warranted (i.e., if the site is believed to be a wintering site only based on negative breeding season results). Refer to Appendix D for information on breeding season and non-breeding season survey methodologies.

Survey Reports

Adequate information about burrowing owls present in and adjacent to an area that will be disturbed by a project or activity will enable the Department, reviewing agencies and the public to effectively assess potential impacts and will guide the development of avoidance, minimization, and mitigation measures. The survey report includes but is not limited to a description of the proposed project or proposed activity, including the proposed project start and end dates, as well as a description of disturbances or other activities occurring on-site or nearby. Refer to Appendix D for details included in a survey report.

Impact Assessment

The third step in the evaluation process is the impact assessment. When surveys confirm occupied burrowing owl habitat in or adjoining the project area, there are a number of ways to assess a project's potential significant impacts to burrowing owls and their habitat. Richardson and Miller (1997) recommended monitoring raptor behavior prior to developing management recommendations and buffers to determine the extent to which individuals have been sensitized to human disturbance. Monitoring results will also provide detail necessary for developing site-specific measures. Postovit and Postovit (1987) recommended an analytical approach to mitigation planning: define the problem (impact), set goals (to guide mitigation development), evaluate and select mitigation methods, and monitor the results.

Define the problem. The impact assessment evaluates all factors that could affect burrowing owls. Postovit and Postovit (1987) recommend evaluating the following in assessing impacts to raptors and planning mitigation: type and extent of disturbance, duration and timing of disturbance, visibility of disturbance, sensitivity and ability to habituate, and influence of environmental factors. They suggest identifying and addressing all potential direct and indirect impacts to burrowing owls, regardless of whether or not the impacts will occur during the breeding season. Several examples are given for each impact category below; however, examples are not intended to be used exclusively.

Type and extent of the disturbance. The impact assessment describes the nature (source) and extent (scale) of potential project impacts on occupied, satellite and unoccupied burrows including acreage to be lost (temporary or permanent), fragmentation/edge being created, increased distance to other nesting and foraging habitat, and habitat degradation. Discuss any project activities that impact either breeding and/or non-breeding habitat which could affect owl home range size and spatial configuration, negatively affect onsite and offsite burrowing owl presence, increase energetic costs, lower reproductive success, increase vulnerability to predation, and/or decrease the chance of procuring a mate.

Duration and timing of the impact. The impact assessment describes the amount of time the burrowing owl habitat will be unavailable to burrowing owls (temporary or permanent) on the site and the effect of that loss on essential behaviors or life history requirements of burrowing owls, the overlap of project activities with breeding and/or non-breeding seasons (timing of nesting and/or non-breeding activities may vary with latitude and climatic conditions, which should be considered with the timeline of the project or activity), and any variance of the project activities in intensity, scale and proximity relative to burrowing owl occurrences.

Visibility and sensitivity. Some individual burrowing owls or pairs are more sensitive than others to specific stimuli and may habituate to ongoing visual or audible disturbance. Site-specific monitoring may provide clues to the burrowing owl's sensitivities. This type of assessment addresses the sensitivity of burrowing owls within their nesting area to humans on foot, and vehicular traffic. Other variables are whether the site is primarily in a rural versus urban setting, and whether any prior disturbance (e.g., human development or recreation) is known at the site.

Environmental factors. The impact assessment discusses any environmental factors that could be influenced or changed by the proposed activities including nest site availability, predators, prey availability, burrowing mammal presence and abundance, and threats from other extrinsic factors such as human disturbance, urban interface, feral animals, invasive species, disease or pesticides.

Significance of impacts. The impact assessment evaluates the potential loss of nesting burrows, satellite burrows, foraging habitat, dispersal and migration habitat, wintering habitat, and habitat linkages, including habitat supporting prey and host burrowers and other essential habitat attributes. This assessment determines if impacts to the species will result in significant impacts to the species locally, regionally and range-wide per CEQA Guidelines §15382 and Appendix G. The significance of the impact to habitat depends on the extent of habitat disturbed and length of time the habitat is unavailable (for example: minor – several days, medium – several weeks to months, high - breeding season affecting juvenile survival,

or over winter affecting adult survival).

Cumulative effects. The cumulative effects assessment evaluates two consequences: 1) the project's proportional share of reasonably foreseeable impacts on burrowing owls and habitat caused by the project or in combination with other projects and local influences having impacts on burrowing owls and habitat, and 2) the effects on the regional owl population resulting from the project's impacts to burrowing owls and habitat.

Mitigation goals. Establishing goals will assist in planning mitigation and selecting measures that function at a desired level. Goals also provide a standard by which to measure mitigation success. Unless specifically provided for through other FGC Sections or through specific regulations, take, possession or destruction of individual burrowing owls, their nests and eggs is prohibited under FGC sections 3503, 3503.5 and 3513. Therefore, a required goal for all project activities is to avoid take of burrowing owls. Under CEQA, goals would consist of measures that would avoid, minimize and mitigate impacts to a less than significant level. For individual projects, mitigation must be roughly proportional to the level of impacts, including cumulative impacts, in accordance with the provisions of CEQA (CEQA Guidelines, §§ 15126.4(a)(4)(B), 15064, 15065, and 16355). In order for mitigation measures to be effective, they must be specific, enforceable, and feasible actions that will improve environmental conditions. As set forth in more detail in Appendix A, the current scientific literature supports the conclusion that mitigation for permanent habitat loss necessitates replacement with an equivalent or greater habitat area for breeding, foraging, wintering, dispersal, presence of burrows, burrow surrogates, presence of fossorial mammal dens, well drained soils, and abundant and available prey within close proximity to the burrow.

MITIGATION METHODS

The current scientific literature indicates that any site-specific avoidance or mitigation measures developed should incorporate the best practices presented below or other practices confirmed by experts and the Department. The Department is available to assist in the development of site-specific avoidance and mitigation measures.

