



## Storm Water Best Management Practices (BMPs) for Pipeline Construction

*Although oil and gas pipeline construction activities are conditionally exempt from storm water discharge permits, it is important to use best management practices to minimize sediment transport to surface waters to prevent violations of Ohio water quality standards.*

Pipeline construction plays an integral part in the development of the oil and gas fields. Linear projects of this type present difficult obstacles when planning storm water control implementation. Surface waters located within the drainage areas of pipeline projects may be affected by sediment from those activities.

*Ohio's Rainwater & Land Development Manual*, available online at [epa.ohio.gov/dsw/storm/technical\\_guidance.aspx](http://epa.ohio.gov/dsw/storm/technical_guidance.aspx), contains best management practices for pipeline projects. Chapters 5, 6 and 7 provide guidance and specifications for implementing storm water BMPs. Operators of pipeline projects can utilize the same BMPs as other linear projects such as highway construction, power line construction, and water/sewer line construction. This fact sheet highlights some of the BMPs from the manual that Ohio EPA recommend be implemented during pipeline construction activities. This is not, however, a complete list of BMPs, and is not a substitute for reviewing the manual.

Experience has shown that one of the most effective BMPs that linear pipeline projects can implement is stabilizing disturbed areas in a timely manner.

### Chapter 5

**Rock Check Dam** – Rock check dams can be utilized to reduce the velocity of concentrated flows, thereby reducing erosion within the swale or ditch in areas that will not be moved.

**Slope Drain** – Slope drains are useful along road fills or other long fills where surface flow down the embankment would cause significant damage.

**Temporary Diversion** – This practice applies to construction areas where runoff must be redirected in order to prevent offsite sedimentation, erosion or flooding of work areas.

**Stream Utility Crossing** – A temporary stream crossing provides construction traffic temporary access across a stream while reducing the amount of disturbance and sediment pollution.

**Water Bar** – Water bars are used at construction site ingress/egress points, on long sloping access roads, on temporary construction roads, or at utility right-of-ways which do not have a stable surface or where runoff would otherwise collect and cause erosion.

**Dewatering Measures** – Dewatering measures provide a stable area for receiving and treating water pumped from excavation or work areas prior to being released off-site. These practices reduce sediment impacts to downstream water resources.

### Chapter 6

**Sediment Basin** – Sediment basins are usually placed near the perimeter of construction sites to prevent off-site sedimentation while serving large drainage areas.

**Sediment Trap** – A sediment trap is a temporary settling pond formed by construction of an embankment and/or excavated basin and having a simple outlet structure that is typically stabilized with geotextile and rip-rap.

**Silt Fence** – Silt fence is a sediment-trapping practice utilizing a geotextile fence, topography and sometimes vegetation to cause sediment deposition.

**Storm Drain Inlet Protection** – Inlet protection is installed to capture some sediment and reduce the maintenance of storm sewers and other underground piping systems prior to the site being stabilized.

**Filter Berm** – Filter berms are sediment trapping practices that utilize a compost/mulch material.

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**Filter Sock** – Filter socks are sediment-trapping devices using compost inserted into a flexible, permeable tube.

## Chapter 7

**Minimized Phased Disturbance** – Phased disturbance limits the total amount of grading at any one time and sequences operations so that at least half the site is either left as undisturbed vegetation or re-stabilized prior to additional grading operations.

**Clearing and Grubbing** – Clearing and grubbing is the removal of trees, brush and other unwanted material in order to develop land for other uses or provide access for site work.

**Tree and Natural Area Preservation** – Tree and natural area preservation insures that important vegetated areas existing on-site prior to development will survive the construction process.

**Construction Entrance** – A construction entrance is a stabilized pad of stone underlain with geotextile and is used to reduce the amount of mud tracked off-site with construction traffic.

**Dust Control** – Dust control involves preventing or reducing dust from exposed soils or other sources during land disturbing, demolition and construction activities to reduce the presence of airborne substances which may present health hazards, traffic safety problems or harm animal or plant life.

**Grade Treatment (Surface Roughening)** – Grade treatment or surface roughening creates horizontal depressions in the soil surface that help to reduce erosion by reducing runoff velocity and increasing infiltration.

**Topsoiling** – Replacing topsoil helps plant growth by improving the water holding capacity and nutrient content and consistency of the soils.

**Temporary Seeding** – Temporary seeding provides erosion control on areas in between construction operations.

**Mulching** – A protective layer of mulch, usually of straw, applied to bare soil is used to abate erosion by shielding it from raindrop impact.

**Permanent Seeding** – Permanent seeding includes site preparation, seedbed preparation, planting seed, mulching, irrigation and maintenance.

**Sodding** – Sodding utilizes rolls or mats of turf grass to provide immediate stabilization to bare soils.

**Temporary Rolled Erosion Control Products (Erosion Control Matting)** – These products reduce soil erosion and assist vegetative growth by providing temporary cover from the erosive action of rainfall and runoff while providing soil-seed contact.

**Turf Reinforcement Matting (Permanent Rolled Erosion Control Products)** – Turf reinforcement is generally an interwoven material applied to areas where natural vegetation alone is not sufficient to withstand expected flow conditions or to provide sufficient long-term erosion protection.

## More Information

If you have questions about recommended storm water BMPs for your project, contact the storm water coordinator at your local Ohio EPA district office. For a list of contacts, see [epa.ohio.gov/dsw/storm/index.aspx#108452498-contacts](http://epa.ohio.gov/dsw/storm/index.aspx#108452498-contacts). For general information about oil and gas related operations, go to: [epa.ohio.gov/MarcellusandUticaShale.aspx](http://epa.ohio.gov/MarcellusandUticaShale.aspx). For guidelines and recommended best management practices to help rural landowners and farmers restore soil productivity and agricultural drainage after the installation of a pipeline, see the Ohio Pipeline Standard and Construction Specifications on the Ohio Department of Agriculture's website at [agri.ohio.gov/divs/SWC/docs/PIPELINESTANDARD.pdf](http://agri.ohio.gov/divs/SWC/docs/PIPELINESTANDARD.pdf).