FACT SHEET FOR PACIFIC SHELLFISH – SOUTH BEND
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
(NPDES) PERMIT WA0002186

Purpose of this Fact Sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed National Pollutant Discharge Elimination System (NPDES) permit for Pacific Shellfish – South Bend, LLC.

Ecology makes the draft permit and fact sheet available for public review and comment at least 30 days before issuing the final permit. Copies of the fact sheet and draft permit for Pacific Shellfish – South Bend, NPDES Permit WA0002186, are available for public review and comment. For more details on preparing and filing comments about these documents, please see **Appendix A - Public Involvement** Information.

Pacific Shellfish – South Bend reviewed the draft permit and fact sheet for factual accuracy. Ecology corrected any errors or omissions regarding the facility's location, history, discharges, or receiving water prior to publishing this draft fact sheet for public notice.

After the public comment period closes, Ecology will summarize substantive comments and provide responses to them. Ecology will include the summary and responses to comments in this fact sheet as **Appendix E** - **Response to Comments**, and publish it when issuing the final NPDES 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 previous permit was issued to Coast Seafoods in June of 2011. In October of 2011, Coast Seafoods was purchased by the Pacific Shellfish Company, which is a subsidiary of the Pacific Seafood Group. The name of the facility under new ownership was changed to Pacific Shellfish – South Bend. This facility still processes oysters in Willapa Bay located in South Bend, Washington. This facility is a member of the Total Maximum Daily Load (TMDL) for Dissolved Oxygen for the Willapa River.

The proposed permit includes the same monitoring requirements and effluent limits as the existing permit, including the TMDL for Dissolved Oxygen.

TABLE OF CONTENTS

I. INTRODUCTION

The Federal Clean Water Act [(FCWA) 1972 and later amendments in 1977, 1981, and 1987] established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), administered by the federal Environmental Protection Agency (EPA). The EPA authorized the state of Washington to manage the NPDES permit program in our state. Our state legislature accepted the delegation and assigned the power and duty for conducting NPDES permitting and enforcement to the Department of Ecology (Ecology). The Legislature defined Ecology's authority and obligations for the wastewater discharge permit program in Revised Code of Washington (RCW).

The following regulations apply to industrial NPDES permits:

- Procedures Ecology Follows for Issuing NPDES Permits [chapter 173-220 Washington Administrative Code (WAC)]
- Water Quality Criteria for Surface Waters (chapter 173-201A WAC)
- Water Quality Criteria for Ground Waters (chapter 173-200 WAC)
- Whole Effluent Toxicity Testing and Limits (chapter 173-205 WAC)
- Sediment Management Standards (chapter 173-204 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 an NPDES permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the NPDES permit program and in response to a complete and accepted permit application, Ecology must prepare a draft permit and accompanying fact sheet, and make them available for public review before final issuance. Ecology must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of 30 days (WAC 173-220-050). (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 NPDES 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 — Facility Information

Applicant:	Pacific Shellfish – South Bend, LLC.
Facility Name and Address	Pacific Shellfish – South Bend, LLC 1200 Robert Bush Drive West South Bend, WA 98586
Contact at Facility	Name: Chris Jones Telephone #: 360-774-6315
Responsible Official	Name: Amy Wentworth Title: Director of Environmental, Health, & Safety Address: 1200 Robert Bush Drive West South Bend, WA 98586 Telephone #: (360) 905-4276
Industry Type	Seafood Processing
Categorical Industry	40 CFR Part 408 Subpart Y
Type of Treatment	Screening and Chemical Treatment
Fee Category	Seafood Processing (>100,000 GPD)
SIC Codes	2092
NAIC Codes	311710
Facility Location (NAD83/WGS84 Reference Datum)	Latitude: 46.66729 Longitude: -123.81163
Discharge Waterbody Name and Location (NAD83/WGS84 Reference Datum)	Willapa River Latitude: 46.667564 Longitude: -123.812433

Table 2 — Permit Status

Renewal Date of Previous Permit	June 21, 2011
Application for Permit Renewal Submittal Date	March 20, 2015 June 6, 2018
Date of Ecology Acceptance of Application	August 26, 2015

Table 3 — Inspection Status

Date of Last Non-sampling Inspection Date	April 23, 2021

Figure 1 — Facility Location Map

A. Facility Description

History

Pacific Shellfish Co., which is a subsidiary of Pacific Seafood Group purchased Coast Seafoods in October of 2011. The name of the purchased facility is Pacific Shellfish – South Bend. Before the acquisition, Coast Seafoods had been in operation at this site since 1940. The first NPDES permit for this facility was issued on December 19, 1974. The previous permit was issued on June 21, 2011, and this permit was reauthorized on June 1, 2018.

Pacific Shellfish – South Bend submitted an Engineering Report which addressed improvements in both the stormwater and the wastewater system in 2016. An additional Engineering Report with more details was submitted to Ecology in 2017. The Engineering Report was approved by Ecology in June of 2017. The upgrades covered in the Engineering Report were completed in September of 2017. More details about the Engineering Report and the upgrades are mentioned in the Wastewater Treatment Processes section below.

Cooling Water Intakes

Clean Water Act (CWA) § 316(b) requires the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact. Since July 2013, Ecology has required a supplemental application for all applicants using EPA Form 2-C. Pacific Shellfish – South Bend selected "No" on this form when asked if a cooling water intake is associated with the facility.

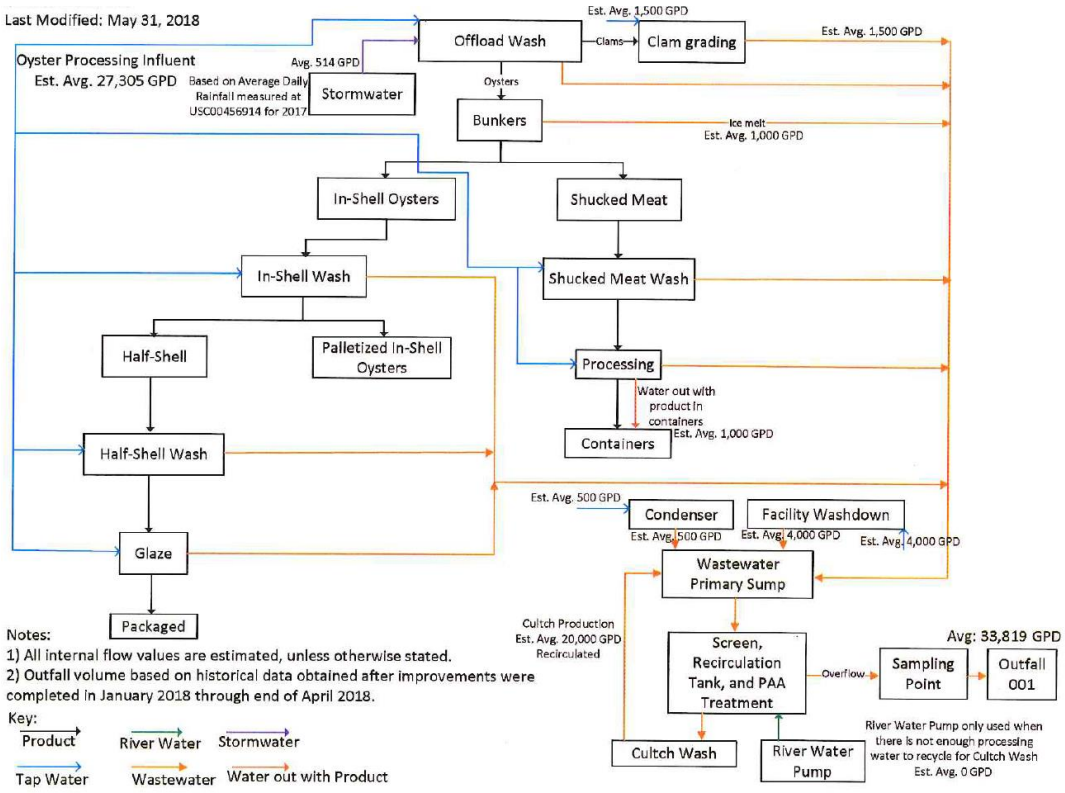
Industrial Processes

Oysters are brought into the Pacific Shellfish – South Bend facility from Quilcene, Washington. Manila clams are also handled at this facility but infrequently and in small amounts. The manila clams are only weighed and packaged at the facility. The oysters are washed as they are unloaded at the facility. The washed oysters are then separated into two types – in-shell oysters and shucked oysters.

The in-shell oysters are then separated into two types – half-shell oysters and palletized in-shell oysters. The palletized in-shell oysters are shipped out of the facility. The half-shell oysters are again washed, glazed, then packaged for shipping. The shucked oysters are washed again, processed, then placed into containers for shipping.

The below figure shows the process flow diagram of the facility.

Figure 2 : Process Flow Diagram



The orange lines in the process flow diagram are the processes that generate wastewater. The permit application divides up the processes that generate wastewater into four operations and they are clam grading, cultch production, oyster processing, and facility wash-down.

The below table summarizes the categories and the wastewater flows that are typical for this facility. The wastewater generated from the cultch production is recirculated in the oyster processing process. These flows values are from the permit renewal application.

Figure 3 : Flow at the Facility

Category	Process	Flow
Clam Grading	Clam Grading	1,500 GPD
Cultch Production (Recirculated)	Empty Oyster Shells Wash	20,000 GPD

Category	Process	Flow
Oyster Processing	Offload Wash	27,305 GPD
	In-Shell Wash	
	Half-Shell Wash	
	Glaze	
	Shucked Meat Wash	
	Processing	
	Containers	
Wash-down	Facility Wash-down	4,000 GPD
Total Flow without recirculation		32,805 GPD

The sum of the flows without the cultch production (recirculated flow) is 32,805 Gallons per Day (GPD). There are variations in the amount of oysters processed throughout the year. Roughly 12,000 oysters per day are processed between January and October, and 25,000 oysters per day are processed in November and December. Due to the production variations, the permit renewal application lists 33,819 GPD as the long-term average monthly flow and 62,242 GPD as the maximum daily flow.

Pacific Shellfish – South Bend typically operates four to five days per week. In November and December, this facility typically operates seven days a week for 24 hours per day to meet seasonal demands.

Wastewater Treatment Processes

The wastewater treatment system at this facility is designed to remove solids, treat for Fecal Coliform, and maintain discharge to the Willapa River to within permit limits.

Between July of 2011 and May of 2016, Pacific Shellfish – South Bend had a significant number of permit limit exceedances for Fecal Coliform. The facility also had exceedances for the flow limits. These exceedances led to an Engineering Report being required to be submitted to address the Fecal Coliform and flow issues.

The facility hired SLR International Corporation to prepare an Engineering Report to address the Fecal Coliform and the Flow issues. The Engineering Report was submitted to Ecology in December of 2016. An addendum Engineering Report was submitted in 2017, which led to the approval of the wastewater improvements included in the Engineering Report by Ecology in 2017. The upgrades were completed in September of 2017.

