



# Oregon

Tina Kotek, Governor

Department of Environmental Quality

Western Region Salem Office  
4026 Fairview Industrial Dr SE  
Salem, OR 97302  
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December 20, 2024

Jerri Bartholomew  
Oregon State University  
220 Nash Hall  
Corvallis, OR 97331-3804

**Re: NPDES Permit Public Notice Period**

**Comments Due: January 27, 2025, 5 p.m.**

File no. 103919

Permit no. 102512

EPA no. OR0032573

Facility: OSU John L. Fryer Aquatic Animal Health Lab and Fish Performance and Genetics Lab,  
34347 NE Electric Rd., Corvallis

Linn County

Enclosed please find the Public Notice drafts for your proposed National Pollutant Discharge Elimination System permit including a copy of the public notice, permit, and fact sheet. Please be aware that the Oregon State University may provide additional comment on the permit during this time and submit to:

Trinh Hansen, Water Quality Permit Coordinator

DEQ Western Region

4026 Fairview Industrial Way Dr. SE

Salem, OR 97302

[trinh.hansen@deq.oregon.gov](mailto:trinh.hansen@deq.oregon.gov)

Your comments **must be received by 5 p.m. on January 27, 2025**. DEQ will hold a public hearing if DEQ receives written requests for a hearing during the public comment period from at least 10 people, or from an organization representing 10 or more people. DEQ gives equal weight to written and oral comments. When the public participation period has ended, DEQ will take final action on your application.

Please contact me at 503-378-5055 with any questions about permitting processing.

Sincerely,

Trinh Hansen  
Water Quality Permit Coordinator  
Western Region, Salem Office

cc: Regional Source File, Water Quality Division, DEQ  
Kenzie Billings, Salem, DEQ  
Olivia Hakanson, Oregon State University  
Craig Ryan, Oregon State University  
ORMS



# PUBLIC NOTICE

Date posted: 12/20/24

## DEQ Requests Comments on Proposed Oregon State University's Water Quality Permit Renewal in Corvallis

### HOW TO PROVIDE PUBLIC COMMENT

**Facility name:** Oregon State University  
**Permit type:** National Pollutant Discharge Elimination System (NPDES) Industrial - minor  
**Comments due by:** Monday, Jan. 27, 2025 at 5 p.m.

**Send written comments to:** Trinh Hansen, Oregon DEQ, Water Quality Permit Coordinator  
**By mail:** 4026 Fairview Industrial Drive SE, Salem, OR 97302  
**By email:** [trinh.hansen@deq.oregon.gov](mailto:trinh.hansen@deq.oregon.gov)

The Oregon Department of Environmental Quality invites the public to provide written comments on the conditions of Oregon State University's proposed water quality permit, known officially as a National Pollutant Discharge Elimination System (NPDES) permit.

### Summary

Subject to public review and comment, DEQ intends to renew the proposed water quality permit, which allows Oregon State University's Aquatic Animal Health Laboratory and Fish Performance and Genetics Laboratory to discharge wastewater to the Willamette River.

### About the facility

The Aquatic Animal Health Laboratory has applied for a water quality permit renewal for the John L. Fryer Aquatic Animal Health Laboratory located at 34347 NE Electric Road in Corvallis. OSU's Fish Performance and Genetics Laboratory shares the discharge and has been added to the permit as part of this renewal. DEQ last issued this permit on Jan. 10, 2007. These facilities perform research on fish disease and performance. Wastewater from research and fish-holding aquaria is disinfected with chlorine prior to conveyance to a series of two ponds prior to discharging to Willamette River. The first pond is designed for chlorine dissipation followed by a second pond for solids settling. The permit limits the discharge of total suspended solids, settleable solids, total residual chlorine, and pH through numeric limits, floating solids are addressed with narrative limits. The discharge of solids and process chemicals, such as formaldehyde, is limited through effluent limit guidelines from the Code of Federal Regulations for concentrated aquatic animal production facilities (40 CFR§451.11), as well as facility-developed Best Management Practices plans, or BMPs.

The facility discharges to the Willamette River in Corvallis. The Willamette River is listed as impaired (Category 4 or 5) for several pollutants according to the most recent U.S. Environmental Protection Agency-approved integrated report for Oregon. The proposed permit reflects effluent limits established through reasonable potential analysis, best available technology and effluent limit guidelines for industrial dischargers (language from the Code of Federal Regulations) for total suspended solids, floating and settleable solids, total residual chlorine, and pH.

### Translation or other formats

[Español](#) | [한국어](#) | [繁體中文](#) | [Русский](#) | [Tiếng Việt](#) | [العربية](#)  
800-452-4011 | TTY: 711 | [deqinfo@deq.oregon.gov](mailto:deqinfo@deq.oregon.gov)

The most recent DEQ inspection of the Aquatic Animal Health Laboratory and Fish Performance and Genetics Laboratory facilities was on Apr. 18, 2024. DEQ did not identify violations during this inspection. The Aquatic Animal Health Laboratory has had two water quality violations in the past permit term. The issues related to these past compliance issues have been resolved and the facility is currently operating in full compliance.

The facility holds no other permits from DEQ.

### **What types of pollutants does the permit regulate?**

This permit sets conditions for how the facility deals with the following pollutants: Total residual chlorine, pH, total suspended solids, floating solids, settleable solids, and formaldehyde.

### **Would the draft permit change the amount of pollution the facility is allowed to release?**

Yes. The draft permit would reduce the average monthly limit for total residual chlorine and raise the lower range for the pH limit. In addition, an existing Excess Thermal Loading limit was removed. Removing the ETL has been determined to have no impact on the temperature loading from this facility, per the Willamette Basin TMDL. These limit changes are discussed in the Fact Sheet.

<b>Pollutant</b>	<b>Change</b>
Total residual chlorine	Daily maximum limit decreased.
pH	Lower range pH limit more stringent.
Excess Thermal Loading	ETL limit was removed.

### **How did DEQ determine permit requirements?**

DEQ evaluates types and amounts of pollutants and the water quality of the surface water or groundwater where the pollutants are proposed to be discharged and determines permit requirements to ensure the proposed discharges will meet applicable statutes, rules, regulations and effluent guidelines of Oregon and the Clean Water Act.

For this proposed permit action, DEQ evaluated the Aquatic Animal Health Laboratory's water quality permit renewal application and discharge monitoring reports, facility design reports and the Willamette Basin Total Maximum Daily Load, a water pollution control plan known as a TMDL. DEQ referenced the Federal Code of Regulations in establishing narrative effluent limit guidelines as Technology Based Effluent Limits. DEQ also evaluated water quality data from multiple DEQ monitoring stations located on the Willamette River in Corvallis. These materials may be viewed in person at the DEQ Western Region Offices located at 4026 Fairview Industrial Drive SE in Salem. In addition to the review and assessment of materials noted above, DEQ has exercised discretion in establishing monitoring/reporting requirements and identifying applicable data for analyses.