Avoiding. A primary goal is to design and implement projects to seasonally and spatially avoid negative impacts and disturbances that could result in take of burrowing owls, nests, or eggs. Other avoidance measures may include but not be limited to:

- Avoid disturbing occupied burrows during the nesting period, from 1 February through 31 August.
- Avoid impacting burrows occupied during the non-breeding season by migratory or non-migratory resident burrowing owls.
- Avoid direct destruction of burrows through chaining (dragging a heavy chain over an area to remove shrubs), disking, cultivation, and urban, industrial, or agricultural development.
- Develop and implement a worker awareness program to increase the on-site worker's recognition of and commitment to burrowing owl protection.
- Place visible markers near burrows to ensure that farm equipment and other machinery does not collapse burrows.
- Do not fumigate, use treated bait or other means of poisoning nuisance animals in areas where burrowing owls are known or suspected to occur (e.g., sites observed with nesting

owls, designated use areas).
- Restrict the use of treated grain to poison mammals to the months of January and February.

Take avoidance (pre-construction) surveys. Take avoidance surveys are intended to detect the presence of burrowing owls on a project site at a fixed period in time and inform necessary take avoidance actions. Take avoidance surveys may detect changes in owl presence such as colonizing owls that have recently moved onto the site, migrating owls, resident burrowing owls changing burrow use, or young of the year that are still present and have not dispersed. Refer to Appendix D for take avoidance survey methodology.

Site surveillance. Burrowing owls may attempt to colonize or re-colonize an area that will be impacted; thus, the current scientific literature indicates a need for ongoing surveillance at the project site during project activities is recommended. The surveillance frequency/effort should be sufficient to detect burrowing owls if they return. Subsequent to their new occupancy or return to the site, take avoidance measures should assure with a high degree of certainty that take of owls will not occur.

Minimizing. If burrowing owls and their habitat can be protected in place on or adjacent to a project site, the use of buffer zones, visual screens or other measures while project activities are occurring can minimize disturbance impacts. Conduct site-specific monitoring to inform development of buffers (see Visibility and sensitivity above). The following general guidelines for implementing buffers should be adjusted to address site-specific conditions using the impact assessment approach described above. The CEQA lead agency and/or project proponent is encouraged to consult with the Department and other burrowing owl experts for assistance in developing site-specific buffer zones and visual screens.

Buffers. Holroyd et al. (2001) identified a need to standardize management and disturbance mitigation guidelines. For instance, guidelines for mitigating impacts by petroleum industries on burrowing owls and other prairie species (Scobie and Faminow, 2000) may be used as a template for future mitigation guidelines (Holroyd et al. 2001). Scobie and Faminow (2000) developed guidelines for activities around occupied burrowing owl nests recommending buffers around low, medium, and high disturbance activities, respectively (see below).

Recommended restricted activity dates and setback distances by level of disturbance for burrowing owls (Scobie and Faminow 2000).

Location	Time of Year	Level of Disturbance		
		Low	Med	High
Nesting sites	April 1-Aug 15	200 m*	500 m	500 m
Nesting sites	Aug 16-Oct 15	200 m	200 m	500 m
Nesting sites	Oct 16-Mar 31	50 m	100 m	500 m

* meters (m)

Based on existing vegetation, human development, and land uses in an area, resource managers may decide to allow human development or resource extraction closer to these area/sites than recommended above. However, if it is decided to allow activities closer than

the setback distances recommended, a broad-scale, long-term, scientifically-rigorous monitoring program ensures that burrowing owls are not detrimentally affected by alternative approaches.

Other minimization measures include eliminating actions that reduce burrowing owl forage and burrowing surrogates (e.g. ground squirrel), or introduce/facilitate burrowing owl predators. Actions that could influence these factors include reducing livestock grazing rates and/or changing the timing or duration of grazing or vegetation management that could result in less suitable habitat.

Burrow exclusion and closure. Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls, or permanently exclude burrowing owls and close burrows after verifying burrows are empty by site monitoring and scoping. Exclusion in and of itself is not a take avoidance, minimization or mitigation method. Eviction of burrowing owls is a potentially significant impact under CEQA.

The long-term demographic consequences of these techniques have not been thoroughly evaluated, and the fate of evicted or excluded burrowing owls has not been systematically studied. Because burrowing owls are dependent on burrows at all times of the year for survival and/or reproduction, evicting them from nesting, roosting, and satellite burrows may lead to indirect impacts or take. Temporary or permanent closure of burrows may result in significant loss of burrows and habitat for reproduction and other life history requirements. Depending on the proximity and availability of alternate habitat, loss of access to burrows will likely result in varying levels of increased stress on burrowing owls and could depress reproduction, increase predation, increase energetic costs, and introduce risks posed by having to find and compete for available burrows. Therefore, exclusion and burrow closure are not recommended where they can be avoided. The current scientific literature indicates consideration of all possible avoidance and minimization measures before temporary or permanent exclusion and closure of burrows is implemented, in order to avoid take.

The results of a study by Trulio (1995) in California showed that burrowing owls passively displaced from their burrows were quickly attracted to adjacent artificial burrows at five of six passive relocation sites. The successful sites were all within 75 meters (m) of the destroyed burrow, a distance generally within a pair's territory. This researcher discouraged using passive relocation to artificial burrows as a mitigation measure for lost burrows without protection of adjacent foraging habitat. The study results indicated artificial burrows were used by evicted burrowing owls when they were approximately 50-100 m from the natural burrow (Thomsen 1971, Haug and Oliphant 1990). Locating artificial or natural burrows more than 100 m from the eviction burrow may greatly reduce the chances that new burrows will be used. Ideally, exclusion and burrow closure is employed only where there are adjacent natural burrows and non-impacted, sufficient habitat for burrowing owls to occupy with permanent protection mechanisms in place. Any new burrowing owl colonizing the project site after the CEQA document has been adopted may constitute changed circumstances that should be addressed in a re-circulated CEQA document.

The current scientific literature indicates that burrow exclusion should only be conducted by qualified biologists (meeting the Biologist's Qualifications above) during the non-breeding

season, before breeding behavior is exhibited and after the burrow is confirmed empty by site surveillance and/or scoping. The literature also indicates that when temporary or permanent burrow exclusion and/or burrow closure is implemented, burrowing owls should not be excluded from burrows unless or until:

- A Burrowing Owl Exclusion Plan (see Appendix E) is developed and approved by the applicable local DFG office;
- Permanent loss of occupied burrow(s) and habitat is mitigated in accordance with the Mitigating Impacts sections below. Temporary exclusion is mitigated in accordance with the item #1 under Mitigating Impacts below.
- Site monitoring is conducted prior to, during, and after exclusion of burrowing owls from their burrows sufficient to ensure take is avoided. Conduct daily monitoring for one week to confirm young of the year have fledged if the exclusion will occur immediately after the end of the breeding season.
- Excluded burrowing owls are documented using artificial or natural burrows on an adjoining mitigation site (if able to confirm by band re-sight).

