



**STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT
601 57th Street SE
Charleston, WV 25304-2345**

FACT SHEET

**GENERAL WATER POLLUTION CONTROL PERMIT
STORMWATER ASSOCIATED WITH OIL AND GAS RELATED
CONSTRUCTION ACTIVITIES**

1. NAME AND ADDRESS OF APPLICANT

An applicant is any establishment with discharges composed entirely of stormwater associated with oil and gas field activities or operations associated with exploration, production, processing or treatment operations or transmission facilities agreeing to be regulated under the terms of this General Permit (except as noted herein). Construction activities are defined as land disturbing operations such as grubbing, grading and excavating operations during site development for residential, commercial or industrial purposes except for operations that result in the disturbance of less than one acre of total land area which are not part of a larger common plan of development or sale. A common plan of development is a contiguous construction project where multiple separate and distinct construction activities may be taking place at different times on different schedules but under one plan.

2. GENERAL WATER POLLUTION CONTROL PERMIT NO:

3. COUNTY: Any WV county

RECEIVING STREAM: Any WV stream

4. PUBLIC COMMENT PERIOD FROM March 8, 2012 **TO** April 19, 2012

5. SIC CODE: 17

6. DESCRIPTION OF APPLICANT'S FACILITY OR ACTIVITY:

Oil and gas field activities or operations associated with exploration, production, processing or treatment operations or transmission facilities.

7. DESCRIPTION OF DISCHARGES:

Earthmoving and grading projects create conditions where accelerated erosion can cause large quantities of soil to be deposited into the streams and rivers of the state. The lack of vegetation, steepening of slopes, increased runoff, decreased infiltration, and other ill effects of construction can cause a 1,000-fold increase in the rate of erosion over pre-existing conditions. The erosion rates on construction sites can run into the hundreds of tons per acre. By volume, sediment is the number one pollutant in the state's waters and degrades more miles of stream than any other pollutant.

8. BACKGROUND

Rapidly expanding extraction of oil and gas from Marcellus shale in West Virginia, largely through horizontal drilling, has increased land disturbances in the State associated with oil and gas activities. Aside from actual well sites, development of oil and gas reserves in Marcellus shale is also requiring construction of additional pipelines and processing facilities in West Virginia. It is expected that this activity will continue to increase in the next several years.

The 1987 Water Quality Act added section 402(l)(2) to the Clean Water Act specifying that the U.S. EPA and States shall not require NPDES permits for uncontaminated stormwater discharges from oil and gas exploration, production, processing or treatment operations or transmission facilities. Section 323 of the Energy Policy Act of 2005 added a new provision to the Clean Water Act defining the term "oil and gas exploration, production, processing or treatment operations or transmission facilities" to mean "all field activities or operations associated with exploration, production, processing, or treatment operations, or transmission facilities, including activities necessary to prepare a site for drilling and for the movement and placement of drilling equipment, whether or not such field activities or operations may be considered to be construction activity". These actions essentially exempt all oil and gas related construction from coverage under NPDES storm water permits.

The State regulates certain aspects of oil and gas operations as established in Chapter 22, Article 6 of the West Virginia State Code. The Department of Environmental Protection (DEP) Office of Oil and Gas permits well sites and pit wastes discharges, as well as a new certification program for large pit or impoundments (greater than 5,000 barrels). Regulations have expanded under the recently passed House Bill 401 and associated Chapter 22, Article 6A. Natural Gas Horizontal Well Control Act. However several oil and gas related construction activities remain unregulated, notably pipelines, access roads, and construction of most transmission and processing facilities.

The West Virginia Water Pollution Control Act, Chapter 22, Article 11 establishes that permits are required for discharge of pollutants and 47CSR 10-3.2.c. provides that State permits not required by NPDES may follow the procedures set forth in 47CSR 10. The Agency believes that establishing a State General Permit for oil and gas related construction activities benefits both the industry and water resource protection by providing for clear guidance and consistent

application of pollution control measures for these activities, as well as establishing a level “playing field” for the industry.

9. GENERAL

DWWM, through its permitting system, is responsible for ensuring that wastewaters are identified, receive adequate treatment and are disposed of in accordance with federal and state regulations. Usually this requires an individual permit based on a thorough review of the facility processes and the constituents of its waste stream. The issuance of an individual permit for any facility is a resource intensive and time consuming process for both the permitting agency and the industry.

