Fact Sheet for State Waste Discharge Permit ST0501325

Sound Transit – Lynnwood Link Extension L300

Date of Public Notice of Draft: October 7, 2020

Effective Date: February 1, 2021

Purpose of this fact sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed State Waste Discharge permit for Sound Transit - Lynnwood Link Extension L300 that will allow discharge of wastewater to the City of Edmonds wastewater treatment plant (Edmonds WWTP) via the City of Mountlake Terrace sewer system.

State law requires any commercial or industrial facility to obtain a permit before discharging waste or chemicals to municipal sanitary sewer collection and treatment systems.

Ecology makes the draft permit and fact sheet available for public review and comment at least 30 days before it issues the final permit to the facility operator. Copies of the fact sheet and draft permit for Sound Transit – Lynnwood Link Extension L300, State Waste Discharge permit ST0501325, are available for public review and comment from October 7, 2020 until the close of business November 6, 2020. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement Information**.

Sound Transit reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions about the facility's location, history, product type, production rate, or discharges prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology will summarize substantive comments and our responses to them. Ecology will include our summary and responses to comments to this fact sheet as **Appendix E - Response to Comments**, and publish it when we issue the final State Waste Discharge permit. Ecology generally will not revise the rest of the fact sheet. The full document will become part of the legal history contained in the facility's permit file.

Summary

The L300 contract is part of the Sound Transit Lynnwood Link Extension Project, which will bring Link Light Rail from the Northgate Station in Seattle to the future Lynnwood Transit Center Station in the City of Lynnwood. The proposed permit authorizes the discharge of process wastewater to the Edmonds WWTP and King County West Point WWTP. This is the first state waste discharge permit issued to Sound Transit for the L300 contract.

Table of Contents

List of Tables

List of Figures

I. Introduction

The legislature defined Ecology's authority and obligations for the wastewater discharge permit program in the Water Pollution Control law, chapter 90.48 RCW (Revised Code of Washington).

Ecology adopted rules describing how it exercises its authority:

- State waste discharge program (chapter 173-216 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC)

These rules require any industrial facility owner/operator to obtain a State Waste Discharge permit before discharging wastewater to state waters. This rule includes commercial or industrial discharges to sewerage systems operated by municipalities or public entities which discharge into public waters of the state. They also help define the basis for limits on each discharge and for other performance requirements imposed by the permit.

Under the State Waste Discharge permit program and in response to a complete and accepted permit application, Ecology generally prepares a draft permit and accompanying fact sheet, and makes it available for public review before final issuance. If the volume of the discharge has not changed or if the characteristics of the discharge have not changed Ecology may choose not to issue a public notice. When Ecology publishes an announcement (public notice); it tells people where they can read the draft permit, and where to send their comments, during a period of 30 days. (See **Appendix A - Public Involvement Information** for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft State Waste Discharge permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix E**.

II. Background Information

Table 1: General Facility Information

Facility Information	
Applicant	Sound Transit
Facility Name and Address	Lynnwood Link Extension L300
Contact at Facility	Name: Mike Foster Title: Construction Site Environmental Management Supervisor, O'Neill Service Group Telephone #: (206) 755-5816
Responsible Official	Name: Stephanie Karlsson Title: North Corridor Permit Manager, Sound Transit Telephone #: (2016) 370-5503
Industrial User Type	Non-Categorical Significant Industrial User
Industry Type	Transit construction
Permit Fee Category (WAC 173-224)	Individual stormwater permits; 50-<100 acres
Type of Treatment by Industry	Settling, flocculation, and dechlorination
SIC Code	1629
NAICS Code	237990
Facility Location (NAD83/WGS84 reference datum)	Northern Extent of L300 project (within Edmonds/King County service area) Latitude: 47.806528 Longitude: -122.307892 Southern Extent of L300 project Latitude: 47.773539 Longitude: -122.318639
Treatment Plants Receiving Discharge	Edmonds WWTP King County West Point WWTP

Facility Information	
Edmonds WWTP and King County West Point Discharge Location (NAD83/WGS84 reference datum)	Edmonds: North Diffuser Latitude: 47.813056 Longitude: -122.390278 South Diffuser Latitude: 47.811667 Longitude: -122.390833 King County: Latitude: 47.66077 Longitude: -122.44863

Authorized Outfalls			
Area identifier	Sound Transit L300 identifier	Mountlake Terrace (MLT) asset identifier	Coordinates (NAD83/WGS84 reference datum) [a]
Area 10 (Melody Hill yard)	MLT 12A	MLT 3-56	Latitude: 47.797603 Longitude: -122.316832
Area 9 (south of 228th Street)	MLT 12	MLT 3-21A	Latitude: 47.792170 Longitude: -122.316857
Area 7 (MLT Transit Center)	MLT 4	MLT B2 (new manhole)	Latitude: 47.784962 Longitude: -122.315672
Area 6 (south of 236th Street @ approximately 241st Street east of I-5)	MLT 1	MLT 7-13	Latitude: 47.780142 Longitude: -122.316375
[a]	Coordinates are approximate. Actual outfall location is designated by Mountlake Terrace asset identifier.		

