

## Groundskeeping (GK) Volume I - Design



### Practice Description

Groundskeeping, or “good housekeeping”, describes the various activities and measures, in addition to the specific practices used for erosion and sediment control that are essential during construction for the protection of environmental quality. Groundskeeping is applicable at all construction sites.

### Planning Considerations

In addition to the sediment and erosion control practices included in the Handbook that deal directly with sediment and erosion control, some general groundskeeping practices are essential to the pollution prevention aspect of a Stormwater Pollution Prevention Plan. Groundskeeping addresses these practices. Included in the practice are the following different areas:

- Inspection and Maintenance Procedures
- Materials Inventory
- Spill Prevention and Material Management Practices
- Spill Controls
- Hazardous Products
- Air Emissions (excessive odor)
- Other Good Groundskeeping Practices (i.e. fugitive spray, excessive noise and aesthetics)

#### **Note on these standards:**

These standards are taken from the *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas*. Use of these minimum standards are at the owner/contractor discretion and the City of Montgomery does not endorse or guarantee their fitness to use. The owner/contractor is solely responsible in determining the fitness of these practices and the revision or additions that may be necessary.

## Design Criteria

### ***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 accumulation of rainfall of ¾" or more within a 24-hour period. A more frequent inspection interval may be required by either a permitting agency or a permittee.
- 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 ½ 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 ½ of the basin volume is filled.
- Temporary and permanent seeding and plantings need to be inspected for bare spots, washouts and unhealthy growth. A person should be designated to be responsible for maintaining planted areas until there is a uniform stand with 85% ground cover and growth has reached 1" in height.

### ***Materials Inventory***

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

For example, (check applicable materials):

- 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; strippers; detergents; cleaners; 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. A Spill Prevention Control and Countermeasures (SPCC) plan should be developed for the facility to address the safe storage, handling and clean-up of petroleum products and other chemicals. Petroleum products should be stored in tightly sealed containers, which are clearly labeled. If petroleum products are stored on site, a secondary containment facility will be required if the cumulative storage capacity of all tanks, greater than 55 gallons, at the site exceeds 1,320 gallons. 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 stream classified for public water supply (PWS) or Outstanding Alabama Water (OAW), or designated as an Outstanding National Resource Water (ONRW), or a sinkhole.

### *Mud Tracking*

A stabilized construction entrance needs to be designated on the plan. The practice Construction Exit Pad provides design details for planning such an entrance.

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 appropriately treated to meet applicable regulatory requirements. It is not permissible to discharge concrete wash directly to streams or storm drains.

Concrete wash can contain sediment, as well as, alkalinity and chemical additives that could be harmful to fish, stream bottom 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.

### *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. Portable toilets should be located so that accidental spills will not discharge into a storm sewer or concentrated flow area.

### *Other Discharges*

Water for pressure testing sanitary sewers, flushing water lines, sand blasting, concrete cleansing, etc., may be discharged only in approved areas. Discharge of hydrostatic test water may require additional permitting, particularly if chlorinated public water is used.

### **Spill Controls**

In addition to the good housekeeping practices and material management practices listed previously, the following procedures 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 (Material Safety Data Sheet).
- 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 limited to; brooms, dust pans, mops, rags, gloves, goggles, absorbent clay (kitty litter), sand, sawdust, absorbent mats, 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.
- 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.

### **Contaminated Soils**

Removal of contaminated soils and underground storage tanks should be based on information provided by the Alabama Department of Environmental Management following a proper site assessment.

### **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, disposal must be done in accordance with Alabama Department of Environmental Management regulations.

### **Air Emissions**

#### *Burning*

Burning on the site may require a permit from the Alabama Forestry Commission. County or city ordinances may also apply. Starting disposal fires with diesel fuel or old tires is not a recommended practice. The use of burn pits with fans to generate hot disposal fires decreases the fire disposal time and minimizes smoke.

#### *Dust Control*

Apply measures that minimize dust. Stabilizing areas with mulch as soon as possible can minimize dust. Watering should be provided in unstabilized areas.

### ***Other Good Groundskeeping Practices***

The following good housekeeping practices also need to be followed during the construction of the project:

- An effort should be made to store only enough products to do the job.
- 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 Material Safety Data Sheet).
- 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 shall not be dumped into the storm sewer system but should be properly disposed of according to manufacturer's instructions (see Material Safety Data Sheet) and State regulations.
- The site should be kept clean and well groomed (trash picked up regularly, weeds mowed and signs maintained).
- Offsite fugitive spray from dust control, sand blasting and pressure washing must be minimized to the extent possible.
- Locate activities that generate odors and noise as far from surrounding properties as possible (this item includes portable toilets, burn sites, fueling areas, equipment repair areas and dumpsters).

