

WM-12 FERTILIZER STORAGE AND DISCHARGE MANAGEMENT

For assistance, contact the District Environmental Planners, District Maintenance Engineer, or the Roadside Program Administrator at ITD Headquarters Maintenance Section.

Refer to: ITD Standards and Specifications for Highway Construction, Sections 620 and 621.



BMP Objectives

- Perimeter Control
- Slope Protection
- Borrow and Stockpiles
- Drainage Areas
- Sediment Trapping
- Stream Protection
- Temporary Stabilizing
- Permanent Stabilizing

Definition and Purpose

These are procedures and practices for storage and use of fertilizer in a manner that minimizes or eliminates the discharge of nutrients to the storm drain system or other watercourses.

Appropriate Applications

This BMP applies to all construction or maintenance projects when fertilizer is stored, mixed, or applied to aid in the growth and establishment of vegetative cover.

Fertilizer Storage and Application Limitations

- Space limitation may preclude indoor or covered storage of fertilizer.
- Material used to cover fertilizer or build a temporary enclosure may result in future waste management or housekeeping issues at the project.
- On-site storage sheds or structures built must meet local building and fire code requirements.
- Variables including soil types, climate, vegetation types, timing of application, and terrain are all potential limiting factors for effective fertilizer application and uptake and minimization of nutrient runoff.

Fertilizer Storage Practices

- Train employees and subcontractors on proper storage and application practices.
- Storage area shall be located at least 150 feet away from receiving waters or storm drain inlets, unless otherwise directed by the Engineer.
- Time delivery of fertilizer to minimize onsite storage time.

- Safety Data Sheets (SDS) shall be supplied to the Engineer for fertilizers.
- Fertilizers shall be stored in their original containers and the original product labels shall be maintained in place in a legible condition. Damaged or otherwise illegible labels shall be replaced immediately.
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to storm events, and shall be maintained free of accumulated rainwater and spills.

Fertilizer Application and Discharge Considerations

- Fertilizer application rates are site specific and vary by region depending on soil types, climate, vegetation or crop uptake, and other factors.
- Follow manufacturer's recommendations, ITD specifications or contract requirements for fertilizer applications.
- Use organic or non-toxic fertilizers.
- Minimize nutrient loss or offsite transport from applied area by:
 - Apply at a rate consistent with manufacturer's specifications, or document departures from manufacturer's specified rates.
 - Apply at the appropriate time of year for your location, and timed to coincide as closely as possible to the period of maximum vegetation uptake and growth.
 - Avoid applying before heavy rains that could cause excess nutrient runoff.
 - Do not apply to frozen ground.
 - Do not apply directly to stormwater conveyance channels or channels of intermittent water ways, or directly to surface waters.
 - Work fertilizers into the soil, if possible, instead of letting them lie on the ground exposed to the next rainstorm.

Fertilizer Clean Up Practices

- Contain and clean up any fertilizer spills immediately using dry cleanup methods.
- See WM-5 (Spill Prevention and Control), for additional spill control guidance.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any excess materials or contaminated soil.

Maintenance and Inspection

- Inspections shall be conducted as required by the NPDES permit or contract specifications.
- Storage areas shall be kept clean, well-organized, and equipped with ample cleanup supplies as appropriate for the materials being stored.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.