

# Concrete Waste Management

## DESCRIPTION

Concrete waste at construction sites comes in two forms: 1) excess fresh concrete mix including truck and equipment washing, and 2) concrete dust and concrete debris resulting from demolition. Both forms have the potential to impact water quality through storm water runoff contact with the waste.

## PRIMARY USE

Concrete waste is present at most construction sites. This BMP should be utilized at sites in which concrete waste is present.

## APPLICATIONS

A number of water quality parameters can be affected by introduction of concrete - especially fresh concrete. Concrete affects the pH of runoff, causing significant chemical changes in water bodies and harming aquatic life. Suspended solids in the form of both cement and aggregate dust are also generated from both fresh and demolished concrete waste.

### Unacceptable Waste Concrete Disposal Practices

- Dumping in vacant areas on the job-site.
- Illicit dumping off-jobsite.
- Dumping into ditches or drainage facilities.

### Recommended Disposal Practices

- Avoid unacceptable disposal practices listed above.
- Develop pre-determined, safe concrete disposal areas.
- Provide a washout area with a minimum of 6 cubic feet of containment area volume for every 10 cubic yards of concrete poured.
- Never dump waste concrete illicitly or without property owner's knowledge and consent.
- Overflow of washdown water shall be discharged in an area protected by one or more sediment removal BMPs and shall be done in a manner that does not result in a violation of groundwater or surface water quality standards.

### Education

- Drivers and equipment operators should be instructed on proper disposal and equipment washing practices (see above).
- Supervisors must be made aware of the potential environmental consequences of improperly handled concrete waste.

### Enforcement

- The construction site manager or foreman must ensure that employees and pre-mix companies follow proper procedures for concrete disposal and equipment washing.
- Employees violating disposal or equipment cleaning directives must be re-educated or disciplined if necessary.

### Demolition Practices

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

## Applications

- Perimeter Control
- Slope Protection
- Sediment Trapping
- Channel Protection
- Temporary Stabilization
- Permanent Stabilization

Waste Management

Housekeeping Practices

## Targeted Constituents

- Sediment
- Nutrients Toxic Materials
- Oil & Grease
- Floatable Materials
- Other Construction Wastes

## Implementation Requirements

- Capital Costs
- Maintenance
- Training
- Suitability for Slopes > 5%

## Legend

- Significant Impact
- Medium Impact
- Low Impact
- ? Unknown or Questionable Impact

M-3



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## *Requirements*

- Use pre-determined disposal sites for waste concrete.
- Prohibit dumping waste concrete anywhere but pre-determined areas.
- Assign pre-determined truck and equipment washing areas.
- Educate drivers and operators on proper disposal and equipment cleaning procedures.

## *Costs*

- Minimal cost impact for training and monitoring.
- Concrete disposal cost depends on availability and distance to suitable disposal areas
- Additional costs involved in equipment washing could be significant.

## **LIMITATIONS**

Concrete waste management is one part of a comprehensive construction site waste management program.