

## 4.5-m CONCRETE/BENTONITE MANAGEMENT

Alternative Names: Masonry Materials and Bentonite Waste Management; Concrete/Mortar Washout

### DESCRIPTION

Concrete work generates water and slurry containing fine particles, high levels of chromium, and a high pH; all of which can cause violation of water quality standards for receiving waters. This practice is intended to prevent the discharge of concrete/bentonite. Practices include off-site truck and equipment washouts, performing on-site washouts in designated areas, containing and disposing of wastes properly, and appropriately training construction personnel.

### SITE SUITABILITY

Where concrete, mortar, grout, cement, or any other potentially pH-altering materials are mixed and/or used on-site during construction.

### Advantages

- Minimizes concrete/bentonite pollutants from entering surface and groundwater.
- Prevents improper disposal of unused concrete/bentonite that can accumulate and solidify in storm conveyance systems and severely reduce their capacities.

### Disadvantages

- Requirements for off-site washout may increase difficulty of maintaining delivery vehicles in operating condition and increase construction costs.

### DESIGN CONSIDERATIONS

- Size washout facilities to completely contain all slurry waste generated.
- Ensure that a spill kit is available at each station, capable of rapid use in case of spills.
- Incorporate requirements for concrete/bentonite waste management into agreements with material suppliers and in specifications for contractors.
- Washing of vehicles or construction equipment, including cement mixers, must be authorized by the permitting authority.
- Locate wash stations away from construction traffic routes to reduce the likelihood of accidental damage and spills.
- Locate washout facilities a minimum of 50 feet from storm drains, open ditches, and water bodies.
- Clean concrete paving and hauling vehicles regularly at approved off-site locations. Use dry methods of removing hardened concrete (such as scrubbing with a brush by hand) instead of water or solvents whenever possible.
- Do not wash out concrete trucks or equipment into storm drains, open ditches, streets, or streams.

### BMP DESIGN APPROACH

Pollutant Source Control

Hydrologic Source Control

Stormwater Treatment

### SCALE OF APPLICATION

All SFR and MFR < 1 acre

MFR 1-5 Acre and CICU < 5 acres

MFR and CICU > 5 acres and all WQIPs

### TYPE OF APPLICATION

Temporary

Permanent

- Instruct drivers, equipment operators, concrete suppliers, and their employees about proper practices for waste disposal and equipment washout. Discuss concrete management techniques, such as handling of concrete waste and washout, before any deliveries are made.

## **INSTALLATION**

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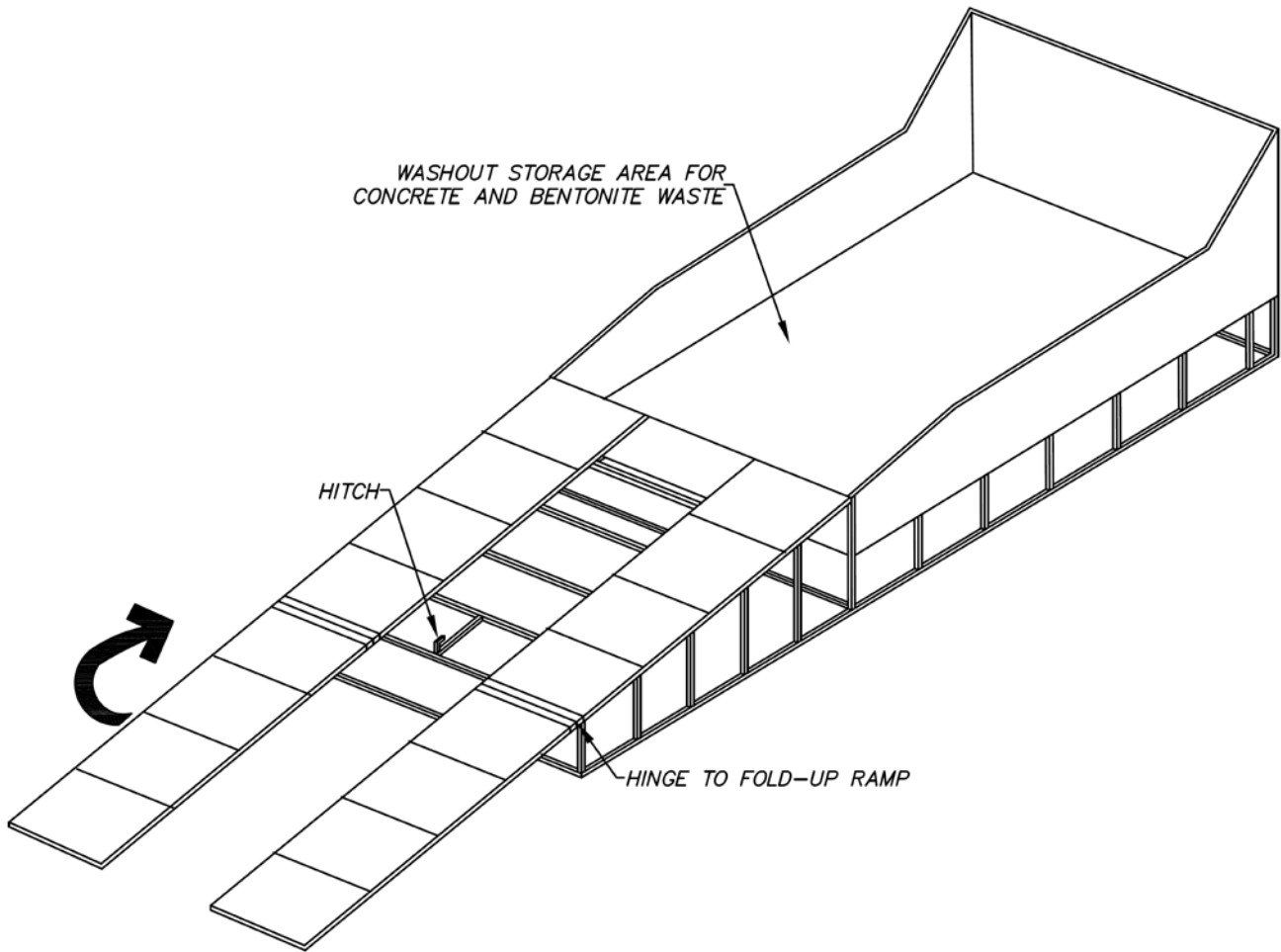
- Monitor weather conditions and wind direction to ensure that concrete dust will not enter storm drains, watercourses, surface waters, or the atmosphere. Conduct concrete operations during dry weather and monitor weather forecasts throughout the workday. Sweep and vacuum as necessary to collect and control concrete dust.
- Avoid mixing excess amounts of fresh concrete or cement on-site. Do not allow excess concrete to be poured, preventing generation of waste material.
- Ensure that on-site washout stations are water-tight.
- Size washout stations to handle expected volumes of solids, wash water, and rainfall.
- Post information about proper techniques for washout and waste disposal at each station, plainly visible to construction personnel.
- Clean all hand tools at washout stations.
- Properly dispose of any sweepings or aggregate base after activities have ceased.

## **INSPECTION AND MAINTENANCE**

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- Inspect and verify that spill containment barriers are in place prior to commencement of construction activity.
- Inspect and verify the concrete washout facilities do not leak and are in good working order prior to commencement of concrete work.
- Maintain designed holding capacity of concrete washout facilities.
- For below-ground wash stations, backfill any holes or depressions and stabilize all disturbed soils.
- If soil is contaminated with concrete or bentonite, contain and remove the contaminated soil and appropriately dispose of it at a TRPA approved disposal site.

**Concrete Washout Station Figure**



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