

---

## GROUNDSKEEPING BEST MANAGEMENT PRACTICES FOR WATER QUALITY PROTECTION

When National Pollutant Discharge Elimination System (NPDES) stormwater permits are applicable, the Stormwater Pollution Prevention Plan (SPPP) is the focus of the stormwater permit for construction activities and is the key to controlling pollutants in stormwater discharges. Therefore, proper and careful development and implementation of the plan will maximize the potential benefits of pollution prevention and sediment and erosion control measures. The permit consists of specific requirements for the plan, including deadlines and certain stormwater control measures. The process of developing and implementing a SPPP for construction activities can be divided into seven phases. These are: 1) site evaluation and design development; 2) assessment; 3) control selection/plan design; 4) certification/notification; 5) construction/implementation; 6) operation and maintenance of measures; and 7) final stabilization/termination. The topics presented so far in this book cover various aspects of the seven phases of the SPPP, especially sediment and erosion control. This chapter focuses on practices for general “housekeeping” and grounds management practices which are also essential to the pollution prevention aspect of the plan. Whether or not a NPDES permit is required, these practices are recommended as a means to protect water quality.

### Inspection and Maintenance Procedures

The following inspection and maintenance procedures need to be followed to maintain adequate sediment and erosion controls:

- **All control measures need to be inspected at least once per week and following any storm event of 1/2" or more.**
- All measures need to be maintained in good working order. If a repair is necessary, it should be initiated within 24 hours of report.
- Silt fence and straw bales need to be inspected **weekly** for proper anchorage and leakage underneath. Silt fencing should also be inspected for tears.
- Built-up sediment needs to be removed from silt barriers when it has reached 1/3 of the height of the barrier. Sediment needs to be placed in a

stabilized site to prevent re-entry into the same site or another entrapment area.

- Sediment basins need to be inspected for depth of sediment on a **monthly** basis and built up sediment needs to be removed when 1/3 of the basin volume is filled.
- Temporary and permanent seeding and planting needs to be inspected for bare spots, washouts and healthy growth. A person should be designated to be responsible for maintaining planted areas until growth has reached 1" in height and the area disturbed adequately protects 70% of the ground surface.

**Materials Inventory**

A materials list should be compiled for items that will be stored outside on the site during construction. For example:

- \_\_\_\_\_ Pipe, fittings and joint compounds for underground utility piping
- \_\_\_\_\_ Gravel and stone bedding material
- \_\_\_\_\_ Concrete forming materials
- \_\_\_\_\_ Other (specify) \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

NOTE: Fuels, oils and other petroleum products; forming oils and compounds; fertilizers; pesticides; or any other hazardous or toxic compounds should not be stored outside on the site unless specifically agreed upon by all responsible parties, including those persons responsible for enforcing local ordinances and policies. On-site storage should meet all local, state and federal rules regarding secondary containment. Additionally, local ordinances may require fencing and security measures for storage of these products.

**Spill  
Prevention and  
Material  
Management  
Practices**

**PETROLEUM PRODUCTS:** All vehicles kept on the site need to be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products should be stored in tightly sealed containers which are clearly labeled. Any asphalt substances used on-site should be applied according to the manufacturer's recommendations.

**FUELING & SERVICING:** No fueling, servicing, maintenance, or repair of equipment or machinery should be done within 50 feet of a stream, or within 100 feet of a classified stream, losing stream or sink-hole.

**MUD TRACKING:** A stabilized construction entrance needs to be designated on the plan. Only designated entrances should be used for construction access to the site. The General Contractor should be responsible for keeping mud cleaned from adjoining streets on a daily basis if needed.

**CONCRETE TRUCKS:** Concrete trucks should be allowed to wash only in locations where discharge is directed to a sediment basin. It is not permissible to discharge concrete wash directly to streams or storm drains. Alkalinity and chemical additives could be harmful to fish, streambottom macroinvertebrates and wildlife.

**DISPOSAL OF OIL:** No fuels, oils, lubricants, solvents, or other hazardous materials can be disposed of on the site. All hazardous material must be properly disposed of in accordance with State law. For guidance, contact 1-800-361-4827 in Missouri or 1-785-296-1667 in Kansas.

