Why do I care about erosion and sediment control on my construction site?

Soil erosion is a major contributor to pollution in waterways. Uncontrolled sediment can move off-site through ditches, storm drains or across other property and be deposited in a creek, stream, or wetland. Sediment can clog storm drains and pose a safety hazard on streets. Erosion and sediment control during construction activity is important. It is required by local and state regulations and implementing Best Management Practices (BMPs) on your construction site can save time, money, and protect natural resources. Additionally, practicing erosion prevention instead of erosion repair may help avoid problems such as negative publicity, fines, and stop work orders.

Why is sediment harmful to a waterbody?

Too much sediment in a waterbody can cloud the water and make it difficult or impossible for aquatic plants to receive the sunlight they need to grow. Excess sediment also smothers aquatic habitat, clogs fish gills, and impedes navigation in our waterways, which can lead to expensive dredging.

Additional Information

Additional information on the CSGP is available from IDEM's Construction/ Land Disturbance Permitting website.
https://www.in.gov/idem/stormwater/construction-land-disturbance-permitting/

Local MS4 Requirements:

Determine what MS4 your project is in using this map:
https://morganin.elevatemaps.io/

For projects in Morgan County, including all projects outside of other MS4s, visit:
https://morgancounty.in.gov/

For projects in Brooklyn, visit the Town Hall at 10 East Mill Street

For projects in Martinsville, visit:
https://martinsville.in.gov/194/Building-Services

For projects in Mooresville, visit:
https://www.mooresville.in.gov/building-department/

For projects in the Tri-County Conservancy District, visit:

http://tricountyconservancy-in.gov

MS4-owned projects submit their SWPPPS though IDEM's Regulatory ePortal for review by IDEM at
https://stormwater.idem.in.gov/ncore/ext

Prepared by

WESSLER ENGINEERING

Construction Site Stormwater Management

A Guide for working in Morgan County, Indiana MS4s

Construction sites are required to comply with sediment and erosion control, stormwater quantity, and stormwater quality requirements.

Sites with a projected land disturbance of 1 acre or more, and land disturbance of less than 1 acre that is part of a larger common plan of development or sale are required to obtain a Construction Stormwater General Permit (CSGP) from the Indiana Department of Environmental Management (IDEM) after receiving approval of their Stormwater Pollution Prevention Plan (SWPPP) from the local Municipal Separate Storm Sewer System (MS4).

MS4s in Morgan County have the following minimum land disturbance requirements for a Stormwater Permit:

Brooklyn: 1 acre

Martinsville: 0.5 acre

Mooresville: 10,000 ft^2

Morgan County: 0.5 acre

Tri-County Conservancy District: Refer to applicable County requirements (Hendricks, Marion, and/or Morgan)

Erosion & Sediment Control Plan Elements

1. Delineate areas of trees, shrubs, sensitive areas, and vegetation that are to be undisturbed. To prevent root damage, the areas delineated for tree protection should be at least the same diameter as the crown.
2. Install perimeter silt fence at construction limits. Position the fence to intercept runoff prior to entering drainage swales.
3. Avoid disturbing drainage swales if vegetation is established. If drainage swales are bare, install erosion control blankets or sod to immediately stabilize.
4. Install drop inlet protection for all inlets on the property.
5. Install curb inlet protection, on both sides of the road, for all inlets along property frontage and the along the frontage of adjacent lots.
6. Install gravel construction entrance that extends from the street to the building pad.

7. Protect on-site soil stockpiles with silt fence, vegetated buffers, temporary seeding and/or other BMPs as needed or required.
8. Establish temporary seeding and straw mulch on disturbed areas.
9. Construct the structure and install utilities.
10. Install downspout extenders once the roof and gutters have been constructed. Extenders should outlet to a stabilized area.
11. Re-seed any areas disturbed by construction and utilities installation with temporary seed mix within 7 days of completion of disturbance.
12. Grade the site to final elevations.
13. Install and maintain permanent seeding or sod.
14. Remove temporary BMPs once sod and vegetation are well established and uniform, perennial cover has reached a density of 70%.

Tips for Erosion & Sediment Control

Fit the development to the existing terrain
Assess the physical characteristics of the site, including topography, soils, and drainage, to determine how best to develop it with minimal environmental damage. Utilize the existing topography to minimize grading. Utilize the natural drainage patterns where possible. Preserve any existing wetland in accordance with the law.

Develop an erosion and sediment control plan before land-disturbing activities begin, then follow it
If necessary, get professional help in developing such a plan, which should identify the areas where erosion and sedimentation problems are apt to occur on the site and specify the measures to reduce those problems.

Retain existing vegetation
If existing vegetation must be cleared, retain and protect it until the area must be disturbed. Maintain a buffer strip of existing vegetation around the perimeter of the site to reduce off-site erosion and sedimentation.

Minimize the exposure of bare soil
Use staged clearing & grading (scheduling) to reduce the amount of bare soil and other disturbed area. Use stabilizing measures, such as seeding temporary or permanent vegetation, sodding, mulching, erosion control blankets, or other protective practices within seven days after the land has been disturbed.

Keep sediment on the construction site
Retain sediment from unavoidable erosion on-site by trapping it with sediment basins or by filtering it out of runoff with vegetative or man-made barriers. Install any needed sediment traps and basins before construction activities begin.

If possible, divert off-site runoff
Use diversions, perimeter dikes, and waterways to intercept off-site runoff and divert it away from the construction site. Install these measures before clearing and grading to reduce the potential for erosion.

Minimize length and steepness of slopes
Use stair-step grading, diversions, and sediment barriers to break up long, steep slopes. Design measures to slow runoff and allow deposition of sediment.

Keep runoff velocity low
Reduce runoff velocity by maintaining vegetative cover, preserving a vegetated buffer strip around the lower perimeter of the land disturbance, and installing perimeter controls, such as sediment barriers, silt fences, filters, dikes, or sediment traps.

Inspect and maintain erosion control measures
Inspect all measures for damage after each storm event. Repair any damaged measure.