

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT
601 57th STREET, SE
CHARLESTON, WV 25304

WEST VIRGINIA/NPDES GENERAL WATER POLLUTION CONTROL PERMIT
DISCHARGES FROM HIGHWAY OR MUNICIPAL MAINTENANCE FACILITIES

FACT SHEET AND RATIONALE

1. NAME AND ADDRESS OF APPLICANT: Any highway or municipal maintenance facility with discharges composed of storm water associated with industrial activity, the operation of a vehicle washing procedure, a sewage disposal system, and/or any combination, thereof, on the same site agreeing to be regulated under the terms of this proposed General Permit (except as noted herein).
2. GENERAL WV/NPDES PERMIT NO.: WV0116246
3. COUNTY: Any WV county
4. RECEIVING STREAM: Any WV stream
5. PUBLIC COMMENT PERIOD FROM May 15, 2006 TO June 15, 2006
6. BACKGROUND

The West Virginia Highway or Municipal Maintenance Facilities General Permit is intended to cover discharges to waters of the state from Division of Highway or municipal maintenance facilities engaged in the maintenance activities of highways or streets and the associated actions relative to the implementation of those activities. The discharges will be primarily storm water. However, certain facilities engage in vehicle washing and/or have sewage treatment facilities on site that also require permitting. The majority of the facilities to be permitted under this General Permit is existing and may already have a specific coverage under another General Permit. This General Permit is intended to allow for one (1) registration to cover multiple discharges at a facility.

The storm water portion has been patterned somewhat after the West Virginia Storm Water Multi-Sector Permit No. WV0111457. The vehicle washing portion has been patterned somewhat after the West Virginia Vehicle Washing Permit No. WV0078743. The sewage disposal portion has been patterned somewhat after the West Virginia Sewage Treatment and Disposal Permit Nos. WV0103110 and WV0107000. Maintenance facilities covered under an existing General Permit may submit a new registration form to obtain coverage under this General Permit. Upon receipt of the

6. BACKGROUND (Continued)

registration application form, the Division of Water and Waste Management will review it for completeness. The Division of Water and Waste Management then will advise applicant of its coverage under this Permit and advise of applicable monitoring requirements. Proposed maintenance facility wastewater discharges or discharges without previous permit or applications are also eligible for coverage under the General Permit, however, each discharge/facility must meet the public notice and public comment requirements.

7. TYPES OF DISCHARGES COVERED

This permit covers storm water, vehicle washing and/or sewage treatment discharges associated with industrial activity relative to the operation and maintenance of a highway or street maintenance facility. The Permit is primarily intended to afford coverage to Division of Highway's facilities, since the universe of facilities is large. Municipal facilities involved in the same activities would be eligible for coverage.

8. TREATMENT AND MONITORING REQUIREMENTS

This permit requires treatment and analytical monitoring for discharges. Parameters, frequencies, and requirements are prescribed under a particular group.

For Storm Water:

The Division believes that industries may reduce the level of pollutants in storm water runoff from their sites through the development and proper implementation of a storm water pollution prevention plan. To determine when such analytical monitoring would be required, the EPA established "benchmark" concentrations for the pollutant parameters on which monitoring results had been received. The "benchmarks" are the pollutant concentrations above which the EPA determined represents a level of concern. The level of concern is a concentration at which a storm water discharge could potentially impair, or contribute to impairing water quality or affect human health from ingestion of water or fish. The benchmarks are also viewed by the Division as a level, that if below, a facility represents little potential for water quality concern. As such, the benchmarks also provide an appropriate level to determine whether a facility's storm water pollution prevention measures are successfully implemented. The benchmark concentrations are not effluent limitations and should not be interpreted or construed as such. These values are merely levels which the Division is using to determine if a storm water discharge from any given facility merits further monitoring to insure that this facility has been successful in implementing a storm water pollution prevention plan. As such, these levels represent a target concentration for a facility to achieve through implementation of

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

pollution prevention measures at the facility. The following table lists the parameter benchmark values as selected by the Division for this Permit.

**Parameter Benchmark Values
West Virginia**

Parameter Name	Benchmark Level	Source(*)
Chemical Oxygen Demand	120 mg/l	2
Total Suspended Solids	100 mg/l	6
Oil and Grease	15 mg/l	4
Total Phosphorus	2.0 mg/l	3
PH	6.0-9.0 SU	6
Chloride	860 mg/l	1
Iron, Total Recoverable	1.0 mg/l	5

(*) Sources

1. "EPA Recommended Ambient Water Quality Criteria." Acute Aquatic Life Freshwater
2. Factor of 4 times BOD5 concentration - Benchmark
3. North Carolina storm water benchmark derived from NC Water Quality Standards
4. Median concentration of Storm Water Effluent Limitation Guideline (40 CFR Part 419)
5. "EPA Recommended Ambient Water Quality Criteria." Chronic Aquatic Life Freshwater
6. Baseline General Permit for Storm Water Discharges from Industrial Activity and Best Professional Judgment