Permit Status	
Application Submittal Date for New Permit	July 15, 2019
Date of Ecology Acceptance of Application	October 25, 2019

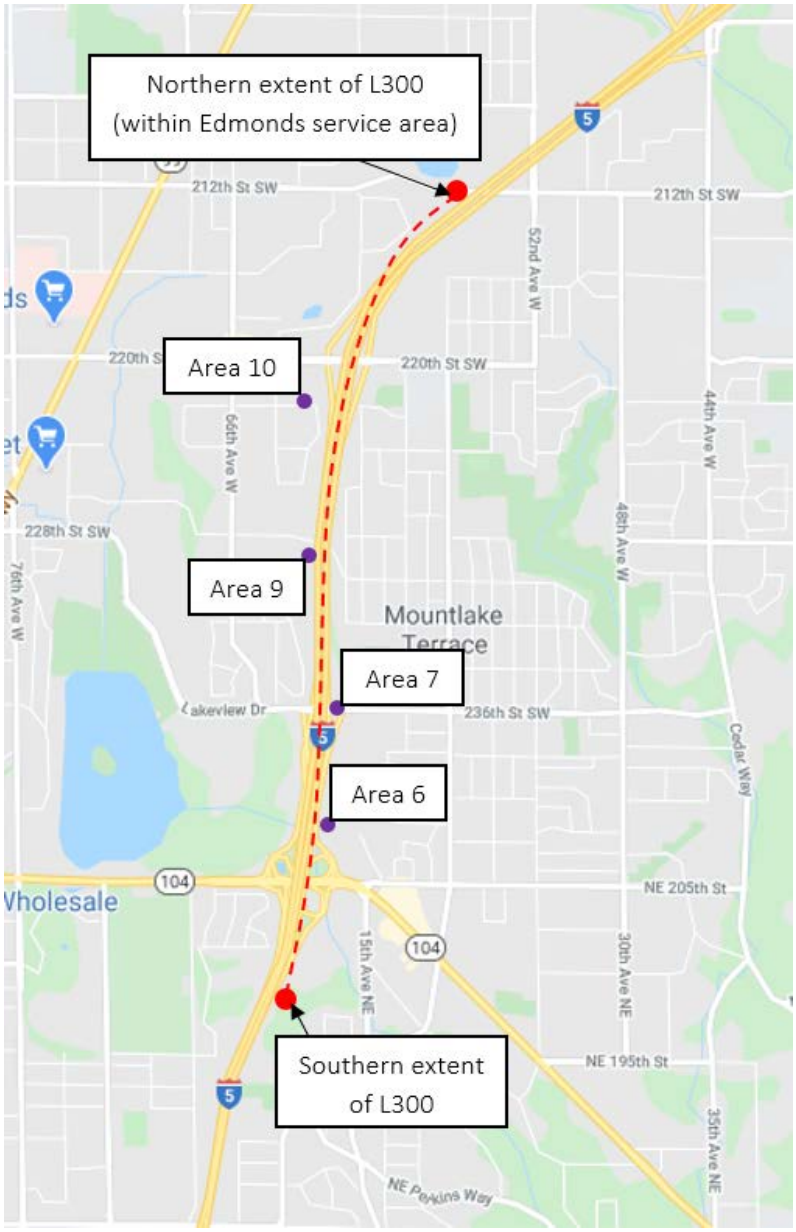

Figure 1 Project and Authorized Discharge Location Map

A. Facility description

History

The L300 contract is part of the Sound Transit Lynnwood Link Extension Project, which will bring Link Light Rail from the Northgate Station in Seattle to the future Lynnwood Transit

Center Station in the City of Lynnwood. Contract L300 will construct approximately 3.67 miles of light rail (at-grade and elevated) from NE 200th Street in the City of Shoreline, through the City of Mountlake Terrace, to the Transit Center in the City of Lynnwood. The project area covers approximately 91 acres of land and includes 97 large-diameter drilled shafts for aerial guideway structures. Contract L300 also includes updating the existing Mountlake Terrace Transit Center Station and Lynnwood Transit Centers to accommodate light rail infrastructure. Construction at this location is scheduled to be complete, with functioning light rail fair service expected by 2024.

Approximately 2.55 linear miles of the L300 Project will be in the City of Shoreline and the City of Mountlake Terrace, within the Edmonds WWTP service area.

This proposed permit only covers the L300 Project process wastewater discharged to the Edmonds WWTP and the King County West Point WWTP via the Mountlake Terrace sewer system. The northern portion of the L300 Project is within the City of Lynnwood WWTP service area and process wastewater discharged is covered by discharge authorization issued by the City of Lynnwood.

Sound Transit submitted the State Waste Discharge Permit application for discharge of process wastewater to the Edmonds WWTP as outlined in Table 1. Ecology issued a temporary discharge permit to Sound Transit on October 25, 2019, authorizing discharge of process wastewater based on information presented in the application. Subsequently, Sound Transit submitted two permit application addendums on February 13, 2020 and March 23, 2020. Ecology accepted the two addendums as complete and incorporated the additional information into the temporary permit on February 13, 2020 and March 24, 2020, respectively.

Stormwater management and discharge from the L300 Project is managed under Ecology's Construction Stormwater General Permit (permit no. WAR306720).

Activities generating process wastewater and wastewater pretreatment

The majority of wastewater is generated from drilling and dewatering the large-diameter shafts for the aerial guideway structures. Water is used to facilitate shaft drilling. In addition, water remains in the shafts and is displaced by concrete as the shaft is filled. While this process is occurring, the shafts must be dewatered of additional groundwater or other process wastewater. Due to this process, it is very difficult or near impossible to separate groundwater and process wastewater, therefore, Sound Transit is authorized to discharge groundwater contaminated with process water in this scenario.

In some circumstances, a polymer slurry is used to further facilitate drilling of the shafts. Polymer slurry is used when soil conditions prevent the temporary casings from rotating freely. The polymer is used as a soil lubricant in order to reduce friction. Water used for shaft drilling, including water containing polymer slurry, may be reused for multiple drillings.

A limited quantity of process wastewater is also generated from wheel washing, street sweeping, and vac trucks.

Process wastewater generated at the construction sites will be transported via vactor truck to an above-ground dump pond. Water will decant from the solids. A pump suspended from the bottom of the far corner (opposite of where the trucks discharge) of the pond will be manually activated to transfer water to the treatment tank.