Translocation (Active relocation offsite >100 meters). At this time, there is little published information regarding the efficacy of translocating burrowing owls, and additional research is needed to determine subsequent survival and breeding success (Klute et al. 2003, Holroyd et al. 2001). Study results for translocation in Florida implied that hatching success may be decreased for populations of burrowing owls that undergo translocation (Nixon 2006). At this time, the Department is unable to authorize the capture and relocation of burrowing owls except within the context of scientific research (FGC §1002) or a NCCP conservation strategy.

Mitigating impacts. Habitat loss and degradation from rapid urbanization of farmland in the core areas of the Central and Imperial valleys is the greatest of many threats to burrowing owls in California (Shuford and Gardali, 2008). At a minimum, if burrowing owls have been documented to occupy burrows (see Definitions, Appendix B) at the project site in recent years, the current scientific literature supports the conclusion that the site should be considered occupied and mitigation should be required by the CEQA lead agency to address project-specific significant and cumulative impacts. Other site-specific and regionally significant and cumulative impacts may warrant mitigation. The current scientific literature indicates the following to be best practices. If these best practices cannot be implemented, the lead agency or lead investigator may consult with the Department to develop effective mitigation alternatives. The Department is also available to assist in the identification of suitable mitigation lands.

1. Where habitat will be temporarily disturbed, restore the disturbed area to pre-project condition including decompacting soil and revegetating. Permanent habitat protection may be warranted if there is the potential that the temporary impacts may render a nesting site (nesting burrow and satellite burrows) unsustainable or unavailable depending on the time frame, resulting in reduced survival or abandonment. For the latter potential impact, see the permanent impact measures below.
2. Mitigate for permanent impacts to nesting, occupied and satellite burrows and/or burrowing owl habitat such that the habitat acreage, number of burrows and burrowing owls impacted are replaced based on the information provided in Appendix A. Note: A

minimum habitat replacement recommendation is not provided here as it has been shown to serve as a default, replacing any site-specific analysis and discounting the wide variation in natal area, home range, foraging area, and other factors influencing burrowing owls and burrowing owl population persistence in a particular area.

3. Mitigate for permanent impacts to nesting, occupied and satellite burrows and burrowing owl habitat with (a) permanent conservation of similar vegetation communities (grassland, scrublands, desert, urban, and agriculture) to provide for burrowing owl nesting, foraging, wintering, and dispersal (i.e., during breeding and non-breeding seasons) comparable to or better than that of the impact area, and (b) sufficiently large acreage, and presence of fossorial mammals. The mitigation lands may require habitat enhancements including enhancement or expansion of burrows for breeding, shelter and dispersal opportunity, and removal or control of population stressors. If the mitigation lands are located adjacent to the impacted burrow site, ensure the nearest neighbor artificial or natural burrow clusters are at least within 210 meters (Fisher et al. 2007).
4. Permanently protect mitigation land through a conservation easement deeded to a non-profit conservation organization or public agency with a conservation mission, for the purpose of conserving burrowing owl habitat and prohibiting activities incompatible with burrowing owl use. If the project is located within the service area of a Department-approved burrowing owl conservation bank, the project proponent may purchase available burrowing owl conservation bank credits.
5. Develop and implement a mitigation land management plan to address long-term ecological sustainability and maintenance of the site for burrowing owls (see Management Plan and Artificial Burrow sections below, if applicable).
6. Fund the maintenance and management of mitigation land through the establishment of a long-term funding mechanism such as an endowment.
7. Habitat should not be altered or destroyed, and burrowing owls should not be excluded from burrows, until mitigation lands have been legally secured, are managed for the benefit of burrowing owls according to Department-approved management, monitoring and reporting plans, and the endowment or other long-term funding mechanism is in place or security is provided until these measures are completed.
8. Mitigation lands should be on, adjacent or proximate to the impact site where possible and where habitat is sufficient to support burrowing owls present.
9. Where there is insufficient habitat on, adjacent to, or near project sites where burrowing owls will be excluded, acquire mitigation lands with burrowing owl habitat away from the project site. The selection of mitigation lands should then focus on consolidating and enlarging conservation areas located outside of urban and planned growth areas, within foraging distance of other conserved lands. If mitigation lands are not available adjacent to other conserved lands, increase the mitigation land acreage requirement to ensure a selected site is of sufficient size. Offsite mitigation may not adequately offset the biological and habitat values impacted on a one to one basis. Consult with the Department when determining offsite mitigation acreages.
10. Evaluate and select suitable mitigation lands based on a comparison of the habitat attributes of the impacted and conserved lands, including but not limited to: type and structure of habitat being impacted or conserved; density of burrowing owls in impacted and conserved habitat; and significance of impacted or conserved habitat to the species range-wide. Mitigate for the highest quality burrowing owl habitat impacted first and foremost when identifying mitigation lands, even if a mitigation site is located outside of

a lead agency's jurisdictional boundary, particularly if the lead agency is a city or special district.

11. Select mitigation lands taking into account the potential human and wildlife conflicts or incompatibility, including but not limited to, human foot and vehicle traffic, and predation by cats, loose dogs and urban-adapted wildlife, and incompatible species management (i.e., snowy plover).
12. Where a burrowing owl population appears to be highly adapted to heavily altered habitats such as golf courses, airports, athletic fields, and business complexes, permanently protecting the land, augmenting the site with artificial burrows, and enhancing and maintaining those areas may enhance sustainability of the burrowing owl population onsite. Maintenance includes keeping lands grazed or mowed with weed-eaters or push mowers, free from trees and shrubs, and preventing excessive human and human-related disturbance (e.g., walking, jogging, off-road activity, dog-walking) and loose and feral pets (chasing and, presumably, preying upon owls) that make the environment uninhabitable for burrowing owls (Wesemann and Rowe 1985, Millsap and Bear 2000, Lincer and Bloom 2007). Items 4, 5 and 6 also still apply to this mitigation approach.
13. If there are no other feasible mitigation options available and a lead agency is willing to establish and oversee a Burrowing Owl Mitigation and Conservation Fund that funds on a competitive basis acquisition and permanent habitat conservation, the project proponent may participate in the lead agency's program.