Notes:

Assumptions:

- Receiving water temperature - 20^o C
- Receiving water pH - 7.8
- Receiving water hardness CaCO₃ - 100 mg/l
- Receiving water salinity - 20 g/kg
- Acute to Chronic Ratio (ACR) - 10

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

As can be seen here, benchmark concentrations were determined based upon a number of existing standards or other sources to represent a level above which water quality concerns could arise. The Division has sought to develop values, which can realistically be measured and achieved by industrial facilities. Moreover, storm water discharges with pollutant concentrations occurring below these levels would not warrant further analytical monitoring due to their minor potential effect on water quality. The Division believes that each of these benchmark values represents a reasonable level below which water quality impacts should not occur and they, therefore, represent a useful level to assess whether a pollution prevention plan is controlling pollution in the storm water discharges.

In order to be consistent with the EPA Multisector Storm Water Industrial General Permit requirements, the following two (2) conditions have been added.

1. Permittees discharging pollutants of concern to waters for which there is a total maximum daily load established or approved by EPA are not eligible for coverage under this general permit.
2. If a site discharges to a stream where a Federally endangered or threatened species or its habitat are present, the applicant should contact the US Fish and Wildlife Service to insure that requirements of the Federal Endangered Species Act are met.

The sampling waiver provided for in the current Multisector Storm Water Industrial General Permit will still be made available under the terms of this General Permit. However, the permittee will be required to provide an additional set of sample results in order to maintain this waiver in the reissued General Permit. This is being required to reflect any changes or modifications of production activities at the production site.

To be consistent with Federal Regulations under 40 CFR Section 122.26(g) a no exposure certification is now allowed.

Facilities applying for the permit registration for the first time must now submit a copy of the Storm Water Pollution Prevention Plan and Ground Water Protection Plan with the application for review by the Division.

Monitoring for storm water will be performed semiannually, with Discharge Monitoring Reports (DMRs) being submitted annually.

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

For Vehicle Washing:

In 1989, the Division issued the initial general WV/NPDES Permit for coin operated and other fee-generating car washing establishments. Since that time, many non-fee generating vehicle washing operations (facilities with fleet vehicles such as power companies, telephone companies, delivery companies, vehicle rental companies, highway maintenance facilities, etc.) have been constructed, needing permit coverage. The wastewaters generated from and the treatment technology required to treat those wastewaters are the same for both operations. The Division decided to expand its general Permit to cover all vehicle washing establishments with the reissuance of the general WV/NPDES Permit. Some of the Division of Highways' facilities are currently covered under that Permit.

Vehicle wash facilities must utilize a treatment scheme that consists of in-bay grit traps, a multi-chamber sedimentation/separation tank, and a multi-media filter bed. The general WV/NPDES Permit requires the facilities to monitor their effluent and submit Discharge Monitoring Reports (DMRs) on a regular basis. A review of past DMRs submitted for that general Permit indicates the typically used treatment system achieves an acceptable effluent level. If installed and maintained properly, the typical treatment system should be able to effectively reduce the wastewater generated at most vehicle washing establishments. Therefore, it is proposed to require in-bay grit traps, a multi-chamber sedimentation/separation tank and a multi-media filter bed as a minimum treatment technology. This treatment technology appears to satisfy technology based requirements as well as the requirements of Title 47, Series 11.4.a. through d. of the West Virginia Legislative Rules.

The general Permit proposes to allow the acquisition, construction, installation, modification and operation of a disposal system at any highway or street maintenance establishment with discharges of industrial wastes composed, in part, of wastewaters associated with the washing of vehicles. The Division will continue, however, to require vehicle washing establishments that discharge into trout waters to obtain a regular WV/NPDES permit. This is due to the need to require additional treatment and/or limitations to protect trout waters.

In 1994, Title 47, Series 58, The Groundwater Protection Regulations, was promulgated that prohibits any discharge ". Onto or under the land surface in such a manner that could impact groundwater". As such, any facility that discharges into karst areas will be required to provide additional treatment.

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

Specific limitations and monitoring requirements for the vehicle washing establishments are presented as follows.

Flow - "Hydraulic Capacity" (MGD) Maximum - Technology Based – BPJ

It is proposed to limit the effluent flow from the treatment system to the hydraulic capacity of the sedimentation/separation tank. This should insure that the treatment system is not hydraulically overloaded.

BOD5 - Monitor (mg/l) Maximum - Technology Based – BPJ

It is proposed to require monitoring only for influent and effluent BOD-5 to allow calculating the percent removal of BOD-5 through the treatment system to insure the "substantial removal of five day biochemical oxygen demand" as required by 47 CSR 11-4.3.b. The collection of data will also aid in the determination of future limitations that may be implemented.