The treatment tank has a 18,000 gallon static water capacity (total capacity is 21,000 gallons). Pump floats will keep the intake 12 inches below the static surface level to capture organic contaminants and provide a location to monitor water quality before discharge. A pump will be used to discharge treated water to the sewer via a flow meter and sample port, using a gate valve to control the maximum flow rate. A second line valve will be used to recycle out of compliance water back to the end of the tank for additional pre-treatment, if necessary. A carbon dioxide (CO_2) injection system including a 50 lb. tank, gas regulator, in-line heater, and flow control valve is installed in the discharge line to adjust effluent pH to within permit limits.

For instances where polymer slurry is present in the process wastewater, a slightly different treatment regimen is followed. Process wastewater with polymer slurry is first sent to a mud tank, where the polymer is broken down with chlorine. The polymer settles to the bottom of the tank and the chlorinated water is removed from the top and transferred to the treatment tank. The treatment tank operates in the same manner as described above, except for the addition of sodium sulfate to remove the chlorine prior to discharge into the sewer system.

Solids from the dump pond, mud tank, and treatment tank will be periodically removed and disposed of properly.

Diagrams of the treatment systems are included in **Appendix D**.

B. Discharge location to the City of Edmonds WWTP and King County West Point WWTP via the City of Mountlake Terrace sewer system

Due to the fact that the L300 project is a linear construction project over several miles, the proposed permit authorizes discharge of process wastewater at three different locations along the construction corridor. The location of these discharge points is given in Table 1.

The process wastewater is discharged to the City of Mountlake Terrace sewer system and ultimately to the City of Edmonds WWTP and the King County West Point WWTP. King County has a delegated pretreatment program managed by the King County Industrial Waste Program, however the City of Edmonds is not delegated. Municipalities with delegated pretreatment programs are authorized to regulate and permit significant industrial users. As part of a verbal agreement between City of Edmonds and King County, industrial users in the City of Mountlake Terrace will not be regulated by the King County

Industrial Waste Program. Therefore, any significant industrial users within Mountlake Terrace must receive state waste discharge permits from Ecology.

C. Wastewater characterization

Sound Transit reported the concentration of pollutants via email to Ecology per an information request. The tabulated data represents the quality of the effluent discharged from April 14-15, 2020. Although a short time period, Ecology believes this data is representative of the typical discharge from activities that generate process wastewater. The effluent is characterized as follows:

Table 2: Wastewater Characterization

Parameter	Units	# of Samples	Minimum Value	Maximum Value
Discharge rate	gpm	2	100	100
pH	standard units	2	10.8	10.9
Total residual chlorine	mg/L	2	0 (non-detect)	0.3
Total settleable solids	mL/L	2	0	0

D. State environmental policy act (SEPA) compliance

To meet the intent of SEPA, new discharges must undergo SEPA review during the permitting process. Sound Transit, as lead agency for SEPA, and the Federal Transit Administration, as lead agency for the National Environmental Policy Act (NEPA), prepared an Environmental Impact Statement (EIS) for the Lynnwood Link Extension. The EIS was completed pursuant to SEPA and NEPA. The SEPA Register Notice for the Final EIS was published April 1, 2015. Both the Federal Transit Administration and the Federal Highway Administration subsequently issued a separate Record of Decision (ROD). In addition, a SEPA Addendum to the EIS was issued in 2018. The EIS, technical reports, RODs, and SEPA Addendum can be found at, https://www.soundtransit.org/system-expansion/lynnwood-link-extension/documents?filter=project&facets=3592.

III. Proposed Permit Limits

State regulations require that Ecology base limits in a State Waste Discharge permit on the:

- Technology and treatment methods available to treat specific pollutants (technology-based). Technology-based limits are set by the EPA and published as a regulation (40 CFR

400 - 471), or Ecology develops limits on a case-by-case basis (40 CFR 125.3, and RCW 90.48). Dischargers must treat wastewater using all known, available, reasonable methods of prevention, control, and treatment (AKART).

- Effects of the pollutants on the publicly-owned treatment works (POTW). Wastewater must not interfere with the operation of the POTW. Ecology considers local limits in developing permit limits.
- Applicable requirements of other local, state and federal laws.

Ecology applies the most stringent of these limits to each parameter of concern and further describes the proposed limits below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, monitoring, etc.). Ecology evaluated the permit application and determined the limits needed to comply with the rules adopted by the state of Washington. Ecology does not develop effluent limits for all reported pollutants. Some pollutants are not treatable at the concentrations reported, are not controllable at the source, and are not listed in regulation.

Ecology does not usually develop permit limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize the discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent. Until Ecology modifies the permit to reflect additional discharge of pollutants, a permitted facility could be violating its permit.

A. Technology-based effluent limits

Waste discharge permits issued by Ecology specify conditions requiring all available and reasonable methods of prevention, control, and treatment (AKART) of discharges to waters of the state (RCW 90.48).

No existing federal categorical standards apply to this process or discharge.

The state waste discharge permit regulations include restrictions and prohibitions to protect publicly-owned sewerage systems. A facility may not discharge any wastewater having a pH less than 5.0 or greater than 11.0 or having any other corrosive property capable of causing damage or hazard to structures, equipment, or personnel unless the:

- System is specifically designed to accommodate such discharge.
- Discharge is authorized by a permit (WAC 173-216-060).

Federal regulations (40 CFR 403.5b) also prohibits the discharge of pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower

than 5.0, unless the collection and treatment system is designed to accommodate such discharges.

Sound Transit submitted a conceptual plan for the treatment system with the applications dated July 15, 2019 and March 24, 2020. The conceptual plans outlined an accepted method for settleable solids removal, pH control, and polymer removal. Ecology approves conceptual plans submitted with the applications, as stated above, and prepared by O'Neill Service Group. Ecology determined the facility meets the minimum requirements demonstrating compliance with the AKART standard and federal guidelines if Sound Transit operates the treatment and disposal system as described in the approved conceptual plans and any subsequent Ecology approved reports.