Discretion exists when DEQ has the power to make a choice about whether to act or not act, to approve or not approve, or to approve with conditions. The role of the decision-maker is to make a judgment that takes into account all relevant information.

### **How does DEQ monitor compliance with the permit requirements?**

This permit will require the facility to monitor pollutants discharged using approved monitoring practices and standards. DEQ reviews the facility's discharge monitoring reports to check for compliance with permit limits.

## **What happens next?**

Submit comments by sending an email or using mail service addressed to the permit coordinator listed in the “how to provide public comment” box above.

DEQ will hold a public hearing if it receives written requests for a hearing during the public comment period from at least 10 people or from an organization representing at least 10 people.

DEQ will consider and respond to all comments received and may modify the proposed permit based on comments.

## **For more information**

Find more information by reviewing draft permit documents attached to this notice or contact Trinh Hansen at 503-378-5055 or [Trinh.Hansen@deq.oregon.gov](mailto:Trinh.Hansen@deq.oregon.gov) with questions or to view documents in person at a DEQ office.

## **Non-discrimination statement**

DEQ does not discriminate on the basis of race, color, national origin, disability, age or sex in administration of its programs or activities. Visit DEQ's [Civil Rights and Environmental Justice page](#).



# NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM WASTE DISCHARGE PERMIT

Oregon Department of Environmental Quality  
Western Region – Salem Office  
4026 Fairview Industrial Dr. SE  
Salem, OR 97302  
Telephone: 503-378-8240

Issued pursuant to ORS 468B.050 and the federal Clean Water Act.

## ISSUED TO:

Oregon State University  
220 Nash Hall  
Corvallis, OR 97331

## SOURCES COVERED BY THIS PERMIT:

Type of Waste	Outfall Number	Outfall Location
Treated discharge from OSU fish holding facility	001	44.57755, -123.24139

## FACILITY LOCATION:

OSU John L. Fryer Aquatic Animal Health Lab  
34347 NE Electric Road  
Corvallis, OR 97333

*and*

OSU Fish Performance and Genetics Lab  
34349 NE Electric Road  
Corvallis, OR 97333  
County: Linn  
EPA Permit Type: Industrial-Minor

## RECEIVING STREAM INFORMATION:

Receiving stream/NHD name: Willamette River  
USGS 12-Digit HUC: 170900030608  
OWRD Administrative Basin: Willamette  
NHD Reach Code & % along reach: 17090003000130,  
83.23% along reach  
ODEQ LLID & RM: 1227618456580 at RM-130.3  
Integrated Report AU ID: OR-SR-1709000306-05-103854

Issued in response to Application No. 967974 received January 3, 2011. This permit is issued based on the land use findings in the permit record.

DRAFT

Ranei Nomura, Water Quality Manager,  
Western Region

DRAFT

Issuance Date

DRAFT

Effective Date

## PERMITTED ACTIVITIES

Until this permit expires or is modified or revoked, the permittee is authorized to: 1) operate a wastewater collection, treatment, control and disposal system; and 2) discharge treated wastewater to waters of the state only from the authorized discharge point or points in Schedule A in conformance with the requirements, limits, and conditions set forth in this permit.

Unless specifically authorized by this permit, by another NPDES or Water Pollution Control Facility permit, or by Oregon statute or administrative rule, any other direct or indirect discharge of pollutants to waters of the state is prohibited.

## TABLE OF CONTENTS

<b>SCHEDULE A: WASTE DISCHARGE LIMITS.....</b>	<b>3</b>
1. Outfall 001 – Permit Limits .....	3
2. Operating Requirements.....	3
3. Chemical Use .....	4
4. Regulatory Mixing Zone .....	5
5. Use of Recycled Water.....	5
<b>SCHEDULE B: MINIMUM MONITORING AND REPORTING REQUIREMENTS.....</b>	<b>6</b>
1. Reporting Requirements.....	6
2. Monitoring and Reporting Protocols.....	6
3. Additional Reporting Requirements.....	8
4. Monitoring and Reporting Requirements.....	10
<b>SCHEDULE D: SPECIAL CONDITIONS.....</b>	<b>13</b>
1. Best Management Practices (BMP) Plan .....	13
2. Emergency Response and Public Notification Plan.....	13
3. Environmental Supervisor.....	13
4. Spill/Emergency Response Plan.....	13
5. Outfall Inspection.....	14
<b>SCHEDULE F: NPDES GENERAL CONDITIONS.....</b>	<b>16</b>

Note: Schedule C (Compliance) and E (Pretreatment Activities) are not part of this permit.

## LIST OF TABLES

Table A1: Permit Limits.....	3
Table B1: Reporting Requirements and Due Dates .....	6
Table B2: Effluent Monitoring Requirements .....	10

## SCHEDULE A: WASTE DISCHARGE LIMITS

### 1. Outfall 001 – Permit Limits

During the term of this permit, the permittee must comply with the limits in the following table:

**Table A1: Permit Limits**

Parameter (Year-round)	Units	Average Monthly	Average Weekly	Daily Maximum
Effluent Flow	MGD	-	-	1.2
Chlorine, Total Residual (See note a.)	mg/L	0.01	-	0.03
pH	SU	Instantaneous limit between a daily minimum of 6.3 and a daily maximum of 9.0		
TSS	mg/L	5.0	-	-
Floating Solids	-	Non-visible		
Settleable Solids	mL/L	-	-	0.1
Note:				
a. DEQ has established a Quantitation Limit of 0.05 mg/L for Total Residual Chlorine. Any analysis done for Total Residual Chlorine must have a quantitation limit that is either equal to or less than 0.05 mg/L. In cases where the average monthly or maximum daily limit for Total Residual Chlorine is lower than the Quantitation Limit, DEQ will use the reported Quantitation Limit as the compliance evaluation level.				

### 2. Operating Requirements

- a. **Solids control.** The permittee must:
  - i. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.
  - ii. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and offline settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting of aquatic animals in the production system.
  - iii. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.
- b. **Materials storage.** The permittee must:
  - i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the U.S.
  - ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.