10. COVERAGE UNDER THE GENERAL PERMIT

The general permit proposes to provide coverage for any discharges composed entirely of stormwater associated with oil and gas field activities or operations associated with exploration, production, processing or treatment operations or transmission facilities be regulated under the terms of the general permit except for:

1. Operations that result in the disturbance of less than one acre of total land area, which is not part of a larger common plan of development or sale.
2. Stormwater discharges associated with land disturbing activities that may reasonably be expected to be causing or contributing to a violation of a water quality standard as determined by the Director.
3. Activities covered under the Department of Environmental Protection Office of Oil Gas permits or certifications and activities covered under the WV NPDES Stormwater Construction General Permit.

Determination of the disturbed area is made by totaling all disturbed area directly related to construction of the entire project. Offsite waste (excluding sales of topsoil to individuals) and borrow sites are included in the total disturbance unless borrow sites are covered by other permits.

For minor construction activities (one to less than three acres) a simpler program exists. These minor land disturbing activities are required to submit a Notice of Intent (NOI) form prior to commencing construction. The NOI is a simplified application form. A Stormwater Pollution Prevention Plan (SWPPP) still needs to be developed, kept onsite, and made available for review by DEP personnel. A project that disturbs one to less than three acres but will have construction activities one year or longer must file a Site Registration Application Form.

Sites under construction prior to the effective date of this General Permit are not required to apply for coverage. However, any new land disturbance of one acre or more is required to obtain coverage under this permit.

11. MONITORING REQUIREMENTS

Monitoring is not required unless requested by the Director. Construction activities are usually of short duration, less than one year, and the pollutant associated with construction is primarily sediment. The measures used to minimize pollution for land disturbing activities are preventative i.e., best management practices (BMPs) and are not subject to effluent limits.

12. WHEN TO APPLY

The application for construction activities requiring coverage must be submitted at least 45 days prior to starting the project, except as follows. All projects that discharge to Tier 3 waters, or with 100 or greater acres of disturbance, or with an initial grading construction phase of one year or greater, must be submitted at least 90 days prior to start of construction in order to allow time for the public notice procedure. Minor construction projects (disturbing one to less than three acres) not discharging to or upstream of Tier 3 waters must only submit the NOI form 10 days prior to initiation of construction. Minor construction projects that discharge upstream of Tier 3 waters shall submit the NOI form and SWPPP at least 45 days prior to initiating construction.

13. SECTION-BY-SECTION RATIONALE

Section A. Terms of Permit

This section of the permit establishes discharge limitations. Since construction activities are normally short term, sampling is not required unless requested by the Director.

Section B. Schedule of Compliance

Compliance with this General Permit and the approved Stormwater Pollution Prevention Plan (including the sequence of events) is required upon the beginning of the construction project.

Section C. Management Condition

This section is boilerplate language essentially extracted from Title 47, Series 10 of the West Virginia Legislative Rules. A reference to Title 47, Series 11, Section 9 of the West Virginia Legislative Rules was included that requires that outlet markers be posted. Outlet markers would be required only during the time of active permit coverage.

Section D. Operation and Maintenance

This section is boilerplate language essentially extracted from Title 47, Series 10 of the West Virginia Legislative Rules.

Section E. Monitoring and Reporting

Unless directed by the DWWM monitoring will not be required. Reports will be maintained in accordance with and as required in Section G.4.e.2.C.vi. In addition, several new definitions are included which relate to the stormwater permitting program.

Section F. Other Reporting

This section is boilerplate language essentially extracted from Title 47, Series 10 of the West Virginia Legislative Rules.

Section G. Other Requirements

This section encompasses the requirements specific to the stormwater permitting program and those sites subject to regulation under the general permit.

- G.1 This paragraph simply depicts the situations for which the Director may require a facility covered by the permit to be covered by a different permit or when such facility may approach the Director on its own initiative to obtain coverage by a different permit.
- G.2. Prohibition of non-stormwater discharges. Also, a section was added notifying the developer that an Underground Injection Well Permit is required if discharging stormwater into a sinkhole.
- G.3. This paragraph details that stormwater discharges from a project cannot contain hazardous substances.
- G.4. This section details the requirements of the SWPPPs that must be developed for each facility covered by the general permit.