The following permit limits are necessary to satisfy the requirement for AKART:

Table 3: Technology Based Effluent Limits

Parameter	Daily Minimum	Daily Maximum
pH	5.0 standard units	11.0 standard units

B. Effluent limits based on local limits

To protect the Edmonds WWTP and King County West Point WWTP from pass-through, interference, concentrations of toxic chemicals that would impair beneficial or designated uses of sludge, or potentially hazardous exposure levels, Ecology believes it necessary to impose limits for certain parameters. Ecology based these limits on local limits established by City of Edmonds and codified in ordinance. Ecology's pretreatment program delegation agreement with EPA includes language in which Ecology agreed to enforce limits adopted by non-delegated programs (local limits). Applicable local limits for this discharge include the following:

Table 4: Limits Based on City of Edmonds Local Limits

Effluent Limits		
Parameter	**Average Monthly**	**Maximum Daily**
Nonpolar fats, oils, and grease	N/A	100 mg/L

Parameter	Daily Minimum	Daily Maximum
pH	5.0 standard units	11.0 standard units

Ecology also evaluated local limits and discharge requirements established by City of Mountlake Terrace in order to protect the City's sewer infrastructure and hydraulic capacity. In the permit application submitted on July 15, 2019, and certified by the City of Mountlake Terrace, the City included allowable discharge rates in order to maintain, and not exceed, hydraulic capacity in their sewer system. The allowable discharge rates are outlined below and are applicable to all authorized discharge locations as outlined in Table 1:

Table 5: City of Mountlake Terrace Allowable Discharge Rates

Effluent Limits		
Parameter	**Off Peak [a]**	**Peak [b]**
Discharge Rate – Dry Season (May 1 – September 30)	250 gpm	150 gpm
Discharge Rate – Wet Season (October 1 – April 30)	100 gpm	No discharge allowed

a Off Peak means between the daytime hours of 9am to 5pm and nighttime hours of 8pm to 4am.
b Peak means between the morning hours of 4am to 9am and evening hours of 5pm to 8pm.

Finally, Ecology evaluated King County local limits. For the majority of applicable parameters, the City of Edmonds' local limits are the same or more stringent. Therefore, the above limits will be protective of the King County sewer system. However, King County has a specific settleable solids limit:

"Industrial wastewater must contain less than 7 milliliters per liter of solids capable of settling."

IV. Monitoring Requirements

Ecology requires monitoring, recording, and reporting (WAC 173-216-110) to verify that the treatment process functions correctly and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, detection level (DL), and quantitation level (QL) on the discharge monitoring report or in the required report.

A. Lab accreditation

Ecology requires that facilities must use a laboratory registered or accredited under the provisions of chapter 173-50 WAC, Accreditation of Environmental Laboratories, to prepare all monitoring data (with the exception of certain parameters).

B. Wastewater monitoring

Ecology details the proposed monitoring schedule under Special Condition S2. Specified monitoring frequencies take into account the quantity and variability of the discharge, the treatment method, past compliance, significance of pollutants, and cost of monitoring.

V. Other Permit Conditions

A. Reporting and recordkeeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and recordkeeping requirements to prevent and control waste discharges [WAC 173-216-110 and CFR 403.12 (e),(g), and (h)].

B. Operations and maintenance

Ecology requires dischargers to take all reasonable steps to properly operate and maintain their wastewater treatment system in accordance with state regulations (WAC 173-240-080 and WAC 173-216-110). The facility must prepare and submit an operation and maintenance (O&M) manual as required by state regulation for the wastewater treatment facilities (WAC 173-240-150). Implementation of the procedures in the operation and maintenance manual ensures the facility's compliance with the terms and limits in the permit.

C. Prohibited discharges

Ecology prohibits certain pollutants from being discharged to the POTW. These include substances which cause pass-through or interference, pollutants which may cause damage to the POTW or harm to the POTW workers (chapter 173-216 WAC) and the discharge of designated dangerous wastes not authorized by this permit (chapter 173-303 WAC).

D. Dilution prohibited

Ecology prohibits the facility from diluting its effluent as a partial or complete substitute for adequate treatment to achieve compliance with permit limits.

E. Non routine and unanticipated wastewater

Occasionally, this facility may generate wastewater not characterized in the permit application because it is not a routine discharge and the facility did not anticipate it at the time of application. These wastes typically consist of waters used to pressure-test storage tanks or fire water systems or of leaks from drinking water systems.

The permit authorizes the discharge of non-routine and unanticipated wastewater under certain conditions. The facility must characterize these waste waters for pollutants and examine the opportunities for reuse. Depending on the nature and extent of pollutants in this wastewater and on any opportunities for reuse, Ecology may:

- Authorize the facility to discharge the water.
- Require the facility to treat the wastewater.
- Require the facility to reuse the wastewater.

F. Slug discharge plan

Ecology determined that the Sound Transit L300 project has the potential for a batch discharge or a spill that could adversely affect the treatment plant, therefore the proposed permit requires a slug discharge control plan [(40 CFR 403.8 (f)(l) (iii)(B)(6) and (f) (2)(vi)].

G. General conditions

Ecology bases the standardized general conditions on state law and regulations. They are included in all state waste discharge permits issued by Ecology.

VI. Public Notification of Noncompliance

Ecology may annually publish a list of all industrial users in significant noncompliance with Pretreatment Standards or Requirements during any of the previous four quarters in a local newspaper. Accordingly, this permit Special Condition informs the Facility that noncompliance with this permit may result in publication of the noncompliance.

VII. Permit Issuance Procedures

A. Permit modifications

Ecology may modify this permit to impose or change the numerical limits, if necessary to comply with changes in the pretreatment requirements, conditions in local sewer ordinances, or based on new information from sources such as inspections and effluent monitoring. It may also modify this permit to comply with new or amended state or federal regulations.

B. Proposed permit issuance

This proposed permit meets all statutory requirements for authorizing a wastewater discharge, including those limits and conditions believed necessary to control toxics. Ecology proposes that the permit be issued for five years.

VIII. References for Text and Appendices

Washington State Department of Ecology.