- c. **Structural maintenance.** The permittee must:
  - i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
  - ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.
- d. **Recordkeeping.** The permittee must:
  - i. In order to calculate representative feed conversion ratios, maintain records documenting the feed amounts and estimates of the numbers of aquatic animals.
  - ii. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.
- e. **Training.** The permittee must:
  - i. In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
  - ii. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

### 3. Chemical Use

- a. Chemical residuals generated from the treatment of fish disease or parasites are permitted provided that the chemicals are applied in accordance with EPA, FDA or other labeling requirements.
- b. Unless DEQ approves in writing before use, the permittee must use chemicals approved or allowed for hatchery use by the US Food and Drug Administration (USFDA) or the US Environmental Protection Agency (USEPA). USFDA-approved chemicals include the following:
  - i. Investigational New Animal Drugs (INADs), Low Regulatory Priority (LRP) listed drugs,
  - ii. Deferred Regulatory Status (DRS) drugs, and
  - iii. Veterinary Extra-labelled drugs.
- c. The permittee must follow the conditions detailed in a facility's INAD application, treatment restrictions for LRP and DRS drugs, product label instructions for environmental protection, and precautions on labels of chemicals that are Extra-labelled by prescription. INADS must be labelled correctly, used in accordance with established protocols, and must not violate the Federal Insecticide, Fungicide, and Rodenticide Act FIFRA.
- d. The permittee must report all chemicals on the chemical use log retained onsite and made available to DEQ or EPA staff upon request. The permittee must document the disposal of all spent chemical disinfection treatment solutions according to the procedure described in the permittee's Best Management Practices Plan (See Schedule D, Condition 1).

**4. Regulatory Mixing Zone**

Pursuant to OAR 340-041-0053, the permittee is granted a regulatory mixing zone as described below:

*The allowable mixing zone is that portion of the Willamette River where the discharge enters a small side inlet and extends 50 feet upstream and fifty feet downstream from where the side channel enters the mainstem Willamette River. The Zone of Immediate Dilution (ZID) is that portion of the allowable mixing zone that is within five feet of the point where the discharge enters the mainstem Willamette River.*

**5. Use of Recycled Water**

The permit holder does not currently operate a recycled water program and does not intend to do so during the term of this permit.

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## SCHEDULE B: MINIMUM MONITORING AND REPORTING REQUIREMENTS

### 1. Reporting Requirements

The permittee must submit to DEQ monitoring results and reports as listed below.

**Table B1: Reporting Requirements and Due Dates**

Reporting Requirement	Frequency	Due Date (See note a.)	Report Form (See note b.)	Submit To:
Table B2 Effluent Monitoring	Monthly	By the 15 <sup>th</sup> of the following month	Specified in Schedule B. Section 2 of this permit	Electronic reporting as directed by DEQ
Outfall Inspection Report (see Schedule D)	Once per permit cycle	Submit by <b>XX/15/20XX</b> In the 3 <sup>rd</sup> year of the permit.	Electronic copy in a DEQ-approved format	Attached via electronic reporting as directed by DEQ
Best Management Practices plan (see Schedule D.1)	Once per permit cycle	<b>XX/15/20XX</b> (3 <sup>rd</sup> month after permit effective date)	Records maintained on site, available upon request by DEQ	Attached via electronic reporting as directed by DEQ
Chemical Use Log (see Schedule A.3)	Monthly	By the 15 <sup>th</sup> of the following month	Records maintained on site, available upon request by DEQ	Attached via electronic reporting as directed by DEQ
Notes:				
a. For submittals that are provided to DEQ by mail, the postmarked date must not be later than the due date.				
b. All reporting requirements are to be submitted in a DEQ-approved format, unless otherwise specified in writing.				

### 2. Monitoring and Reporting Protocols

#### a. Electronic Submissions

The permittee must submit to DEQ the results of monitoring indicated in Schedule B in an electronic format as specified below.

- i. The permittee must submit monitoring results required by this permit via DEQ-approved web-based Discharge Monitoring Report (DMR) forms to DEQ via electronic reporting. Any data used to calculate summary statistics must be submitted as a separate attachment approved by DEQ via electronic reporting.
- ii. The reporting period is the calendar month.
- iii. The permittee must submit monitoring data and other information required by this permit for all compliance points by the 15th day of the month following the reporting period unless specified otherwise in this permit or as specified in writing by DEQ.

b. Test Methods

The permittee must conduct monitoring according to test procedures in 40 CFR 136 and 40 CFR 503 for biosolids or other approved procedures as per Schedule F.

c. Detection and Quantitation Limits

- i. Detection Level (DL) – The DL is defined as the minimum measured concentration of a substance that can be distinguished from method blank results with 99% confidence. The DL is derived using the procedure in 40 CFR 136 Appendix B and evaluated for reasonableness relative to method blank concentrations to ensure results reported above the DL are not a result of routine background contamination. The DL is also known as the Method Detection Limit (MDL) or Limit of Detection (LOD).
- ii. Quantitation Limits (QLs) – The QL is the minimum level, concentration or quantity of a target analyte that can be reported with a specified degree of confidence. It is the lowest level at which the entire analytical system gives a recognizable signal and acceptable calibration for the analyte. It is normally equivalent to the concentration of the lowest calibration standard adjusted for sample weights, volumes, preparation and cleanup procedures employed. The QL as reported by a laboratory is also sometimes referred to as the Method Reporting Limit (MRL) or Limit of Quantitation (LOQ).

d. Sufficient Sensitivity of Quantitation Limits

- i. The Laboratory QLs (adjusted for any dilutions) for analyses performed to demonstrate compliance with permit limits or as part of effluent characterization, must meet at least one of the requirements below:
  - (A) The QL is at or below the level of the water quality criterion for the measured parameter.
  - (B) The QL is above the water quality criterion but the amount of the pollutant in a facility's discharge is high enough that the method detects and quantifies the level of the parameter in the discharge.
  - (C) The QL has the lowest sensitivity of the analytical methods procedure specified in 40 CFR 136.
  - (D) The QL is at or below those defined in Oregon DEQ list of quantitation limits posted online at [DEQ permitting website](#).

e. Quality Assurance and Quality Control

- i. Quality Assurance Plan – The permittee must develop and implement a written Quality Assurance Plan that details the facility sampling procedures, equipment calibration and maintenance, analytical methods, quality control activities and laboratory data handling and reporting. The QA/QC program must conform to the requirements of 40 CFR 136.7.
- ii. If QA/QC requirements are not met for any analysis, the permittee must re-analyze the sample. If the sample cannot be re-analyzed, the permittee must re-sample and analyze at the earliest opportunity. If the permittee is unable to collect a sample that meets QA/QC requirements, then the permittee must include the result in the discharge monitoring report (DMR) along with a notation (data qualifier). In addition, the permittee must explain how the sample does not meet QA/QC requirements. The permittee may not use the result that failed the QA/QC requirements in any calculation required by the permit unless authorized in writing by DEQ.

