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

FACT SHEET, INFORMATION, AND RATIONALE FOR WV/NPDES GENERAL PERMIT WATER TREATMENT PLANT WASTEWATER DISPOSAL

1. NAME AND ADDRESS OF APPLICANT

Any owner/operator of a wastewater treatment system for water treatment plants (WTP) in the State who will be regulated under the terms of this General Permit.

2. GENERAL WV/NPDES PERMIT NO.: WV0115754

3. COUNTY: Any WV County **RECEIVING STREAM:** Any WV Stream

4. PUBLIC COMMENT PERIOD FROM: March 8, 2013 to April 8, 2013

5. SIC CODE: Primarily 4941 (Water treatment plants)

6. DESCRIPTION OF APPLICANT'S FACILITY OR ACTIVITY:

The General Permit is designed to regulate discharges of treated WTP wastewaters (filter backwash, clarifier/settling basin lowdown, pre-settling basin blow down and clear well and treatment basins overflow). It is also proposed to allow coverage of swimming pool filter backwash due to its similarity to WTP backwash. Only direct discharge of wastewater is proposed for coverage under this general permit. Indirect discharges, such as to a sanitary sewer system, are not required to register under this general permit.

7. DESCRIPTION OF DISCHARGES:

Waste generated by potable WTPs consists of solids and generally certain metals (such as aluminum and iron) removed from the raw water. Typically raw water is pumped from the source to the WTP to be processed for public consumption. Raw water may receive initial solids removal in a presedimentation tank/basin. From here the water goes to settling basins/tanks/ponds for additional solids removal. Coagulants, such as aluminum sulfate or ferric chloride, may be added in the presedimentation basin/tank and/or the settling basins/tanks/ponds to enhance solids removal. The water then goes to sand or multimedia filters for fine solids removal. The backwash from the filters will be pumped to backwash basins/tanks/ponds for treatment prior to discharging to the receiving stream. Blowdown from the presedimentation tank/basin and the settling basins/tanks/ponds are also treated in the backwash treatment system. Since coagulants have settled with the solids initially, simple gravity sedimentation can effect solids removal in the backwash basins/tanks/ponds. Overflows from the clearwell and various settling tanks may also be directed to the backwash treatment system. Based on historical data previously submitted to the Division of Water and Waste Management by permitted water treatment plants with properly sized, operated and maintained treatment systems, the following effluent quality is expected:

Total Suspended Solids	30 mg/l average & 60 mg/l maximum.
pH	maintained between 6.0 & 9.0 standard units.
Total Residual Chlorine	below detection limits of approved analytical procedures as listed in 40 CFR 136.
Iron, Aluminum, Fluoride & Manganese	variable, depending on water source and treatment processes used.

8. COVERAGE UNDER THE GENERAL PERMIT

Historically, individual WV/NPDES Water Pollution Control Permits were issued to water treatment plants. The purpose of this general permit is to establish a simpler and more efficient procedure for water treatment plants to gain permit coverage for their wastewater treatment systems.

The Division of Water and Waste Management is proposing the reissuance of a General Permit to regulate water treatment plants wastewater treatment systems. Any owner/operator of a water treatment plant wastewater disposal system in the State will be regulated under the terms of the proposed General Permit. The Director has the authority to require any owner/operator to apply for and obtain an individual permit. This authority will be exercised when the Director determines that such a permit will better protect the receiving water.

The universe of existing facilities eligible for regulation under the general permit numbers approximately 120. Proposed treatment facilities are also eligible for coverage under the General Permit. Each proposed facility must meet the public notice and public comment requirements. The discharge of swimming pool filter backwash is also eligible for coverage under this general permit. However, it is not the intent to require all pools to obtain coverage. Pool discharges will be evaluated on a case-by-case basis and coverage will be required when appropriate.

Those facilities to be regulated under the terms of the General Permit will be required to provide adequate treatment technologies and to achieve compliance with the limitation category requirements assigned.