Artificial burrows. Artificial burrows have been used to replace natural burrows either temporarily or long-term and their long-term success is unclear. Artificial burrows may be an effective addition to in-perpetuity habitat mitigation if they are augmenting natural burrows, the burrows are regularly maintained (i.e., no less than annual, with biennial maintenance recommended), and surrounding habitat patches are carefully maintained. There may be some circumstances, for example at airports, where squirrels will not be allowed to persist and create a dynamic burrow system, where artificial burrows may provide some support to an owl population.

Many variables may contribute to the successful use of artificial burrows by burrowing owls, including pre-existence of burrowing owls in the area, availability of food, predators, surrounding vegetation and proximity, number of natural burrows in proximity, type of materials used to build the burrow, size of the burrow and entrance, direction in which the burrow entrance is facing, slope of the entrance, number of burrow entrances per burrow, depth of the burrow, type and height of perches, and annual maintenance needs (Belthoff and King 2002, Smith et al. 2005, Barclay et al. 2011). Refer to Barclay (2008) and (2011) and to Johnson et al. 2010 (unpublished report) for guidance on installing artificial burrows including recommendations for placement, installation and maintenance.

Any long-term reliance on artificial burrows as natural burrow replacements must include semi-annual to annual cleaning and maintenance and/or replacement (Barclay et al. 2011, Smith and Conway 2005, Alexander et al. 2005) as an ongoing management practice. Alexander et al. (2005), in a study of the use of artificial burrows found that all of 20 artificial burrows needed some annual cleaning and maintenance. Burrows were either excavated by predators, blocked by soil or vegetation, or experienced substrate erosion forming a space beneath the tubing that prevented nestlings from re-entering the burrow.

Mitigation lands management plan. Develop a Mitigation Lands Management Plan for projects that require off-site or on-site mitigation habitat protection to ensure compliance with and effectiveness of identified management actions for the mitigation lands. A suggested outline and related vegetation management goals and monitoring success criteria can be found in Appendix E.

Mitigation Monitoring and Reporting

Verify the compliance with required mitigation measures, the accuracy of predictions, and ensure the effectiveness of all mitigation measures for burrowing owls by conducting follow-up monitoring, and implementing midcourse corrections, if necessary, to protect burrowing owls. Refer to CEQA Guidelines Section 15097 and the CEQA Guidelines for additional guidance on mitigation, monitoring and reporting. Monitoring is qualitatively different from site surveillance; monitoring normally has a specific purpose and its outputs and outcomes will usually allow a comparison with some baseline condition of the site before the mitigation (including avoidance and minimization) was undertaken. Ideally, monitoring should be based on the Before-After Control-Impact (BACI) principle (McDonald et al. 2000) that requires knowledge of the pre-mitigation state to provide a reference point for the state and change in state after the project and mitigation have been implemented.

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Appendix A. Burrowing Owl Natural History and Threats

Diet

Burrowing owl diet includes arthropods, small rodents, birds, amphibians, reptiles, and carrion (Haug et al. 1993).

Breeding

In California, the breeding season for the burrowing owl typically occurs between 1 February and 31 August although breeding in December has been documented (Thompson 1971, Gervais et al. 2008); breeding behavior includes nest site selection by the male, pair formation, copulation, egg laying, hatching, fledging, and post-fledging care of young by the parents. The peak of the breeding season occurs between 15 April and 15 July and is the period when most burrowing owls have active nests (eggs or young). The incubation period lasts 29 days (Coulombe 1971) and young fledge after 44 days (Haug et al. 1993). Note that the timing of nesting activities may vary with latitude and climatic conditions. Burrowing owls may change burrows several times during the breeding season, starting when nestlings are about three weeks old (Haug et al. 1993).

Dispersal

The following discussion is an excerpt from Gervais et al (2008):

> "The burrowing owl is often considered a sedentary species (e.g., Thomsen 1971). A large proportion of adults show strong fidelity to their nest site from year to year, especially where resident, as in Florida (74% for females, 83% for males; Millsap and Bear 1997). In California, nest-site fidelity rates were 32%–50% in a large grassland and 57% in an agricultural environment (Ronan 2002, Catlin 2004, Catlin et al. 2005). Differences in these rates among sites may reflect differences in nest predation rates (Catlin 2004, Catlin et al. 2005). Despite the high nest fidelity rates, dispersal distances may be considerable for both juveniles (natal dispersal) and adults (postbreeding dispersal), but this also varied with location (Catlin 2004, Rosier et al. 2006). Distances of 53 km to roughly 150 km have been observed in California for adult and natal dispersal, respectively (D. K. Rosenberg and J. A. Gervais, unpublished data), despite the difficulty in detecting movements beyond the immediate study area (Koenig et al. 1996)."

Habitat

The burrowing owl is a small, long-legged, ground-dwelling bird species, well-adapted to open, relatively flat expanses. In California, preferred habitat is generally typified by short, sparse vegetation with few shrubs, level to gentle topography and well-drained soils (Haug et al. 1993). Grassland, shrub steppe, and desert are naturally occurring habitat types used by the species. In addition, burrowing owls may occur in some agricultural areas, ruderal grassy fields, vacant lots and pastures if the vegetation structure is suitable and there are useable burrows and foraging habitat in proximity (Gervais et al 2008). Unique amongst North

American raptors, the burrowing owl requires underground burrows or other cavities for nesting during the breeding season and for roosting and cover, year round. Burrows used by the owls are usually dug by other species termed host burrowers. In California, California ground squirrel (*Spermophilus beecheyi*) and round-tailed ground squirrel (*Citellus tereticaudus*) burrows are frequently used by burrowing owls but they may use dens or holes dug by other fossorial species including badger (*Taxidea taxus*), coyote (*Canis latrans*), and fox (e.g., San Joaquin kit fox, *Vulpes macrotis mutica*; Ronan 2002). In some instances, owls have been known to excavate their own burrows (Thompson 1971, Barclay 2007). Natural rock cavities, debris piles, culverts, and pipes also are used for nesting and roosting (Rosenberg et al. 1998). Burrowing owls have been documented using artificial burrows for nesting and cover (Smith and Belthoff, 2003).