- iii. Flow measurement, field measurement, and continuous monitoring devices. The permittee must:
  - (A) Establish verification and calibration frequency for each device or instrument in the quality assurance plan that conforms to the frequencies recommended by the manufacturer.
  - (B) Verify at least once per year that flow-monitoring devices are functioning properly according to manufacturer's recommendation. Calibrate as needed according to manufacturer's recommendations.
  - (C) Verify at least weekly that the continuous monitoring instruments are functioning properly according to manufacturer's recommendation unless the permittee demonstrates a longer period is sufficient and such longer period is approved by DEQ in writing.
- f. Reporting Sample Results
  - i. The permittee must report the laboratory DL and QL as defined above for each analyte, with the following exceptions: pH, temperature, TSS, and alkalinity. For temperature and pH, neither the QL nor the DL need to be reported. For the other parameters listed above, the permittee is only required to report the QL and only when the result is ND.
  - ii. The permittee must report the same number of significant digits as the permit limit for a given parameter.
  - iii. Chemical Abstracts Service (CAS) Numbers. CAS numbers (where available) must be reported along with monitoring results.
  - iv. (For Discharge Monitoring Reports) If a sample result is above the DL but below the QL, the permittee must report the result as the DL preceded by DEQ's data code "E". For example, if the DL is 1.0 µg/l, the QL is 3.0 µg/L and the result is estimated to be between the DL and QL, the permittee must report "E1.0 µg/L" on the DMR. This requirement does not apply in the case of parameters for which the DL does not have to be reported.
  - v. (For Discharge Monitoring Reports) If the sample result is below the DL, the permittee must report the result as less than the specified DL. For example, if the DL is 1.0 µg/L and the result is ND, report "<1.0" on the discharge monitoring report (DMR). This requirement does not apply in the case of parameters for which the DL does not have to be reported.

### 3. Additional Reporting Requirements

- a. Except as noted below, a permittee subject to this part must notify the permitting authority of the use of any investigational new animal drug (INAD) or any extra-label drug use where such a use may lead to a discharge of the drug to waters of the U.S. Reporting is not required for an INAD or extra-label drug use that has been previously approved by FDA for a different species or disease if the INAD or extra-label use is at or below the approved dosage and involves similar conditions of use.
  - i. The permittee must provide a written report to the permitting authority of an INAD's impending use within 7 days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.

- ii. For INADs and extra-label drug uses, the permittee must provide a written report to the permitting authority within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added.
- b. Failure in, or damage to, the structure of an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the U.S. In accordance with the following procedures, any permittee subject to this part must notify the permitting authority when there is a reportable failure.
  - i. The permittee must provide an oral report within 24 hours of discovery of any reportable failure or damage that results in a material discharge of pollutants, describing the cause of the failure or damage in the containment system and identifying materials that have been released to the environment as a result of this failure.
  - ii. The permittee must provide a written report within 7 days of discovery of the failure or damage documenting the cause, the estimated time elapsed until the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.
- c. In the event a spill of drugs, pesticides or feed occurs that results in a discharge to waters of the U.S., the permittee must provide an oral report of the spill to the permitting authority within 24 hours of its occurrence and a written report within 7 days. The report shall include the identity and quantity of the material spilled.

#### 4. Monitoring and Reporting Requirements

- a. The permittee receives influent water from a groundwater well for their research facility. Influent monitoring is not a permit requirement for this permittee.
- b. The permittee must monitor effluent for Outfall 001 at the manhole access point located at the discharge channel from the solids settling pond (Pond #2) and report results in accordance with Table B1 and the table below:

**Table B2: Effluent Monitoring Requirements**

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
Flow (50050)	MGD	Year-round	Daily	Metered	1. Monthly Average 2. Daily Maximum
Temperature (00010)	°C	Year-round	Daily	Continuous (See note c.)	1. Daily Maximum 2. Monthly Average 3. 7-day Rolling Average of Daily Maximum
pH (00400)	SU	Year-round	3/week	Grab	1. Daily Maximum 2. Daily Minimum
Chlorine, Total Residual (50060)	mg/L	Year-round	Daily	Grab	1. Daily Maximum 2. Monthly Average
Chlorine used (81400)	lb/day	Year-round	Daily	Scale reading	Monthly Average
TSS (00530)	mg/L	Year-round	1/week	24-hour composite	1. Monthly Average 2. Daily Maximum
Solids, Settleable (00545)	mL/L	Year-round	1/week	24-hour composite	1. Monthly Average 2. Daily Maximum
Solids, Floating (45613)	No/Yes	Year-round	1/week	Visual observation	Value
Total ammonia (as N) (00610)	mg/L	Year-round	Quarterly	24-hour composite	Quarterly Maximum
Alkalinity as CaCO <sub>3</sub> (00410)	mg/L	Year-round	Quarterly	24-hour composite	Quarterly Maximum
Formaldehyde (71880) (See note d.)	mg/L	Year-round	Quarterly (During application periods)	Grab	Quarterly Maximum

Item or Parameter	Units	Time Period	Minimum Frequency	Sample Type/ Required Action (See note a.)	Report Statistic (See note b.)
<p>Notes:</p> <ul style="list-style-type: none"> <li>a. In the event of equipment failure or loss, the permittee must notify DEQ and deploy new equipment to minimize interruption of data collection. If new equipment cannot be immediately deployed, the permittee must perform grab measurements. If the failure or loss is for continuous temperature monitoring equipment, the permittee must collect one grab sample daily between 12 PM and 5 PM until continuous monitoring equipment is redeployed.</li> <li>b. When submitting DMRs electronically, all data used to determine summary statistics must be submitted in a DEQ-approved format as a spreadsheet via electronic reporting unless otherwise directed by DEQ.</li> <li>c. When determining the daily maximum temperature, the permittee may report the hourly average maximum temperature if continuous monitoring of temperature is performed at less than hourly intervals.</li> <li>d. Facility personnel must collect effluent samples for formaldehyde concurrently with the highest application for the quarter, within the first hour after the initial discharge of effluent expected to contain formaldehyde. If formalin is not used for the entire quarter the permittee may report that the chemical was not used, in lieu of a formaldehyde sample.</li> </ul>					

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## **SCHEDULE C: COMPLIANCE SCHEDULE**

A compliance schedule is not part of this permit.

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## **SCHEDULE D: SPECIAL CONDITIONS**

### **1. Best Management Practices (BMP) Plan**

The permittee must:

- a. Develop and maintain a plan on site describing how the permittee will achieve the requirements of Schedule A.2, A.3, and the following:
  - i. The permittee must collect process wastewaters containing hatchery approved treatment chemicals, such as anaesthetic (i.e., MS-222), that are not to be discharged to waters of the state. These wastewaters must be disposed of according to hazardous waste disposal practices required by the Oregon State University's Environmental Health and Safety department.
  - ii. The permittee must maintain a log of chemical applications at the facility, made available to DEQ by request. The permittee must document the disposal of all spent chemical disinfection solutions.
  - iii. The chlorine dissipation and solids settling ponds must not be drained or dredged without prior written approval from DEQ.
  - iv. Management practices for the settling ponds and surrounding grounds must be coordinated with the adjacent OSU Trysting Tree Golf Course to prevent the introduction of chemicals (e.g., fertilizers, pesticides or herbicides) into the research facility treatment ponds.
- b. Make the plan available to the permitting authority upon request.
- c. The permittee subject to this part must certify in writing to the permitting authority that a BMP plan has been developed within three months of permit issuance.

