

Appendix E. Response to Comments for the Water Treatment Plant General Permit

NPDES and State Waste Discharge General Permit
for Discharges from
Water Treatment Plants

July 17, 2019

State of Washington
Department of Ecology
Olympia, Washington 98504

1.0 INTRODUCTION

This Response to Comments addresses comments received on the formal draft of the Water Treatment Plant General Permit. It is included as Appendix E to the Fact Sheet for the Water Treatment Plant General Permit.

Ecology considered all of the public comments received prior to finalizing the Water Treatment Plant General Permit. Ecology received comments from two commenters, which included eight separate comments.

2.0 OUTREACH

Since 1998, Ecology has offered coverage by the Water Treatment Plant General Permit. For each of the five versions of this permit (counting this one), Ecology has solicited and relied on information from and the concerns of the approximately 30 water treatment plants that requested coverage and of any other interested stakeholders. Public input has consistently helped to improve the quality and effectiveness of each version of this permit.

On February 20, 2019, Ecology published the draft of version five of the Water Treatment Plant General Permit and invited the public's input during a 41-day comment period. On March 26, 2019, Ecology hosted a workshop and public hearing in Lacey, Washington. Attendance at the workshop and hearing was possible in person and via webinar. No person provided testimony at the public hearing, but two persons provided written testimony during the allotted public comment period, which ended on April 2, 2019.

3.0 COMMENTS AND RESPONSES

Ecology modified the Water Treatment Plant General Permit based on the comments received from the public. All of these comments and Ecology's numbered responses (in blue font) are provided below. Changes made to the permit in response to the public comments are provided below with the comment that initiated the change. Ecology also made additional non-substantive changes to permit wording and punctuation to improve the clarity and readability of the permit.

COMMENTS from Michael D. Wolanek, City of Arlington Public Works, Washington:

1. Overall, Ecology's modifications to this permit relative to the prior cycle result in beneficial improvements for both utilities and the environment.

Response No. 1

Thank you for your review and comment.

2. The City supports the concept of turbidity benchmarks of 25 and 250 NTUs established in S-2.1 and S-5.4. We understand the benchmarks serve as thresholds which, when approached, serve to trigger adaptive management by utility operators in order to reduce the quantity of solids in discharges of backwash waste.

Response No. 2

Your understanding is correct. Thank you for your review and comment.

3. Define and distinguish "Essential Maintenance" and "Non-essential Maintenance" within S-4.2.1 or in Appendix B. It is possible that intended improvements may have resulted in reduced clarity regarding these terms.

Response No. 3

"Maintenance" and "essential maintenance" are now defined in Appendix B. These definitions are:

Maintenance

Activities conducted on currently serviceable structures, facilities, and equipment that involves no expansion or use beyond that previously existing. Maintenance includes those usual activities taken to prevent a decline, lapse, or cessation in the use of structures and systems. Those usual activities may include replacement of dysfunctioning facilities, including cases where environmental permits require replacing an existing structure with a different structure, as long as the functioning characteristics of the original structure are not changed. One example is the repair of a deteriorating paved walkway along the top of the berm enclosing a settling pond that otherwise is fully functional with no overtopping or leaks to the ground surface. Maintenance of WTP settling ponds includes periodic assessment to ensure ongoing proper operation, removal of built-up pollutants (e.g., sediments), replacement of spent or failing treatment media, and other actions taken to prevent or correct degraded performance.

Essential maintenance

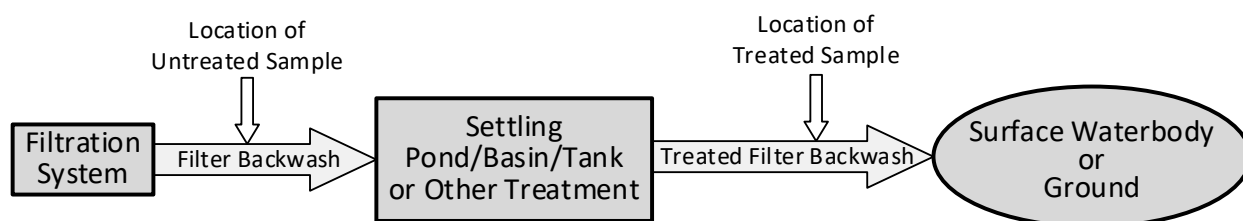
Maintenance required to ensure the proper and successful operation of the subject structure, equipment, mechanism, or facility. Examples of essential maintenance are:

- Frequent cleaning of oily materials from an in-line pH sensor that controls whether or not an episodic discharge occurs.
 - Removal of accumulated sediment and trash from a catch basin prior to the basin becoming so filled that it no longer functions as intended.
 - Testing and replacing emergency batteries that would provide, in the event of a regional power outage, electrical power to critical operations central to the purpose of the facility.
4. The treatment diagram first referenced in S-5.2.3 (and elsewhere in the draft Permit) does not appear to describe WTP backwash treatment processes at the City of Arlington or at other treatment plants where alternative treatment methods may exist, such as splitting of the backwash flows based on characteristics of water quality (i.e. turbidity, settleable solids, and/or residual chlorine). We also note that Ecology indicated in its Publication 18-10-014 (regarding this Permit) that its "understanding of the water treatment industry may have become outdated. More large systems operate now than in the past. More of those systems probably discharge their backwash wastewater to the ground than in the past. The volumes of those

wastewater discharges to the ground are likely greater than Ecology had assumed in the past." Accordingly, Ecology should not simply increase the number of its permittees, or begin to emphasize groundwater, but modify its management of WTP backwash discharges to recognize multiple treatment technologies and the effects of various discharge locations and methods.

Response No. 4

Ecology has modified the diagram to include a wider range of treatment methods.



