Storm Drain Pollution Prevention

CITY OF NEWARK, CALIFORNIA **BUILDING INSPECTION DIVISION**

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In the City of Newark, along with all other cities in the Bay Area, water in storm drains flows directly to local creeks and the San Francisco Bay without treatment. Storm water pollution is a serious problem for wildlife dependent on our waterways and for the people who live near polluted streams or baylands. Common sources of this pollution are oil, fuel, fluids from vehicles and heavy equipment, construction debris, saw-cutting operations, mud and dirt from construction sites tracked onto public streets, landscaping runoff containing pesticides or weed killers, and other materials such as used motor oil, antifreeze, and paint products that people pour or spill into a street or storm drain.

Federal, State, and local laws require anyone engaged in an activity that might pollute storm water to take all practical measures to reduce pollutants. For larger construction projects, developers must submit a plan to the City describing the methods they will employ to reduce pollutants. For further information call the City's Engineering Division at 510-578-4320.

There are a number of activities listed below which developers and contractors can use to reduce pollution on construction sites.

CONSTRUCTION ACTIVITIES

- **Never track mud or dirt from a construction site onto a public road.** Anytime there is the potential for mud or dirt to stick to tires of vehicles leaving the construction site, install a stabilized construction entrance. During rainy periods, on-site vehicle wash areas may be needed.

- **Clean up leaks, drips, and other spills immediately** so they do not contaminate soil, groundwater, or leave residue on paved surfaces.

- **Refuel vehicles and heavy equipment in one designated location** on the site and take care to clean up spills when they happen.

- **Never hose down "dirty" pavement or surfaces where materials have spilled.** Use dry cleanup methods whenever possible. If you must use water, use just enough to keep the dust down.

- **Control the amount of runoff crossing your site** (especially during excavation) by using berms or temporary or permanent drainage ditches to divert water flow around the site. Reduce storm water runoff velocities by constructing temporary check dams or berms where appropriate.

- **Keep materials out of the rain - prevent runoff contamination at the source.** Schedule clearing or earth moving activities for periods of dry weather. Cover exposed piles of soil or construction materials with plastic sheeting or temporary roofs. Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.

- **Keep pollutants off exposed surfaces.** Place trash cans around the site to minimize litter. Dispose of construction wastes in covered dumpsters or recycling receptacles.

- **Practice Source Reduction.** Minimize waste when you order materials. Order only the amount you need to finish the job.

- **Use recyclable materials** whenever possible. Arrange for pickup of recyclable materials such as concrete, asphalt, scrap metal, solvents, degreasers, cleared vegetation, paper, rock, and vehicle maintenance materials such as used oil, antifreeze, batteries, and tires.

- **Dispose of all wastes properly.** Materials that cannot be recycled must be taken to an appropriate landfill or disposed of as hazardous waste. Never store or leave waste materials in the street or near a creek or stream bed.

- **Train your employees and subcontractors.** Inform subcontractors about the new storm water requirements and their own responsibilities.

EROSION CONTROL

- Avoid excavation and grading activities during wet weather.

- Remove existing vegetation only when absolutely necessary.

- Plant temporary vegetation for erosion control on slopes or where no construction is immediately planned.

- Where replanting is not feasible, use secured plastic sheeting or filter fabric to stabilize and protect exposed soils, stockpiled topsoil, and landscaping materials.

- As a last resort, protect downslope drainage courses, streams, or catch basins with hay bales or temporary drainage swales.

- Once excavation and grading activities are complete, plant permanent vegetation as soon as possible.

- Construct diversion dikes and drainage swales to channel runoff around the site. Line swales with grass or roughened pavement to reduce runoff velocity.

- Use berms and drainage ditches to divert runoff around exposed areas.

- Roughen other surfaces by adding rip rap, sandbags, rocks, straw bales, or temporary vegetation. *Do not use asphalt rubble or other demolition debris for this purpose.*

- Consider check dams, filter fabric, and terracing.

- If none of the above measures seem appropriate for the site, install sediment traps in catch basins and drain inlets, or create an overflow drain by raising the inlet so that sediments will settle before reaching the drain.

GENERAL SITE MAINTENANCE

- Perform major maintenance, repair jobs, and vehicle and equipment washing off site.

- Maintain all vehicles and heavy equipment. Inspect frequently for leaks.

- Designate one area of the construction site, well away from streams or storm drain inlets, for auto and equipment parking and routine vehicle and equipment maintenance.

- If you must drain and replace motor oil, radiator coolant, or other fluids on-site, use drip pans or drop cloths to catch drips and spills. Collect all spent fluids, store in separate containers, and recycle whenever possible. *Note that in order to be recyclable, such liquids must not be mixed with other fluids.* Nonrecycled fluids generally must be disposed of as hazardous wastes.