The purpose of the Engineering Report was to recycle the wastewater from the shell washing operation to reduce the flow leaving the facility via the outfall. Reusing this wastewater also allows continuous disinfection of Fecal Coliform. The shell washing operation represents the largest portion of wastewater from the facility and this source

is suspected to be the main source of Fecal Coliform. Therefore, reusing the shell washing operations wastewater allows for disinfection to reduce Fecal Coliform and to reduce the flow leaving the facility. The Engineering Report also included installing a flow meter at the discharge line to more accurately measure the flow leaving the facility.

The design criteria for the upgraded wastewater treatment system at this facility were:

- Preventing unnecessary introduction of bird droppings into wastewater collection streams to reduce Fecal Coliform concentrations
- Limiting long term ponding and/or contact of wastewater with solids on unpaved surfaces
- Capturing precipitation falling on the shell conveyor
- Treating wastewater to meet the permit limits for Fecal Coliform
- Providing a means of recording volumes discharged to reliably report maximum daily Flow

The proposed upgrades covered below were completed in September of 2017.

1. Paving of the area between the shell washer and the treatment sump.
2. Relocation of the spray bars providing preliminary cleaning of incoming oyster shells closer to the main building and the construction of a new elevated tank to collect wastewater and solids from the cleaned shells. Water in the tank will be transferred to the new collection sump through the shell conveyor trough.
3. Construction of a trough beneath the shell conveyor to transport water and solids from the conveyor to the new collection sump. Wastewater collected from the spray bars will be used to assist in clearing solids from the trough.
4. Construction of a new collection sump within the paved area for wastewater from the building, precipitation on the paved area, and wastewater from the new spray bar collection tank and conveyor trough. Water in the sump will be pumped to a new recycle tank where the water will be treated and used for the shell washing operation.
5. Construction of a pipeline to transfer wastewater from the shell washer directly to the recycle tank.
6. Installation of a hydro-sieve screen and new recycle tank.
7. Disinfection to remove Fecal Coliform in the recycle tank.

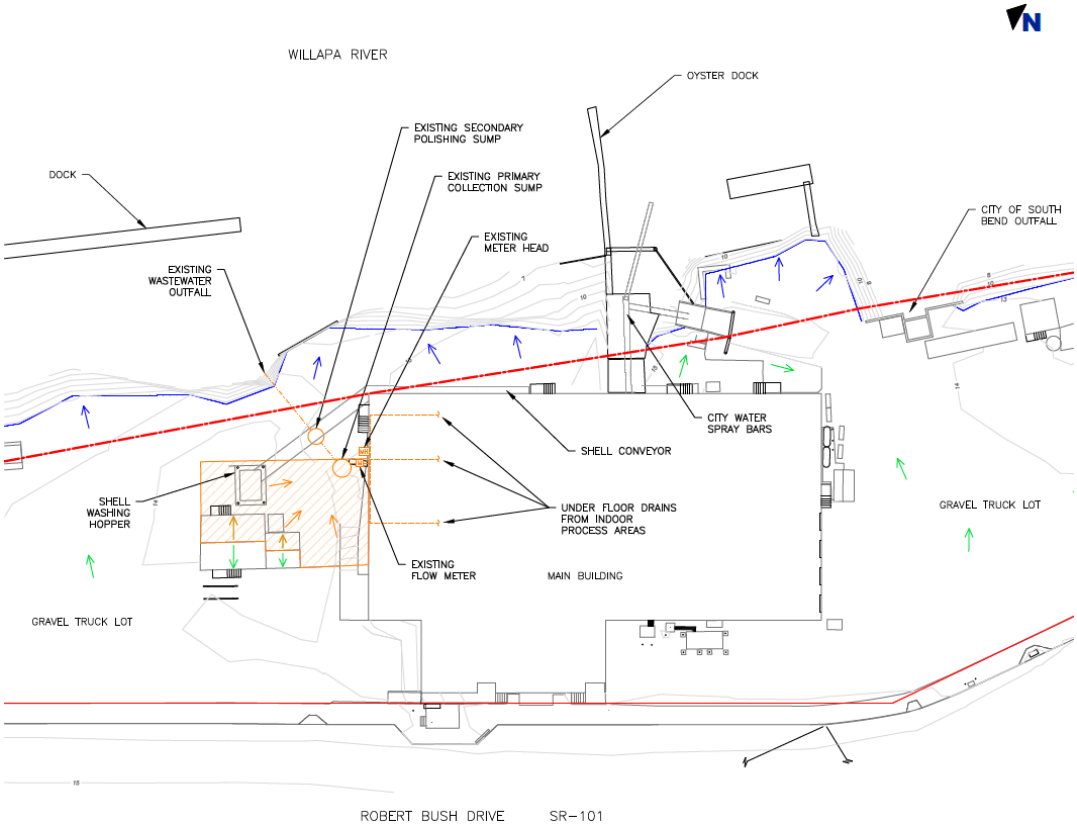
8. Installation of equipment to recirculate water from the recycle tank to the shell wash operation.

9. Construction of an overflow line from the recycle tank that directs excess wastewater to the discharge outfall.

10. Installation of a new auto sampler and data logging flow meter on the discharge line.

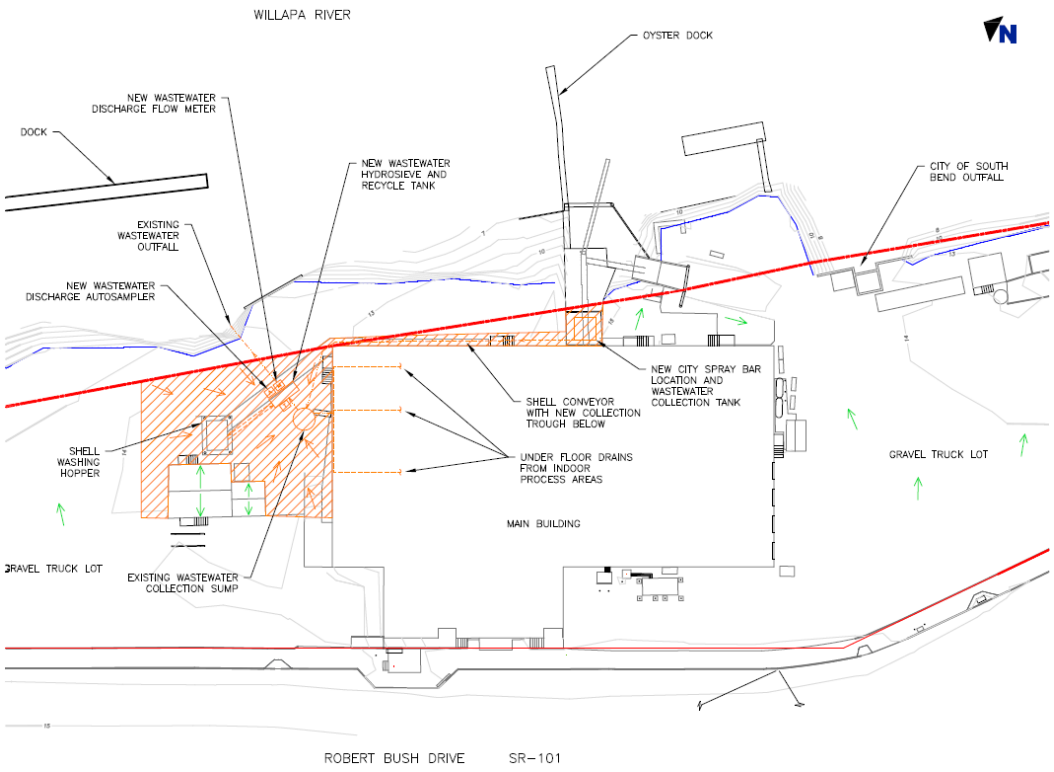
The previous site plan of the facility prior to the upgrades being made is below.

Figure 4 : Site Plan of the Facility Before the Upgrades were Made



The Site Plan after the upgrades were made is below.

Figure 5 : Site Plan on the Facility After the Upgrades Were Made



The major components of the treatment system include a primary settling sump and pumps, hydro-sieve, recycle/treatment tank and pumps, disinfectant treatment unit, auto sampler, discharge flow meter, data logger, outfall, and river make-up water system.

Each component is briefly described below.

Primary Settling Sump and Pump

Process wastewater in the facility drains through pipes below the main building into the collection sump. This sump also collects incidental runoff from the spray bar and shell conveyer trough and the paved area surrounding the shell washing hopper.

The new collection sump is constructed within a paved area to better capture wastewater from the building, rain on the paved area, rain falling on the conveyors, and wastewater from the spray bars used to clean the incoming oysters. The new design also allows regular removal of solids that accumulate in the sump. The wastewater in the sump is pumped to the hydro-sieve using a submersible trash pump.

The pump has a Variable Frequency Drive (VFD). The pump activates as the level in the sump reaches an activation level. The pump speed is controlled off the level sensor in the sump. The pump stops when the sump level meets its set point value.

Hydro-Sieve

The hydro-sieve is used for solids removal (shells and sand) in the wastewater. The solids are screened out into a solids collection bin. The wastewater that passes through the screen is directed to the recycle/treatment tank.

Recycle/Treatment Tank and Pumps

The wastewater in this tank is used for accumulation, treatment, and storage, as needed, prior to either reuse in the shell wash operation via the tank pumps or discharge to the Willapa River through an overflow.

Wastewater in the tank is treated using peracetic acid. The pump out of this tank pumps the wastewater to be reused for the shell wash operation. The pump also is controlled by a VFD which is controlled off the tank level. The residual peracetic acid is introduced to the shell wash system and the treatment system if there is peracetic acid leftover in the tank.

The peracetic acid treated wastewater is discharged to the river as the tank level rises to or above the level of the overflow pipe. After the wastewater overflow and prior to the wastewater reaching the outfall, the wastewater is sampled using the auto sampler and measured via the meter head and data logger.

Disinfectant System

The wastewater in the recycle/treatment tank is treated using peracetic acid injection to reduce Fecal Coliform. The disinfectant system consists of a chemical metering pump, a bulk disinfectant storage vessel, and monitoring equipment. The monitoring equipment consists of a manual and an automated sampling port for monitoring of the previously treated wastewater returning to the tank to determine peracetic acid dosing requirements.