Foraging habitat. Foraging habitat is essential to burrowing owls. The following discussion is an excerpt from Gervais et al. (2008):

> "Useful as a rough guide to evaluating project impacts and appropriate mitigation for burrowing owls, adult male burrowing owls home ranges have been documented (calculated by minimum convex polygon) to comprise anywhere from 280 acres in intensively irrigated agroecosystems in Imperial Valley (Rosenberg and Haley 2004) to 450 acres in mixed agricultural lands at Lemoore Naval Air Station, CA (Gervais et al. 2003), to 600 acres in pasture in Saskatchewan, Canada (Haug and Oliphant 1990). But owl home ranges may be much larger, perhaps by an order of magnitude, in non-irrigated grasslands such as at Carrizo Plain, California (Gervais et al. 2008), based on telemetry studies and distribution of nests. Foraging occurs primarily within 600 m of their nests (within approximately 300 acres, based on a circle with a 600 m radius) during the breeding season."

Importance of burrows and adjacent habitat. Burrows and the associated surrounding habitat are essential ecological requisites for burrowing owls throughout the year and especially during the breeding season. During the non-breeding season, burrowing owls remain closely associated with burrows, as they continue to use them as refuge from predators, shelter from weather and roost sites. Resident populations will remain near the previous season's nest burrow at least some of the time (Coulombe 1971, Thomsen 1971, Botelho 1996, LaFever et al. 2008).

In a study by Lutz and Plumpton (1999) adult males and females nested in formerly used sites at similar rates (75% and 63%, respectively) (Lutz and Plumpton 1999). Burrow fidelity has been reported in some areas; however, more frequently, burrowing owls reuse traditional nesting areas without necessarily using the same burrow (Haug et al. 1993, Dechant et al. 1999). Burrow and nest sites are re-used at a higher rate if the burrowing owl has reproduced successfully during the previous year (Haug et al. 1993) and if the number of burrows isn't limiting nesting opportunity.

Burrowing owls may use "satellite" or non-nesting burrows, moving young at 10-14 days, presumably to reduce risk of predation (Desmond and Savidge 1998) and possibly to avoid nest parasites (Dechant et al. 1999). Successful nests in Nebraska had more active satellite burrows within 75 m of the nest burrow than unsuccessful nests (Desmond and Savidge

1999). Several studies have documented the number of satellite burrows used by young and adult burrowing owls during the breeding season as between one and 11 burrows with an average use of approximately five burrows (Thompsen 1984, Haug 1985, Haug and Oliphant 1990). Supporting the notion of selecting for nest sites near potential satellite burrows, Ronan (2002) found burrowing owl families would move away from a nest site if their satellite burrows were experimentally removed through blocking their entrance.

Habitat adjacent to burrows has been documented to be important to burrowing owls. Gervais et al. (2003) found that home range sizes of male burrowing owls during the nesting season were highly variable within but not between years. Their results also suggested that owls concentrate foraging efforts within 600 meters of the nest burrow, as was observed in Canada (Haug and Oliphant 1990) and southern California (Rosenberg and Haley 2004). James et al. (1997), reported habitat modification factors causing local burrowing owl declines included habitat fragmentation and loss of connectivity.

In conclusion, the best available science indicates that essential habitat for the burrowing owl in California must include suitable year-round habitat, primarily for breeding, foraging, wintering and dispersal habitat consisting of short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey within close proximity to the burrow.

Threats to Burrowing Owls in California

Habitat loss. Habitat loss, degradation, and fragmentation are the greatest threats to burrowing owls in California. According to DeSante et al. (2007), "the vast majority of burrowing owls [now] occur in the wide, flat lowland valleys and basins of the Imperial Valley and Great Central Valley [where] for the most part,...the highest rates of residential and commercial development in California are occurring." Habitat loss from the State's long history of urbanization in coastal counties has already resulted in either extirpation or drastic reduction of burrowing owl populations there (Gervais et al. 2008). Further, loss of agricultural and other open lands (such as grazed landscapes) also negatively affect owl populations. Because of their need for open habitat with low vegetation, burrowing owls are unlikely to persist in agricultural lands dominated by vineyards and orchards (Gervais et al. 2008).

Control of burrowing rodents. According to Klute et al. (2003), the elimination of burrowing rodents through control programs is a primary factor in the recent and historical decline of burrowing owl populations nationwide. In California, ground squirrel burrows are most often used by burrowing owls for nesting and cover; thus, ground squirrel control programs may affect owl numbers in local areas by eliminating a necessary resource.

Direct mortality. Burrowing owls suffer direct losses from a number of sources. Vehicle collisions are a significant source of mortality especially in the urban interface and where owls nest alongside roads (Haug et al. 1993, Gervais et al. 2008). Road and ditch maintenance, modification of water conveyance structures (Imperial Valley) and discing to control weeds in fallow fields may destroy burrows (Rosenberg and Haley 2004, Catlin and Rosenberg 2006) which may trap or crush owls. Wind turbines at Altamont Pass Wind Resource Area are known to cause direct burrowing owl mortality (Thelander et al. 2003). Exposure to

pesticides may pose a threat to the species but is poorly understood (Klute et al. 2003, Gervais et al. 2008).

Appendix B. Definitions

Some key terms that appear in this document are defined below.

Adjacent habitat means burrowing owl habitat that abuts the area where habitat and burrows will be impacted and rendered non-suitable for occupancy.

Breeding (nesting) season begins as early as 1 February and continues through 31 August (Thomsen 1971, Zarn 1974). The timing of breeding activities may vary with latitude and climatic conditions. The breeding season includes pairing, egg-laying and incubation, and nestling and fledging stages.

Burrow exclusion is a technique of installing one-way doors in burrow openings during the non-breeding season to temporarily exclude burrowing owls or permanently exclude burrowing owls and excavate and close burrows after confirming burrows are empty.