### **2. Emergency Response and Public Notification Plan**

The permittee must develop an Emergency Response and Public Notification Plan ("plan") or ensure the facility's existing plan is current and accurate, per Schedule F, Section B, and Condition 7 within 6 months of permit effective date. The permittee must update the plan annually to ensure all information contained in the plan, including telephone and email contact information for applicable public agencies, is current and accurate. An updated copy of the plan must be kept on file at the facility for DEQ review. The latest plan revision date must be listed on the plan cover along with the reviewer's initials or signature.

### **3. Environmental Supervisor**

An environmental supervisor shall be designated to coordinate and carry out all necessary functions related to maintenance and operation of waste collection, treatment, and disposal facilities. This person must have access to all information pertaining to the generation of wastes in the various process areas.

### **4. Spill/Emergency Response Plan**

The permittee must have an up-to-date spill response plan for prevention and handling of spills and unplanned discharges. This plan must be available for review during a DEQ inspection. The spill response plan must include all of the following:

- a. A description of the reporting system that will be used to alert responsible managers and legal authorities in the event of a spill.

- b. A description of preventive measures and facilities (including an overall facility plot showing drainage patterns) to prevent, contain, or treat spills.
- c. A description of the permittee's training program to ensure that employees are properly trained at all times to respond to unplanned and emergency incidents.
- d. A description of the applicable reporting requirements. These must be consistent with the reporting requirements found in Schedule F, condition D.5.

## **5. Outfall Inspection**

The permittee must inspect Outfall 001 including the submerged portion of the outfall line and diffuser (if present) to document its integrity and to determine whether it is functioning as designed. The inspection must determine whether all diffuser ports (if present) are intact, clear and fully functional. The inspection must verify the latitude and longitude of the outfall end pipe and/or diffuser ports. The permittee must submit a written report to DEQ regarding the results of the outfall inspection by the date in Table B1. The report must include a description of the outfall as originally constructed, the condition of the current outfall and identify any repairs needed to return the outfall to satisfactory condition.

## **SCHEDULE E: PRETREATMENT ACTIVITIES**

A pretreatment program is not part of this permit.

Public Notice

## **SCHEDULE F: NPDES GENERAL CONDITIONS**

### **INDUSTRIAL FACILITIES July 31, 2016 Version**

#### **SECTION A. STANDARD CONDITIONS**

##### **A1. Duty to Comply with Permit**

The permittee must comply with all conditions of this permit. Failure to comply with any permit condition is a violation of Oregon Revised Statutes (ORS) 468B.025 and the federal Clean Water Act and is grounds for an enforcement action. Failure to comply is also grounds for DEQ to terminate, modify and reissue, revoke, or deny renewal of a permit.

##### **A2. Penalties for Water Pollution and Permit Condition Violations**

The permit is enforceable by DEQ or EPA, and in some circumstances also by third-parties under the citizen suit provisions of 33 USC § 1365. DEQ enforcement is generally based on provisions of state statutes and Environmental Quality Commission (EQC) rules, and EPA enforcement is generally based on provisions of federal statutes and EPA regulations.

ORS 468.140 allows DEQ to impose civil penalties up to \$25,000 per day for violation of a term, condition, or requirement of a permit.

Under ORS 468.943, unlawful water pollution in the second degree, is a Class A misdemeanor and is punishable by a fine of up to \$25,000, imprisonment for not more than one year, or both. Each day on which a violation occurs or continues is a separately punishable offense.

Under ORS 468.946, unlawful water pollution in the first degree is a Class B felony and is punishable by a fine of up to \$250,000, imprisonment for not more than 10 years, or both.

The Clean Water Act provides that any person who violates permit condition, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation.

The Clean Water Act provides that any person who negligently violates any condition, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than 1 year, or both.

In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than 2 years, or both.

Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than 3 years, or both.

In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than 6 years, or both.

Any person who knowingly violates section any permit condition, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both.

In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both.

An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.

Any person may be assessed an administrative penalty by the Administrator for violating any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act.

Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000.

Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.

A3. Duty to Mitigate

The permittee must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit. In addition, upon request of DEQ, the permittee must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

A4. Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and have the permit renewed. The application must be submitted at least 180 days before the expiration date of this permit.

DEQ may grant permission to submit an application less than 180 days in advance but no later than the permit expiration date.

A5. Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:

- a. Violation of any term, condition, or requirement of this permit, a rule, or a statute.
- b. Obtaining this permit by misrepresentation or failure to disclose fully all material facts.
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.
- d. The permittee is identified as a Designated Management Agency or allocated a wasteload under a total maximum daily load (TMDL).
- e. New information or regulations.
- f. Modification of compliance schedules.
- g. Requirements of permit reopener conditions.
- h. Correction of technical mistakes made in determining permit conditions.
- i. Determination that the permitted activity endangers human health or the environment.
- j. Other causes as specified in 40 CFR §§ 122.62, 122.64, and 124.5.

The filing of a request by the permittee for a permit modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

**A6. Toxic Pollutants**

The permittee must comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rules (OAR) 340-041-0033 and 307(a) of the federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

**A7. Property Rights and Other Legal Requirements**

The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, or authorize any injury to persons or property or invasion of any other private rights, or any infringement of federal, tribal, state, or local laws or regulations.

**A8. Permit References**

Except for effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act and OAR 340-041-0033 for toxic pollutants, and standards for sewage sludge use or disposal established under section 405(d) of the federal Clean Water Act, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

**A9. Permit Fees**

The permittee must pay the fees required by OAR.

**SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS**

**B1. Proper Operation and Maintenance**

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also include adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

**B2. Need to Halt or Reduce Activity Not a Defense**

For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permittee must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

**B3. Bypass of Treatment Facilities**

**a. Definitions**

- (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs b and c of this section.
- (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

**b. Prohibition of bypass.**

- (1) Bypass is prohibited and DEQ may take enforcement action against a permittee for bypass unless:

- i. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
  - ii. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventative maintenance; and
  - iii. The permittee submitted notices and requests as required under General Condition B3.c.
- (2) DEQ may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when DEQ determines that it will meet the three conditions listed above in General Condition B3.b(1).
- c. Notice and request for bypass.
- (1) Anticipated bypass. If the permittee knows in advance of the need for a bypass, a written notice must be submitted to DEQ at least ten days before the date of the bypass.
  - (2) Unanticipated bypass. The permittee must submit notice of an unanticipated bypass as required in General Condition D5.