Auto Sampler, Flow Meter, and Data Logger

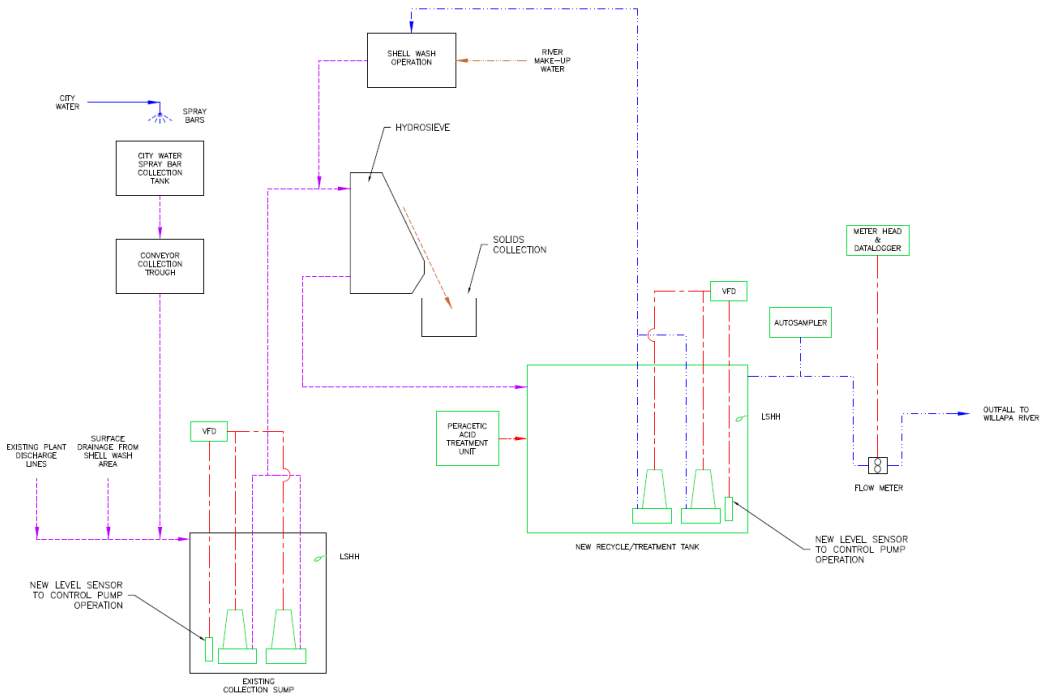
The overflow line from the recycle tank is connected to the outfall. The overflow line is equipped with a totalizing flow meter with a data logging function to measure the total flow discharged. The discharge line also has a sampling point to allow the collection of wastewater discharge samples.

River Make-Up Water System

The river make-up water system is used to draw water from the Willapa River in case the peracetic acid treated wastewater is not available. This system also prevents the discharge of wastewater through the existing intake during normal operations.

The process flow diagram of the treatment system after the upgrades were made is below.

Figure 6 : Process Flow Diagram of the Treatment System After the Upgrades were Made



Solid Wastes

The oyster shells that are cleaned then shucked are hauled away to a propagation site in Quilcene, Washington. All other waste materials are disposed of in a permitted solid waste landfill.

Discharge Outfall

The treated and disinfected effluent flows into the Willapa River through outfall 001. The wastewater at this facility is screened using a hydro-sieve then disinfected using peracetic acid in the recycle/treatment tank before leaving the facility via outfall 001. This flow leaves the recycle/treatment tank via an overflow of the tank. This overflow line has a totalizing flow meter and a sampling point. The outfall is on the northeast end of the property.

B. Description of the Receiving Water

Pacific Shellfish – South Bend discharges to the Willapa River. Other nearby point source outfalls include South Bend Products, the Willapa Regional wastewater treatment plant, and East Point Seafoods. East Point Seafoods has ceased operations in early 2020 but could be in operation in the future.

C. Wastewater Characterization

Pacific Shellfish – South Bend reported the concentration of pollutants in the discharge in the permit application and in discharge monitoring reports. The tabulated data represents the quality of the wastewater effluent discharged from the previous permit effective date of July 1, 2011, through November 30, 2020. The wastewater effluent is characterized as follows:

Table 4 — Wastewater Characterization

Parameter	Units	Average Value	Maximum Value
Flow	GPD	27,654	123,303
Temperature	°C	11.3	16.9
Total Suspended Solids (TSS)	mg/L	217.1	760
TSS	lbs/day	75.3	288.5
Oil & Grease	mg/L	12.2	102
Oil & Grease	lbs/day	7.0	228
Fecal Coliform	CFU	6,998	280,000
Production	lbs/day	11,746	28,046
$CBOD_5$	mg/L	158.1	690
Ammonia	mg/L	2.4	10.26
Equivalent Oxygen Demand (EOD)	µg/L	4.0	13.4
Parameter	**Units**	**Minimum Value**	**Maximum Value**
pH	Standard Units	6.1	8.9

D. Summary of Compliance with Previous Permit Issued

The previous permit placed effluent limits on Flow, Temperature, Total Suspended Solids (TSS), Oil and Grease, Fecal Coliform, pH, and Equivalent Oxygen Demand (EOD).

Pacific Shellfish – South Bend has not consistently complied with the effluent limits and permit conditions throughout the duration of the permit issued on the previous permit effective date of July 1, 2011, through November 30, 2020. Ecology assessed compliance based on its review of the facility's Discharge Monitoring Reports (DMRs) and on inspections.

Upgrades on the wastewater treatment system to address Fecal Coliform was completed in 2017. Fecal Coliform permit limit exceedances appear to have reduced in quantity. However, there have been various violations for TSS and Oil & Grease since then.

The following table summarizes the violations and permit triggers that occurred during the permit term.

Table 5 — Violations

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jul-2011	Fecal Coliform	CFU	870	400	Numeric effluent violation
Aug-2011	Fecal Coliform	CFU	5,500	400	Numeric effluent violation
Sep-2011					DMR Late Submittal
Sep-2011	Fecal Coliform				Analysis not Conducted
Sep-2011	Oil & Grease				Analysis not Conducted
Sep-2011	TSS				Analysis not Conducted
Oct-2011	Fecal Coliform	CFU	3,800	400	Numeric effluent violation
Oct-2011	TSS	lbs/day	337	36	Avg monthly limit exceedance
Oct-2011	TSS	lbs/day	421	45	Daily max limit exceedance
Oct-2011	Oil & Grease	lbs/day	15.9	1.7	Avg monthly limit exceedance
Oct-2011	Oil & Grease	lbs/day	20.6	2.2	Daily max limit exceedance
Nov-2011	TSS	lbs/day	1032	36	Avg monthly limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Nov-2011	TSS	lbs/day	1291	45	Daily max limit exceedance
Nov-2011	Oil & Grease	lbs/day	48.8	1.7	Avg monthly limit exceedance
Nov-2011	Oil & Grease	lbs/day	63.1	2.2	Daily max limit exceedance
Mar-2012	Fecal Coliform	CFU	750	400	Numeric effluent violation
Apr-2012					DMR Late Submittal
Apr-2012	Oil & Grease				Analysis not Conducted
Apr-2012	TSS				Analysis not Conducted
Jun-2012	TSS	lbs/day	138	45	Daily max limit exceedance
Jun-2012	TSS	lbs/day	138	36	Avg monthly limit exceedance
Aug-2012	TSS	lbs/day	67	36	Avg monthly limit exceedance
Aug-2012	TSS	lbs/day	67	45	Daily max limit exceedance
Aug-2012					DMR Late Submittal
Sep-2012	Fecal Coliform	CFU	1,600	400	Numeric effluent violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Sep-2012	TSS	lbs/day	37	36	Avg monthly limit exceedance
Oct-2012	TSS	lbs/day	52	36	Avg monthly limit exceedance
Oct-2012	TSS	lbs/day	52	45	Daily max limit exceedance
Dec-2012					DMR Late Submittal
Dec-2012	Oil & Grease				Analysis not Conducted
Dec-2012	TSS				Analysis not Conducted
Feb-2013	TSS	lbs/day	70	36	Avg monthly limit exceedance
Feb-2013	TSS	lbs/day	70	45	Daily max limit exceedance
Mar-2013	Fecal Coliform	CFU	1,400	400	Numeric effluent violation
Apr-2013	Fecal Coliform	CFU	5,600	400	Numeric effluent violation
May-2013	Fecal Coliform	CFU	1,400	400	Numeric effluent violation
Jun-2013	Fecal Coliform	CFU	910	400	Numeric effluent violation
Jul-2013	Temperature	°C	18.3	18.0	Numeric effluent violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jul-2013	Fecal Coliform	CFU	490	400	Numeric effluent violation
Sep-2013	Fecal Coliform	CFU	34,000	400	Numeric effluent violation
Sep-2013	TSS	lbs/day	113	36	Avg monthly limit exceedance
Sep-2013	TSS	lbs/day	113	45	Daily max limit exceedance
Oct-2013	TSS	lbs/day	71	45	Daily max limit exceedance
Oct-2013	TSS	lbs/day	71	36	Avg monthly limit exceedance
Nov-2013	Oil & Grease				Analysis not Conducted
Nov-2013	TSS				Analysis not Conducted
Dec-2013	TSS	lbs/day	98	45	Daily max limit exceedance
Dec-2013	TSS	lbs/day	98	36	Avg monthly limit exceedance
Jan-2014	TSS	lbs/day	65	36	Avg monthly limit exceedance
Jan-2014	TSS	lbs/day	65	45	Daily max limit exceedance
Feb-2014	TSS	lbs/day	71	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Feb-2014	TSS	lbs/day	71	36	Avg monthly limit exceedance
Mar-2014	TSS	lbs/day	73	36	Avg monthly limit exceedance
Mar-2014	TSS	lbs/day	73	45	Daily max limit exceedance
Apr-2014	TSS	lbs/day	171	36	Avg monthly limit exceedance
Apr-2014	TSS	lbs/day	171	45	Daily max limit exceedance
May-2014	Fecal Coliform	CFU	24,000	400	Numeric effluent violation
May-2014	TSS	lbs/day	43	36	Avg monthly limit exceedance
Jun-2014	TSS	lbs/day	73	36	Avg monthly limit exceedance
Jun-2014	TSS	lbs/day	73	45	Daily max limit exceedance
Jul-2014	Fecal Coliform	CFU	280,000	400	Numeric effluent violation
Jul-2014	TSS	lbs/day	101	36	Avg monthly limit exceedance
Jul-2014	TSS	lbs/day	101	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jul-2014	Oil & Grease	lbs/day	12.2	1.7	Avg monthly limit exceedance
Jul-2014	Oil & Grease	lbs/day	12.2	2.2	Daily max limit exceedance
Aug-2014	TSS	lbs/day	180	45	Daily max limit exceedance
Aug-2014	TSS	lbs/day	180	36	Avg monthly limit exceedance
Aug-2014	Oil & Grease	lbs/day	228	1.7	Avg monthly limit exceedance
Aug-2014	Oil & Grease	lbs/day	228	2.2	Daily max limit exceedance
Sep-2014	Fecal Coliform	CFU	440	400	Numeric effluent violation
Sep-2014	Oil & Grease				Analysis not Conducted
Sep-2014	TSS				Analysis not Conducted
Oct-2014	Flow	GPD	191,574	175,000	Numeric effluent violation
Oct-2014	TSS	lbs/day	753	45	Daily max limit exceedance
Oct-2014	TSS	lbs/day	753	36	Avg monthly limit exceedance
Nov-2014	Flow	GPD	195,300	175,000	Numeric effluent violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Nov-2014	TSS	lbs/day	575	45	Daily max limit exceedance
Nov-2014	TSS	lbs/day	575	36	Avg monthly limit exceedance
Nov-2014	Oil & Grease	lbs/day	7.1	2.2	Daily max limit exceedance
Nov-2014	Oil & Grease	lbs/day	7.1	1.7	Avg monthly limit exceedance
Dec-2014	Flow	GPD	185,760	175,000	Numeric effluent violation
Dec-2014	Fecal Coliform	CFU	22,000	400	Numeric effluent violation
Dec-2014	TSS	lbs/day	589	45	Daily max limit exceedance
Dec-2014	TSS	lbs/day	589	36	Avg monthly limit exceedance
Dec-2014	Oil & Grease	lbs/day	5.5	1.7	Avg monthly limit exceedance
Dec-2014	Oil & Grease	lbs/day	5.5	2.2	Daily max limit exceedance
Jan-2015					DMR Late Submittal
Jan-2015	TSS				Analysis not Conducted
Feb-2015	TSS	lbs/day	280	36	Avg monthly limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Feb-2015	TSS	lbs/day	280	45	Daily max limit exceedance
Feb-2015	Oil & Grease	lbs/day	6.2	2.2	Daily max limit exceedance
Feb-2015	Oil & Grease	lbs/day	6.2	1.7	Avg monthly limit exceedance
Mar-2015	TSS	lbs/day	245	45	Daily max limit exceedance
Mar-2015	TSS	lbs/day	245	36	Avg monthly limit exceedance
Mar-2015	Oil & Grease	lbs/day	5	1.7	Avg monthly limit exceedance
Mar-2015	Oil & Grease	lbs/day	5	2.2	Daily max limit exceedance
Apr-2015	TSS	lbs/day	184	45	Daily max limit exceedance
Apr-2015	TSS	lbs/day	184	36	Avg monthly limit exceedance
May-2015	Fecal Coliform	CFU	22,000	400	Numeric effluent violation
May-2015	TSS	lbs/day	520	36	Avg monthly limit exceedance
May-2015	TSS	lbs/day	520	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
May-2015	Oil & Grease	lbs/day	5.4	1.7	Avg monthly limit exceedance
May-2015	Oil & Grease	lbs/day	5.4	2.2	Daily max limit exceedance
Jun-2015	Fecal Coliform	CFU	1,800	400	Numeric effluent violation
Jun-2015	TSS	lbs/day	128	45	Daily max limit exceedance
Jun-2015	TSS	lbs/day	128	36	Avg monthly limit exceedance
Jun-2015	Oil & Grease	lbs/day	2.6	1.7	Avg monthly limit exceedance
Jun-2015	Oil & Grease	lbs/day	2.6	2.2	Daily max limit exceedance
Jul-2015	Oil & Grease	lbs/day	7.1	1.7	Avg monthly limit exceedance
Jul-2015	Oil & Grease	lbs/day	7.1	2.2	Daily max limit exceedance
Aug-2015	Fecal Coliform	CFU	82,000	400	Numeric effluent violation
Aug-2015	TSS	lbs/day	82	36	Avg monthly limit exceedance
Aug-2015	TSS	lbs/day	82	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Aug-2015	Oil & Grease	lbs/day	17.9	1.7	Avg monthly limit exceedance
Aug-2015	Oil & Grease	lbs/day	17.9	2.2	Daily max limit exceedance
Sep-2015	Fecal Coliform	CFU	8,900	400	Numeric effluent violation
Sep-2015	TSS	lbs/day	187	36	Avg monthly limit exceedance
Sep-2015	TSS	lbs/day	187	45	Daily max limit exceedance
Oct-2015	TSS	lbs/day	72	36	Avg monthly limit exceedance
Oct-2015	TSS	lbs/day	72	45	Daily max limit exceedance
Nov-2015	Fecal Coliform				Analysis not Conducted
Nov-2015	Oil & Grease				Analysis not Conducted
Nov-2015	TSS				Analysis not Conducted
Dec-2015	Flow	GPD	198,754	175,000	Numeric effluent violation
Dec-2015	Fecal Coliform	CFU	460	400	Numeric effluent violation
Dec-2015	TSS	lbs/day	650	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Dec-2015	TSS	lbs/day	650	36	Avg monthly limit exceedance
Dec-2015	Oil & Grease	lbs/day	9.8	1.7	Avg monthly limit exceedance
Dec-2015	Oil & Grease	lbs/day	9.8	2.2	Daily max limit exceedance
Jan-2016	Fecal Coliform	CFU	1,000	400	Numeric effluent violation
Jan-2016	TSS	lbs/day	271	36	Avg monthly limit exceedance
Jan-2016	TSS	lbs/day	271	45	Daily max limit exceedance
Jan-2016	Oil & Grease	lbs/day	4.4	2.2	Daily max limit exceedance
Jan-2016	Oil & Grease	lbs/day	4.4	1.7	Avg monthly limit exceedance
Feb-2016	TSS	lbs/day	160	45	Daily max limit exceedance
Feb-2016	TSS	lbs/day	160	36	Avg monthly limit exceedance
Mar-2016	Fecal Coliform	CFU	7,100	400	Numeric effluent violation
Mar-2016	Oil & Grease	lbs/day	3.1	1.7	Avg monthly limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Mar-2016	Oil & Grease	lbs/day	3.1	2.2	Daily max limit exceedance
Apr-2016	Fecal Coliform	CFU	1,500	400	Numeric effluent violation
Apr-2016	TSS	lbs/day	195	45	Daily max limit exceedance
Apr-2016	TSS	lbs/day	195	36	Avg monthly limit exceedance
Apr-2016	Oil & Grease	lbs/day	6.2	1.7	Avg monthly limit exceedance
Apr-2016	Oil & Grease	lbs/day	6.2	2.2	Daily max limit exceedance
May-2016	Fecal Coliform	CFU	38,000	400	Numeric effluent violation
May-2016	TSS	lbs/day	222	36	Avg monthly limit exceedance
May-2016	TSS	lbs/day	222	45	Daily max limit exceedance
May-2016	Oil & Grease	lbs/day	1.9	1.7	Avg monthly limit exceedance
Jun-2016					DMR Late Submittal
Jun-2016	Fecal Coliform				Analysis not Conducted
Jun-2016	Oil & Grease				Analysis not Conducted

