

## **4.02 POLLUTION SOURCE CONTROLS ON CONSTRUCTION SITES** **(SW BMP 2.04)**

### **Definition**

Minimizing nonpoint source pollution from construction sites through good management and "housekeeping" techniques.

### **Purpose**

To reduce the availability of construction-related pollutants which can contaminate runoff water and, where runoff contamination cannot be avoided, to retain pollutants and polluted water on the site.

### **Conditions Where Practice Applies**

This practice applies to all construction projects. The level of planning and management necessary to control nonpoint source pollution adequately is dependent upon the size and complexity of the construction site.

### **Planning Considerations**

Construction activities, by their nature, create many sources of potential pollutants which can contaminate runoff and thereby affect the quality of downstream receiving waters. Accelerated erosion and sedimentation caused by land-disturbing activities are the major pollution problems caused by construction.

There are, however, many other potential pollutants associated with construction activities such as gasoline, oils, grease, paints, cements, and solvents, to name only a few. Even relatively non-toxic materials such as paper and cardboard can be classified as potential pollutants when they are washed into streams and lakes.

The best way to prevent nonpoint source pollution on construction sites is to use "good housekeeping" practices, which usually entails simply maintaining the site in a neat and orderly condition. Specific practices should be employed to retain runoff and to deal with toxic substances and materials. An overall plan for the control of nonpoint source pollution is advisable so that control measures can be specified and implemented effectively.

Following are some elements which should be considered in **nonpoint** source pollution control planning on a construction site:

#### 1) **Erosion and Sediment Controls**

Practices which minimize erosion and retain sediment on site are effective in controlling many other nonpoint source pollutants associated with construction activities as well. Development and implementation of a good erosion and sediment control plan is a key factor in controlling nonpoint source pollutants other than sediment on a construction site.

2) **Equipment Maintenance and Repair**

Maintenance and repair of construction machinery and equipment should be confined to areas specifically designated for that purpose. Such areas should be located and designed so that oils, gasoline, grease, solvents and other potential pollutants cannot be washed directly into receiving streams, stormwater conveyance systems, or existing and potential wellfields. These areas should be provided with adequate waste disposal receptacles for liquid and solid wastes. Maintenance areas should be inspected and cleaned daily.

On a construction site where designated equipment maintenance areas are not feasible, exceptional care should be taken during each individual repair or maintenance operation to prevent potential pollutants from becoming available to be washed into streams or conveyance systems. Temporary waste disposal receptacles should be provided and emptied as required.

3) **Storm Sewer Inlet Protection**

Inlets to storm sewers should be protected by suitable filtering devices during construction to keep pollutants from entering conveyance systems. See STORM DRAIN INLET PROTECTION - Section 4.08 (ES BMP 1.08).

4) **Waste Collection and Disposal**

A plan should be formulated for the collection and disposal of waste materials on a construction site. Such a plan should designate locations for trash and waste receptacles and establish a specific collection schedule. Methods for ultimate disposal of waste should be specified and carried out according to applicable local and state health and safety regulations. Special provisions should be made for the collection, storage, and disposal of liquid wastes and toxic or hazardous materials.

Receptacles and other waste collection areas should be kept neat and orderly to the extent possible. Trash cans should have lids and dumpsters should have covers to prevent rainwater from entering. Waste should not be allowed to overflow its container or accumulate for excessively long periods of time. Trash collection points should be located where they will least likely be affected by concentrated stormwater runoff.

5) **Demolition Areas**

Demolition projects usually generate large amounts of dust with significant concentrations of heavy metals and other toxic pollutants. Dust control techniques should be used to limit the transport of the airborne pollutants. However, water or slurry used to control dust should be retained on the site and not be allowed to run directly into watercourses or stormwater conveyance systems.

6) **Washing Areas**

Vehicles such as cement or dump trucks and other construction equipment should not be washed at locations where the runoff will flow directly into a watercourse or stormwater

conveyance system. Special areas should be designated for washing vehicles. These areas should be located where the wash water will spread out and evaporate or infiltrate directly into the ground, or where the runoff can be collected in a temporary holding or seepage basin. Wash areas should have gravel bases to minimize mud generation.

7) **Storage of Construction Materials, Chemicals, Etc.**

Sites where chemicals, cements, solvents, paints, or other potential water pollutants are to be stored, should be isolated in areas where they will not cause runoff pollution. Toxic chemicals and materials, such as pesticides, paints, and acids, should be stored according to manufacturers' guidelines. Overuse should be avoided and great care should be taken to prevent accidental spillage. Containers should never be washed in or near flowing streams or stormwater conveyance systems. Groundwater resources should be protected from leaching by placing a plastic mat, tar paper, or other impervious materials on any areas where toxic liquids are to be opened and stored.

8) **Sanitary Facilities**

All construction sites should be provided with adequate sanitary facilities for workers according to applicable health regulations.

9) **Dust Control**

The use of calcium chloride, oils, or other chemical dust control agents on construction roads should be avoided. Periodic watering of these areas is a preferred alternative.

10) **Dewatering**

Many improvements such as underground utilities, foundations, and stormwater management facilities require removal and disposal of water from excavations. A detailed discussion of this practice follows in DEWATERING - Section 4.40.