#### B4. Upset

- a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.
- b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of General Condition B4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
- c. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
  - (1) An upset occurred and that the permittee can identify the cause(s) of the upset;
  - (2) The permitted facility was at the time being properly operated;
  - (3) The permittee submitted notice of the upset as required in General Condition D5, hereof (24-hour notice); and
  - (4) The permittee complied with any remedial measures required under General Condition A3 hereof.
- d. Burden of proof. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

#### B5. Treatment of Single Operational Upset

For purposes of this permit, a single operational upset that leads to simultaneous violations of more than one pollutant parameter will be treated as a single violation. A single operational upset is an exceptional incident that causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one federal Clean Water Act effluent discharge pollutant parameter. A single operational upset does not include federal Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational upset is a violation.

**B6. Public Notification of Effluent Violation**

If effluent limitations specified in this permit are exceeded or an overflow occurs that threatens public health, the permittee must take such steps as are necessary to alert the public, health agencies and other affected entities (for example, public water systems) about the extent and nature of the discharge in accordance with the notification procedures developed under General Condition B7. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

**B7. Emergency Response and Public Notification Plan**

The permittee must develop and implement an emergency response and public notification plan that identifies measures to protect public health from bypasses or upsets that may endanger public health. At a minimum the plan must include mechanisms to:

- a. Ensure that the permittee is aware (to the greatest extent possible) of such events;
- b. Ensure notification of appropriate personnel and ensure that they are immediately dispatched for investigation and response;
- c. Ensure immediate notification to the public, health agencies, and other affected entities (including public water systems). The response plan must identify the public health and other officials who will receive immediate notification;
- d. Ensure that appropriate personnel are aware of and follow the plan and are appropriately trained;
- e. Provide emergency operations; and
- f. Ensure that DEQ is notified of the public notification steps taken.

**B8. Removed Substances**

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering waters of the state, causing nuisance conditions, or creating a public health hazard.

**SECTION C. MONITORING AND RECORDS**

**C1. Representative Sampling**

Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit, and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of DEQ. Samples must be collected in accordance with requirements in 40 CFR part 122.21 and 40 CFR part 403 Appendix E.

**C2. Flow Measurements**

Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than  $\pm 10$  percent from true discharge rates throughout the range of expected discharge volumes.

**C3. Monitoring Procedures**

Monitoring must be conducted according to test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 unless other test procedures have been specified in this permit.

For monitoring of recycled water with no discharge to waters of the state, monitoring must be conducted according to test procedures approved under 40 CFR part 136 or as specified in the most recent edition of

Standard Methods for the Examination of Water and Wastewater unless other test procedures have been specified in this permit or approved in writing by DEQ.

C4. Penalties for Tampering

The federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit may, upon conviction, be punished by a fine of not more than \$10,000 per violation, imprisonment for not more than two years, or both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than \$20,000 per day of violation, or by imprisonment of not more than four years, or both.

C5. Reporting of Monitoring Results

Monitoring results must be summarized each month on a discharge monitoring report form approved by DEQ. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

C6. Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR part 136 or, in the case of sludge (biosolids) use and disposal, approved under 40 CFR part 503 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the discharge monitoring report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (for example, total residual chlorine), only the average daily value must be recorded unless otherwise specified in this permit.

C7. Averaging of Measurements

Calculations for all limitations that require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

C8. Retention of Records

Records of monitoring information required by this permit related to the permittee's sewage sludge use and disposal activities must be retained for a period of at least 5 years (or longer as required by 40 CFR part 503). Records of all monitoring information including all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit must be retained for a period of at least 3 years from the date of the sample, measurement, report, or application. This period may be extended by request of DEQ at any time.

C9. Records Contents

Records of monitoring information must include:

- a. The date, exact place, time, and methods of sampling or measurements;
- b. The individual(s) who performed the sampling or measurements;
- c. The date(s) analyses were performed;
- d. The individual(s) who performed the analyses;
- e. The analytical techniques or methods used; and
- f. The results of such analyses.

C10. Inspection and Entry

The permittee must allow DEQ or EPA upon the presentation of credentials to:

- a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

- b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
- d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

#### C11. Confidentiality of Information

Any information relating to this permit that is submitted to or obtained by DEQ is available to the public unless classified as confidential by the Director of DEQ under ORS 468.095. The permittee may request that information be classified as confidential if it is a trade secret as defined by that statute. The name and address of the permittee, permit applications, permits, effluent data, and information required by NPDES application forms under 40 CFR § 122.21 are not classified as confidential [40 CFR § 122.7(b)].

### **SECTION D. REPORTING REQUIREMENTS**

#### D1. Planned Changes

The permittee must comply with OAR 340-052, "Review of Plans and Specifications" and 40 CFR § 122.41(l)(1). Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers may be commenced until the plans and specifications are submitted to and approved by DEQ. The permittee must give notice to DEQ as soon as possible of any planned physical alternations or additions to the permitted facility.

#### D2. Anticipated Noncompliance

The permittee must give advance notice to DEQ of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

#### D3. Transfers

This permit may be transferred to a new permittee provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and EQC rules. No permit may be transferred to a third party without prior written approval from DEQ. DEQ may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under 40 CFR § 122.61. The permittee must notify DEQ when a transfer of property interest takes place.

#### D4. Compliance Schedule

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

#### D5. Twenty-Four Hour Reporting

The permittee must report any noncompliance that may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours from the time the permittee becomes aware of the circumstances, unless a shorter time is specified in the permit. During normal business hours, the DEQ regional office must be called. Outside of normal business hours, DEQ must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

- a. The following must be included as information that must be reported within 24 hours under this paragraph:
  - (1) Any unanticipated bypass that exceeds any effluent limitation in this permit;
  - (2) Any upset that exceeds any effluent limitation in this permit;

- (3) Violation of maximum daily discharge limitation for any of the pollutants listed by DEQ in this permit; and
  - (4) Any noncompliance that may endanger human health or the environment.
- b. A written submission must also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission must contain:
- (1) A description of noncompliance and its cause;
  - (2) The period of noncompliance, including exact dates and times;
  - (3) The estimated time noncompliance is expected to continue if it has not been corrected;
  - (4) Steps taken or planned to reduce, eliminate and prevent reoccurrence of the noncompliance; and
  - (5) Public notification steps taken, pursuant to General Condition B7.

DEQ may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

D6. Other Noncompliance

The permittee must report all instances of noncompliance not reported under General Condition D4 or D5, at the time monitoring reports are submitted. The reports must contain:

- a. A description of the noncompliance and its cause;
- b. The period of noncompliance, including exact dates and times;
- c. The estimated time noncompliance is expected to continue if it has not been corrected; and
- d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

D7. Duty to Provide Information

The permittee must furnish to DEQ within a reasonable time any information that DEQ may request to determine compliance with the permit or to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit. The permittee must also furnish to DEQ, upon request, copies of records required to be kept by this permit.