This general permit establishes minimum standards of practices (best management practices) for specific situations rather than specific effluent limitations for stormwater discharges. This means the quality of the discharges must meet a best management practice requirement that represents the minimum level of controls. This permit allows the meeting of water quality standards with the proper installation of the minimum standards set forth in the permit and instructions. The application and plans detailing the permittee's schedules and intended best management practices must be submitted for approval as detailed in Section 12 on page 7. Compliance with the plan must begin immediately as detailed in the SWPPP.

The development and implementation of the SWPPP is one of the most important parts of this permit and is critical to the successful control of stormwater pollution. The SWPPP must be modified as necessary to include additional or modified BMPs designed to correct specific problems identified. These adaptive management requirements are designed to result in permit compliance and prevent stormwater discharges that could cause a violation of state water quality standards. The SWPPP must also be modified whenever there is a change in design,

construction, operation, or maintenance at the construction site that has, or could have, a significant effect on the discharge of pollutants to waters of the state.

A permittees are required to develop a Groundwater Protection Plan (GPP). For construction sites, the areas of concern will be equipment maintenance yards, including fueling and refueling areas, and product storage facilities. GPPs should address groundwater protection, and maintenance. A generic GPP for construction-related activities has been developed and is available upon request from the Division of Water and Waste Management. The GPP must be developed and kept onsite.

G.4.b. This section details the timeframe an application must be submitted. This section also includes the requirements for the public notice sign.

G.4.c. This section details when the SWPPP must be modified.

G.4.d. This section details general management conditions including preventive maintenance, good housekeeping and spill prevention and response. Probably the most common reason for failure of construction site erosion control devices (BMPs) is inadequate maintenance. If BMPs are properly constructed, but not properly or frequently maintained, very little benefit may be expected. Newly installed devices will perform as initially expected until their capacity is exceeded. Silt fences, for example, should be maintained before the material that accumulates behind them becomes excessive. More importantly, the integrity of the fences needs to be checked frequently. Many silt fences at construction sites are undermined or bypassed because of large flows or large sediment accumulations. Sedimentation basins, silt traps, etc., need to be cleaned frequently. The cleaning frequency of these devices located in areas undergoing construction should be quite high because of the very large discharges of sediment from construction sites. Rill or gully erosion must be corrected immediately when first observed. During each inspection, the person conducting the inspection should document whether the BMP is performing correctly, any damage to the BMP since the last inspection, and what should be done to repair the BMP if damage has occurred. The housekeeping and spill prevention and response requirement is intended to prevent the discharge of trash, chemicals and other polluting materials from the site.

G.4.e. This section details what must be included in the site description section, the erosion and sediment control section, the stormwater management control section and other control section of the SWPPP.

Site description section- Development projects must be phased or sequenced in order to minimize the amount of exposed soil at any one time and prevent the transport of sediment from the site during construction. Construction sequencing can be an effective tool for erosion and sediment control because it ensures that management practices are installed where necessary and when appropriate. A comparison of sediment loss from a typical development and from a comparable phased project showed a 42 percent

reduction in sediment export in the phased project (EPA, 2002). As discussed previously, permittees are required to evaluate BMP performance. Based on the results of inspections and monitoring, remedial actions must be implemented, documented and reported in accordance with specific timeframes.

The purpose of stabilizing entrances to construction sites is to minimize the amount of sediment and mud being tracked offsite by motorized vehicles. Installing and maintaining a pad of gravel over filter cloth where construction traffic leaves a site can help stabilize the entrance. As a vehicle drives over the gravel pad, mud and other sediments are loosened and removed from the vehicle's wheels thereby reducing the offsite transport of sediment. The gravel pad also reduces mechanical erosion and prevents the formation of muddy wheel ruts, which can be a source of "track-out". The filter fabric reduces the amount of rutting caused by vehicle tires by spreading the vehicle's weight over a larger soil area than just the tire width. The filter fabric also separates the gravel from the soil below, preventing the gravel from being ground into the soil. Limiting construction site access to one point minimizes the surface area that could be affected by tracked out mud and sediment from construction traffic.

This section also details what is required on the site maps.