9. WHEN TO APPLY

State NPDES rules require permit applications to be filed 180 days prior to the commencement of the activity, or expiration of permit coverage. However, this requirement is not reasonable for reissuance of general permit coverage. Therefore, existing facilities wishing to continue coverage will be required to reapply within 30 days of notification from the Agency. Those individual permittees with existing WV/NPDES Permits may continue to operate under that permit until its expiration date. Upon reissuance of the General Permit and prior to expiration of the existing permit, the permittee will be required to submit a complete general permit facility registration application form and submit a permit application fee in order to gain continued coverage under the new General Permit.

Those facilities with existing discharges and without an individual NPDES Permit which are operating at the time of issuance of the General Permit will be required to apply within 60 days of the effective date of the permit. Proposed facilities must apply at least 180 days prior to the planned commencement of construction.

10. PROPOSED EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS:

All establishments covered by this general permit will be required to sample, analyze and submit Discharge Monitoring Reports (DMRs) for the designated parameters once every quarter. For the specific limitations and monitoring requirements, refer to the attached copies of pages 2 through 5 of the Draft Permit.

11. RATIONALE FOR PROPOSED DISCHARGE CATEGORIES, LIMITATIONS, MONITORING AND TREATMENT REQUIREMENTS:

A. Discharge Categories (Note, depending on the activities conducted by the facility, more than one Limitation Category may apply):

1. Limitation Category I

This limitation category will generally be assigned to facilities with discharges into large receiving streams [instream waste concentration (IWC*) less than 10%]. The agency may also assign this category to facilities with discharges into small receiving streams (IWC* greater than 10%) if it has data showing the background concentrations for the pollutants of concern in the receiving stream are at or near zero and that discharges in compliance with the effluent limitations of this category will assure compliance with water quality standards (WQS).

2. Limitation Category I-A

   This limitation category will generally be assigned to facilities with discharges into large trout waters receiving streams (IWC* less than 10%). The agency may also assign this category to facilities with discharges into small trout waters receiving streams (IWC* greater than 10%) if it has data showing the background concentrations for the pollutants of concern in the receiving stream are at or near zero and that discharges in compliance with the effluent limitations of this category will assure compliance with WQS.

3. Limitation Category II

   This limitation category will generally be assigned to facilities with discharges into small receiving streams (IWC* greater than 10%). The agency may also assign this category to facilities with discharges into large receiving streams (IWC* less than 10%) if it has data showing that high background concentrations of pollutants of concern exist in the receiving stream and that discharges in compliance with the effluent limitations of Category I will not assure compliance with WQS.

4. Limitation Category II-A

   This limitation category will generally be assigned to facilities with discharges into small trout waters receiving streams (IWC* greater than 10%). The agency may also assign this category to facilities with discharges into large trout waters receiving streams (IWC* less than 10%) if it has data showing that high background concentrations of pollutants of concern exist in the receiving stream and that discharges in compliance with the effluent limitations of Category I-A will not assure compliance with WQS.

5. Limitation Category III

   This limitation category will generally be assigned to facilities with discharges from swimming pools into non-trout streams.

6. Limitation Category III-A

   This limitation category will generally be assigned to facilities with discharges from swimming pools into trout streams.

7. Limitation Category IV

   This limitation category will be assigned to a facility that wishes to dispose of Filtrate through Land Application. Limitations and monitoring requirements for the filtrate generated to be used for land application are from 33CSR9.

*NOTE: IWC = Qd / (Qd + 7Q10), where Qd = flow of the discharge in feet / second (CFS), and $7Q10_3$ = the minimum mean seven consecutive day drought flow in CFS of the receiving stream with a 10 year return frequency.

B. Discharge Limitations

Flow - Monitor (MGD) Maximum - Technology Based

BPJ. Monitor only is proposed to determine any potential impact the discharge may have on the receiving stream. Consistent with Title 47, Series 10, Section 6.3.h.1.B. of the West Virginia Legislative Rules (WVLR).