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# Groundskeeping (GK)

## Volume 2 – Installation and Maintenance

### Practice Description

Groundskeeping or “good housekeeping” describes the various activities and measures, in addition to the specific practices used for erosion and sediment control that are essential during construction for the protection of environmental quality. Groundskeeping is applicable at all construction sites.

### Typical Components of the Practice

Prior to the start of construction, Groundskeeping activities and measures should be identified by a qualified design professional and included in the construction and pollution prevention plan. The essential components of Groundskeeping should be provided to the prime contractor for a project. Groundskeeping activities and measures essential at construction sites vary based on the complexity of the site and the project. Groundskeeping typically includes the following activities and measures:

- Inspections During Construction/Installation of Erosion and Sediment Control and Stormwater Measures (BMPS)
- Spill Prevention and Material Management
- Spill Controls
- Other Potential Activities and Measures (examples: removal of contaminated soils, management of hazardous products, protection of air quality, etc.)

### Details about Components

#### *Inspections of BMPs*

Inspections should be made regularly and timely to ensure that erosion and sediment control and stormwater management practices are performing as planned and whether or not maintenance is needed. In addition, inspections and reports should meet local and state requirements.

#### *Spill Prevention and Material Management*

Alabama Department Environmental Management (ADEM) regulations require that an operator/owner implement a Spill Prevention Control and Counter Measures (SPCC) Plan for all temporary and permanent onsite fuel or chemical storage tanks or facilities to address the safe storage, handling and cleanup of petroleum products and other chemicals.

All vehicles kept on the site need to be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage.

If petroleum products are stored on site, a secondary containment facility will be required if the cumulative storage capacity of all tanks, greater than 55 gallons, at the site exceeds 1,320 gallons. The secondary containment facility must be designed by a qualified design professional.

Petroleum products should be stored in labeled tightly sealed containers.

Any asphalt substances used on-site should be applied according to the manufacturer's recommendations.

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 stream classified for public water supply (PWS) or Outstanding Alabama Water (OAW), or designated as an Outstanding National Resource Water (ONRW) or a sinkhole.

Only designated entrances should be used for construction access to the site. Mud tracked from the site onto streets and roads should be cleaned on a daily basis if needed.

Concrete trucks should be allowed to wash only in locations where discharge is appropriately treated to meet applicable regulatory requirements. It is not permissible to discharge concrete wash directly to streams or storm drains.

Concrete wash can contain sediment, as well as, alkalinity and chemical additives that could be harmful to fish, stream bottom macroinvertebrates and wildlife.

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.

Solid waste should be disposed of in accordance with state law. Dumpsters or other collection facilities must be provided as needed.

Portable toilets should be located so that accidental spills will not discharge into a storm sewer or concentrated flow area.

Water for pressure testing sanitary sewers, flushing water lines, etc., may be discharged only in approved areas and to prevent discharging to surface waters. Discharge of hydrostatic test water may require additional permitting, particularly if chlorinated public water is used.

### ***Spill Controls***

The operator/owner is expected to maintain on-site or have readily available sufficient oil & grease absorbing material and flotation booms to contain and clean-up fuel or chemical spills and leaks.

Equipment and materials include, but are not limited to brooms, dust pans, mops, rags, gloves, goggles, absorbent clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

Spills of toxic or hazardous material must be reported immediately. For emergency response to spills within Montgomery County, always **Dial 911** for the Montgomery Fire Department HazMat Unit first. The operator/owner is also required to immediately notify ADEM after becoming aware of a significant spill/leak or visible oil sheen in the vicinity of the construction activity. In the event of a spill with the potential to impact groundwater or other waters of the State, the operator/owner is expected to immediately call the National Response Center (NRC) at 1-800-424-8802 and the Alabama Emergency Management Agency (AEMA) at 1-800-843-0699. The caller should be prepared to report the name, address and telephone number of person reporting spill, the exact location of the spill, the company name and location, the material spilled, the estimated quantity, the source of spill, the cause of the spill, the nearest downstream water with the potential to receive the spill, and the actions taken for containment and cleanup.

All spills need to be cleaned up immediately after discovery and properly containerized for proper disposal. Refer to Material Safety Data Sheets for safe handling procedures. 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.