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jun-2016	TSS				Analysis not Conducted
Jul-2016	Temperature	°C	20.6	18.0	Numeric effluent violation
Jul-2016	TSS	lbs/day	179	36	Avg monthly limit exceedance
Jul-2016	TSS	lbs/day	179	45	Daily max limit exceedance
Jul-2016	Oil & Grease	lbs/day	7.5	1.7	Avg monthly limit exceedance
Jul-2016	Oil & Grease	lbs/day	7.5	2.2	Daily max limit exceedance
Aug-2016	Temperature	°C	19.4	18.0	Numeric effluent violation
Aug-2016	Fecal Coliform	CFU	9,000	400	Numeric effluent violation
Aug-2016	TSS	lbs/day	553	36	Avg monthly limit exceedance
Aug-2016	TSS	lbs/day	553	45	Daily max limit exceedance
Aug-2016	Oil & Grease	lbs/day	6.2	1.7	Avg monthly limit exceedance
Aug-2016	Oil & Grease	lbs/day	6.2	2.2	Daily max limit exceedance
Sep-2016	Fecal Coliform	CFU	1,400	400	Numeric effluent violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Sep-2016	TSS	lbs/day	151	36	Avg monthly limit exceedance
Sep-2016	TSS	lbs/day	151	45	Daily max limit exceedance
Sep-2016	Oil & Grease	lbs/day	47	1.7	Avg monthly limit exceedance
Sep-2016	Oil & Grease	lbs/day	47	2.2	Daily max limit exceedance
Oct-2016	Fecal Coliform	CFU	1,000	400	Numeric effluent violation
Oct-2016	TSS	lbs/day	248	45	Daily max limit exceedance
Oct-2016	TSS	lbs/day	248	36	Avg monthly limit exceedance
Oct-2016	Oil & Grease	lbs/day	4	1.7	Avg monthly limit exceedance
Oct-2016	Oil & Grease	lbs/day	4	2.2	Daily max limit exceedance
Nov-2016	Fecal Coliform	CFU	11,000	400	Numeric effluent violation
Nov-2016	TSS	lbs/day	369	36	Avg monthly limit exceedance
Nov-2016	TSS	lbs/day	369	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Nov-2016	Oil & Grease	lbs/day	6.1	1.7	Avg monthly limit exceedance
Nov-2016	Oil & Grease	lbs/day	6.1	2.2	Daily max limit exceedance
Dec-2016	TSS	lbs/day	380	45	Daily max limit exceedance
Dec-2016	TSS	lbs/day	380	36	Avg monthly limit exceedance
Dec-2016	Oil & Grease	lbs/day	9.9	1.7	Avg monthly limit exceedance
Dec-2016	Oil & Grease	lbs/day	9.9	2.2	Daily max limit exceedance
Jan-2017	Fecal Coliform	CFU	820	400	Numeric effluent violation
Jan-2017	TSS	lbs/day	531	36	Avg monthly limit exceedance
Jan-2017	TSS	lbs/day	531	45	Daily max limit exceedance
Jan-2017	Oil & Grease	lbs/day	5.4	1.7	Avg monthly limit exceedance
Jan-2017	Oil & Grease	lbs/day	5.4	2.2	Daily max limit exceedance
Feb-2017	TSS	lbs/day	253	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Feb-2017	TSS	lbs/day	253	36	Avg monthly limit exceedance
Feb-2017	Oil & Grease	lbs/day	4.9	1.7	Avg monthly limit exceedance
Feb-2017	Oil & Grease	lbs/day	4.9	2.2	Daily max limit exceedance
Mar-2017	Flow	GPD	268,065	175,000	Numeric effluent violation
Mar-2017	TSS	lbs/day	985	45	Daily max limit exceedance
Mar-2017	TSS	lbs/day	985	36	Avg monthly limit exceedance
Mar-2017	Oil & Grease	lbs/day	19	1.7	Avg monthly limit exceedance
Mar-2017	Oil & Grease	lbs/day	19	2.2	Daily max limit exceedance
Apr-2017					Analysis not Conducted
May-2017					Analysis not Conducted
Jun-2017					DMR Late Submittal
Jun-2017	Fecal Coliform				Analysis not Conducted
Jun-2017	Oil & Grease				Analysis not Conducted
Jun-2017	TSS				Analysis not Conducted