Total Suspended Solids - 30 (mg/l) Average & 60 (mg/l) Maximum - Technology Based

BPJ. EPA's Treatability Manual indicates that sedimentation as the best practical technology for the removal of suspended solids. Since the facilities to be regulated have backwash treatment basins/tanks/ponds with adjustable decanting devises and adequate detention time, compliance with these limits should be no problem. Also, these values should produce compliance with Title 46, Series 1, Section 3 of the WVLR. Also, consistent with Title 47, Series 10, Section 6.3.h.1.C. of the WVLR.

Total Recoverable Aluminum - Water Quality Based

Category I - 0.75 (mg/l) Average & 1.5 (mg/l) Maximum

WQBEL. The water quality based effluent limit (WQBEL) limits for Category I were developed using the water quality criteria of 0.750 mg/l (Acute) and assuming an IWC of less than 10%, a receiving stream background concentration of 0.375 mg/l and a default dilution factor of three for the zone of initial dilution (ZID), which is the acute mixing zone for the discharge. (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

NOTE: The Agency recognizes that the background concentration for some receiving streams may exceed the assumed value. The IWC restriction, however, provides mitigation for situations where actual receiving stream information is unavailable. If data exists showing the background concentration higher than that assumed, the facility will be assigned to Category II, or the facility may be required to obtain a site-specific permit.

Categories I-A and II-A - 0.0712(mg/l) Average & 0.143(mg/l) Maximum

WQBEL-Aquatic Life. The water quality based effluent limit (WQBEL) limits for Categories I-A and II-A were developed using the water quality criteria of 0.087 mg/l (Chronic). Since most streams of the State have ambient data, which shows aluminum already above 0.087 (mg/l) no mixing zone is warranted. Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

NOTE: The Agency recognizes that some trout streams may have ambient data that would permit a mixing zone. In such cases, the facility may decide to apply for an individual permit.

Category II - 0.37 (mg/l) Average & 0.75 (mg/l) Maximum

WQBEL. The limits for Category II were developed using the water quality criteria of 0.750 mg/l (Acute) as end of pipe effluent limits (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Total Recoverable Iron - Water Quality Based

Category I - 3.7 (mg/l) Average & 6.6 (mg/l) Maximum

WQBEL. The limits for Category I were developed using the water quality criteria of 1.5 mg/l (Chronic – Average; Human Health for Maximum) and assuming an IWC of less than 10%, a receiving stream background concentration of 0.75 mg/l and a default dilution factor of five for the chronic mixing zone (CCC). (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Category I-A - 2.45 (mg/l) Average & 4.92 (mg/l) Maximum

WQBEL. The limits for Category I-A were developed from the water quality criteria of 1.0 mg/l (Chronic for trout waters) and assuming an IWC of less than 10%, a receiving stream background concentration of 0.5 mg/l and a default dilution factor of five for the CCC. (See attached spreadsheets). Previous Limits were based on water quality criteria of 0.5 mg/l, from 2008 version of CSR Title 47, Series 2, Requirements Governing Water Quality Standards. The water quality criterion was changed to 1.0 mg/l in the 2011 triennial review of the Water Quality Standards. Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

NOTE: The Agency recognizes that the background concentration for some receiving streams may exceed the assumed value. The IWC restriction, however, provides mitigation for situations where actual receiving stream information is unavailable. If data exists showing the background concentration higher than that assumed, the facility will be assigned to Categories II or II-A, or the facility may be required to obtain a site-specific permit.