**TRASH/SOLID WASTE:** The General Contractor is responsible for disposing of all solid waste from the site in accordance with State law. Dumpsters or other collection facilities must be provided as needed. Solid waste may not be buried on the site.

**SANITARY WASTE:** The General Contractor is responsible for providing sanitary facilities on the site. Sanitary waste may be disposed only in locations having a State permit.

**OTHER DISCHARGES:** Water for pressure testing sanitary sewers, flushing water lines, etc., may be discharged only in approved areas.

**Spill Controls** A Sediment & Erosion Control Officer needs to be designated as the spill prevention and cleanup coordinator.

In addition to the good housekeeping practices and material management practices listed previously, the following practices need to be followed for spill prevention and clean-up:

- Manufacturer's recommended methods for spill cleanup needs to be clearly posted and site personnel need to be made aware of the procedures and the location of the information and cleanup supplies. Refer to material safety data sheets (MSDs).
- Material and equipment necessary for spill cleanup needs to be kept in the material storage area on-site. Equipment and materials include, but are not be limited to, brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for this purpose.
- All spills need to be cleaned up immediately after discovery and properly containerized for proper disposal. Burial is not acceptable.
- The spill area must be kept well ventilated and personnel need to wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material must be reported immediately to the appropriate state or local government agency, regardless of the size. Each county should have a Local Emergency Planning Committee (LEPC). If you are unable to access your local LEPC directly, contact your local fire department, city hall or county courthouse. When permits are applicable, the permittee or his/her authorized representative is required to notify the MDNR or KDHE Environmental Emergency Response in accordance with 40CFR117 and CFR302 as soon as they have knowledge of the discharge of any hazardous substance or petroleum product in excess of the reportable quantity. In Missouri, contact the MDNR emergency spills hot line at 1-573-634-2436. In Kansas, contact the KDHE 24-hour spill hotline at 1-785-296-1679.

- The spill prevention plan needs to be adjusted to include measures to prevent this type of spill from being repeated, and the plan needs to show how to clean up the spill if another one does occur.

### **Hazardous Products**

- Products must be kept in original containers unless they are not resealable. If product is transferred to a new container, it must be properly marked and labeled.
- Original labels and material safety data sheets should be retained.
- If surplus product must be disposed of, disposal must be done in accordance with State law. For local disposal information, contact your solid waste district, your local emergency planning committee (LEPC) or in Missouri call 1-800-361-4827 or in Kansas call 1-785-296-1667.

### **Air Emissions**

**BURNING:** Burning on the site may require a permit from the Missouri Department of Natural Resources (MDNR) or the Kansas Department of Health and Environment (KDHE). For guidance in Missouri, contact your MDNR regional office or the MDNR Air Pollution Control Program at (573) 751-4817. For guidance in Kansas, contact your KDHE district office or contact the KDHE Bureau of Air and Radiation at (785) 296-1550. County or city ordinances may also apply.

**DUST CONTROL:** In Missouri, the contractor is required by State law to control fugitive dust blown from the site. Kansas does not have specific regulations for fugitive dust emissions; however, KDHE encourages contractors to implement measures to reduce such emissions. Dust can be minimized by stabilizing areas with mulch as soon as possible. Watering should be provided in unstabilized areas. Contact MDNR or KDHE for guidance at numbers listed above.

### **Other Good Groundskeeping Practices**

In addition to the foregoing, the following good housekeeping practices need to be followed during the construction of the project:

- An effort should be made to store only enough product to do the job.

## Groundskeeping BMPs

---

- All materials stored on-site should be stored in a neat, orderly manner in their appropriate containers and, if possible, under a roof or other enclosure.
- Products should be kept in their original containers with the original manufacturer's label.
- Whenever possible, all of a product should be used up before disposing of the container.
- Manufacturer's recommendations for proper use and disposal must be followed. (See MSDs.)
- The site superintendent should inspect daily to ensure proper usage, storage and disposal of materials.
- Fertilizers need to be applied only in the minimum amounts recommended by the manufacturer.
- All paint containers need to be tightly sealed and stored when not required for use. Excess paint should not be dumped into the storm sewer system but should be properly disposed of according to manufacturer's instructions (see MSDs) and State regulations.