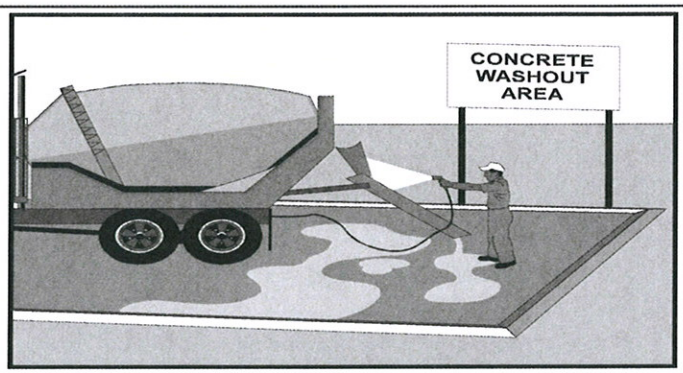
ACTIVITY: Concrete Waste Management

WCP – 01



Targeted Constituents				
● Significant Benefit		◑ Partial Benefit		○ Low or Unknown Benefit
○ Sediment	○ Heavy Metals	○ Floatable Materials	○ Oxygen Demanding Substances	
○ Nutrients	○ Toxic Materials	○ Oil & Grease	○ Bacteria & Viruses	◑ Construction Wastes

Implementation Requirements				
● High		◑ Medium		○ Low
○ Capital Costs	○ O & M Costs	◑ Maintenance	○ Suitability for Slopes >5%	◑ Training

Description

Prevent or reduce the discharge of pollutants to stormwater from concrete waste by conducting washout off-site, performing on-site washout in a designated area, and training employees and subcontractors. This management practice is likely to create a partial reduction in construction waste.

Approach

The following steps will help reduce stormwater pollution from concrete wastes:

- Store dry and wet materials under cover, away from drainage areas.
- Avoid mixing excess amounts of fresh concrete or cement on-site.
- Perform washout of concrete trucks off site or in designated areas only – such as a specially designed soil mixing sump protected by a sediment trap.
- Do not wash out concrete trucks into storm drains, open ditches, streets, or streams.
- Do not allow excess concrete to be dumped on-site, except in designated areas.
- For on-site washout:
  - locate washout area at least 50 feet (15.2 m) from storm drains, open ditches, or water bodies. Do not allow runoff from this area by constructing a temporary pit or bermed area large enough for liquid and solid waste;
  - wash out wastes into the temporary pit where the concrete can set, be broken up, and then disposed of properly.
  - be sure the stormwater collection system is protected by means of a sediment trap or similar practice.
- When washing concrete to remove fine particles and expose the aggregate, avoid

creating runoff by draining the water to a bermed or level area.

- Do not wash sweepings from exposed aggregate concrete into the street or storm drain. Collect and return sweepings to aggregate base stockpile, or dispose in the trash.
- Train employees and subcontractors in proper concrete waste management.
- For a quick reference on disposal alternatives for specific wastes, see the table presented in the Employee/Subcontractor Training BMP fact sheet.
- Illicit dumping on-site or off-site without property owner's knowledge and consent is unacceptable.
- Washout locations may be flagged with lath and surveyors tape or designated as necessary to insure that truck drivers utilize proper areas.

Education

- Instruct drivers and equipment operators on proper disposal and equipment washout practices.
- Educate employees, subcontractors, and suppliers on concrete waste storage and disposal procedures.
- Designate a foreman or supervisor to oversee and enforce concrete waste management procedures. Make supervisors aware of the potential environmental consequences of improperly handled concrete wastes.

Demolition Practices

- Monitor weather and wind direction to ensure concrete dust is not entering storm drains, watercourses, or surface waters.
- Where appropriate, construct sediment traps or other types of sediment detention devices downstream of demolition activities.

Requirements

- Costs (Capital, O&M)
  - All of the above are low cost measures.

Maintenance

- Inspect subcontractors to ensure that concrete wastes are being properly managed.
- If using a temporary pit, dispose hardened concrete on a regular basis that will prevent the pit from being more than half full.
- Foreman and/or construction supervisor shall monitor on site concrete waste storage and disposal procedures at least weekly.

Limitations

- Off-site washout of concrete wastes may not always be possible.

Primary References

California Storm Water Best Management Practice Handbooks, Construction and Industrial Handbooks, CDM et.al. for the California SWQTF, 1993.

Caltrans Storm Water Quality Handbooks, CDM et.al. for the California Department of Transportation, 1997.

Subordinate References

Best Management Practices and Erosion Control Manual for Construction Sites; Flood Control District of Maricopa County, AZ, July 1992.

Blueprint for a Clean Bay-Construction-Related Industries: Best Management Practices for Storm Water Pollution Prevention; Santa Clara Valley Nonpoint Source Pollution Control Program, 1992.

Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92005; USEPA, April 1992.