Other Information: When the permittee becomes aware that it has failed to submit any relevant facts or has submitted incorrect information in a permit application or any report to DEQ, it must promptly submit such facts or information.

D8. Signatory Requirements

All applications, reports or information submitted to DEQ must be signed and certified in accordance with 40 CFR § 122.22.

D9. Falsification of Information

Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed \$125,000 per violation and up to 5 years in prison per ORS chapter 161. Additionally, according to 40 CFR § 122.41(k)(2), any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit including monitoring reports or reports of compliance or non-compliance will, upon conviction, be punished by a federal civil penalty not to exceed \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both.

D10. Changes to Discharges of Toxic Pollutant

The permittee must notify DEQ as soon as it knows or has reason to believe the following:

- a. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - (1) One hundred micrograms per liter (100 µg/l);
  - (2) Two hundred micrograms per liter (200 µg/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
  - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
  - (4) The level established by DEQ in accordance with 40 CFR § 122.44(f).
- b. That any activity has occurred or will occur that would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant that is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
  - (1) Five hundred micrograms per liter (500 µg/l);
  - (2) One milligram per liter (1 mg/l) for antimony;
  - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with 40 CFR § 122.21(g)(7); or
  - (4) The level established by DEQ in accordance with 40 CFR § 122.44(f).

**SECTION E. DEFINITIONS**

- E1. *BOD* or *BOD<sub>5</sub>* means five-day biochemical oxygen demand.
- E2. *CBOD* or *CBOD<sub>5</sub>* means five-day carbonaceous biochemical oxygen demand.
- E3. *TSS* means total suspended solids.
- E4. *Bacteria* means but is not limited to fecal coliform bacteria, total coliform bacteria, *Escherichia coli* (*E. coli*) bacteria, and *Enterococcus* bacteria.
- E5. *FC* means fecal coliform bacteria.
- E6. *Total residual chlorine* means combined chlorine forms plus free residual chlorine
- E7. *Technology based permit effluent limitations* means technology-based treatment requirements as defined in 40 CFR § 125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
- E8. *mg/l* means milligrams per liter.
- E9. *µg/l* means microgram per liter.
- E10. *kg* means kilograms.
- E11. *m<sup>3</sup>/d* means cubic meters per day.
- E12. *MGD* means million gallons per day.
- E13. *Average monthly effluent limitation* as defined at 40 CFR § 122.2 means 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.
- E14. *Average weekly effluent limitation* as defined at 40 CFR § 122.2 means the highest allowable average of daily discharges over a calendar week, calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.
- E15. *Daily discharge* as defined at 40 CFR § 122.2 means the discharge of a pollutant measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling. For pollutants with limitations expressed in units of mass, the daily discharge must be calculated as the total mass of the pollutant discharged over the day. For pollutants with limitations expressed in other units of measurement, the daily discharge must be calculated as the average measurement of the pollutant over the day.

- E16. *24-hour composite sample* means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
- E17. *Grab sample* means an individual discrete sample collected over a period of time not to exceed 15 minutes.
- E18. *Quarter* means January through March, April through June, July through September, or October through December.
- E19. *Month* means calendar month.
- E20. *Week* means a calendar week of Sunday through Saturday.

Public Notice



State of Oregon  
Department of  
Environmental  
Quality

# National Pollutant Discharge Elimination System Permit Fact Sheet Oregon State University

<b>Permittee</b>	Oregon State University OSU John L. Fryer Aquatic Animal Health Lab 34347 NE Electric Road Corvallis, OR 97333 and OSU Fish Performance and Genetics Lab 34349 NE Electric Road Corvallis, OR 97333
<b>Existing Permit Information</b>	File Number: 103919 Permit Number: 102512 EPA Reference Number: OR0032573 Category: Industrial Class: Minor Expiration Date: June 30, 2011
<b>Permittee Contact</b>	Ryan Craig Facility Manager 541-737-0743 34347 NE Electric Road Corvallis, OR 97333
<b>Receiving Water Information</b>	Receiving stream/NHD name: Willamette River NHD Reach Code & % along reach: 17090003000130, 83.23% USGS 12-digit HUC: 170900030608 OWRD Administrative Basin: Willamette ODEQ LLID & River Mile: 1227618456580 - RM 130.3 Assessment Unit ID: OR_SR_1709000306_05_103854
<b>Proposed Action</b>	Permit Renewal Application Number: 967974 Date Application Received: January 3, 2011
<b>Permit Writer</b>	Matthew Schult 971-806-4857 Date Prepared: December 19, 2024

# NPDES Permit Fact Sheet Oregon State University

## Table of Contents

<b>1. Introduction</b>	<b>4</b>
<b>2. Facility Description</b>	<b>5</b>
2.1 Wastewater Facility	5
2.2 Stormwater	11
2.3 Wastewater Classification	11
2.4 Industrial Rating	11
<b>3. Schedule A: Effluent Limit Development</b>	<b>11</b>
3.1 Existing Effluent Limits	11
3.2 Technology-Based Effluent Limit Development	12
3.3 Water Quality-Based Effluent Limit Development	17
3.4 Antibacksliding	29
3.5 Antidegradation	30
3.6 Whole Effluent Toxicity	30
3.7 Groundwater	31
<b>4. Schedule A: Other Limitations</b>	<b>31</b>
4.1 Mixing Zone	31
<b>5. Schedule B: Monitoring and Reporting Requirements</b>	<b>31</b>
<b>6. Schedule C: Compliance Schedule</b>	<b>31</b>
<b>7. Schedule D: Special Conditions</b>	<b>31</b>
7.1 Best Management Practices (BMP) plan	31
7.2 Emergency Response and Public Notification Plan	31
7.3 Environmental Supervisor	32
7.4 Spill/Emergency Response Plan	32
7.5 Outfall Inspection	32
<b>8. Schedule F: NPDES General Conditions</b>	<b>32</b>
<b>Appendix A: Thermal Plumes RPA</b>	<b>33</b>

## List of Tables

Table 2-1: List of Outfalls.....	11
Table 3-1: Existing Effluent Limits for Outfall 001 (from Settling Pond).....	12
Table 3-2: Category 5 and Category 4A Parameters .....	18
Table 3-3: Applicable WLAs.....	19
Table 3-4: Pollutants of Concern .....	19
Table 3-5: Mixing Zone Dilution Summary .....	20
Table 3-6: pH Reasonable Potential Analysis .....	22
Table 3-7: Temperature Criteria Information .....	23
Table 3-8: Temperature Criterion Effluent Limits.....	24
Table 3-9: Thermal Plume Effluent Limit .....	25
Table 3-10: Proposed <i>E. coli</i> Limits .....	26
Table 3-11: Proposed Chlorine Limits.....	26
Table 3-12: Ammonia Analysis Information – Summer .....	27
Table 3-13: Ammonia Analysis Information – Winter.....	28