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jul-2017	TSS	lbs/day	335	36	Avg monthly limit exceedance
Jul-2017	TSS	lbs/day	335	45	Daily max limit exceedance
Jul-2017	Oil & Grease	lbs/day	3.7	2.2	Daily max limit exceedance
Jul-2017	Oil & Grease	lbs/day	3.7	1.7	Avg monthly limit exceedance
Aug-2017	Fecal Coliform	CFU	3,500	400	Numeric effluent violation
Aug-2017	TSS	lbs/day	239	45	Daily max limit exceedance
Aug-2017	TSS	lbs/day	239	36	Avg monthly limit exceedance
Aug-2017	Oil & Grease	lbs/day	4.1	1.7	Avg monthly limit exceedance
Aug-2017	Oil & Grease	lbs/day	4.1	2.2	Daily max limit exceedance
Sep-2017	Fecal Coliform	CFU	150,000	400	Numeric effluent violation
Sep-2017	TSS	lbs/day	476	45	Daily max limit exceedance
Sep-2017	TSS	lbs/day	476	36	Avg monthly limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Sep-2017	Oil & Grease	lbs/day	3.5	2.2	Daily max limit exceedance
Sep-2017	Oil & Grease	lbs/day	3.5	1.7	Avg monthly limit exceedance
Oct-2017	Fecal Coliform	CFU	1,300	400	Numeric effluent violation
Oct-2017	TSS	lbs/day	96.2401	36	Daily max limit exceedance
Oct-2017	TSS	lbs/day	96.2401	45	Daily max limit exceedance
Oct-2017	TSS	lbs/day	96.2401	36	Avg monthly limit exceedance
Oct-2017	Flow				Frequency of Sampling Violation
Nov-2017	Fecal Coliform	CFU	3,400	400	Numeric effluent violation
Nov-2017	TSS	lbs/day	87.12799	36	Daily max limit exceedance
Nov-2017	TSS	lbs/day	87.128	45	Daily max limit exceedance
Nov-2017	TSS	lbs/day	87.128	36	Avg monthly limit exceedance
Nov-2017					DMR Late Submittal
Nov-2017	Flow				Frequency of Sampling Violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Dec-2017	Fecal Coliform	CFU	900	400	Numeric effluent violation
Dec-2017	TSS	lbs/day	246.5683	36	Daily max limit exceedance
Dec-2017	TSS	lbs/day	246.568	45	Daily max limit exceedance
Dec-2017	TSS	lbs/day	246.568	36	Avg monthly limit exceedance
Dec-2017	Oil & Grease	lbs/day	1.95689	1.7	Avg monthly limit exceedance
Dec-2017	Oil & Grease	lbs/day	1.956891	1.7	Daily max limit exceedance
Dec-2017					DMR Late Submittal
Dec-2017	Flow				Frequency of Sampling Violation
Jan-2018	Fecal Coliform	CFU	1,000	400	Numeric effluent violation
Jan-2018	TSS	lbs/day	174.3944	36	Daily max limit exceedance
Jan-2018	TSS	lbs/day	174.394	45	Daily max limit exceedance
Jan-2018	TSS	lbs/day	104.561	36	Avg monthly limit exceedance
Jan-2018	Flow				Frequency of Sampling Violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Feb-2018	Fecal Coliform	CFU	600	400	Numeric effluent violation
Feb-2018	TSS	lbs/day	99.58694	36	Daily max limit exceedance
Feb-2018	TSS	lbs/day	99.5869	36	Avg monthly limit exceedance
Feb-2018	TSS	lbs/day	99.5869	45	Daily max limit exceedance
Feb-2018	Flow				Frequency of Sampling Violation
Apr-2018	TSS	lbs/day	57.91968	36	Daily max limit exceedance
Apr-2018	TSS	lbs/day	57.9197	36	Avg monthly limit exceedance
Apr-2018	TSS	lbs/day	57.9197	45	Daily max limit exceedance
Jun-2018	TSS	lbs/day	125.6185	36	Daily max limit exceedance
Jun-2018	TSS	lbs/day	125.619	36	Avg monthly limit exceedance
Jun-2018	TSS	lbs/day	125.619	45	Daily max limit exceedance
Jun-2018					DMR Late Submittal
Jun-2018	pH				Frequency of Sampling Violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jun-2018	pH				Analysis not Conducted
Jun-2018	pH				Analysis not Conducted
Jun-2018	Temperature				Frequency of Sampling Violation
Jun-2018	Temperature				Analysis not Conducted
Jul-2018	TSS	lbs/day	223.2717	36	Daily max limit exceedance
Jul-2018	TSS	lbs/day	223.272	36	Avg monthly limit exceedance
Jul-2018	TSS	lbs/day	223.272	45	Daily max limit exceedance
Jul-2018	Oil & Grease	lbs/day	1.89813	1.7	Avg monthly limit exceedance
Jul-2018	Oil & Grease	lbs/day	1.898131	1.7	Daily max limit exceedance
Jul-2018	EOD				Frequency of Sampling Violation
Aug-2018	TSS	lbs/day	229.9838	36	Daily max limit exceedance
Aug-2018	TSS	lbs/day	229.984	36	Avg monthly limit exceedance
Aug-2018	TSS	lbs/day	229.984	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Aug-2018	EOD				Frequency of Sampling Violation
Sep-2018	TSS	lbs/day	41.15898	36	Daily max limit exceedance
Sep-2018	TSS	lbs/day	41.159	36	Avg monthly limit exceedance
Sep-2018	Oil & Grease	lbs/day	65.0886	1.7	Avg monthly limit exceedance
Sep-2018	Oil & Grease	lbs/day	65.08862	1.7	Daily max limit exceedance
Sep-2018	Oil & Grease	lbs/day	65.0886	2.2	Daily max limit exceedance
Sep-2018	Ammonia				Frequency of Sampling Violation
Sep-2018	EOD				Frequency of Sampling Violation
Sep-2018	CBOD5				Frequency of Sampling Violation
Sep-2018	EOD				Frequency of Sampling Violation
Oct-2018	TSS	lbs/day	51.92456	36	Daily max limit exceedance
Oct-2018	TSS	lbs/day	51.9246	45	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Oct-2018	TSS	lbs/day	51.9246	36	Avg monthly limit exceedance
Nov-2018	TSS	lbs/day	140.8107	36	Daily max limit exceedance
Nov-2018	TSS	lbs/day	140.811	36	Avg monthly limit exceedance
Nov-2018	TSS	lbs/day	140.811	45	Daily max limit exceedance
Nov-2018	Oil & Grease	lbs/day	2.1	1.7	Avg monthly limit exceedance
Nov-2018	Oil & Grease	lbs/day	2.1	1.7	Daily max limit exceedance
Dec-2018	TSS	lbs/day	277.711	36	Daily max limit exceedance
Dec-2018	TSS	lbs/day	277.711	45	Daily max limit exceedance
Dec-2018	TSS	lbs/day	277.711	36	Avg monthly limit exceedance
Dec-2018	Oil & Grease	lbs/day	19.6447	1.7	Avg monthly limit exceedance
Dec-2018	Oil & Grease	lbs/day	19.6447	1.7	Daily max limit exceedance
Dec-2018	Oil & Grease	lbs/day	19.6447	2.2	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jan-2019	TSS	lbs/day	174.2961	36	Daily max limit exceedance
Jan-2019	TSS	lbs/day	96.2941	36	Avg monthly limit exceedance
Jan-2019	TSS	lbs/day	174.296	45	Daily max limit exceedance
Jan-2019	Oil & Grease	lbs/day	2.922082	1.7	Daily max limit exceedance
Jan-2019	Oil & Grease	lbs/day	4.892052	1.7	Daily max limit exceedance
Jan-2019	Oil & Grease	lbs/day	3.90707	1.7	Avg monthly limit exceedance
Jan-2019	Oil & Grease	lbs/day	4.89205	2.2	Daily max limit exceedance
Jan-2019					DMR Late Submittal
Feb-2019	TSS	lbs/day	120.1152	36	Daily max limit exceedance
Feb-2019	TSS	lbs/day	120.115	36	Avg monthly limit exceedance
Feb-2019	TSS	lbs/day	120.115	45	Daily max limit exceedance
Feb-2019	Oil & Grease	lbs/day	3.33653	1.7	Avg monthly limit exceedance
Feb-2019	Oil & Grease	lbs/day	3.33653	2.2	Daily max limit exceedance

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Feb-2019	Oil & Grease	lbs/day	3.336535	1.7	Daily max limit exceedance
Feb-2019					DMR Late Submittal
Mar-2019	TSS	lbs/day	288.536	36	Daily max limit exceedance
Mar-2019	TSS	lbs/day	288.536	45	Daily max limit exceedance
Mar-2019	TSS	lbs/day	288.536	36	Avg monthly limit exceedance
Apr-2019	TSS	lbs/day	77.21986	36	Daily max limit exceedance
Apr-2019	TSS	lbs/day	77.2199	36	Avg monthly limit exceedance
Apr-2019	TSS	lbs/day	77.2199	45	Daily max limit exceedance
Jul-2019	Oil & Grease	lbs/day	2.1	1.7	Avg monthly limit exceedance
Jul-2019	Oil & Grease	lbs/day	2.1	1.7	Daily max limit exceedance
Jul-2019	Ammonia				Frequency of Sampling Violation
Jul-2019	EOD				Frequency of Sampling Violation
Jul-2019	CBOD5				Frequency of Sampling Violation

Monitoring Period	Parameter	Unit	Measurement Value	Permit Limit	Violation
Jul-2019	EOD				Frequency of Sampling Violation
Aug-2019	EOD				Frequency of Sampling Violation
Aug-2019	EOD				Frequency of Sampling Violation
Nov-2019	TSS	lbs/day	74.7	45	Daily max limit exceedance
Nov-2019	TSS	lbs/day	74.7	36	Avg monthly limit exceedance
Nov-2019	TSS	lbs/day	74.7	36	Daily max limit exceedance
Nov-2019	Oil & Grease	lbs/day	2.9	1.7	Avg monthly limit exceedance
Nov-2019	Oil & Grease	lbs/day	2.9	2.2	Daily max limit exceedance
Nov-2019	Oil & Grease	lbs/day	2.9	1.7	Daily max limit exceedance
May-2020	Oil & Grease	lbs/day	1.9	1.7	Avg monthly limit exceedance
May-2020	Oil & Grease	lbs/day	1.9	1.7	Daily max limit exceedance

The following table summarizes compliance with report submittal requirements over the permit term.

Table 6 — Permit Submittals

Submittal	Submittal Status	Report Begin Date	Due Date	Received Date
Application for Permit Renewal	Accepted	3/18/15	1/1/15	3/20/15
Application for Permit Renewal	Received	6/1/18	1/1/15	6/6/18
Construction Plans & Specs	Approved	6/28/17	12/31/12	7/5/17
Construction Plans & Specs	Approved	9/12/17	12/31/12	9/18/17
Engineering Report Status Report	-	-	12/31/11	-
Spill Prevention Plan	-	-	1/1/12	-
Engineering Report	Approved	3/21/12	6/30/12	4/10/12
Engineering Report	Not Accepted	6/26/12	6/30/12	6/28/12
Engineering Report	Accepted	9/21/12	6/30/12	9/25/12
Engineering Report	Accepted	11/29/12	6/30/12	12/4/12
Engineering Report	Reviewed	10/13/16	6/30/12	10/13/16
Engineering Report	Approved	12/22/16	6/30/12	12/27/16
Solid Waste Control Plan	Not Accepted	9/18/09	1/1/12	4/10/12
O&M - Operation And Maintenance Manual (Update)	Approved	2/6/12	1/1/12	4/10/12
Response to DMR Warning Letter	Received	12/16/18	-	12/26/18
Response to DMR Warning Letter	Received	3/21/19	-	3/25/19

E. State Environmental Policy Act (SEPA) Compliance

State law exempts the issuance, reissuance or modification of any wastewater discharge permit from the SEPA process as long as the permit contains conditions that are no less stringent than federal and state rules and regulations (RCW 43.21C.0383). The exemption applies only to existing discharges, not to new discharges.

III. PROPOSED PERMIT LIMITS

Federal and state regulations require that effluent limits in an NPDES permit must be either technology- or water quality-based.

- Technology-based limits are based upon the treatment methods available to treat specific pollutants. Technology-based limits are set by the EPA and published as a regulation, or Ecology develops the limit on a case-by-case basis (40 CFR 125.3, and chapter 173-220 WAC).