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



### ***Removal of Contaminated Soils and Underground Storage Tanks***

Site assessment and removal of contaminated soils and underground storage tanks should be done following a site assessment based on procedures provided by the Alabama Department of Environmental Management.

### ***Management of Hazardous Products***

Products must be kept in original containers unless they are not resealable. If a product is transferred to a new container, it must be properly marked and labeled.

Original labels and Material Safety Data Sheets should be retained until the related product is no longer on the site.

If surplus product must be disposed of, disposal must be done in accordance with state (Alabama Department of Environmental Management regulations).

### ***Protection of Air Quality***

#### *Smoke*

Burning on the site may require a permit from the Alabama Forestry Commission. County and city ordinances may also apply. Starting disposal fires with diesel fuel, petroleum products, or old tires is not a recommended practice. Burn pits with fans to generate hot disposal fires decreases the fire time and minimizes smoke. Burning may be prohibited by State “burn bans” to reduce potential for ground-level ozone.

#### *Dust*

Dust should be controlled if it will create a problem either on or off of the site. If measures are not included in the site design plan see the practice Dust Control for potential measures to use to eliminate or minimize dust.

### ***Other Good Groundskeeping Practices***

*The following measures may be needed:*

- 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 tightly sealed 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 Material Safety Data Sheets for product of concern.
- The site superintendent or a designated employee should inspect daily to ensure proper usage, storage and disposal of material

### **Spill Prevention and Material Management**

- All construction sites with temporary or permanent fuel or chemical storage must have a Spill Prevention Control and Counter Measures (SPCC) Plan.
- Monitor all vehicles on-site for leaks.
- Secondary containment is required for storage of petroleum products when tanks greater than 55 gallons have a cumulative storage capacity that exceeds 1,320 gallons.
- All petroleum products and chemicals must be stored in labeled tightly sealed containers. Store the containers in a neat orderly manner and under roof when possible.
- No fueling, servicing, maintenance, or repair of equipment should occur within 50 feet of a stream or within 100 feet of Public Water Supply, Outstanding Alabama Water, Outstanding National Resource Water, or a sinkhole.
- All construction traffic should use the designated construction entrance/exit.
- Mud and soil tracked onto streets and roads should be removed on a daily basis.
- Concrete trucks should only be allowed to wash out at designated locations where the discharge is appropriately treated according to regulations.
- Locate portable toilets so that accidental spills will not discharge into a storm sewer or concentrated flow area.
- No hazardous materials of any kind can be disposed of on the site.
- All solid waste should be collected in a dumpster or other approved collection facility and be disposed of in accordance with state law.
- Water used to pressure test sanitary sewers, flush water lines, etc., should be discharged only in approved locations. Discharge of chlorinated water may require permitting.

### **Spill Controls**

- Materials to contain and clean-up fuel and chemical spills should be readily available on-site.
- In the event of a spill that has the potential to impact surface or groundwater, immediately call the National Response Center at 1-800-424- 8802 and the Alabama Emergency Management Agency at 1-800-843-0699.
- ALL SPILLS should be cleaned up immediately, properly contained, and handled according to the Safety Data Sheet (SDS). DO NOT Bury spilled materials.

### **Management of Hazardous Products**

- Keep all products in original containers whenever possible. Make sure all containers are properly marked and labeled.
- Original labels and SDSs should be on-site until the product(s) is no longer used.
- Surplus product and empty containers should be disposed of only according to ADEM regulations.

**Additional Construction Site Pollutants**

List any modification or additional construction site pollutants as may be required.

Pollutant-Generating Activity	Pollutants or Pollutant Constituents	Location on Site
Fueling operations	Petroleum Products,	
Vehicle lubrication & maintenance operations	Petroleum Products	
Disposal of Oil	Petroleum Products	
Paving Operations	Petroleum Products & Aggregate	
Concrete operations		
Stucco & mortar		
Paints & Stains (latex water based only)		
Other Chemicals		
Municipal solid waste storage & disposal		
C &D waste storage & disposal		
Sanitary waste		
Mud Tracking	Sediment	
Other Discharges		

Pollutant-Generating Activity	Pollutants or Pollutant Constituents	Location on Site
Fueling operations	Petroleum Products,	
Vehicle lubrication & maintenance operations	Petroleum Products	
Disposal of Oil	Petroleum Products	
Paving Operations	Petroleum Products & Aggregate	
Concrete operations		
Stucco & mortar		
Paints & Stains (latex water based only)		
Other Chemicals		
Municipal solid waste storage & disposal		
C & D waste storage & disposal		
Sanitary waste		
Mud Tracking	Sediment	
Other Discharges		



