

## Water Quality – It's the Law

A drive through Humboldt County reveals that we have a long road of improvement to satisfy water quality requirements, both from a regulatory and a stewardship perspective (Picture 1). Soil disturbance during wet weather, improper best management practices (BMPs), or a lack of BMPs are common on construction sites. Sites under an acre, which don't require a National Pollution Discharge Elimination System (NPDES) permit from the Water Quality Board, are collectively some of the worst water quality offenders. Current state and federal water quality standards prohibit any pollution, including sediment, from entering our waterways. These regulations are enforceable even if city or county officials are not enforcing local ordinances. Good stewardship practices preclude activities that degrade water quality.



Picture 1. Local oil sheen.

### Impacts

The days of the old adage that "dilution is the solution to pollution" are long gone. According to the U.S. EPA, forty percent of U.S. waters are not swimmable or fishable. "Even a partial accounting shows that hundreds of millions of dollars are lost each year...due to urban stormwater pollution" (Natural Resources Defense Council). As of 2002, 45 percent of assessed streams and rivers, 47 percent of assessed lakes, 32 percent of assessed estuarine areas, 17 percent of assessed shoreline miles, 87 percent of near-coastal ocean areas, 51 percent of assessed wetlands areas were not meeting water quality standards set by the states (2002 EPA Report to Congress). The most recent data indicate that 42 percent of wadeable streams are in poor biological condition and 25 percent are in fair condition (EPA, 2006). According to the EPA, construction sites export sediment at a rate of 20 to 1000 times the rates of other land uses (Picture 2). This translates to an estimate of 80 million tons of solids entering receiving waters from construction sites every year.



Picture 2. Sediment near failed wattles.

### Enforcement

Aside from the grim environmental consequences, enforcement actions by the Regional Water Quality Control Board can include the following:

- Informal Enforcement - Verbal Warning
- Staff Enforcement Letter
- Notice of Violation (NOV)
- Formal Enforcement - Notice to Comply
- Notice of Stormwater Noncompliance
- Cleanup and Abatement Order (CAO)
- Cease and Desist Order (CDO)
- Administrative Civil Liabilities up to \$5,000/day and \$10/gallon
- Attorney General/District Attorney referral
- Noncompliance - Fines up to \$37,500 per day/occurrence (Federal Clean Water Act)
- Fines up to \$25,000 per day + \$25/gallon (State Porter Cologne Act)

Some of the major compliance issues found by EPA inspectors, which could apply on any site, are:

- 1) A lack of tracking BMPs (dirty tire tracks leaving the site, Pictures 2 & 3)
- 2) Improper solid or hazardous waste management (asphalt piles, etc.)
- 3) Poorly managed washouts (for concrete or paint)
- 4) Too much exposed soil (leading to erosion and subsequent sedimentation off the site)



Picture 3. Trackout.

Additional major compliance issues found on sites under NPDES permits (>1 acre) include:

- 1) Missing or misunderstood sediment control BMPs (such as silt fences not keyed in or run-over straw wattles, Picture 2)
- 2) Poor stockpile management (lacking erosion and sediment controls or proper shape, Picture 4)
- 3) Inadequate BMP maintenance (such as run-over straw wattles, Picture 2)
- 4) De-watering and other polluted discharges (such as accumulated rainwater, oil or solvent, Picture 1)
- 5) Inadequate BMP self inspections (using a new copy of the inspection checklist, Attachment H, for each inspection, to identify inadequate or ineffective BMPs; each inspection should list the corrective action taken)
- 6) Inadequate storm water pollution prevention plan (SWPPP) maintenance (it's supposed to be a working document)



Picture 4. Un-protected stockpile.

### What You Can Do

Using basic, inexpensive BMPs to protect the soil will ensure the environment, your reputation, and your clients' pocketbooks are protected. Including BMP costs in bids and contracts will ensure your pocket book is protected. Using erosion control BMPs such as straw mulch or erosion control blankets, in combination with sediment control BMPs such as silt fences or straw wattles, will not only protect the environment, but will also build a green image for your business. The easiest measure of your environmental impact, regarding water quality, is sediment leaving your construction site (Picture 5). This typically occurs as dirty tire tracks entering a paved road, or sediment leaving the site due to erosion. Other sources of pollution come from concrete washout, painting equipment rinsing, or stockpiled materials. A number of practices, known as best management practices (BMPs) are available from the California Stormwater Quality Association's Construction Handbook. Sections 3 and 4 of this handbook contain BMP fact sheets that describe how to properly use the BMPs. Shaping the land, during grading, can be an important tool to direct stormwater around disturbed soil areas or stockpiles, and to collect water for infiltration. Stabilizing roadways, especially entrance/exit points, with angular rock on fabric reduces the amount of sediment tracked onto roadways.



Picture 5. Sediment-laden stormwater.

### Related Websites

North Coast Regional Water Quality Control Board @ <http://www.waterboards.ca.gov/northcoast/>  
California Stormwater Quality Association BMP Handbooks @ <http://www.cabmphandbooks.com/>  
U.S. Environmental Protection Agency NPDES Stormwater Program @ [http://cfpub.epa.gov/npdes/home.cfm?program\\_id=6](http://cfpub.epa.gov/npdes/home.cfm?program_id=6)

Feel free to contact Streamline Planning with your storm water or erosion control questions, or to schedule a consultation. We specialize in writing erosion control plans and site inspections.

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