- Water quality-based limits are calculated so that the effluent will comply with the Surface Water Quality Standards (chapter 173-201A WAC), Ground Water Standards (chapter 173-200 WAC), Sediment Quality Standards (chapter 173-204 WAC), or the Federal Water Quality Criteria Applicable to Washington (40 CFR 131.45).

- Ecology must apply the most stringent of these limits to each parameter of concern. These limits are described below.

The limits in this permit reflect information received in the application and from supporting reports (engineering, hydrogeology, 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, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation.

Ecology does not usually develop limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize 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 [40 CFR 122.42(a)]. Until Ecology modifies the permit to reflect additional discharge of pollutants, a permitted facility could be violating its permit.

A. Technology-Based Effluent Limits

Ecology must ensure that facilities provide all known, available, and reasonable methods of prevention, control, and treatment (AKART) when it issues a permit.

Below is the technology-based effluent limit for Pacific Shellfish – South Bend. These parameters are from 40 CFR Part 408 §408.255

Table 7 — Technology-Based Limits

Parameter	Product	Average Monthly Limit	Maximum Daily Limit
TSS	Hand-Shucked Oysters	36 lbs/1000 lbs product	45 lbs/1000 lbs product
Oil and Grease	Hand-Shucked Oysters	1.7 lbs/1000 lbs product	2.2 lbs/1000 lbs product

Table 8 — Technology-based Limits

Parameter	Daily Minimum	Daily Maximum
pH	6.0 standard units	9.0 standard units

B. Surface Water Quality-Based Effluent Limits

The Washington State surface water quality standards (chapter 173-201A WAC) are designed to protect existing water quality and preserve the beneficial uses of Washington's surface waters. Waste discharge permits must include conditions that ensure the discharge will meet the surface water quality standards (WAC 173-201A-510). Water quality-based effluent limits may be based on an individual waste load allocation or on a waste load allocation developed during a basin wide Total Maximum Daily Load Study (TMDL).

Numerical Criteria for the Protection of Aquatic Life and Recreation

Numerical water quality criteria are listed in the water quality standards for surface waters (chapter 173-201A WAC). They specify the maximum levels of pollutants allowed in receiving water to protect aquatic life and recreation in and on the water. Ecology uses numerical criteria along with chemical and physical data for the wastewater and receiving water to derive the effluent limits in the discharge permit. When surface water quality-based limits are more stringent or potentially more stringent than technology-based limits, the discharge must meet the water quality-based limits.

Numerical Criteria for the Protection of human health

In 1992, U.S. EPA published 91 numeric water quality criteria for the protection of human health that are applicable to dischargers in Washington State in its National Toxics Rule 40 CFR 131.36 (EPA, 1992). Ecology submitted a standards revision for 192 new human health criteria for 97 pollutants to EPA on August 1, 2016. In accordance with requirements of CWA section 303(c) (2) (B), EPA finalized 144 new and revised Washington specific human health criteria for priority pollutants, to apply to waters under Washington's jurisdiction. EPA approved 45 human health criteria as submitted by Washington. The EPA took no action on Ecology submitted criteria for arsenic, dioxin, and thallium. The existing criteria for these three pollutants remain in effect and were included in 40 CFR 131.45, Revision of certain Federal Water quality criteria applicable to Washington.

These newly adopted criteria, located in WAC 173-201A-240, are designed to protect humans from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters. The Water Quality Standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

Narrative Criteria

Narrative water quality criteria (e.g., WAC 173-201A-240(1); 2006) limit the toxic, radioactive, or other deleterious material concentrations that the facility may discharge to levels below those which have the potential to:

- Adversely affect designated water uses
- Cause acute or chronic toxicity to biota

- Impair aesthetic values
- Adversely affect human health

Narrative criteria protect the specific designated uses of all fresh waters (WAC 173-201A-200, 2016) and of all marine waters (WAC 173-201A-210, 2016) in the state of Washington.

Antidegradation

Description – The purpose of Washington's Antidegradation Policy (WAC 173-201A-300-330; 2016) is to:

- Restore and maintain the highest possible quality of the surface waters of Washington.
- Describe situations under which water quality may be lowered from its current condition.
- Apply to human activities that are likely to have an impact on the water quality of surface water.
- Ensure that all human activities likely to contribute to a lowering of water quality, at a minimum, apply AKART.
- Apply three tiers of protection (described below) for surface waters of the state.

  Tier I: ensures existing and designated uses are maintained and protected and applies to all waters and all sources of pollutions.

  Tier II: ensures that waters of a higher quality than the criteria assigned are not degraded unless such lowering of water quality is necessary and in the overriding public interest. Tier II applies only to a specific list of polluting activities.

  Tier III: prevents the degradation of waters formally listed as "outstanding resource waters," and applies to all sources of pollution.

  A facility must prepare a Tier II analysis when all three of the following conditions are met:

  - The facility is planning a new or expanded action.
  - Ecology regulates or authorizes the action.
  - The action has the potential to cause measurable degradation to existing water quality at the edge of a chronic mixing zone.

Facility Specific Requirements — Ecology determined that this facility must meet Tier II requirements. A Tier II analysis focuses on evaluating feasible alternatives that would eliminate or significantly reduce the level of degradation. The analysis also includes a review of the benefits and costs associated with the lowering of water quality. New discharges and facility expansions are prohibited from lowering water quality without providing overriding public benefits.

Mixing Zones

A mixing zone is the defined area in the receiving water surrounding the discharge port(s), where wastewater mixes with receiving water. Within mixing zones, the pollutant concentrations may exceed water quality numeric standards, so long as the discharge does not interfere with designated uses of the receiving water body (for example, recreation, water supply, and aquatic life and wildlife habitat, etc.) The pollutant concentrations outside of the mixing zones must meet water quality numeric standards.

State and federal rules allow mixing zones because the concentrations and effects of most pollutants diminish rapidly after discharge, due to dilution. Ecology defines mixing zone sizes to limit the amount of time any exposure to the end-of-pipe discharge could harm water quality, plants, or fish.

The State's Water Quality Standards allow Ecology to authorize mixing zones for the facility's permitted wastewater discharges only if those discharges already receive AKART. Mixing zones typically require compliance with water quality criteria within a specified distance from the point of discharge and must not use more than 25 percent of the available width of the water body for dilution [WAC 173-201A-400 (7)(a)(ii-iii)].

Ecology uses modeling to estimate the amount of mixing within the mixing zone. Through modeling Ecology determines the potential for violating the water quality standards at the edge of the mixing zone and derives any necessary effluent limits. Steady-state models are the most frequently used tools for conducting mixing zone analyses. Ecology chooses values for each effluent and for receiving water variables that correspond to the time period when the most critical condition is likely to occur (see Ecology's Permit Writer's Manual). Each critical condition parameter, by itself, has a low probability of occurrence and the resulting dilution factor is conservative. The term "reasonable worst-case" applies to these values.

The mixing zone analysis produces a numerical value called a Dilution Factor (DF). A dilution factor represents the amount of mixing of effluent and receiving water that occurs at the boundary of the mixing zone. For example, a dilution factor of four means the effluent is 25 percent and the receiving water is 75 percent of the total volume of water at the boundary of the mixing zone. Ecology uses dilution factors with the water quality criteria to calculate reasonable potentials and effluent limits. Water quality standards include both aquatic life-based criteria and human health-based criteria. The former are applied at both the acute and chronic mixing zone boundaries; the latter are applied only at the chronic boundary. The concentration of pollutants at the boundaries of any of these mixing zones may not exceed the numerical criteria for that zone.

Each aquatic life acute criterion is based on the assumption that organisms are not exposed to that concentration for more than one hour and more often than one exposure in three years. Each aquatic life chronic criterion is based on the assumption that organisms are not exposed to that concentration for more than four consecutive days and more often than once in three years.

The two types of human health-based water quality criteria distinguish between those pollutants linked to non-cancer effects (non-carcinogenic) and those linked to cancer effects (carcinogenic). The human health-based water quality criteria incorporate several exposure and risk assumptions. These assumptions include:

- A 70-year lifetime of daily exposures
- An ingestion rate for fish or shellfish measured in kg/day
- An ingestion rate of 2.4 liters/day for drinking water (increased from two liters/day in the 2016 Water Quality Standards Update)
- A one-in-one-million cancer risk for carcinogenic chemicals

This permit does not authorize a mixing zone. The Permittee may submit a Mixing Zone Study, for Ecology's consideration, to evaluate whether or not a mixing zone is warranted for the discharge. If considering conducting and submitting a study the Permittee should discuss the applicable requirements with Ecology.

C. Designated Uses and Surface Water Quality Criteria

- Aquatic Life Uses are designated based on the presence of, or the intent to provide protection for the key uses. All indigenous fish and non-fish aquatic species must be protected in waters of the state in addition to the key species. The Aquatic Life Uses for this receiving water are identified below.

Freshwater Aquatic Life Uses and Associated Criteria

Table 9 — Core Summer Salmonid Habitat

Criteria	Value
Temperature Criteria – Highest 7-DAD MAX	16°C (60.8°F)
Dissolved Oxygen Criteria	9.5 mg/L
Turbidity Criteria	• 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.

Criteria	Value
Total Dissolved Gas Criteria	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH Criteria	The pH must measure within the range of 6.5 to 8.5, with a human-caused variation within the above range of less than 0.2 units.

Table 10 — Salmonid Spawning, Rearing, and Migration

Criteria	Value
Temperature Criteria – Highest 7-DAD MAX	17.5°C (63.5°F)
Dissolved Oxygen Criteria – Lowest 1-Day Minimum	8.0 mg/L
Turbidity Criteria	• 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Total Dissolved Gas Criteria	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH Criteria	The pH must measure within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 units.

Table 11 — Salmonid Rearing and Migration Only

Criteria	Value
Dissolved Oxygen Criteria – Lowest 1-Day Minimum	6.5 mg/L
Turbidity Criteria	• 10NTU over background when the background is 50 NTU or less; or • A 20 percent increase in turbidity when the background turbidity is more than 50 NTU.
Total Dissolved Gas Criteria	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH Criteria	The pH must measure within the range of 6.5 to 8.5 with a human-caused variation within the above range of less than 0.5 units.

Table 12 — Char Spawning and Rearing

Criteria	Value
Temperature Criteria – Highest 7-DAD MAX	12°C (53.6°F)
Dissolved Oxygen Criteria – Lowest 1-Day Minimum	9.5 mg/L
Turbidity Criteria	• 5 NTU over background when the background is 50 NTU or less; or • A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Total Dissolved Gas Criteria	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH Criteria	The pH must measure within the range of 6.5 to 8.5, with a human-caused variation within the above range of less than 0.2 units.

- The recreational uses for this receiving water are identified below.

Table 13 — Recreational Uses and Associated Criteria

Recreational Use	Criteria
Extraordinary Primary Contact Recreation (expires 12/31/2020)	Fecal Coliform organism levels must not exceed a geometric mean value of 50 colonies/100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained for calculating the geometric mean value exceeding 100 colonies/100 mL.
Primary Contact Recreation (expires 12/31/2020)	Fecal Coliform organism levels must not exceed a geometric mean value of 100 colonies /100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained for calculating the geometric mean value exceeding 200 colonies /100 mL.
Primary Contact Recreation (effective 1/1/2021)	*E.coli* organism levels must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL.
Secondary Contact Recreation (expires 12/31/2020)	Fecal Coliform organism levels must not exceed a geometric mean value of 200 colonies/100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained for calculating the geometric mean value exceeding 400 colonies /100 mL.

