

## **S429 BMPs for Storage or Transfer (Outside) of Solid Raw Materials, Byproducts, or Finished Products**

**Description of Pollutant Sources:** Some pollutant sources stored outside in large piles, stacks, etc. at commercial or industrial establishments include:

- Solid raw materials
- Byproducts
- Gravel
- Sand
- Salts
- Topsoil
- Compost
- Logs
- Sawdust
- Wood chips
- Lumber
- Concrete
- Metal products

Contact between outside bulk materials and stormwater can cause leachate, and erosion of the stored materials. Contaminants may include TSS, BOD, organics, and dissolved salts (sodium, calcium, and magnesium chloride, etc.).

**Pollutant Control Approach:** Provide impervious containment with berms, dikes, etc., and/or cover to prevent run-on and discharge of leachate pollutant(s) and TSS.

### **Applicable Operational BMPs:**

- Do not hose down the contained stockpile area to a storm drain or a conveyance to a storm drain, or to a receiving water.

- Maintain contributing drainage areas in and around storage of solid materials with a minimum slope of 1.5 percent to prevent pooling and minimize leachate formation. Areas should be sloped to drain stormwater to the perimeter for collection or to internal drainage “alleyways” where no stockpiled material exists.
- Sweep paved storage areas regularly for collection and disposal of loose solid materials.
- If and when feasible, collect and recycle water-soluble materials (leachates).
- Stock cleanup materials, such as brooms, dustpans, and vacuum sweepers near the storage area.

### **Applicable Structural BMPs:**

For stockpiles less than 5 cubic yards, place temporary plastic sheeting (polyethylene, polypropylene, hypalon, or equivalent) over the material as shown in [Figure IV-5.7: Material Covered with Plastic Sheeting](#).

The source control BMP options listed below are applicable to:

- Stockpiles greater than 5 cubic yards of erodible or water soluble materials such as:
  - Soil
  - Road deicing salts
  - Compost
  - Unwashed sand and gravel
  - Sawdust
- Outside storage areas for solid materials such as:
  - Logs
  - Bark
  - Lumber
  - Metal products

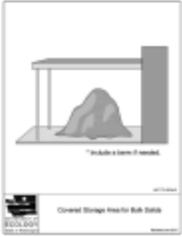
Choose one or more of the following Source Control BMPs:

- Store in a building or a paved and bermed covered area as shown in [Figure IV-5.6: Covered Storage Area for Bulk Solids](#).
- Place temporary plastic sheeting (polyethylene, polypropylene, hypalon, or equivalent) over the material as shown in [Figure IV-5.7: Material Covered with Plastic Sheeting](#).
- Pave the area and install a drainage system. Place curbs or berms along the perimeter of the area to prevent the run-on of uncontaminated stormwater and to collect and convey runoff to treatment. Slope the

paved area in a manner that minimizes the contact between stormwater (e.g., pooling) and leachable materials in compost, logs, bark, wood chips, etc.

- For large uncovered stockpiles, implement containment practices at the perimeter of the site and at any catch basins as needed to prevent erosion and discharge of the stockpiled material off-site or to a storm drain. Ensure that no direct discharge of contaminated stormwater to catch basins exists without conveying runoff through an appropriate treatment BMP.

**Figure IV-5.6: Covered Storage Area for Bulk Solids**



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**Figure IV-5.7: Material Covered with Plastic Sheeting**



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### **Applicable Treatment BMPs:**

Convey contaminated stormwater from the stockpile area to:

- [BMP T10.10: Wetponds - Basic and Large](#),
- [BMP T10.20: Wetvaults](#),
- [BMP T6.10: Presettling Basin](#),
- a Manufactured Treatment Device (see [V-11 Manufactured Treatment Devices as BMPs](#)), or
- other appropriate Runoff Treatment BMP depending on the contamination.

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**Washington State Department of Ecology**

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