Laws, Rules & Rulemaking (https://ecology.wa.gov/About-us/How-we-operate/rulemaking)

Permit and Wastewater Related Information (https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance)

Permit Writer's Manual, January 2015. Publication Number 92-109 (https://fortress.wa.gov/ecy/publications/documents/92109.pdf)

Focus Sheet on Developing a Solid Waste Control Plan for Industrial Wastewater Discharge Permittees, February 2007. Publication Number 07-10-024. (https://fortress.wa.gov/ecy/publications/documents/0710024.pdf)

Appendix A - Public Involvement Information

Ecology proposes to issue a permit to Sound Transit – Lynnwood Link Extension L300. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology placed a Public Notice of Application on October 28, 2019 and November 4, 2019 in the Everett Herald to inform the public about the submitted application and to invite comment on the issuance of this permit.

Ecology placed a Public Notice of Draft on October 7, 2020 in the Everett Herald to inform the public and to invite comment on the proposed draft State Waste Discharge permit and fact sheet.

The notice:

- Told where copies of the draft Permit and Fact Sheet are available for public evaluation (a local public library, the closest Regional or Field Office, posted on our website).
- Offered to provide the documents in an alternate format to accommodate special needs.
- Urged people to submit their comments, in writing, before the end of the Comment Period
- Told how to request a public hearing of comments about the proposed state waste discharge permit.
- Explained the next step(s) in the permitting process.

Ecology has published a document entitled Frequently Asked Questions about Effective Public Commenting, available at https://fortress.wa.gov/ecy/publications/documents/0307023.pdf.

You may obtain further information from Ecology by telephone, (425) 649-7000, or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
Northwest Regional Office
3190 160th Avenue SE
Bellevue, WA 98008-5452

The primary author of this permit and fact sheet is Maia Hoffman.

Appendix B - Your Right to Appeal

You have a right to appeal this permit to the Pollution Control Hearing Board (PCHB) within 30 days of the date of receipt of the final permit. The appeal process is governed by chapter 43.21B RCW and chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2) (see glossary).

To appeal you must do the following within 30 days of the date of receipt of this permit:

- File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this permit on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in chapter 43.21B RCW and chapter 371-08 WAC.

ADDRESS AND LOCATION INFORMATION

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive SE Lacey, WA 98503	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608
Pollution Control Hearings Board 1111 Israel RD SW STE 301 Tumwater, WA 98501	**Pollution Control Hearings Board** PO Box 40903 Olympia, WA 98504-0903

Appendix C - Glossary

1-DMax or 1-day maximum temperature -- The highest water temperature reached on any given day. This measure can be obtained using calibrated maximum/minimum thermometers or continuous monitoring probes having sampling intervals of thirty minutes or less.

7-DADMax or 7-day average of the daily maximum temperatures - The arithmetic average of seven consecutive measures of daily maximum temperatures. The 7-DADMax for any individual day is calculated by averaging that day's daily maximum temperature with the daily maximum temperatures of the three days prior and the three days after that date.

Acute toxicity - The lethal effect of a compound on an organism that occurs in a short time period, usually 48 to 96 hours.

AKART - The acronym for "all known, available, and reasonable methods of prevention, control and treatment." AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and 520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

Alternate point of compliance - An alternative location in the groundwater from the point of compliance where compliance with the groundwater standards is measured. It may be established in the groundwater at locations some distance from the discharge source, up to, but not exceeding the property boundary and is determined on a site specific basis following an AKART analysis. An "early warning value" must be used when an alternate point is established. An alternate point of compliance must be determined and approved in accordance with WAC 173-200-060(2).

Ambient water quality - The existing environmental condition of the water in a receiving water body.

Ammonia - Ammonia is produced by the breakdown of nitrogenous materials in wastewater. Ammonia is toxic to aquatic organisms, exerts an oxygen demand, and contributes to eutrophication. It also increases the amount of chlorine needed to disinfect wastewater.

Annual average design flow (AADF) - Average of the daily flow volumes anticipated to occur over a calendar year.

Average monthly (intermittent) discharge limit - The average of the measured values obtained over a calendar months' time taking into account zero discharge days.

Average monthly discharge limit - The average of the measured values obtained over a calendar months' time.

Background water quality - The concentrations of chemical, physical, biological or radiological constituents or other characteristics in or of groundwater at a particular point in time upgradient of an activity that has not been affected by that activity, [WAC 173-200-020(3)]. Background water quality for any parameter is statistically defined as the 95% upper tolerance interval with a 95% confidence based on at least eight hydraulically upgradient water quality samples. The eight samples are collected over a period of at least one year, with no more than one sample collected during any month in a single calendar year.

Best management practices (BMPs) - Schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs include treatment systems, operating procedures, and practices to control: plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. BMPs may be further categorized as operational, source control, erosion and sediment control, and treatment BMPs.

BOD5 - Determining the five-day Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of organic material present in an effluent that is utilized by bacteria. The BOD5 is used in modeling to measure the reduction of dissolved oxygen in receiving waters after effluent is discharged. Stress caused by reduced dissolved oxygen levels makes organisms less competitive and less able to sustain their species in the aquatic environment. Although BOD_5 is not a specific compound, it is defined as a conventional pollutant under the federal Clean Water Act.

Bypass - The intentional diversion of waste streams from any portion of a treatment facility.

Categorical pretreatment standards - National pretreatment standards specifying quantities or concentrations of pollutants or pollutant properties, which may be discharged to a POTW by existing or new industrial users in specific industrial subcategories.

Chlorine - A chemical used to disinfect wastewaters of pathogens harmful to human health. It is also extremely toxic to aquatic life.

Chronic toxicity - The effect of a compound on an organism over a relatively long time, often 1/10 of an organism's lifespan or more. Chronic toxicity can measure survival, reproduction or growth rates, or other parameters to measure the toxic effects of a compound or combination of compounds.