- The water supply uses are domestic, agricultural, industrial, and stock watering.
- The miscellaneous freshwater uses are wildlife habitat, harvesting, commerce and navigation, boating, and aesthetics.

D. Water Quality Impairments

The Willapa River is listed on the current 303(d) and is impaired for Dissolved Oxygen and Fecal Coliform.

Dissolved Oxygen TMDL

The link to the Willapa River Dissolved Oxygen TMDL can be found at the following link:

https://apps.ecology.wa.gov/publications/documents/0610017.pdf

Abiding to the Wasteload Allocation (WLA) covered in the Willapa River Dissolved Oxygen TMDL is mandatory. The current entities that the WLA applies to are the Willapa Regional WWTP, South Bend Products, and Pacific Shellfish – South Bend. East Point Seafoods was also subject to this WLA. However, East Point Seafoods closed their business in early 2020.

If East Point Seafoods starts their operations again in the future, they are subject to the Willapa River Dissolved Oxygen TMDL.

Appendix B in the TMDL document includes the Willapa Estuary Resource Management Partnership Memorandum of Agreement (WERM MOA). The WERM MOA membership is voluntary. The purpose of the WERM MOA is to provide local control over the distribution of wasteload allocations in the months of July through September pertaining to the dissolved oxygen TMDL, and to coordinate implementation of controls necessary to comply with these requirements.

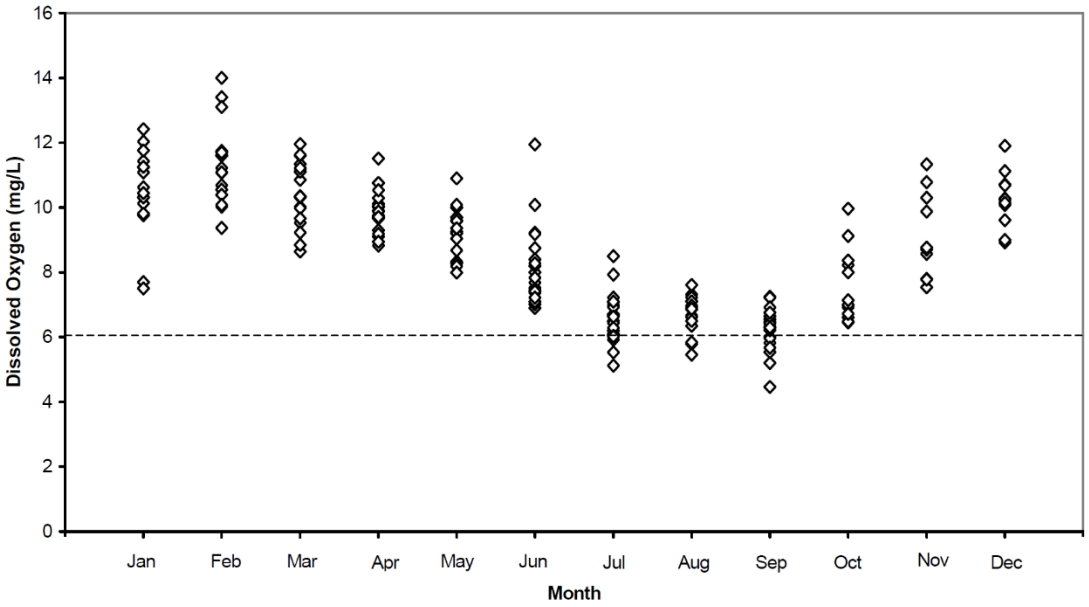
The goals of the WERM MOA are to:

- Provide maximum stakeholder involvement in TMDL implementation
- Achieve cost efficient compliance with the Dissolved Oxygen TMDL
- Determine equitable wasteload allocations based on demonstrated need
- Promote economic development through adaptability of TMDL allocations

The current members of the WERM MOA are Willapa Regional WWTP and South Bend Products. East Point Seafoods ceased their operations. Pacific Shellfish – South Bend has opted out of the voluntary WERM MOA in 2020.

A report conducted in 2005 by various contractors and Ecology recommended a Wasteload Allocations (WLA) to address the low Dissolved Oxygen levels in the Willapa River. As a result, dischargers to the Willapa River are a part of the TMDL to address the low Dissolved Oxygen in the Willapa River. A 10-year sampling period data between 1990 and 2000 shows that dissolved oxygen is below the water quality criterion of 6.0 mg/L in the summer months. Therefore, the TMDL is only applicable from July through September. Below is the graph of Dissolved Oxygen by month for the 10-year sampling period.

Figure 7 : Dissolved Oxygen Data by Month from 1990 - 2000



Pacific Shellfish – South Bend is allocated 15 µg/L of Equivalent Oxygen Demand (EOD) per month. The table below shows the WLA for EOD for the dischargers into the Willapa River and how EOD is calculated.

Table 14 : Wasteload Allocation for Equivalent Oxygen Demand (EOD)

Facility	Equivalent Oxygen Demand (EOD) [µg/L]	Formula[1]	Note
Raymond WWTP	99	(0.207)($CBOD_5$)+(0.420)(NH_3 – N) ≤99	Combined to form Willapa Regional WWTP in 2013
South Bend WWTP	25		
East Point Seafoods	45	(0.031)($CBOD_5$)+(01.78)(NH_3 – N) ≤45	Closed in 2020
South Bend Products	5	(0.027)($CBOD_5$)+(0.155)(NH_3 – N) ≤5	-
Pacific Shellfish – South Bend	15	(0.019)($CBOD_5$)+(0.109)(NH_3 – N) ≤15	Opted out of the WERM MOA in 2020
Reserve	10	-	-
Total WLA	199	-	-
(1) $CBOD_5$ and NH_3 –N loadings are in units of lbs/day weekly average.			

Fecal Coliform TMDL

The Fecal Coliform TMDL can be found at the following link:

https://apps.ecology.wa.gov/publications/documents/0703021.pdf

Segments of the Willapa River have been placed on the Federal Clean Water Act Section 303(d) list for failing to meet Washington State's Water Quality Standards for Fecal Coliform. New data was collected in 2006 at various locations in the Willapa River.

The results from 2006 has established target reductions and load allocations for facilities along the Willapa River. South Bend Products, East Point Seafoods (closed), and Pacific Shellfish – South Bend are allocated 200 CFU as a monthly average and 400 CFU as a daily maximum.

Pacific Shellfish – South Bend is allowed a daily maximum flow of 0.175 MGD which equals a daily maximum bacteria load of 2.65×10^9 CFU per day.

E. Evaluation of Surface Water Quality-Based Effluent Limits for Narrative Criteria

Ecology must consider the narrative criteria described in WAC 173-201A-260 when it determines permit limits and conditions. Narrative water quality criteria limit the toxic, radioactive, or other deleterious material concentrations that the facility may discharge which have the potential to adversely affect designated uses, cause acute or chronic toxicity to biota, impair aesthetic values, or adversely affect human health.

Ecology considers narrative criteria when it evaluates the characteristics of the wastewater and when it implements AKART as described above in the technology-based limits section. When Ecology determines if a facility is meeting AKART it considers the pollutants in the wastewater and the adequacy of the treatment to prevent the violation of narrative criteria.

In addition, Ecology considers the toxicity of the wastewater discharge by requiring Whole Effluent Toxicity (WET) testing when there is a reasonable potential for the discharge to contain toxics. Ecology's analysis of the need for WET testing for this discharge is described later in the fact sheet.

F. Evaluation of Surface Water Quality-Based Effluent Limits for Numeric Criteria

Ecology has not authorized a mixing zone in the permit.

G. Human Health

Washington's water quality standards include numeric human health-based criteria for 97 priority pollutants that Ecology must consider when writing NPDES permits.

Ecology determined the applicant's discharge is unlikely to contain chemicals regulated to protect human health. Ecology will reevaluate this discharge for impacts to human health at the next permit reissuance.

H. Sediment Quality

The aquatic sediment standards (chapter 173-204 WAC) protect aquatic biota and human health. Under these standards Ecology may require a facility to evaluate the potential for its discharge to cause a violation of sediment standards (WAC 173-204-400). You can obtain additional information about sediments at the Aquatic Lands Cleanup Unit available at: https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Sediment-cleanups

Through a review of the discharger characteristics and of the effluent characteristics, Ecology determined that this discharge has no reasonable potential to violate the sediment management standards.

I. Groundwater Quality Limits

The groundwater quality standards (chapter 173-200 WAC) protect beneficial uses of groundwater. Permits issued by Ecology must not allow violations of those standards (WAC 173-200-100).

Pacific Shellfish – South Bend does not discharge wastewater to the ground. No permit limits are required to protect groundwater.

J. Whole Effluent Toxicity

The water quality standards for surface waters forbid discharge of effluent that has the potential to cause toxic effects in the receiving waters. Many toxic pollutants cannot be measured by commonly available detection methods. However, laboratory tests can measure toxicity directly by exposing living organisms to the wastewater and measuring their responses. These tests measure the aggregate toxicity of the whole effluent, so this approach is called WET testing. Some WET tests measure acute toxicity and other WET tests measure chronic toxicity.

Using the screening criteria in chapter 173-205-040 WAC, Ecology determined that toxic effects caused by unidentified pollutants in the effluent are unlikely. Therefore, this permit does not require WET testing. Ecology may require WET testing in the future if it receives information indicating that toxicity may be present in this effluent.

K. Comparison of Effluent Limits with the Previous Permit Issued on June 21, 2011

Table 15 Comparison of Previous and Proposed Effluent Limits

Parameter	Basis of Limit	Previous Effluent Limits: Outfall # 001		Proposed Effluent Limits: Outfall # 001	
		Average Monthly [a]	Maximum Daily [b]	Average Monthly [a]	Maximum Daily [b]
Flow	-	n/a	175,000 GPD	175,000 GPD	175,000 GPD

Parameter	Basis of Limit	Previous Effluent Limits: Outfall # 001		Proposed Effluent Limits: Outfall # 001	
		Average Monthly [a]	Maximum Daily [b]	Average Monthly [a]	Maximum Daily [b]
Temperature	Water Quality	18.0°C	18.0°C	18.0°C	18.0°C
TSS [c]	Technology	36 lbs / 1,000 lbs product	45 lbs / 1,000 lbs product	36 lbs / 1,000 lbs product	45 lbs / 1,000 lbs product
Oil & Grease [c]	Technology	1.7 lbs / 1,000 lbs product	2.2 lbs / 1,000 lbs product	1.7 lbs / 1,000 lbs product	2.2 lbs / 1,000 lbs product
Fecal Coliform	Water Quality	200 CFU	400 CFU	200 CFU	400 CFU
Parameter	**Basis of Limit**	**Lower Limit**		**Upper Limit**	
pH	Technology	6.0 standard units		9.0 standard units	
Parameter	**Basis of Limit**	**Average Monthly**	**Maximum Daily**	**Average Monthly**	**Maximum Daily**
Equivalent Oxygen Demand (EOD) [e]	Water Quality	15 µg/L	199 µg/L	15 µg/L	199 µg/L

[a] The average monthly effluent limitation is defined as the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month. If only one sample is taken during the calendar month, the average monthly effluent limit applies to that sample. For Fecal Coliform, the average monthly limit is the geometric mean.