- Sweep up spilled dry materials immediately. Never attempt to "wash them away" with water or bury them. Use only minimal water for dust control.

- Clean up liquid spills on paved or impermeable surfaces using "dry" cleanup methods (absorbent materials, cat litter, and/or rags).

- Clean up spills on dirt areas by digging up and properly disposing of contaminated soil.

- Report significant spills to the appropriate spill response agencies immediately.

- Store stockpiled materials, wastes, containers, and dumpsters under a temporary roof, or secured plastic sheeting.

- Place berms around covered storage areas to prevent contact with runoff. If you suspect contamination, test ponded water and dispose appropriately.

- Plaster or other powders can create large quantities of suspended solids in runoff, which may be toxic to aquatic life and cause serious environmental harm even if the materials are inert. Store all such potentially polluting dry materials, especially open bags, well under a temporary roof, inside a building, or cover securely with an impermeable tarp.

- Properly store **containers of paints, chemicals, solvents, and other hazardous materials** in garages or sheds with double containment during rainy periods.

- Place dumpsters under roofs or cover them with plastic sheeting at the end of each workday and during rainy weather. If you use plastic, protect dumpster contents from storm water by securing it around the outside of the dumpster.

- Inspect dumpsters regularly for leaks, and repair or replace any dumpster that is not water tight.
- Never clean out a dumpster by hosing it down on the construction site. Return dumpsters to the trash hauling contractor for cleaning.
- Never clean brushes or rinse paint containers into a street, gutter, storm drain, or stream.
- For **water-based paints,** paint out brushes to the extent possible, and rinse into the sanitary sewer.
- For **oil-based paints,** paint out brushes to the extent possible, and filter and reuse thinners and solvents. Dispose of excess liquids and residue as hazardous waste.
- Recycle excess water-based paint or use up. Dispose of excess liquid, including sludges, as hazardous waste.
- Reuse leftover oil-based paint. Dispose of excess liquid, including sludges, as hazardous waste.
- Avoid mixing excess amounts of **fresh concrete or cement** on site.
- Store dry and wet materials under cover, protected from rainfall and runoff.
- Wash out concrete mixers only in designated washout areas where the water will flow into settling ponds or onto dirt or stockpiles of aggregate base or sand. Whenever possible, recycle washout by pumping back into mixers for reuse. Never dispose of washout into the street, storm drains, drainage ditches, or streams.
- Dispose of small amounts of excess **concrete, grout, and mortar** in the trash.
- Inspect visually for leaks. Be sure the leasing company adequately maintains, promptly repairs, and replaces units as needed.
- Do not dispose of plant material in trash dumpsters or mix it with other wastes. Chip if necessary and compost, or take it to a landfill that composts yard waste.

Demolition Waste

- **Concrete debris** from concrete structures and broken pavement should be recycled, not mixed with other debris.
- **Debris from other structures** (wood, etc.) should be confined to dumpsters, covered at night or during wet weather, and taken to a landfill for recycling or disposal.
- **Hazardous debris such as asbestos** must be handled in accordance with specific laws and regulations and disposed of as a hazardous waste. A separate permit is required. You may wish to contact an asbestos removal service for safe removal and disposal.

Roadwork and Pavement Construction

- Apply **concrete, asphalt, and seal coat** during dry weather. Keep contaminants from fresh concrete and asphalt out of the storm drains, creeks, and Bay by scheduling paving jobs during periods of dry weather, when new pavement will have time to cure before storm water flows across it.

- Cover catch basins and manholes when applying seal coat, slurry seal, fog seal, etc.

- Always park pavers over drip pans or absorbent materials, since they tend to drip continuously.

- Shovel or vacuum **saw cut slurry** and remove from the site. Cover or barricade storm drains during saw cutting to contain slurry.

- Wash down exposed aggregate concrete only when the wash water can: (1) flow onto a dirt area or (2) drain onto a bermed surface from which it can be pumped and disposed of properly. If necessary, place hay bales downslope, or divert runoff with temporary berms. Make sure runoff does not reach gutters or storm drains.

- Allow aggregate rinse to settle and pump the water to the sanitary sewer, if allowed by your local wastewater authority.

- Never wash sweepings from exposed aggregate concrete into a street or storm drain. Collect and return to aggregate base stockpile, or dispose with trash.

- When **breaking asphalt or concrete,** control excess dust using the smallest amount of water practicable. Control runoff. Remove all chunks and pieces from the site.

- Recycle broken concrete and asphalt.