Clean water act (CWA) - The federal Water Pollution Control Act enacted by Public Law 92-500, as amended by Public Laws 95-217, 95-576, 96-483, 97-117; USC 1251 et seq.

Compliance inspection-without sampling - A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable statutes and regulations.

Compliance inspection-with sampling - A site visit for the purpose of determining the compliance of a facility with the terms and conditions of its permit or with applicable

statutes and regulations. In addition it includes as a minimum, sampling and analysis for all parameters with limits in the permit to ascertain compliance with those limits; and, for municipal facilities, sampling of influent to ascertain compliance with the 85 percent removal requirement. Ecology may conduct additional sampling.

Composite sample - A mixture of grab samples collected at the same sampling point at different times, formed either by continuous sampling or by mixing discrete samples. May be "time-composite" (collected at constant time intervals) or "flow-proportional" (collected either as a constant sample volume at time intervals proportional to stream flow, or collected by increasing the volume of each aliquot as the flow increased while maintaining a constant time interval between the aliquots).

Construction activity - Clearing, grading, excavation, and any other activity, which disturbs the surface of the land. Such activities may include road building; construction of residential houses, office buildings, or industrial buildings; and demolition activity.

Continuous monitoring - Uninterrupted, unless otherwise noted in the permit.

Critical condition - The time during which the combination of receiving water and waste discharge conditions have the highest potential for causing toxicity in the receiving water environment. This situation usually occurs when the flow within a water body is low, thus, its ability to dilute effluent is reduced.

Date of receipt - This is defined in RCW 43.21B.001(2) as five business days after the date of mailing; or the date of actual receipt, when the actual receipt date can be proven by a preponderance of the evidence. The recipient's sworn affidavit or declaration indicating the date of receipt, which is unchallenged by the agency, constitutes sufficient evidence of actual receipt. The date of actual receipt, however, may not exceed forty-five days from the date of mailing.

Detection limit - The minimum concentration of a substance that can be measured and reported with 99 percent confidence that the pollutant concentration is above zero and is determined from analysis of a sample in a given matrix containing the pollutant.

Dilution factor (DF) - A measure of the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. Expressed as the inverse of the percent effluent fraction, for example, a dilution factor of 10 means the effluent comprises 10% by volume and the receiving water 90%.

Distribution uniformity - The uniformity of infiltration (or application in the case of sprinkle or trickle irrigation) throughout the field expressed as a percent relating to the average depth infiltrated in the lowest one-quarter of the area to the average depth of water infiltrated.

Early warning value - The concentration of a pollutant set in accordance with WAC 173-200-070 that is a percentage of an enforcement limit. It may be established in the effluent, groundwater, surface water, the vadose zone or within the treatment process. This

value acts as a trigger to detect and respond to increasing contaminant concentrations prior to the degradation of a beneficial use.

Enforcement limit - The concentration assigned to a contaminant in the groundwater at the point of compliance for the purpose of regulation, [WAC 173-200-020(11)]. This limit assures that a groundwater criterion will not be exceeded and that background water quality will be protected.

Engineering report - A document that thoroughly examines the engineering and administrative aspects of a particular domestic or industrial wastewater facility. The report must contain the appropriate information required in WAC 173-240-060 or 173-240-130.

Fecal coliform bacteria - Fecal coliform bacteria are used as indicators of pathogenic bacteria in the effluent that are harmful to humans. Pathogenic bacteria in wastewater discharges are controlled by disinfecting the wastewater. The presence of high numbers of fecal coliform bacteria in a water body can indicate the recent release of untreated wastewater and/or the presence of animal feces.

Grab sample - A single sample or measurement taken at a specific time or over as short a period of time as is feasible.

Groundwater - Water in a saturated zone or stratum beneath the surface of land or below a surface water body.

Industrial user - A discharger of wastewater to the sanitary sewer that is not sanitary wastewater or is not equivalent to sanitary wastewater in character.

Industrial wastewater - Water or liquid-carried waste from industrial or commercial processes, as distinct from domestic wastewater. These wastes may result from any process or activity of industry, manufacture, trade or business; from the development of any natural resource; or from animal operations such as feed lots, poultry houses, or dairies. The term includes contaminated stormwater and, also, leachate from solid waste facilities.

Interference - A discharge which, alone or in conjunction with a discharge or discharges from other sources, both:

- Inhibits or disrupts the POTW, its treatment processes or operations, or its sludge processes, use or disposal; and

- Therefore is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or of the prevention of sewage sludge use or disposal in compliance with the following statutory provisions and regulations or permits issued thereunder (or more stringent State or local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA), and including State regulations contained in any State sludge

management plan prepared pursuant to subtitle D of the SWDA), sludge regulations appearing in 40 CFR Part 507, the Clean Air Act, the Toxic Substances Control Act, and the Marine Protection, Research and Sanctuaries Act.

Local limits - Specific prohibitions or limits on pollutants or pollutant parameters developed by a POTW.

Major facility - A facility discharging to surface water with an EPA rating score of > 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Maximum daily discharge limit - The highest allowable daily discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. The daily discharge is the maximum discharge of a pollutant measured during a calendar day.

Maximum day design flow (MDDF) - The largest volume of flow anticipated to occur during a one-day period, expressed as a daily average.

Maximum month design flow (MMDF) - The largest volume of flow anticipated to occur during a continuous 30-day period, expressed as a daily average.

Maximum week design flow (MWDF) - The largest volume of flow anticipated to occur during a continuous 7-day period, expressed as a daily average.

Method detection level (MDL) - See Detection Limit.

Minor facility - A facility discharging to surface water with an EPA rating score of < 80 points based on such factors as flow volume, toxic pollutant potential, and public health impact.

Mixing zone - An area that surrounds an effluent discharge within which water quality criteria may be exceeded. The permit specifies the area of the authorized mixing zone that Ecology defines following procedures outlined in state regulations (chapter 173-201A WAC).