Burrowing owl habitat generally includes, but is not limited to, short or sparse vegetation (at least at some time of year), presence of burrows, burrow surrogates or presence of fossorial mammal dens, well-drained soils, and abundant and available prey.

Burrow surrogates include culverts, piles of concrete rubble, piles of soil, burrows created along soft banks of ditches and canals, pipes, and similar structures.

Civil twilight - Morning civil twilight begins when the geometric center of the sun is 6 degrees below the horizon (civil dawn) and ends at sunrise. Evening civil twilight begins at sunset and ends when the geometric center of the sun reaches 6 degrees below the horizon (civil dusk). During this period there is enough light from the sun that artificial sources of light may not be needed to carry on outdoor activities. This concept is sometimes enshrined in laws, for example, when drivers of automobiles must turn on their headlights (called lighting-up time in the UK); when pilots may exercise the rights to fly aircraft. Civil twilight can also be described as the limit at which twilight illumination is sufficient, under clear weather conditions, for terrestrial objects to be clearly distinguished; at the beginning of morning civil twilight, or end of evening civil twilight, the horizon is clearly defined and the brightest stars are visible under clear atmospheric conditions.

Conservation for burrowing owls may include but may not be limited to protecting remaining breeding pairs or providing for population expansion, protecting and enhancing breeding and essential habitat, and amending or augmenting land use plans to stabilize populations and other specific actions to avoid the need to list the species pursuant to California or federal Endangered Species Acts.

Contiguous means connected together so as to form an uninterrupted expanse in space.

Essential habitat includes nesting, foraging, wintering, and dispersal habitat.

Foraging habitat is habitat within the estimated home range of an occupied burrow, supports suitable prey base, and allows for effective hunting.

Host burrowers include ground squirrels, badgers, foxes, coyotes, gophers etc.

Locally significant species is a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA §15125 (c)) or is so designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include a species at the outer limits of its known range or occurring in a unique habitat type.

Non-breeding season is the period of time when nesting activity is not occurring, generally September 1 through January 31, but may vary with latitude and climatic conditions.

Occupied site or occupancy means a site that is assumed occupied if at least one burrowing owl has been observed occupying a burrow within the last three years (Rich 1984). Occupancy of suitable burrowing owl habitat may also be indicated by owl sign including its molted feathers, cast pellets, prey remains, eggshell fragments, or excrement at or near a burrow entrance or perch site.

Other impacting activities may include but may not be limited to agricultural practices, vegetation management and fire control, pest management, conversion of habitat from rangeland or natural lands to more intensive agricultural uses that could result in “take”. These impacting activities may not meet the definition of a project under CEQA.

Passive relocation is a technique of installing one-way doors in burrow openings to temporarily or permanently evict burrowing owls and prevent burrow re-occupation.

Peak of the breeding season is between 15 April and 15 July.

Sign includes its tracks, molted feathers, cast pellets (defined as 1-2” long brown to black regurgitated pellets consisting of non-digestible portions of the owls’ diet, such as fur, bones, claws, beetle elytra, or feathers), prey remains, egg shell fragments, owl white wash, nest burrow decoration materials (e.g., paper, foil, plastic items, livestock or other animal manure, etc.), possible owl perches, or other items.

Appendix C. Habitat Assessment and Reporting Details

Habitat Assessment Data Collection and Reporting

Current scientific literature indicates that it would be most effective to gather the data in the manner described below when conducting project scoping, conducting a habitat assessment site visit and preparing a habitat assessment report:

1. Conduct at least one visit covering the entire potential project/activity area including areas that will be directly or indirectly impacted by the project. Survey adjoining areas within 150 m (Thomsen 1971, Martin 1973), or more where direct or indirect effects could potentially extend offsite. If lawful access cannot be achieved to adjacent areas, surveys can be performed with a spotting scope or other methods.
2. Prior to the site visit, compile relevant biological information for the site and surrounding area to provide a local and regional context.
3. Check all available sources for burrowing owl occurrence information regionally prior to a field inspection. The CNDDB and BIOS (see References cited) may be consulted for known occurrences of burrowing owls. Other sources of information include, but are not limited to, the Proceedings of the California Burrowing Owl Symposium (Barclay et al. 2007), county bird atlas projects, Breeding Bird Survey records, eBIRD (http://ebird.org), Gervais et al. (2008), local reports or experts, museum records, and other site-specific relevant information.
4. Identify vegetation and habitat types potentially supporting burrowing owls in the project area and vicinity.
5. Record and report on the following information:
    a. A full description of the proposed project, including but not limited to, expected work periods, daily work schedules, equipment used, activities performed (such as drilling, construction, excavation, etc.) and whether the expected activities will vary in location or intensity over the project's timeline;
    b. A regional setting map, showing the general project location relative to major roads and other recognizable features;
    c. A detailed map (preferably a USGS topo 7.5' quad base map) of the site and proposed project, including the footprint of proposed land and/or vegetation-altering activities, base map source, identifying topography, landscape features, a north arrow, bar scale, and legend;
    d. A written description of the biological setting, including location (Section, Township, Range, baseline and meridian), acreage, topography, soils, geographic and hydrologic characteristics, land use and management history on and adjoining the site (i.e., whether it is urban, semi-urban or rural; whether there is any evidence of past or current livestock grazing, mowing, disking, or other vegetation management activities);
    e. An analysis of any relevant, historical information concerning burrowing owl use or occupancy (breeding, foraging, over-wintering) on site or in the assessment area;
    f. Vegetation type and structure (using Sawyer et al. 2009), vegetation height, habitat types and features in the surrounding area plus a reasonably sized (as supported with logical justification) assessment area; (Note: use caution in discounting habitat based on grass height as it can be a temporary condition variable by season and conditions (such as current grazing regime) or may be distributed as a mosaic).

g. The presence of burrowing owl individuals or pairs or sign (see Appendix B);
h. The presence of suitable burrows and/or burrow surrogates (>11 cm in diameter (height and width) and >150 cm in depth) (Johnson et al. 2010), regardless of a lack of any burrowing owl sign and/or burrow surrogates; and burrowing owls and/or their sign that have recently or historically (within the last 3 years) been identified on or adjacent to the site.