Ecology welcomes your recommendation for Ecology (a) To develop an improved understanding of the various technologies employed by WTPs to treat their process wastewater prior to discharge; and (b) To incorporate this “new knowledge” in future permits and new guidance so that the treatment and management of process wastewaters (including backwash wastewater) effectively and efficiently protects receiving water quality. The types of new knowledge that Ecology might use includes:

- The specific treatment technologies that exist at and may be employed by permitted WTPs.
- How the wastewater flows through and is diverted among those treatments at permitted WTPs.
- More detailed chemical characterization of the untreated and treated wastewaters.
- The management, handling, and disposal procedures WTPs apply to residual solids in or generated from their wastestreams.

Ecology anticipates that at least some of this new knowledge will be collected through WTP permittees’ submittals of the Questionnaire and Survey, as described in the proposed general permit.

5. Ecology's intent to use the secondary contaminant data in conjunction with discharges to ground as an evaluation method for risk of groundwater contamination is unclear. The paired samples alone (before and after treatment of backwash waste, and prior to discharge to ground) cannot adequately quantify risk of violation of groundwater standards. In addition, in the City of Arlington's situation, the evaluation of risk is further complicated by these factors:
 - a. Backwash waste treatment includes diversion of turbid fractions to the WRF, but the permit specifies it does not apply to dischargers to POTWs-therefore, does the City get treatment (contaminant removal) credit even though sediment is an avoided rather than minimized contaminant?

- b. WTP backwash waste is blended with stormwater, reclaimed water, and natural groundwater as it enters the constructed treatment wetland, so its unique characteristics are modified and immediately lost before it enters groundwater.
- c. Construction of the Ecology-funded wetland and blending with other waters for "polishing" water quality is already an Ecology-identified adaptive management measure (e.g., heat reduction in reclaimed water for the benefit of river water quality).

Response No. 5

Ecology agrees that the "paired" samples would be inadequate alone to determine a reliable estimate of risk for groundwater contamination. However at this time, Ecology does not plan to use the paired results for that purpose. Some WTPs may have allowed infiltration of untreated backwash wastewater into the ground, for example by treating it by allowing sediments to settle out from the discharge in unlined impoundments. Ecology wants a better idea of the characteristics of the untreated wastewater, along with the treated wastewater.

- (a) Simply splitting a wastewater stream into two separate flows, one with more turbidity than the other, is not in itself treatment. The City of Arlington discharges its more turbid wastewater to a separately-permitted water reclamation facility. This is similar to discharging wastewater to a POTW. Ecology recognizes the City's method of removing turbidity and solids from the filter backwash wastestream and has modified the treatment diagram (see Response No. 4) to accommodate the City's unique process.
- (b) Knowing these types of facts will be critical to Ecology's assessment of threats to groundwater quality. Hopefully, similar **quantitative** information that Ecology expects permittees to provide via the Questionnaire and Survey will inform our efforts. Note that mixing process wastewater with stormwater or other water causes the entire mixture to become process wastewater. Permittees may not dilute process wastewater to decrease the concentration of pollutants in the process water. To our knowledge, this situation (improper dilution) has not occurred at the Arlington WTP because the mixing of process wastewater with stormwater and reclaimed water occurs **after** the wastewater passes the monitoring point.
- (c) Ecology agrees.

- 6. S-5.3.1, Laboratory Accreditation, requires use of an accredited environmental lab for all chlorine and secondary pollutant data. The City disputes the need for environmental lab accreditation for routine monitoring of total residual chlorine under this Permit. Most WTPs meet both public health and environmental regulations for chlorine residuals using their own equipment employing the same photometer method that a third-party lab would use. It is time to provide utilities the opportunity to meet alternative accrediting standards for such a common parameter used throughout the water industry.

Response No. 6

The WAC 173-226-090 (4) and (5) requires that all monitoring data be prepared by an accredited or registered laboratory, except for six specified parameters and any others "used solely for internal process control." Since the purpose of analyzing wastewater discharge

samples for chlorine is to verify compliance with water quality standards, the laboratory that conducts chlorine analyses, whether on-site or third party, must be accredited.

7. The flexibility provided for the Planning Requirements in S-3 using the questionnaires in S-6.3.1 and S-6.3.6 is appreciated.

Response No. 7

Thank you for your review and comment.

COMMENTS from Randi Thurston, Washington Department of Fish and Wildlife, Olympia, Washington:

The Washington Department of Fish and Wildlife (department) received your letter dated February 20, 2018 (sic), announcing review and comment period for the draft Water Treatment Plant General Permit. In response, Habitat and Fish Program staff were asked to review the revised permit. Our staff did not identify any fish and wildlife concerns.

Thank you for the opportunity to comment on the draft Water Treatment Plant General Permit. Please contact, Randi Thurston, with any questions or requests for additional information.

Response No. 8

Thank you for your review and comment.

4.0 FACT SHEET

After the issuance of the draft Fact Sheet on February 20, 2019, Ecology found quality issues with the **Planning Documents** column in Table 7 of the Fact Sheet. During the current 5-year term of the Water Treatment Plant General Permit, permittees responded in various ways to comply with the permit requirement for submission of certain planning documents. Permittees sometimes provided the documents in their entirety or in part, and electronically or as hard-copy paper. Consequently, while some of the “dates received” were recorded automatically by the Ecology WebPortal software, Ecology staff hand-entered other dates. Based on the frequency of missing or contradictory “dates received,” Ecology deleted the entire **Planning Documents** column to avoid incorrectly assigning compliance statuses among the permittees. The rest of Table 7 and all the corresponding descriptive text in Section 2.4 of the Fact Sheet are correct and unchanged.