National pollutant discharge elimination system (NPDES) - The NPDES (Section 402 of the Clean Water Act) is the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been delegated the authority to issue these permits. NPDES permits issued by Washington State permit writers are joint NPDES/State permits issued under both state and federal laws.

pH - The pH of a liquid measures its acidity or alkalinity. It is the negative logarithm of the hydrogen ion concentration. A pH of 7 is defined as neutral and large variations above or below this value are considered harmful to most aquatic life.

Pass-through - A discharge which exits the POTW into waters of the State in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation), or which is a cause of a violation of State water quality standards.

Peak hour design flow (PHDF) - The largest volume of flow anticipated to occur during a one-hour period, expressed as a daily or hourly average.

Peak instantaneous design flow (PIDF) - The maximum anticipated instantaneous flow.

Point of compliance - The location in the groundwater where the enforcement limit must not be exceeded and a facility must comply with the Ground Water Quality Standards. Ecology determines this limit on a site-specific basis. Ecology locates the point of compliance in the groundwater as near and directly downgradient from the pollutant source as technically, hydrogeologically, and geographically feasible, unless it approves an alternative point of compliance.

Potential significant industrial user (PSIU) - A potential significant industrial user is defined as an Industrial User that does not meet the criteria for a Significant Industrial User, but which discharges wastewater meeting one or more of the following criteria:

a. Exceeds 0.5 % of treatment plant design capacity criteria and discharges <25,000 gallons per day or;

b. Is a member of a group of similar industrial users which, taken together, have the potential to cause pass through or interference at the POTW (e.g. facilities which develop photographic film or paper, and car washes).Ecology may determine that a discharger initially classified as a potential significant industrial user should be managed as a significant industrial user.

Quantitation level (QL) - Also known as Minimum Level of Quantitation (ML) – The lowest level at which the entire analytical system must give a recognizable signal and acceptable calibration point for the analyte. It is equivalent to the concentration of the lowest calibration standard, assuming that the lab has used all method-specified sample weights, volumes, and cleanup procedures. The QL is calculated by multiplying the MDL by 3.18 and rounding the result to the number nearest to (1,2,or 5) x 10^n, where n is an integer. (64 FR 30417).
ALSO GIVEN AS:
The smallest detectable concentration of analyte greater than the Detection Limit (DL) where the accuracy (precision & bias) achieves the objectives of the intended purpose. (Report of the Federal Advisory Committee on Detection and Quantitation Approaches and Uses in Clean Water Act Programs Submitted to the US Environmental Protection Agency December 2007).

Reasonable potential - A reasonable potential to cause a water quality violation, or loss of sensitive and/or important habitat.

Responsible corporate officer - A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or the manager of one or

more manufacturing, production, or operating facilities employing more than 250 persons or have gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures (40 CFR 122.22).

Sample Maximum - No sample may exceed this value.

Significant industrial user (SIU) --

1) All industrial users subject to Categorical Pretreatment Standards under 40 CFR 403.6 and 40 CFR Chapter I, Subchapter N and;

2) Any other industrial user that: discharges an average of 25,000 gallons per day or more of process wastewater to the POTW (excluding sanitary, noncontact cooling, and boiler blow-down wastewater); contributes a process wastestream that makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority* on the basis that the industrial user has a reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement [in accordance with 40 CFR 403.8(f)(6)].

Upon finding that the industrial user meeting the criteria in paragraph 2, above, has no reasonable potential for adversely affecting the POTW's operation or for violating any pretreatment standard or requirement, the Control Authority* may at any time, on its own initiative or in response to a petition received from an industrial user or POTW, and in accordance with 40 CFR 403.8(f)(6), determine that such industrial user is not a significant industrial user.

*The term "Control Authority" refers to the Washington State Department of Ecology in the case of non-delegated POTWs or to the POTW in the case of delegated POTWs.

Slug discharge - Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge to the POTW. This may include any pollutant released at a flow rate that may cause interference or pass through with the POTW or in any way violate the permit conditions or the POTW's regulations and local limits.

Soil scientist - An individual who is registered as a Certified or Registered Professional Soil Scientist or as a Certified Professional Soil Specialist by the American Registry of Certified Professionals in Agronomy, Crops, and Soils or by the National Society of Consulting Scientists or who has the credentials for membership. Minimum requirements for eligibility are: possession of a baccalaureate, masters, or doctorate degree from a U.S. or Canadian institution with a minimum of 30 semester hours or 45 quarter hours professional core courses in agronomy, crops or soils, and have 5,3,or 1 years, respectively, of professional experience working in the area of agronomy, crops, or soils.

Solid waste - All putrescible and non-putrescible solid and semisolid wastes including, but not limited to, garbage, rubbish, ashes, industrial wastes, swill, sewage sludge, demolition and construction wastes, abandoned vehicles or parts thereof, contaminated soils and contaminated dredged material, and recyclable materials.

Soluble BOD_5 - Determining the soluble fraction of Biochemical Oxygen Demand of an effluent is an indirect way of measuring the quantity of soluble organic material present in an effluent that is utilized by bacteria. Although the soluble BOD_5 test is not specifically described in Standard Methods, filtering the raw sample through at least a 1.2 um filter prior to running the standard BOD_5 test is sufficient to remove the particulate organic fraction.

State waters - Lakes, rivers, ponds, streams, inland waters, underground waters, salt waters, and all other surface waters and watercourses within the jurisdiction of the state of Washington.

Stormwater - That portion of precipitation that does not naturally percolate into the ground or evaporate, but flows via overland flow, interflow, pipes, and other features of a stormwater drainage system into a defined surface water body, or a constructed infiltration facility.

Technology-based effluent limit - A permit limit based on the ability of a treatment method to reduce the pollutant.

Total coliform bacteria - A microbiological test, which detects and enumerates the total coliform group of bacteria in water samples.

Total dissolved solids - That portion of total solids in water or wastewater that passes through a specific filter.