Appendix D. Breeding and Non-breeding Season Surveys and Reports

Current scientific literature indicates that it is most effective to conduct breeding and non-breeding season surveys and report in the manner that follows:

Breeding Season Surveys

Number of visits and timing. Conduct 4 survey visits: 1) at least one site visit between 15 February and 15 April, and 2) a minimum of three survey visits, at least three weeks apart, between 15 April and 15 July, with at least one visit after 15 June. Note: many burrowing owl migrants are still present in southwestern California during mid-March, therefore, exercise caution in assuming breeding occupancy early in the breeding season.

Survey method. Rosenberg et al. (2007) confirmed walking line transects were most effective in smaller habitat patches. Conduct surveys in all portions of the project site that were identified in the Habitat Assessment and fit the description of habitat in Appendix A. Conduct surveys by walking straight-line transects spaced 7 m to 20 m apart, adjusting for vegetation height and density (Rosenberg et al. 2007). At the start of each transect and, at least, every 100 m, scan the entire visible project area for burrowing owls using binoculars. During walking surveys, record all potential burrows used by burrowing owls as determined by the presence of one or more burrowing owls, pellets, prey remains, whitewash, or decoration. Some burrowing owls may be detected by their calls, so observers should also listen for burrowing owls while conducting the survey.

Care should be taken to minimize disturbance near occupied burrows during all seasons and not to "flush" burrowing owls especially if predators are present to reduce any potential for needless energy expenditure or burrowing owl mortality. Burrowing owls may flush if approached by pedestrians within 50 m (Conway et al. 2003). If raptors or other predators are present that may suppress burrowing owl activity, return at another time or later date for a follow-up survey.

Check all burrowing owls detected for bands and/or color bands and report band combinations to the Bird Banding Laboratory (BBL). Some site-specific variations to survey methods discussed below may be developed in coordination with species experts and Department staff.

Weather conditions. Poor weather may affect the surveyor's ability to detect burrowing owls, therefore, avoid conducting surveys when wind speed is >20 km/hr, and there is precipitation or dense fog. Surveys have greater detection probability if conducted when ambient temperatures are >20º C, <12 km/hr winds, and cloud cover is <75% (Conway et al. 2008).

Time of day. Daily timing of surveys varies according to the literature, latitude, and survey method. However, surveys between morning civil twilight and 10:00 AM and two hours before sunset until evening civil twilight provide the highest detection probabilities (Barclay pers. comm. 2012, Conway et al. 2008).

Alternate methods. If the project site is large enough to warrant an alternate method, consult current literature for generally accepted survey methods and consult with the Department on the proposed survey approach.

Additional breeding season site visits. Additional breeding season site visits may be necessary, especially if non-breeding season exclusion methods are contemplated. Detailed information, such as approximate home ranges of each individual or of family units, as well as foraging areas as related to the proposed project, will be important to document for evaluating impacts, planning avoidance measure implementation and for mitigation measure performance monitoring.

Adverse conditions may prevent investigators from determining presence or occupancy. Disease, predation, drought, high rainfall or site disturbance may preclude presence of burrowing owls in any given year. Any such conditions should be identified and discussed in the survey report. Visits to the site in more than one year may increase the likelihood of detection. Also, visits to adjacent known occupied habitat may help determine appropriate survey timing.

Given the high site fidelity shown by burrowing owls (see Appendix A, Importance of burrows), conducting surveys over several years may be necessary when project activities are ongoing, occur annually, or start and stop seasonally. (See Negative surveys).

Non-breeding Season Surveys

If conducting non-breeding season surveys, follow the methods described above for breeding season surveys, but conduct at least four (4) visits, spread evenly, throughout the non-breeding season. Burrowing owl experts and local Department staff are available to assist with interpreting results.

Negative Surveys

Adverse conditions may prevent investigators from documenting presence or occupancy. Disease, predation, drought, high rainfall or site disturbance may preclude presence of burrowing owl in any given year. Discuss such conditions in the Survey Report. Visits to the site in more than one year increase the likelihood of detection and failure to locate burrowing owls during one field season does not constitute evidence that the site is no longer occupied, particularly if adverse conditions influenced the survey results. Visits to other nearby known occupied sites can affirm whether the survey timing is appropriate.

Take Avoidance Surveys

Field experience from 1995 to present supports the conclusion that it would be effective to complete an initial take avoidance survey no less than 14 days prior to initiating ground disturbance activities using the recommended methods described in the Detection Surveys section above. Implementation of avoidance and minimization measures would be triggered by positive owl presence on the site where project activities will occur. The development of avoidance and minimization approaches would be informed by monitoring the burrowing owls.

Burrowing owls may re-colonize a site after only a few days. Time lapses between project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance.

Survey Reports

Report on the survey methods used and results including the information described in the Summary Report and include the reports within the CEQA documentation:

1. Date, start and end time of surveys including weather conditions (ambient temperature, wind speed, percent cloud cover, precipitation and visibility);
2. Name(s) of surveyor(s) and qualifications;
3. A discussion of how the timing of the survey affected the comprehensiveness and detection probability;
4. A description of survey methods used including transect spacing, point count dispersal and duration, and any calls used;
5. A description and justification of the area surveyed relative to the project area;
6. A description that includes: number of owls or nesting pairs at each location (by nestlings, juveniles, adults, and those of an unknown age), number of burrows being used by owls, and burrowing owl sign at burrows. Include a description of individual markers, such as bands (numbers and colors), transmitters, or unique natural identifying features. If any owls are banded, request documentation from the BBL and bander to report on the details regarding the known history of the banded burrowing owl(s) (age, sex, origins, whether it was previously relocated) and provide with the report if available;
7. A description of the behavior of burrowing owls during the surveys, including feeding, resting, courtship, alarm, territorial defense, and those indicative of parents or juveniles;
8. A list of possible burrowing owl predators present and documentation of any evidence of predation of owls;
9. A detailed map (1:24,000 or closer to show details) showing locations of all burrowing owls, potential burrows, occupied burrows, areas of concentrated burrows, and burrowing owl sign. Locations documented by use of global positioning system (GPS) coordinates must include the datum in which they were collected. The map should include a title, north arrow, bar scale and legend;
10. Signed field forms, photos, etc., as appendices to the field survey report;
11. Recent color photographs of the proposed project or activity site; and
12. Original CNDDB Field Survey Forms should be sent directly to the Department's CNDDB office, and copies should be included in the environmental document as an appendix. (http://www.dfg.ca.gov/bdb/html/cnddb.html).

