

OREGON DEQ
RECOMMENDED BEST MANAGEMENT PRACTICES
FOR WASHING ACTIVITIES

March 1998

1. GENERAL BEST MANAGEMENT PRACTICES (BMPs) - SITE AND ACTIVITY CONDITIONS

- 1.1. Vehicle or equipment washing that occurs on an impermeable surface (i.e., concrete, plastic, or other) should utilize an area that extends to a minimum of four (4) feet on all sides of the vehicle or equipment to trap all overspray. Equipment includes fork-lifts, backhoes, graders, tractors, and similar commercial implements. Equipment does not include motors, engines, generators, compressors, and similar commercial machinery. Washing areas should be properly graded so that all wash water can be collected from the impermeable surface.
- 1.2. Impervious surfaces used for cleaning operations should be marked to indicate the boundaries of the washing area and the area draining to the designated collection point. Exceptions to this practice would include wash areas enclosed by a roofed-structure, or wash areas that use portable impervious material with boom collection.
- 1.3. Vehicles should not be washed near uncovered repair areas or chemical storage facilities such that chemicals can be transported in wash water runoff. All wash water runoff should be drained away from a shop repair area or chemical storage facility.
- 1.4. All vehicle fluids such as gasoline, lubricating oils, anti-freeze, hydraulic fluids, degreasing agents, paints, organic solvents, etc., must be collected and disposed in accordance with methods approved by DEQ.
- 1.5. At all vehicle and equipment washing facilities, the changing of motor oil is prohibited in wash bay areas.
- 1.6. For washing operations that use chemicals, detergents, soaps, cleaners, hot water, or steam, wash water should be collected in a manner that prevents the contamination of storm water runoff. Such preventative measures may include:
 - a) Washing in an enclosed area with a roofed-structure
 - b) In open areas, drainage of wash water to a dead-end sump or grit trap that is then pumped or siphoned to sanitary sewer, recycling equipment, or treatment equipment,
 - c) Utilization of a catch basin as a sump provided a positive control valve can close the outlet to the storm drainage system while washing occurs.
 - d) As a temporary condition, utilization of an existing catch basin as a sump provided the outlet pipe is sealed by a plug (plumber's balloon) to prevent wash water from entering the storm drainage system.
 - e) Collection of wash water by a portable vacuum recovery unit.
- 1.7. For washing operations that drain to catch basins with separate outlets to storm and sanitary sewer, the catch basins should contain positive control valves. The positive control valve is open during washing so that wash water discharges to sanitary sewer. The valve is closed during non-

washing periods so that storm water runoff discharges to storm sewer. The designated wash area should be thoroughly rinsed after washing activities.

- 1.8. At all permanent wash water facilities and catch basins with a valved sanitary sewer outlet, the owner should post a "warning" to customers, employees and others not to dump any materials into the catch basin. A sign or stenciled note on pavement next to the grit trap or catch basin should be in a visible location and maintained for readability.
- 1.9. Paved areas with washing activities should furnish or retrofit catch basins with sediment traps and inverted elbow outlets to trap floating oils. Catch basins should be cleaned of solids and oil when the basin becomes 30% full with solids, or at least once a year. Catch basins should be cleaned during dry-weather to prevent discharge of pollutants into the storm sewer. Solids must be disposed of in a manner approved by DEQ.
- 1.10. The washing of construction vehicles and equipment (i.e., dump truck, flat-bed supply truck, ready-mix concrete truck and chute, pick-up truck, bulldozer, grader, front-end loader, backhoe, etc.) must occur only on the construction site. Public or private streets, parking lots, sidewalks or other paved areas that directly drain to storm sewers may not be used as washing surfaces. Wash water should be allowed to soak into the ground.
- 1.11. Wash down of construction vehicles and equipment must be conducted in a manner that will prevent soil erosion and runoff from the construction site. Silt ponds may be used as an erosion control measure.
- 1.12. Wash water from cleaning the interior of truck trailers and other large commodity carrying containers should be collected and discharged to a sanitary sewer or treated in a closed loop recycle system. If wash water is discharged to the ground or to surface waters, an individual WPCF or NPDES permit would be required.
- 1.13. New developments for repair shops, fueling stations, storage areas, or areas near dumpsters should be designed so that drainage prevents the mixture of wash water with storm water runoff.
- 1.14. Cleaning operations should be modified to minimize the detachment of paint residues (chips), heavy metals, or any other potentially hazardous materials from surfaces. Modifications may include a change of cleaning agent or reduction in water pressure. All detached materials must not enter storm sewers or surface waters.
- 1.15. For washing operations on painted or metal surfaces, detergents should not possess abrasive properties. Surfaces cleaned should not leave paint residues (chips) or detach heavy metals because these particles can enter storm sewers or surface waters.
- 1.16. Detergents and soaps used in washing activities should be phosphate-free and possess the ability to rapidly biodegrade.

2. BUILDING AND PAVEMENT BMPs

- 2.1. Paved areas including parking lots, driveways, sidewalks, and other surfaces should be clean from excessive debris before washing with water only. If excessive debris lies on the pavement surface before washing, the surface should be dry swept or blown and debris collected and disposed of properly.