Category II - 1.2 (mg/l) Average & 2.2 (mg/l) Maximum

WQBEL. The limits for Category II were developed from the water quality criteria of 1.5mg/l (Chronic – Average; Human Health for Maximum) as end of pipe effluent limits (See attached spreadsheets). Consistent with Title 47, Series10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Category II-A - 0.8 (mg/l) Average & 1.6 (mg/l) Maximum

WQBEL. The limits for Category II-A were developed from the water quality criteria of 1.0 mg/l (Chronic for trout waters) as end of pipe effluent limits (See attached spreadsheets). Previous Limits were based on water quality criteria of 0.5 mg/l, from 2008 version of CSR Title 47, Series 2, Requirements Governing Water Quality Standards. The water quality criterion was changed to 1.0 mg/l in the 2011 triennial review of the Water Quality Standards. Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Total Residual Chlorine - Water Quality Based

Category I - 28 (µg/l) Average & 57 (µg/l) Maximum

WQBEL. The limits for Category I were developed from the water quality criteria of 11 µg/l (Chronic) and 19 µg/l (Acute) and assuming an IWC of less than 10%, assuming 0 mg/l background concentration in the receiving stream and a default dilution factor of three for the ZID and five for the CCC (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Categories II and III- 9 (µg/l) Average & 18 (µg/l) Maximum

WQBEL. The limits for Category II and III were developed from the water quality criteria of 11 µg/l (Chronic) and 19 µg/l (Acute) as end of pipe effluent limits (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Categories I-A, II-A and III-A- Zero (µg/l) Average & Zero (µg/l) Maximum

WQBEL. The limitations were for Categories I-A, II-A and III-A were developed in accordance with WVLR 46 CSR 8-1, which states "No chlorinated discharge allowed" in trout waters. The permittee shall dechlorinate the effluent prior to discharge as required by Section B.3. of the permit.

Total Recoverable Manganese - Water Quality Based

Categories I and I-A – 3.0 (mg/l) Average & 4.38 (mg/l) Maximum

WQBEL. The limits for Categories I and I-A were developed from the human health criteria of 1.0 mg/l and assuming an IWC of less than 10%, assuming 0.5 mg/l background concentration in the receiving stream and a default dilution factor of five

(See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

NOTE: The Agency recognizes that the background concentration for some receiving streams may exceed the assumed value. The IWC restriction, however, provides mitigation for situations where actual receiving stream information is unavailable. If data exists showing the background concentration higher than that assumed, the facility will be assigned to Category II or II-A, or the facility may be required to obtain a site-specific permit.

Categories II and II-A – 1.0 (mg/l) Average & 1.46 (mg/l) Maximum

WQBEL. The limits for Categories II and II-A were developed from the human health criteria of 1.0 mg/l and assuming an IWC of more than 10%, assuming 0.5 mg/l background concentration in the receiving stream and no dilution (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

Total Fluoride - Water Quality Based

Categories I and I-A – 4.2 (mg/l) Average & 6.13 (mg/l) Maximum

WQBEL. The limits for Categories I and I-A were developed from the human health criteria of 1.4 mg/l and assuming an IWC of less than 10%, assuming 0.7 mg/l background concentration in the receiving stream and a default dilution factor of five (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

NOTE: The Agency recognizes that the background concentration for some receiving streams may exceed the assumed value. The IWC restriction, however, provides mitigation for situations where actual receiving stream information is unavailable. If data exists showing the background concentration higher than that assumed, the facility will be assigned to Category II or II-A, or the facility may be required to obtain a site-specific permit.

Categories II and II-A – 1.4 (mg/l) Average & 2.04 (mg/l) Maximum

WQBEL. The limits for Categories II and II-A were developed from the human health criteria of 1.4 mg/l and assuming an IWC of more than 10%, assuming 0.7 mg/l background concentration in the receiving stream and no dilution (See attached spreadsheets). Consistent with Title 47, Series 10, Sections 6.3.d. and 6.3.h.1.C. of the WVLR.

pH - Maintained between 6.0 - 9.0 (std units) Technology Based

BPJ. Since the backwash wastewater can be somewhat caustic, a pH limit is proposed. Consistent with Title 47, Series 10, Section 6.3.h.1.C. of the WVLR. Also the proposed limit will satisfy the applicable water quality standards.