Total Suspended Solids - 60 (mg/l) Maximum - Technology Based – BPJ

The Treatability Manual indicates that technology for suspended solids removal is sedimentation, which is capable of meeting the proposed limit of 60 mg/l. Since the minimum required treatment technology includes, in part, in-bay grit traps and a sedimentation/separation tank, it is the permit writer's judgment that the level of 60 mg/l can be achieved. This limit has also been proposed in accordance with generally accepted values that should insure there are no violations of 46 CSR 1-3 of the WVLR.

Chlorides - Monitor (mg/l) Maximum - Technology Based – BPJ

It is proposed to require monitoring for chlorides since, in the winter, vehicles being washed will typically be covered in salt used to treat the roads. The collection of data will aid in the determination of future limitations that may be implemented.

Oil and Grease - 15 (mg/l) Maximum - Technology Based – BPJ

The Treatability Manual indicates that technology for removing free floating oil and grease is gravity separation. Emulsified oil and grease requires filtration. Since the majority of potential permittees utilize some type of surfactant in the vehicle washing operation, resulting in the creation of an emulsion, the minimum required treatment technology includes, in part, a multi-media filter. With both a sedimentation/separation tank and a multimedia filter, the treatment system should be capable of meeting the proposed limit. Therefore, it is the permit writer's judgment that the level of 15 mg/l oil

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

Oil and Grease (Continued)

and grease is proposed. This limit has also been proposed in accordance with generally accepted values that should insure there are no violations of 46 CSR 1-3 of the WVLR.

pH - Maintained between 6.0 - 9.0 (standard units) - Technology Based – BPJ

It is proposed to require that the pH be maintained between 6.0 and 9.0 standard units. This limit satisfies any technology based requirement and is equivalent to the water quality standard.

All vehicle washing establishments covered by this general Permit will be required to sample and analyze for the designated parameters once every six (6) months. DMRs will be submitted annually.

For Sewage Facilities:

Specific limitations and monitoring requirements for the sewage treatment facilities are presented as follows. Since the primary objective of this general Permit is to regulate storm water discharges at these sites, it has been discussed with the largest stakeholder to only prescribe two (2) Groups of registration for sewage facilities.

The Total Suspended Solids and pH limitations are equal to the secondary treatment standard. BOD5, Ammonia Nitrogen, and Total Residual Chlorine limits are water quality based and are imposed to protect the Dissolved Oxygen water quality standard. The effluent limitations for Dissolved Oxygen are imposed for the same reason. Fecal Coliform limitations are imposed to protect the water quality standard for this parameter and will also satisfy any technology-based requirement. Winter limitations for BOD5 and Ammonia Nitrogen (applicable November 1 - April 30) have been incorporated into these categories. Winter limitations will protect water quality standards during the winter months while recognizing reduced treatment efficiencies are commonly experienced during winter months.

Facilities subject to Treatment Group III are required to provide secondary treatment technology followed by additional treatment such as an alternating surface sand filter or a rapid sand filter or a polishing pond or equivalent tertiary technology and a chlorine or an ultraviolet bacteria disinfection system; however, if a chlorine disinfection system is utilized, a dechlorination unit must be provided. If a polishing pond is not provided, post aeration of the final effluent is required, if necessary. Also acceptable is a recirculating sand filter preceded by primary or secondary treatment technology.

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

For Sewage Facilities: (Continued)

Treatment Group IIIA limitations are assigned when the discharge is into a trout stream. The sole difference between Treatment Category III and IIIA is a more stringent limitation on Total Residual Chlorine (TRC) that is imposed to protect the water quality standard for trout waters. A TRC limitation of zero is imposed on discharges to trout streams. Therefore, if chlorine is used as a disinfection method then dechlorination shall be required. The TSS and pH limitations are equal to the secondary treatment standard. BOD5 and Ammonia Nitrogen limits are water quality based and are imposed to protect the Dissolved Oxygen water quality standard. The effluent limitations for Dissolved Oxygen are imposed for the same reason. The Fecal Coliform limitation is imposed to protect the water quality standard established for that parameter. Winter limitations for BOD5 and Ammonia Nitrogen (applicable November 1 - April 30) have been incorporated into these categories. Winter limitations will protect water quality standards during these months while recognizing reduced treatment efficiencies are commonly experienced during winter months.

Facilities subject to Treatment Category IIIA are required to provide secondary treatment technology followed by additional treatment such as an alternating surface sand filter or a rapid sand filter or a polishing pond or equivalent tertiary technology and a chlorine or an ultraviolet bacteria disinfection system; however, if a chlorine disinfection system is utilized, a dechlorination unit must be provided. If a polishing pond is not provided, post aeration of the final effluent is required, if necessary. Also acceptable is a recirculating sand filter preceded by primary or secondary treatment technology.