- 2.2. For building and pavement washing operations that use detergents, soaps, or cleaners, wash water should be allowed to absorb into the ground or collected and discharged to sanitary sewer or a treatment system.
- 2.3. Washing exterior surfaces of buildings with water only may drain to a catch basin with sediment trap and inverted elbow outlet. Catch basins should be cleaned of solids and oil when the basin becomes 30% full with solids, or at least once a year. Catch basins should be cleaned during dry-weather to prevent discharge of pollutants into the storm sewer. Solids must be disposed of in a manner approved by DEQ.
- 2.4. The use of solvents as cleaning agents for building exteriors and pavement areas is not allowed by the National Pollutant Discharge Elimination System (NPDES) General Permit #1700-A or the Water Pollution Control Facilities (WPCF) General Permit #1700-B. Dry or semi-dry methods may be used to clean these surfaces (i.e., sand or other particle blasting, grind-off and vacuum technology, and ice blast technology). If blasting is utilized as an alternative, all solids should be swept or vacuumed and disposed of properly.

3. SANITARY SEWER DISCHARGE BMPs

- 3.1. Wherever practicable, the Department recommends that facilities conducting washing activities that discharge to the sanitary sewer. In most cases, discharge to the sanitary sewer will be the cheapest and best alternative. In Prior to disposal of wash water to sanitary sewer, minimum pretreatment requirements must be meet as required by the local sewer authority.

4. RECYCLING TREATMENT EQUIPMENT BMPs

- 4.1. Recycling treatment equipment should be properly operated and maintained to achieve compliance with all conditions of the permit. Backwash water or concentrate water should be properly discharged to sanitary sewer. Liquid concentrate discharged to the sanitary sewer should meet all pretreatment standards and other requirements of the local sewer authority. Solids, grit, or sludge must be disposed of in a manner approved by DEQ.

5. TREATMENT BMPs - DISCHARGE TO SURFACE WATERS, GROUND SURFACE, OR VEGETATED SWALE

- 5.1. For cleaning operations that use detergents, soaps, cleaners, steam or heated water and do not discharge to sanitary sewer, wash water must be treated and disposed of in a manner approved by DEQ. Wash water should be treated and disposed of by no discharge methods (recycle systems) or by discharge to surface waters provided permit limitations are not exceeded. The following treatment alternatives may be developed:
 - a) Wash water may be treated in sequence with a grit trap, an oil/water separator, a dosing tank with siphons or pumps, and a filtration system. Discharge from the filtration system must meet effluent limitations set forth in the NPDES #1700-A and WPCF #1700-B permits. The filtration system should be operated and maintained in accordance with the design of the filter and the manufacturer's recommendations.
 - b) Wash water may be treated with adequately sized grit traps and oil/water separators. Comparable units such as water quality inlets to remove sediments and floating oils may also be used. Adjustment for pH may be needed as additional treatment. Effluent may be applied on vegetated land by irrigation equipment. Land irrigation should occur on non-

agricultural vegetation with a 20-foot buffer. Treated wash water should not result in surface runoff. Please see WPCF #1700-B for the conditions and limitations applicable to land application of wash water.

- c) Wash water may be treated with adequately sized grit traps and oil/water separators. Comparable units such as a water quality inlet to remove sediments and floating oils may also be used. Effluent may be disposed of to an evaporative storage lagoon or constructed wetlands. The lagoon or constructed wetlands should be designed with no discharge and thus should be designed with sufficient storage. A liner may be needed to protect groundwater in areas of shallow groundwater or highly permeable soils. Please see WPCF #1700-B for the conditions and limitations applicable to evaporation and storage of wash water.
- 5.2. For small cleaning operations that use detergents, soaps, cleaners, steam or heated water but wash less than eight vehicles or pieces of equipment a week, wash water can be disposed of onto the ground surface without permit. Please see Schedule A of WPCF #1700-B permit. A definition of equipment is provided in Best Management Practice No. 1. Cleaning must be limited to the exterior of the vehicle or equipment. Disposal alternatives to ensure that wash water does not enter surface waters are as follows:
- a) Wash water may be collected in a sump, grit trap, or containment structure to be pumped or siphoned to a vegetated area so that complete percolation into the ground occurs.
 - b) Disposal of wash water should occur on ground surfaces with vegetated cover, preferably grasses.
 - c) Wash water may be disposed to a dry grassy swale. The swale should be a minimum of 250 feet in length before reaching a water body. Complete percolation in the swale should occur with no direct discharge to the surface water. Discharge into a grassy swale for treatment should not occur within 24 hours after a rainfall event or if water remains ponded in the swale.

6. MOBILE WASHING BMPs

- 6.1. All mobile cleaning operations that use soaps, detergents or other cleaners must be conducted on an impermeable surface so that wash water can be collected and discharged to sanitary sewer or a recycle system. Mobile washing operations may discharge if they obtain a permit or the facility at which they are conducting washing operations has obtained a NPDES #1700-A or WPCF #1700-B permit. It is likely that some treatment will be necessary before discharging to surface waters under a NPDES #1700-A.
- 6.2. Mobile washing services such as carpet cleaners must collect and discharge all wash water to a sanitary sewer or collect and treat wash water in a closed loop recycle system.. Disposal to sanitary sewer must be in accordance with the requirements of the local sewer authority. No discharge of this type of wash water to either the ground or surface waters is allowed.
- 6.3. Commercial mobile washers that use chemicals, detergents, soaps, steam, or heated water should use a portable impervious surface material (such as a plastic liner) when washing on a porous surface. A portable wash pit, vacuum recovery unit, or comparable device must be used on location to collect wash water for proper disposal.