[b] The maximum daily effluent limitation is defined as the highest allowable daily discharge. The daily discharge means the discharge of a pollutant measured during a calendar day. For pollutants with limitations expressed in units of mass, the daily discharge is calculated as the total mass of the pollutant discharged over the day. For other units

[c] The term product means the weight of the oyster meat after shucking

[d] The Fecal Coliform average monthly is a geometric mean. A minimum of three samples is required to calculate a geometric mean. The criteria for calculating a geometric mean is covered in Chapter 173-201A WAC. Sample collection dates must be well distributed throughout the averaging period so as not to mask noncompliance periods.

If the required three tests are not conducted to calculate a geometric mean, any exceedance which is over the 400 CFU limit will show up as two separate violations - one for exceeding the daily maximum limit and another for exceeding the geometric mean limit.

Parameter	Basis of Limit	Previous Effluent Limits: Outfall # 001		Proposed Effluent Limits: Outfall # 001	
		Average Monthly [a]	Maximum Daily [b]	Average Monthly [a]	Maximum Daily [b]

[e] The average weekly effluent limitation is defined as the highest allowable average of daily discharges over a calendar week. Average weekly values are calculated as the sum of all measured daily discharges (in pounds per day) during a calendar week (Sunday through Saturday) divided by the number of sampling days. The following equation is used to calculate the Equivalent Oxygen Demand (EOD):

1. $EOD_{PSSB} = 0.019*(CBOD_5)_{PSSB} + 0.109*(NH3\text{-}N)_{PSSB}$

   This effluent limit of 15 µg/L only applies when the Total EOD (EODT) exceeds 199 µg/L, or when EOD_T cannot be calculated- for example, through a failure of any party (Willapa Regional WWTP, Pacific Shellfish – South Bend, South Bend Products, or East Point Seafoods) to sample or report.

2. $EODT = 0.207*(CBOD5)_{WR} + 0.420*(NH3\text{-}N)_{WR} + 0.031*(CBOD5)_{EPS} + 0.178*(NH3\text{-}N)_{EPS} + 0.027*(CBOD5)_{SBP} + 0.155*(NH3\text{-}N)_{SBP} + 0.019*(CBOD5)_{PSSB} + 0.109*(NH3\text{-}N)_{PSSB}$

   For equations 1 and 2, CBOD5 is the average weekly CBOD5 discharge, and NH3-N is the average weekly NH3-N discharge for Willapa Regional WWTP (WR), East Point Seafoods (EPS), Pacific Shellfish – South Bend (PSSB), and South Bend Products (SBP).

Limits for EOD and EOD_T apply during the months of July through September.

Effluent limits for the proposed permit [Temperature, TSS, Oil and Grease, Fecal Coliform, pH, and Equivalent Oxygen Demand (EOD)] are the same as the previous permit.

A monthly average flow of 175,000 GPD, which is the same as the daily maximum flow has also been added. This 175,000 GPD value comes from the Fecal Coliform TMDL, which is the highest allowable flow to be below the bacteria load that the facility is allocated.

The use of Fecal Coliform organism levels to determine compliance will expire on December 31, 2020. The change is mentioned in WAC 173-201A-200 Fresh water designated uses and criteria. The link for WAC 173-201A-200 can be find below.

https://apps.leg.wa.gov/wac/default.aspx?cite=173-201A-200&pdf=true

However, because there is a Fecal Coliform TMDL for the Willapa River, and Pacific Shellfish – South bend has a wasteload allocation, the same Fecal Coliform limits of 200 CFU for the monthly average and 400 CFU for the daily maximum apply to the proposed permit.

IV. MONITORING REQUIREMENTS

Ecology requires monitoring, recording, and reporting (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning 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, DL, and QL on the discharge monitoring report or in the required report.

A. Wastewater Monitoring

Ecology updated the water contact recreation bacteria criteria in January 2019. This change will be effective January 1, 2021, and eliminated all recreational uses except for primary contact criteria in both fresh and marine waters. Primary contact criteria changed to E. Coli for freshwater and to enterococci for marine water.

However, because there is a Fecal Coliform TMDL for the Willapa River that applies to this facility, Fecal Coliform will continue to be enforced using the same limits as the previous permit.

Also, Pacific Shellfish – South Bend is considered an EPA minor facility and Ecology has determined that Fecal Coliform monitoring, and not E. Coli is adequate for the time being.

B. 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).

V. OTHER PERMIT CONDITIONS

A. Reporting and Record Keeping

Ecology based Special Condition S3 on its authority to specify any appropriate reporting and record keeping requirements to prevent and control waste discharges (WAC 173-220-210).

B. Non Routine and Unanticipated Wastewater

Occasionally, this facility may generate wastewater which was not characterized in the permit application because it is not a routine discharge and was not anticipated 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 wastewater
- Require the facility to treat the wastewater

- Require the facility to reuse the wastewater

C. Spill Plan

This facility stores a quantity of chemicals on-site that have the potential to cause water pollution if accidentally released. Ecology can require a facility to develop best management plans to prevent this accidental release [Section 402(a)(1) of the Federal Water Pollution Control Act (FWPCA) and RCW 90.48.080].

Pacific Shellfish – South Bend developed a plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit requires the facility to update this plan and submit it to Ecology.

D. Solid Waste Control Plan

Pacific Shellfish – South Bend could cause pollution of the waters of the state through inappropriate disposal of solid waste or through the release of leachate from solid waste.

This proposed permit requires this facility to update the approved solid waste control plan designed to prevent solid waste from causing pollution of waters of the state. The facility must submit the updated plan to Ecology for approval (RCW 90.48.080). You can obtain an Ecology guidance document, which describes how to develop a Solid Waste Control Plan, at: https://fortress.wa.gov/ecy/publications/documents/0710024.pdf

E. General Conditions

Ecology bases the standardized General Conditions on state and federal law and regulations. They are included in all individual industrial NPDES permits issued by Ecology.

VI. PERMIT ISSUANCE PROCEDURES

A. Permit Modifications

Ecology may modify this permit to impose numerical limits, if necessary to comply with water quality standards for surface waters, with sediment quality standards, or with water quality standards for groundwaters, after obtaining new information from sources such as inspections, effluent monitoring, outfall studies, and effluent mixing studies.

Ecology may also modify this permit to comply with new or amended state or federal regulations.

B. Proposed permit Issuance

This proposed permit includes all statutory requirements for Ecology to authorize a wastewater discharge. The permit includes limits and conditions to protect human health and aquatic life, and the beneficial uses of waters of the state of Washington. Ecology proposes to issue this permit for a term of five years.

VII. REFERENCES FOR TEXT AND APPENDICES

Environmental Protection Agency (EPA)

1992. National Toxics Rule. Federal Register, V. 57, No. 246, Tuesday, December 22, 1992.

1991. *Technical Support Document for Water Quality-based Toxics Control*. EPA/505/2-90-001.

1988. *Technical Guidance on Supplementary Stream Design Conditions for Steady State Modeling*. USEPA Office of Water, Washington, D.C.

1985. *Water Quality Assessment: A Screening Procedure for Toxic and Conventional Pollutants in Surface and Ground Water*. EPA/600/6-85/002a.

1983. *Water Quality Standards Handbook*. USEPA Office of Water, Washington, D.C. Tsivoglou, E.C., and J.R. Wallace.

1972. *Characterization of Stream Reaeration Capacity*. EPA-R3-72-012. (Cited in EPA 1985 op.cit.)

1979. *In-stream Deoxygenation Rate Prediction*. Journal Environmental Engineering Division, ASCE. 105(EE2). (Cited in EPA 1985 op.cit.)

Washington State Department of Ecology

July 2018. *Permit Writer's Manual*. Publication Number 92-109 (https://fortress.wa.gov/ecy/publications/documents/92109.pdf)

September 2011. *Water Quality Program Guidance Manual – Supplemental Guidance on Implementing Tier II Antidegradation*. Publication Number 11-10-073 (https://fortress.wa.gov/ecy/publications/summarypages/1110073.html)

October 2010 (revised). *Water Quality Program Guidance Manual – Procedures to Implement the State's Temperature Standards through NPDES Permits*. Publication Number 06-10-100 (https://fortress.wa.gov/ecy/publications/summarypages/0610100.html)

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

Laws and Regulations (http://leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx)

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

APPENDIX A — PUBLIC INVOLVEMENT INFORMATION

Ecology proposes to reissue a permit to Pacific Shellfish – South Bend. 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 June 5, 2019; June 12, 2019; June 10, 2020; and June 17, 2020, in the Chinook Observer to inform the public about the submitted application and to invite comment on the reissuance (or issuance) of this permit.

Ecology will place a Public Notice of Draft on June 16, 2021, in the Chinook Observer to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet.

The notice:

- Tells 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).
- Offers to provide the documents in an alternate format to accommodate special needs.
- Urges people to submit their comments, in writing, before the end of the Comment Period
- Tells how to request a public hearing of comments about the proposed NPDES permit.
- Explains the next step(s) in the permitting process.

Ecology has published a document entitled *Frequently Asked Questions about Effective Public Commenting* which is available on our website at https://fortress.wa.gov/ecy/publications/SummaryPages/0307023.html.

You may obtain further information from Ecology by email at carey.cholski@ecy.wa.gov, or by writing to the address listed below.

Water Quality Permit Coordinator
Department of Ecology
Southwest Regional Office
PO Box 47775
Olympia, WA 98504-7775

The primary author of this permit and fact sheet is Hiro Kusakabe.

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.

Table 16 Address and Location Information

Street Addresses	Mailing Addresses
Department of Ecology Attn: Appeals Processing Desk 300 Desmond Drive Southeast Lacey, WA 98503 **Pollution Control Hearings Board** 1111 Israel Road Southwest, Suite 301 Tumwater, WA 98501	**Department of Ecology** Attn: Appeals Processing Desk PO Box 47608 Olympia, WA 98504-7608 **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 RCW 90.48.520, 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 percent upper tolerance interval with a 95 percent 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 percent by volume and the receiving water 90 percent.

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 WAC 173-240-130.

Enterococci – A subgroup of fecal streptococci that includes *S. faecalis, S. faecium, S. gallinarum,* and *S. avium.* The enterococci are differentiated from other streptococci by their ability to grow in 6.5 percent sodium chloride, at pH 9.6, and at 10°C and 45°C.

E. coli – A bacterium in the family Enterobacteriaceae named Escherichia coli and is a common inhabitant of the intestinal tract of warm-blooded animals, and its presence in water samples is an indication of fecal pollution and the possible presence of enteric pathogens.

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 calculated as the average measurement of the pollutant over the 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 percent 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 — TECHNICAL CALCULATIONS

APPENDIX E — RESPONSE TO COMMENTS

No comments were received.