Sewage treatment facilities covered by this general Permit will be required to sample and analyze for the designated parameters once a quarter. DMRs will be submitted annually.

Some of the facilities provide sewage treatment with home aeration units. Only those sewage treatment systems serving the connection of the small commercial facilities with flow capacities of 600 GPD or less will be provided coverage under this permit group. Facilities with food service and/or industrial wastes, that discharge to the treatment unit, are strictly prohibited.

Coverage under this portion of the general Permit will be issued only to the owner of the facility. Facilities without a maintenance contract, minimum of five (5) years, will not be granted coverage under this permit.

8. TREATMENT AND MONITORING REQUIREMENTS (Continued)

For Sewage Facilities: (Continued)

This general Permit requires the permittee not to cancel a maintenance contract without prior approval of this agency. This is to further insure that the permitted facility is properly operated and remains under a maintenance contract.

Sewage facilities permitted under the HAU provisions, will in lieu of self-monitoring of the discharge be required to have a plan to properly maintain this facility and have a maintenance contract (minimum of five (5) years).

Semiannual monitoring for Total Nitrogen and Total Phosphorus has been added to each of the Groups. This will allow the Division to gather data on nutrient levels in the discharges and will aid in the development of any future permit limitations as may be deemed necessary.

9. ANTIDegradation REQUIREMENTS

For purposes of definition, Best Management Practice (BMP) is defined as permit conditions used in place of or in conjunction with effluent limitations to prevent or control the discharge of pollutants. This may include a schedule of activities, prohibition of practices, maintenance procedure, or other management practice. BMPs may include, but are not limited to, treatment requirements, operating procedures, or practices to control plant site runoff, spillage, leaks, sludge or waste disposal, or drainage from raw material storage.

The storm water industrial group of this general Permit is BMP based and has no discharge permit limits. The majority of the facilities to be covered under this general Permit will be existing. These facilities are existing discharges and not necessarily subject to more detailed antidegradation requirements. Any new facilities wishing to be covered for storm water under this general Permit are required to comply with antidegradation requirements. In order to comply with these requirements, BMPs must be implemented and in place prior to any storm water discharge, and these new facilities are sent to public notice. This office requires that storm water pollution prevention plans and ground water protection plans be submitted with the new applications and reviewed prior to the issuance of individual registrations for storm water under the permit.

9. ANTIDegradation Requirements (Continued)

The vehicle washing establishments group under this general Permit is BMP based with no specific numeric effluent limits based on a water quality standard. The majority of the facilities to be covered under this general Permit will be existing. These facilities are existing discharges and not necessarily subject to more detailed antidegradation requirements. Any new facilities wishing to be covered for vehicle washing under this general Permit are required to comply with antidegradation requirements. In order to comply with these requirements, BMPs must be implemented and in place prior to any discharge, and these new facilities are sent to public notice. This office requires the appropriate treatment train layout be submitted with the new applications and reviewed prior to the issuance of individual registrations for vehicle washing under the permit.

The sewage treatment group under this general Permit has specific numeric effluent limits based on protecting water quality standards. The majority of the facilities to be covered under this general Permit will be existing. These facilities are existing discharges and not necessarily subject to more detailed antidegradation requirements. No new or expanded discharges will be provided coverage without going through a Tier 2 antidegradation review. New or expanded facilities will be required to obtain an approved Waste Load Allocation showing a Dissolved Oxygen sag of less than 0.3 mg/l, which shows de minimus impact. These facilities will also go through a public notice period.

The State of West Virginia, Department of Environmental Protection, Division of Water and Waste Management, has made a tentative decision for a State NPDES 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.

Any interested persons may submit written comments on the Draft Permit and may request a public hearing by addressing such to the Director of the DWWM within 30 days of the date of the public notice. Comments will be accepted until April XX, 2006. They should be addressed to:

Director, Division of Water and Waste Management
Department of Environmental Protection
601 57th Street, SE
Charleston, WV 25304
Attention: Ann Baldwin
Phone: (304) 926-0499, Extension 1027
Fax: (304) 926-0463
E-mail: abaldwin@wvdep.org

All comments received within this period will be considered prior to acting on the Draft General Permit. Correspondence should include the name, address and telephone number of the writer and a concise statement of the nature of the issues raised. Comments will also be accepted in oral or written form at the public hearing.

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.

Hearing impaired individuals having access to a Telecommunication Device for the Deaf (TDD) may contact our agency by calling (304) 926-0489. Calls must be made between 8:30 a.m. to 3:30 p.m. Monday through Friday.

Requests for additional information should be directed to Ann Baldwin at (304) 926-0499, Extension 1027.