General Guidance for Use of Erosion and Sediment Control Measures with Construction Activities

Scope
The work consists of installing measures or performing work to control erosion and minimize the production of sediment and other pollutants to water and air from construction activities.

For larger projects where construction activities will disturb one or more acres of an area that will be subject to runoff away from the site, a storm water permit may be required as administered by OEPA under the national Pollutant Discharge Elimination System (NPDES). In these cases, the contractor will need to follow the permit requirements.

Erosion and sediment control measures and works
The contractor shall develop a pollution control plan that locates and details erosion and sediment control measures to be used on site. The measures in the plan will be installed by the contractor to prevent sediment from leaving the work site. This pollution control plan shall be reviewed at the preconstruction conference prior to the start of construction. The measures and works shall include, but are not limited to, the following:

Staging of earthwork activities—The excavation and moving of soil materials shall be scheduled to minimize the size of areas disturbed and unprotected from erosion for the shortest reasonable time. All erosion and sediment control measures are to be placed prior to or as the first step in land clearing activities.

Seeding—Seeding to protect disturbed areas shall occur as soon as reasonably possible following completion of that earthwork activity.

Mulching—Mulching to provide temporary protection of the soil surface from erosion.

Diversions—Diversions to divert water from work areas and to collect water from work areas for treatment and safe disposition. They are temporary and shall be removed and the area restored to its near original condition when the diversions are no longer required or when permanent measures are installed.

Stream crossings—Culverts or bridges where equipment must cross streams. They are temporary and shall be removed and the area restored to its near original condition when the crossings are no longer required or when permanent measures are installed.

Sediment basins—Sediment basins collect, settle, and eliminate sediment from eroding areas from impacting properties and streams below the construction site(s). These basins are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Sediment filters—Straw bale filters or geotextile sediment fences trap sediment from areas of limited runoff. Sediment filters shall be properly anchored to prevent erosion under or around them. These filters are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Silt fence hall meet the following:

Minimum Tensile Strength (ASTM D 1682) 120 lbs
Minimum Burst Strength (ASTM D1117) 200 psi
Ultrasound Exposure Strength Retention 50% or less

The fabric shall be 36 inches in width. The fabric shall be wrapped in a heavy duty protective covering to protect it from direct sunlight, dirt, and other debris. The silt fence shall be laid in a 6 inch trench on the
contour, then backfilled with soil and tamped. Hardwood posts or equivalent shall be driven on the downhill side of the fabric spaced not more than 10 feet apart. The posts shall be of the size to support the anticipated load. The fabric shall be attached to the posts per manufacturer’s recommendations.

Waterways—Waterways for the safe disposal of runoff from fields, diversions, and other structures or measures. These works are temporary and shall be removed and the area restored to its original condition when they are no longer required or when permanent measures are installed.

Other—Additional protection measures as specified within this specification or required by Federal, State, or local government.

All erosion control measures are to be placed prior to or as the first step in land disturbing activities. All pollution control measures and temporary works shall be adequately maintained in a functional condition for the duration of the construction period. The contractor shall inspect all erosion control measures daily and make and perform all needed maintenance. Temporary soil stockpiles shall be stabilized or protected with sediment trapping measures. The contractor shall schedule excavation and moving of soil materials so that the smallest possible areas will be unprotected from erosion for the shortest time feasible.

Mulch anchoring, straw or hay bake diversions, fabric checks, filter fences, or runoff diversion shall be used to protect disturbed concentrated surface flow areas until vegetation is established.

Permanent or temporary soil stabilization shall be applied to denuded areas within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within 7 days to denuded areas that are not at final grade but that will remain undisturbed for more than 14 days.

Earthfill subgrades and core trenches and all other parts of the construction site shall be dewatered and kept free of standing water and muddy conditions as necessary for the proper execution of the work. The contractor shall furnish, install, operate, and maintain all drains, sumps, pumps, casings, well points, and all other equipment required to properly dewater the site as specified. Dewatering systems that cause a loss of soil fines from the foundation areas will not be permitted.

The contractor shall maintain all earthfill borrow areas free of surface water or otherwise provide for timely and effective removal of surface and subsurface water that accumulates within the borrow area. Earthfill borrow material shall be processed as necessary to achieve proper and uniform moisture content at the time of placement.

Removal of water from the construction site, including the borrow areas, shall be accomplished so that erosion and the transporting of sediment and other pollutants are eliminated or minimized to the greatest extent possible.

When temporary erosion and sediment control measures are no longer needed, as determined by NRCS or their representative, the contractor shall remove and return the area to a condition similar to that which existed before construction. Areas where temporary measures were located shall be graded for slightly appearance with no obstruction to natural surface water flows or the proper functioning and access to the works of improvement installed. The contractor shall exercise extreme care during the removal stages to minimize the loss of soil sediment and debris that was trapped during construction.

Chemical pollution
The contractor shall provide watertight tanks or barrels or construct a sump sealed with plastic sheets to collect and temporarily contain chemical pollutants, such as drained lubricating or transmission fluids, grease, soaps, or concrete mixer wash water. Pollutants shall be disposed of in accordance with appropriate State and Federal regulations. At the completion of the construction work, tanks, barrels, and sumps shall be removed and the area restored to its original condition. Sump removal shall be conducted without causing pollution.
Sanitary facilities, such as chemical toilets, or septic tanks shall not be located next to live streams, wells, or springs. They shall be located at a distance sufficient to prevent contamination of any water source. At the completion of construction activities, facilities shall be disposed of without causing pollution.

**Air pollution**
The burning of brush and the disposal of other materials shall adhere to state and local regulations.

Fire prevention measures shall be taken to prevent the start or spreading of wildfires that may result from project activities. Firebreaks or guards shall be constructed and maintained at locations shown on the drawings.

All public access or haul roads used by the contractor during construction of the project shall be sprinkled or otherwise treated to fully suppress dust. All dust control methods shall ensure safe construction operations at all times. If chemical dust suppressants are applied, the material shall be a commercially available product specifically designed for dust suppression and the application shall follow manufacturer's requirements and recommendations.

**References**

- Information about the OEPA storm water permits program can be found at: [http://epa.ohio.gov/dsw/storm/index.aspx](http://epa.ohio.gov/dsw/storm/index.aspx)
- For additional details on the installation and maintenance of these sediment and erosion control measures refer to the current *Rainwater and Land Development, Ohio's Standards for Storm Water Management Land Development and Urban Stream Protection* by the Ohio Department of Natural Resources (ODNR) Division of Soil and Water Conservation. The manual is available at: [http://soilandwater.ohiodnr.gov/water-conservation/stormwater-management](http://soilandwater.ohiodnr.gov/water-conservation/stormwater-management) or by contacting your county Soil and Water Conservation District