Controls- The duff layer, native topsoil and natural vegetation must be retained in an undisturbed state to the maximum extent practicable. This requirement is partly based on the fundamental principle that vegetation is the most effective form of erosion control. Vegetation reduces runoff volume, reduces flow velocity, filters suspended sediment, absorbs the erosive energy of falling raindrops, and retains soil structure. In areas where soils have been disturbed or exposed during construction activity, timely permanent seeding is appropriate in areas where permanent, long-lived vegetative cover is the most practical or most effective method of stabilizing the soil. Vegetation controls erosion by protecting bare soil surfaces from displacement by raindrop impacts and by reducing the velocity and quantity of overland flow. The advantages of seeding over other means of establishing plants include lower initial costs and labor inputs. Seeding that produces a successful stand of grass has been shown to remove between 50 and 100 percent of total suspended solids from stormwater runoff, with an average removal of 90 percent (EPA 2002).

Sodding is a permanent erosion control practice that involves laying a continuous cover of grass sod on exposed soils. In addition to stabilizing soils, sodding can reduce the velocity of stormwater runoff. Sodding can provide immediate vegetative cover for critical areas and stabilize areas that cannot be vegetated by seed. It can also stabilize channels or swales that convey concentrated flows and reduce flow velocities. Sod has been shown to remove between 98 and 99 percent of total suspended solids in runoff, and is considered a highly effective best management practice (EPA 2002). Mulching is a temporary erosion control practice in which materials such as hay, wood chips, wood fibers, or straw are placed on exposed or recently planted soil surfaces. Mulching is highly recommended as a stabilization method and is most effective when anchored in place until vegetation is well established. Mulching can also reduce the velocity of stormwater runoff. When used in combination with seeding or planting, mulching

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can aid plant growth by holding seeds, fertilizers, and topsoil in place, by preventing birds from eating seeds, by retaining soil moisture, and by insulating plant roots against extreme temperatures.

Sediment control systems create conditions that allow for the settlement of soil particles that are suspended in stormwater runoff. Sediment containment systems (sediment traps and sediment basins) are hydraulic controls that function by modifying the storm-runoff hydrograph and slowing water velocities. This allows for the settling and deposition of suspended particles by gravity.

Sediment traps are appropriate where the contributing drainage area is five acres or less.

Sediment basins are generally larger and more effective in retaining sediment than temporary sediment traps and typically remain active throughout the construction period. A sediment basin must be used where the contributing drainage area is greater than five acres. Sediment basins must control the discharge in order to dewater the wet storage volume between 48 and 72 hours. In addition, the safety of embankment structures requires the outlets to safely pass the peak discharge from 25-year 24-hour storm.

The permit requires sediment traps and sediment basins to be sized for 3,600 cubic feet per acre of watershed draining to that structure, half of which is dry storage and half of which is wet storage. The permit also states that, barring impossible site conditions, all projects will utilize, to the extent practicable, sediment traps or sediment basins and diversions.

The SWPPP should address the steepness of cut-and-fill slopes and how the slopes will be protected from runoff, stabilized and maintained. Berms, diversions, and other stormwater practices that require excavation and filling should also be incorporated into the grading plan.

Rock outlet structures placed at the outfall of channels or culverts reduce the velocity of flow in the receiving channel to non-erosive rates. This practice applies where discharge velocities and energies at the outlets of culverts are sufficient to erode the next downstream reach and is applicable to outlets of all types such as sediment traps, sediment basins and culverts.

Sediment-laden water is not allowed to leave a site without going through an appropriate best management practice.

Hay and straw bales are not acceptable BMPs.

Antidegradation review is addressed in the General Permit. The legislature, in codifying the Antidegradation Policy, eliminated general permit registrations from antidegradation review except in Tier 3 waters. However, general permits must go through antidegradation review during the issuance/reissuance process. Construction projects by their nature are normally short term and transient. Anticipating the scope and location of construction projects is difficult. While local, short term sediment impacts can be extreme; in general, sediment impacts are temporary.

A. To meet antidegradation requirements for the waters of the state, the following guidelines will be followed on all projects.

1. Sediment basins

Sediment basins/traps will be installed with 3,600 cubic feet of storage measured from the bottom elevation of the structure to the top of the riser or weir, per acre of drainage and will have draw-down times of 48 to 72 hours. Half of the pond will be in wet storage and half in dry storage. Dewatering devices that skim the discharge from the top several inches is encouraged. Alternative structures that provide that provide equal or greater pollution control may be considered with justification provided by the applicant.

B. Large long-term projects

Projects that the initial grading construction phase lasts for more than one year or disturbs 100 acres or more shall submit the application 90 days prior to construction. These projects will be subject to the public notice requirements as outlined in 47CSR10 prior to receiving coverage under this permit.