C. Monitoring Requirements:

Self-monitoring and reporting requirements are identical for all permittees regulated under the General Permit. The Legislative Rules of the West Virginia Department of Environmental Protection require that each permit have monitoring requirements to assure compliance with permit limitations.

D. Treatment Requirements:

All permittees must provide adequate treatment technologies in order to comply with the established effluent limitations of their assigned limitation category. The Division of Water and Waste Management has addressed minimum treatment unit requirements as follows:

1. Sediment removal. A multiple cell (except when the backwash frequency is less than once per day) backwash basin/pond/tank with adjustable decanting devices, minimum depth of 4-5 feet and surface water deflecting devices. The system must be located above the 25-year flood plain and have means for convenient cleaning.

2. Dechlorination of the wastewater is required. If natural dechlorination in the backwash basin is not sufficient, chemical dechlorination is required. However, for discharge to trout waters, dechlorination is required.

3. Metals removal may be required.

12. RATIONALE OF ADDITIONAL REQUIREMENTS

B.1 Self-explanatory.

B.2 - This identifies situations in which the Director may require a facility covered by this permit to be covered by an individual permit or when such facility may approach the Director on its own initiative to obtain coverage by an individual permit.

B.3 Self-explanatory. In order to comply with the requirements of WVLR 46 CSR 8-1, which states "No chlorinated discharge allowed" in trout waters, dechlorination of the effluent is necessary.

B.4 This paragraph delineates the requirements for TRC sampling and analysis.

B.5 Self-explanatory.

B.6 - Submission of GPPs are necessary to comply with WVLR 47 CSR 58-4.12.

B.7 - Submission of DMR reports are required as per 47 CSR 10-5.10. of the WVLR.

B.8. Self-explanatory.

B.9. This paragraph delineates the requirements for discharge to a stream for which a TMDL has been developed.

B.10. Self-explanatory.

B.11. Self-explanatory

B.12. This paragraph contains the standard reopener clause for development of effluent limitations under the Clean Water Act subsequent to reissuance of the general permit.

B.13. Self-explanatory

B.14. Self-explanatory

B.15. Self-explanatory

B.16. Self-explanatory

C.1. Submission of Filtrate Management Reports is required as per 33 CSR 9.

C.2. Self-explanatory.

C3. Self-explanatory.

C4. This section provides a list of rules and restrictions for Land Application of Filtrate as per 33 CSR 9.

C5. This section provides a list of rules and restrictions for subsurface Land Application of Filtrate as per 33 CSR 9.

C6. Self-explanatory.

C7. Self-explanatory.

C8. Submissions of GPPs are necessary to comply with WVLR 47 CSR 58-4.12.

C9. This paragraph is to establish that all land application of filtrate meets all requirements per 33 CSR 9.

C10. Self-explanatory.

C11. Self-explanatory.

C12. Self-explanatory.

C13. Self-explanatory.

C14. This paragraph, and accompanying table, is to establish maximum concentrations for these heavy metals in filtrate being land applied, as per 33 CSR 9.

C15. This paragraph, and accompanying table, is to establish maximum total soil concentrations for these heavy metals at Land Application Sites, as per 33 CSR 9.

C16. Self-explanatory.

ANTIDEGRADATION

The proposed activity is necessary to accommodate important economic or social development. Most of the swimming pools are existing facilities and only discharge infrequently. Most of the water treatment plants are existing facilities and any new facilities would improve the drinking water of their respective areas. Therefore an exemption shall be granted to the facilities covered under this general permit. Consistent with WV Legislative Rule Title 60 Series 5-3.7.

The State of West Virginia, Division 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.

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing. Comments will be accepted until April 8, 2013. They should be addressed to:

Director, Division of Water and Waste Management, DEP
601 57th Street SE
Charleston, WV 25304-2345
Attention: Ann Baldwin
E-mail: Ann.M.Baldwin@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.

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 25311, 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.