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3.4.2 Concrete Washout



Source: Hamilton Co. (2008)

Definition and Purpose

Concrete washouts are pits lined with plastic (or other watertight materials) or leak proof containments that can hold and store liquid or slurry concrete washed off heavy machinery and vehicles. The washoff is held in place until it is dried to a point at which it can be disposed of properly.

Appropriate Applications

Concrete washout areas are applicable when:

- Concrete trucks and other concrete-coated equipment are washed onsite;
- Slurries containing portland cement concrete or asphalt concrete are generated, such as from saw cutting, coring, grinding, grooving, and hydro-concrete demolition; and
- Washing of exposed aggregate concrete occur.

Limitations and Maintenance

Concrete washouts are temporary facilities that require emptying on a routine schedule such that a minimum freeboard of four inches is provided for above grade washout facilities and 12 inches for below grade washout facilities. Remove concrete once it has hardened to ensure sufficient storage for additional concrete washout. Alternatively, remove accumulated materials once 75% of the storage capacity is filled. Inspect plastic linings, geotextiles, and sidewalls of site-built washouts to ensure there are no tears or leaks. During



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cleaning processes, pump any excess wash water into a containment vessel that can be properly disposed. Plastic linings may need to be replaced after each cleaning of the washout facility (VDEQ, 2024). Inspect all surfaces of prefabricated washouts to ensure the container is not leaking.

Identify whether washout facilities are being used regularly. If the inspector finds that concrete trucks are being washed out in locations other than designated areas, the inspector must notify the site superintendent and/or operator immediately.

Avoid mixing excess concrete for a pour and also perform washout of concrete trucks offsite or in designated areas. Do not allow concrete trucks to wash into storm drains, open ditches, streets, or streams. Do not allow excess concrete to be dumped onsite, except in designated areas. Do not wash sweepings from exposed aggregate concrete into the street or storm drainage systems.

Planning and Design Criteria

Educate all construction site personnel on the use of the washout facilities (USEPA, 2012). There are two main types of concrete washouts: prefabricated washout containers and site-built washouts. Private companies often offer heavy-duty, prefabricated concrete washout containers that are delivered to the site. Some services provide only the containers while others also provide the maintenance and disposal of the materials. When selecting a company to handle concrete waste, ensure they properly dispose of all materials. If the project utilizes a concrete pump truck, the prefabricated container should have an adequate ramp to accommodate the concrete pump truck. When using prefabricated washout containers, ensure containers can withstand heavy impacts and are watertight.



Source: TDEC



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Site-built washouts can be below-grade in order to prevent breaches. They are constructed by providing a temporary pit or bermed area large enough to handle solids, wash slurry, and rainfall to prevent overflow. They often are 10 ft by 10 ft and include a minimum of 12 inches of freeboard. Above-grade structures may be used if they are sized properly, leak proof, and maintained regularly to provide a minimum of four inches of freeboard. Site built concrete washouts may use a 10mil plastic lining or a nonwoven geotextile lining. When removing concrete and disposing of the hardened concrete be sure to dispose of the linings separately and not to bury them with the concrete. This is to reduce the amount of microplastics that will be found onsite.

Locate concrete washout areas as far as possible from streams, sinkholes, wetlands, or other sensitive features yet accessible for concrete trucks and waste removal (USEPA, 2012). It is a good practice to use signage to indicate where the location of the washout. Line vehicular pathways to and from the washout with appropriately sized gravel to prevent tracking offsite and erosion. Consider having multiple washouts on large sites.

Example Application

No formal design or quantities are required for this measure and therefore are not presented here.

References

Hamilton County. (2008). *Stormwater BMP Manual Best Management Practices*.
USEPA. (2012). *Stormwater Best Management Practice: Concrete Washout*.
VDEQ. (2024). *Virginia Stormwater Management Handbook*.