Appendix E. Example Components for Burrowing Owl Artificial Burrow and Exclusion Plans

Whereas the Department does not recommend exclusion and burrow closure, current scientific literature and experience from 1995 to present, indicate that the following example components for burrowing owl artificial burrow and exclusion plans, combined with consultation with the Department to further develop these plans, would be effective.

Artificial Burrow Location

If a burrow is confirmed occupied on-site, artificial burrow locations should be appropriately located and their use should be documented taking into consideration:

1. A brief description of the project and project site pre-construction;
2. The mitigation measures that will be implemented;
3. Potential conflicting site uses or encumbrances;
4. A comparison of the occupied burrow site(s) and the artificial burrow site(s) (e.g., vegetation, habitat types, fossorial species use in the area, and other features);
5. Artificial burrow(s) proximity to the project activities, roads and drainages;
6. Artificial burrow(s) proximity to other burrows and entrance exposure;
7. Photographs of the site of the occupied burrow(s) and the artificial burrows;
8. Map of the project area that identifies the burrow(s) to be excluded as well as the proposed sites for the artificial burrows;
9. A brief description of the artificial burrow design;
10. Description of the monitoring that will take place during and after project implementation including information that will be provided in a monitoring report.
11. A description of the frequency and type of burrow maintenance.

Exclusion Plan

An Exclusion Plan addresses the following including but not limited to:

1. Confirm by site surveillance that the burrow(s) is empty of burrowing owls and other species preceding burrow scoping;
2. Type of scope and appropriate timing of scoping to avoid impacts;
3. Occupancy factors to look for and what will guide determination of vacancy and excavation timing (one-way doors should be left in place 48 hours to ensure burrowing owls have left the burrow before excavation, visited twice daily and monitored for evidence that owls are inside and can't escape i.e., look for sign immediately inside the door).
4. How the burrow(s) will be excavated. Excavation using hand tools with refilling to prevent reoccupation is preferable whenever possible (may include using piping to stabilize the burrow to prevent collapsing until the entire burrow has been excavated and it can be determined that no owls reside inside the burrow);
5. Removal of other potential owl burrow surrogates or refugia on site;
6. Photographing the excavation and closure of the burrow to demonstrate success and sufficiency;

7. Monitoring of the site to evaluate success and, if needed, to implement remedial measures to prevent subsequent owl use to avoid take;
8. How the impacted site will continually be made inhospitable to burrowing owls and fossorial mammals (e.g., by allowing vegetation to grow tall, heavy disking, or immediate and continuous grading) until development is complete.

Appendix F. Mitigation Management Plan and Vegetation Management Goals

Mitigation Management Plan

A mitigation site management plan will help ensure the appropriate implementation and maintenance for the mitigation site and persistence of the burrowing owls on the site. For an example to review, refer to Rosenberg et al. (2009). The current scientific literature and field experience from 1995 to present indicate that an effective management plan includes the following:

1. Mitigation objectives;
2. Site selection factors (including a comparison of the attributes of the impacted and conserved lands) and baseline assessment;
3. Enhancement of the conserved lands (enhancement of reproductive capacity, enhancement of breeding areas and dispersal opportunities, and removal or control of population stressors);
4. Site protection method and prohibited uses;
5. Site manager roles and responsibilities;
6. Habitat management goals and objectives:
    a. Vegetation management goals,
        i. Vegetation management tools:
            1. Grazing
            2. Mowing
            3. Burning
            4. Other
    b. Management of ground squirrels and other fossorial mammals,
    c. Semi-annual and annual artificial burrow cleaning and maintenance,
    d. Non-natives control – weeds and wildlife,
    e. Trash removal;
7. Financial assurances:
    a. Property analysis record or other financial analysis to determine long-term management funding,
    b. Funding schedule;
8. Performance standards and success criteria;
9. Monitoring, surveys and adaptive management;
10. Maps;
11. Annual reports.

Vegetation Management Goals

- Manage vegetation height and density (especially in immediate proximity to burrows). Suitable vegetation structure varies across sites and vegetation types, but should generally be at the average effective vegetation height of 4.7 cm (Green and Anthony 1989) and <13 cm average effective vegetation height (MacCracken et al. 1985*a)*.
- Employ experimental prescribed fires (controlled, at a small scale) to manage vegetation structure;

- Vegetation reduction or ground disturbance timing, extent, and configuration should avoid take. While local ordinances may require fire prevention through vegetation management, activities like disking, mowing, and grading during the breeding season can result in take of burrowing owls and collapse of burrows, causing nest destruction. Consult the take avoidance surveys section above for pre-management avoidance survey recommendations;
- Promote natural prey distribution and abundance, especially in proximity to occupied burrows; and
- Promote self-sustaining populations of host burrowers by limiting or prohibiting lethal rodent control measures and by ensuring food availability for host burrowers through vegetation management.

Refer to Rosenberg et al. (2009) for a good discussion of managing grasslands for burrowing owls.

Mitigation Site Success Criteria

In order to evaluate the success of mitigation and management strategies for burrowing owls, monitoring is required that is specific to the burrowing owl management plan. Given limited resources, Barclay et al. (2011) suggests managers focus on accurately estimating annual adult owl populations rather than devoting time to estimating reproduction, which shows high annual variation and is difficult to accurately estimate. Therefore, the key objective will be to determine accurately the number of adult burrowing owls and pairs, and if the numbers are maintained. A frequency of 5-10 years for surveys to estimate population size may suffice if there are no changes in the management of the nesting and foraging habitat of the owls.

Effective monitoring and evaluation of off-site and on-site mitigation management success for burrowing owls includes (Barclay, pers. comm.):

- Site tenacity;
- Number of adult owls present and reproducing;
- Colonization by burrowing owls from elsewhere (by band re-sight);
- Evidence and causes of mortality;
- Changes in distribution; and
- Trends in stressors.