Total maximum daily load (TMDL) - A determination of the amount of pollutant that a water body can receive and still meet water quality standards.

Total suspended solids (TSS) - Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

Upset - An exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, lack of preventative maintenance, or careless or improper operation.

Water quality-based effluent limit - A limit imposed on the concentration of an effluent parameter to prevent the concentration of that parameter from exceeding its water quality criterion after discharge into receiving waters.

Appendix D – Process Diagrams

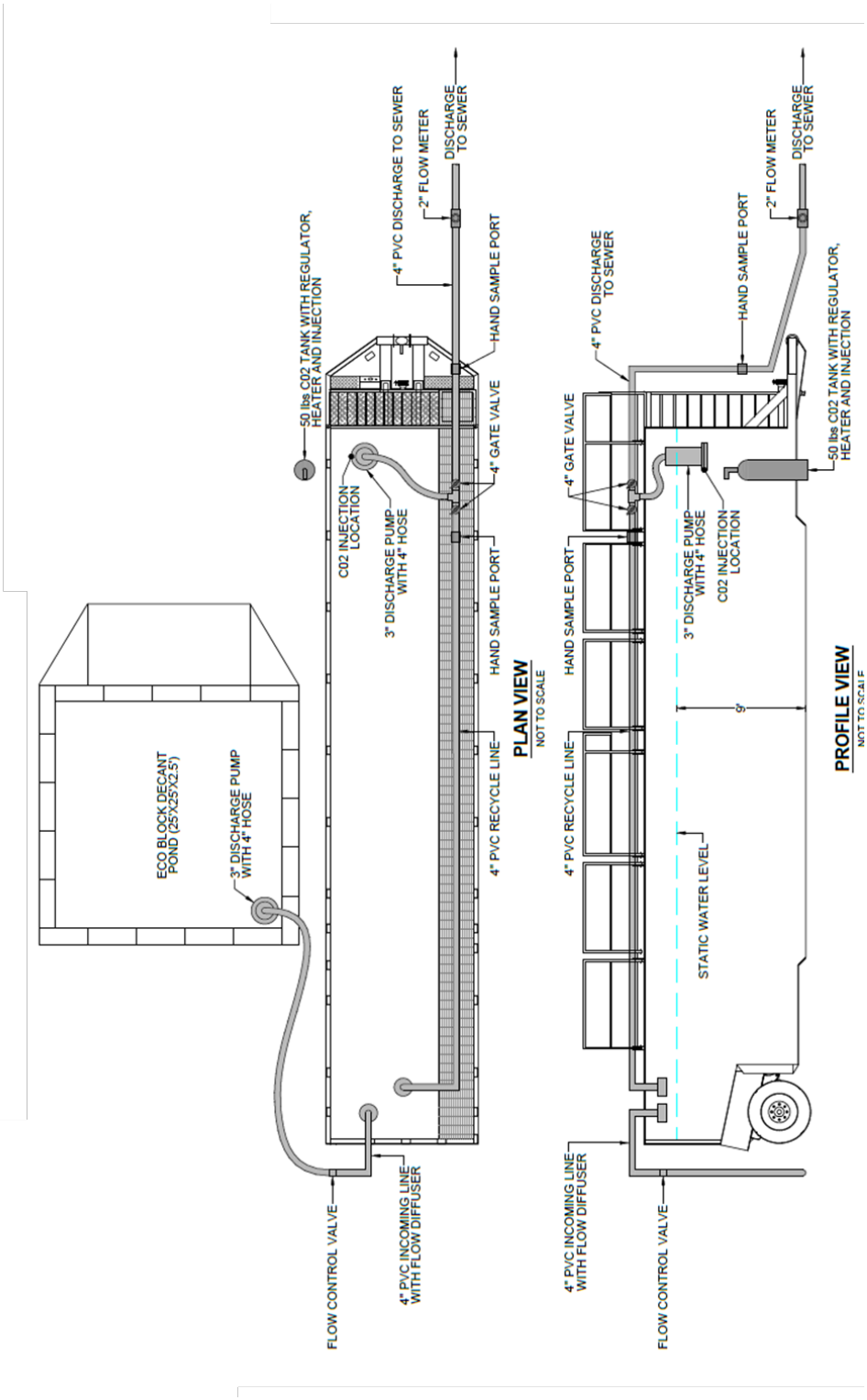

Figure 2 Treatment process diagram

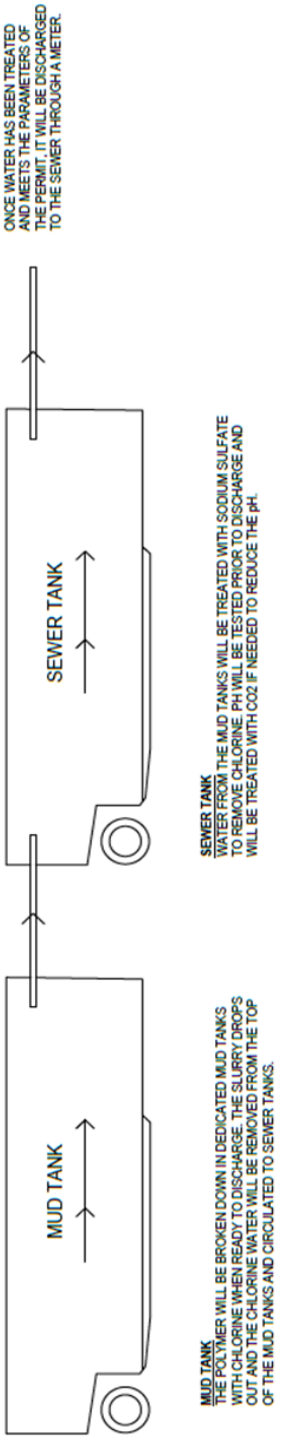

Figure 3 Polymer slurry treatment process diagram

Appendix E - Response to Comments

Ecology did not receive any comments for this permit during the public notice period.