C. Projects that discharge to or upstream of Tier 3 waters.

1. Public notice

All applications for construction projects that will discharge to Tier 3 waters shall submit the application 90 days prior to construction. Public comments will be used in the decisions leading to issuing the approval or denial for coverage under the general permit.

2. Presumptive Conditions

Construction activities discharging to Tier 3 waters will go through the Tier 3 antidegradation review process.

No degradation will be allowed on Tier 3 waters except for temporary, short term activities.

Stormwater management plan section- A description of measures that will be installed during construction to control pollutants in stormwater discharges after the project is completed shall be included in the SWPP. The completed project shall convey stormwater runoff in a manner that will protect both the site and the receiving stream from post construction erosion. All waterways and other runoff conveyance structures shall be permanently stabilized as appropriate for expected flows. Velocity dissipation devices shall be placed at the outlet of all detention or retention structures and along the length of any outlet channel as necessary to provide a non-erosive velocity flow from the structure to a natural water course. Projects installing substantial impervious surface in post construction conditions, such as a large processing facility, will be required to provide pre-post development discharge information for an appropriate design storm.

Projects located in areas that have local government requirements and/or criteria for post construction stormwater management must meet those requirements and/or criteria.

Permanent stormwater management structures that will impound water (detention/retention basins or similar structures) shall be designed and certified by a registered professional engineer.

Other control section- This section requires the solid waste be disposed of properly. Provisions must be made to control dust. This section also details maintenance, inspection, training and record keeping requirements.

Compliance with other state laws and statutes- This section advises the permit that nothing in this general permit shall be construed as excusing the permittee from compliance with any applicable federal, state, or local statutes, ordinances, or regulations.

G.5. Discharges to Impaired Waters

Impaired waters are those that do not meet applicable water quality standards and are listed on the Clean Water Act Section 303(d list). Pollutants of concern are those constituents for which the water body is listed as impaired. Dischargers located in a watershed area where a TMDL has been developed and/or approved by the U.S. EPA may implement additional BMP's, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule. Within six months of a new TMDL approval, permittees may implement additional BMP's, conduct additional monitoring activities, and/or comply with an applicable waste load allocation and implementation schedule.

- H. This paragraph serves as a reopener mechanism to go back to a permittee covered under the general permit and places any necessary additional requirements upon the site as necessary, due to potential or realized water quality impacts by the site stormwater discharges.
- I. This section allows for changes in permit conditions in later general permits.
- J. This section provides for the Notice of Termination and explains final stabilization requirements.

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The State of West Virginia, Department of Environmental Protection, Division of Water and Waste Management, has proposed a state General Pollution Control Permit as listed on this fact sheet. In order to provide public participation on the proposed issuance of the required permit, the following information is being supplied in accordance with Title 47, Series 10, Section 11.3.e.2 and 3, of the West Virginia Legislative Rules.

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing. A request for a public hearing shall be made in writing and addressed to:

Director, Division of Water and Waste Management
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304
Attention: Tonya Ombler
E-mail: Tonya.K.Ombler@wv.gov

The request shall state the nature of the issues proposed to be raised in the hearing and must be received within the comment period. The Director shall hold a public hearing whenever he or she finds, on the basis of requests, a significant degree of public interest on issues relevant to the draft permit. Any person may submit oral or written statements and data concerning the draft permit; however, reasonable limits may be set upon the time allowed for oral statements, and the submission of statements in writing may be required. A tape recording or written transcript of the hearing shall be made available to the public upon request.

A public hearing has been scheduled to take additional comments on the Draft Permit. The hearing has been scheduled for 6 p.m. on April 9, 2012, at the Coopers Rock Training Room, WV DEP Headquarters, 601 57th Street SE, Charleston, WV 25304.

If information received during the public comment period appears to raise substantial new questions, the Director may reopen the public comment period.

All applicable information concerning any permit application and the tentative decisions is on file and may be inspected by appointment, or copies obtained at a nominal cost, at the offices of the Division of Water and Waste Management, 601 57th Street SE, Charleston, West Virginia 25304, Monday through Friday (except State holidays) between 8:00 a.m. to 4:00 p.m.

Requests for additional information should be directed to Tonya Ombler at (304) 926-0499, extension 1132.