## List of Figures

Figure 2-1: Aerial view of OSU facilities on the Willamette River, east of Corvallis .....	8
Figure 2-2: Line diagram of Aquatic Animal Health Lab facility .....	9
Figure 2-3: Line diagram for Fish Performance and Genetics Lab facility (AAHL at left edge) .....	10
Figure 3-1: Outfall 001, mixing zone and outlet to the mainstem Willamette River .....	21
Figure A-1: Thermal plumes reasonable potential analysis following OAR 340-041-0053(2)(d)(D) to assess salmonid migration blockage. ....	33

# NPDES Permit Renewal Fact Sheet

## Oregon State University

### 1. Introduction

As required by Oregon Administrative Rule 340-045-0035, this fact sheet describes the basis and methodology used in developing the permit. The permit is divided into several sections:

- Schedule A – Waste discharge limitations
- Schedule B – Minimum monitoring and report requirements
- Schedule C – Compliance conditions and schedules
- Schedule D – Special conditions
- Schedule E – Pretreatment conditions
- Schedule F – General conditions

The existing permit for the facility was issued on January 10, 2007. It was set to expire on June 30, 2011, and was administratively extended when the permittee submitted their NPDES permit renewal application on January 3, 2011.

The permit shall not be deemed to expire until final action has been taken on the renewal application as per Oregon Administrative Rules (OAR) 340-045-0040. A renewal permit is necessary to discharge to state waters pursuant to provisions of Oregon Revised Statutes (ORS) 468B.050 and the Federal Clean Water Act. The Department proposes to renew the permit. This permit evaluation report describes the basis and methodology used in developing the permit.

A summary of the major changes to the permit are listed below:

- OSU's Fish Performance and Genetics Lab has been added as a named facility to this NPDES permit; their discharge shares the discharge to the ponds and Outfall 001 with the Aquatic Animal Health Lab.
- The existing excess thermal load limits and monitoring requirements from the previous permit have been removed and are not part of this proposed permit.
- The existing pH and total residual chlorine limits have been updated to more stringent limits, based on reasonable potential analyses.
- DEQ's Quantitation Limit (QL) for chlorine has been updated since this permit was last renewed. The new QL will apply as the compliance limit when permit limits for chlorine are below the chlorine QL.
- Updated best professional judgment effluent limit guidelines in Schedule A, Section 2 Operating Requirements and Section 3 Chemical Use.
- Added a new requirement to develop a Best Management Practices plan in Schedule D and submit the plan in Schedule B, to meet Operating Requirements in Schedule A.

- Changes to effluent monitoring requirements, reflecting updates to DEQ's monitoring matrix.
- The existing WET testing requirement for bioassays has been removed.

## 2. Facility Description

### 2.1 Wastewater Facility

The Aquatic Animal Health Lab (AAHL) is a research facility operated by Oregon State University (OSU) on the Linn County side of the Willamette River near Corvallis, Oregon (Figure 2-1). Formerly known as the OSU Salmon Disease Laboratory, it was originally constructed in 1990, and the first wastewater permit was issued in 1989. The lab is a regional fish disease research facility dedicated to the study of infectious diseases for salmonids and other species of freshwater fish. In addition to wastewater generated by the AAHL facility, wastewater from the adjacent OSU Fish Performance and Genetics Lab (FPGL) joins AAHL's discharge to the settling ponds, these flows are jointly discharged to the Willamette River. Although this arrangement has existed since before the permit was first issued, FPGL was not explicitly named in previous permits. With this permit renewal, FPGL operations will also be covered in this permit. The industrial wastewater is treated and discharged in accordance with National Pollutant Discharge Elimination System (NPDES) permit number 102512.

AAHL is a flow-through facility that consists of fish rearing and holding tanks, a chlorine dosing and contact chamber, a 50 foot by 100-foot chlorine dissipation pond and a 100 foot by 110 foot settling pond (Figure 2-2). Water for the facility is sourced from two 29-foot-deep wells capable of producing up to 600 gallons per minute (gpm) of groundwater at a consistent temperature of 12.8 °C. Water quality analysis indicates that this source water is high quality, supplied to the lab for use in various experiments on aquatic animals. On average the facility utilizes 200 gpm in the summer months and 100 gpm in the winter months. There is an additional option to pump influent water from the Willamette River if needed. All influent waters are sterilized using UV and then de-gassed prior to introduction to the facility.

AAHL maintains a network of approximately 330 indoor tanks (25 to 380 liters in volume) to hold infected fish for research. There are an additional 45 outdoor tanks (the majority are 3 feet in diameter, ranging up to 12 feet in diameter) used to hold non-infected fish. AAHL hosts research focused on fish response to disease. In the past, this has included research and development of drugs for fish disease treatment. Although AAHL has not hosted this type of research since 2016 (approximately), AAHL could potentially host drug development research in the future. This permit includes effluent limit guidelines requiring DEQ approval (Schedule A.3) and notification from the permittee (Schedule B.3) prior to any anticipated investigational new animal drug (INAD) applications or extra-label usage of approved drugs or chemicals. Drugs and chemicals are periodically used to treat fish for other ailments common to fish rearing facilities, on a needs-based basis as opposed to routine applications. Furanase (antifungal) and MS-222 (anesthetic) are prepared in batches separate from the research tank network and are not discharged with the tank waters. Wastewater containing antifungals or anesthetics must be disposed of according to OSU's Environmental Health and Safety program guidelines. AAHL has a 45-gallon tub for the disinfecting agent Virkon (active ingredient is potassium

peroxymonosulphate), used to disinfect equipment. The Virkon tub is refreshed quarterly, expired Virkon is used to wash down the lab floors where it is allowed to dry. Iodine is used to disinfect empty tanks; it is left to dry on the tanks to metabolize before rinsing into the floor channels. Excess iodine solution is left out to metabolize and degrade before pouring into the floor channel drains. Hydrogen peroxide has been used infrequently in the past (in 2012, treatment concentration at 5 ppm) to treat fish for fungal or bacterial infections. Formalin (Parasite-S) is applied periodically to treat fish for external parasites. Application volumes range from 0.5 L to 5 L in a calendar year, applied at concentrations of 83 – 125 ppm. When applied, hydrogen peroxide and formalin are discharged with the effluent stream. It is a permit requirement for AAHL to monitor for formalin any time they apply the chemical to their tanks. Historically, formalin monitoring results have reported non-detects, with levels have been below the detection point.

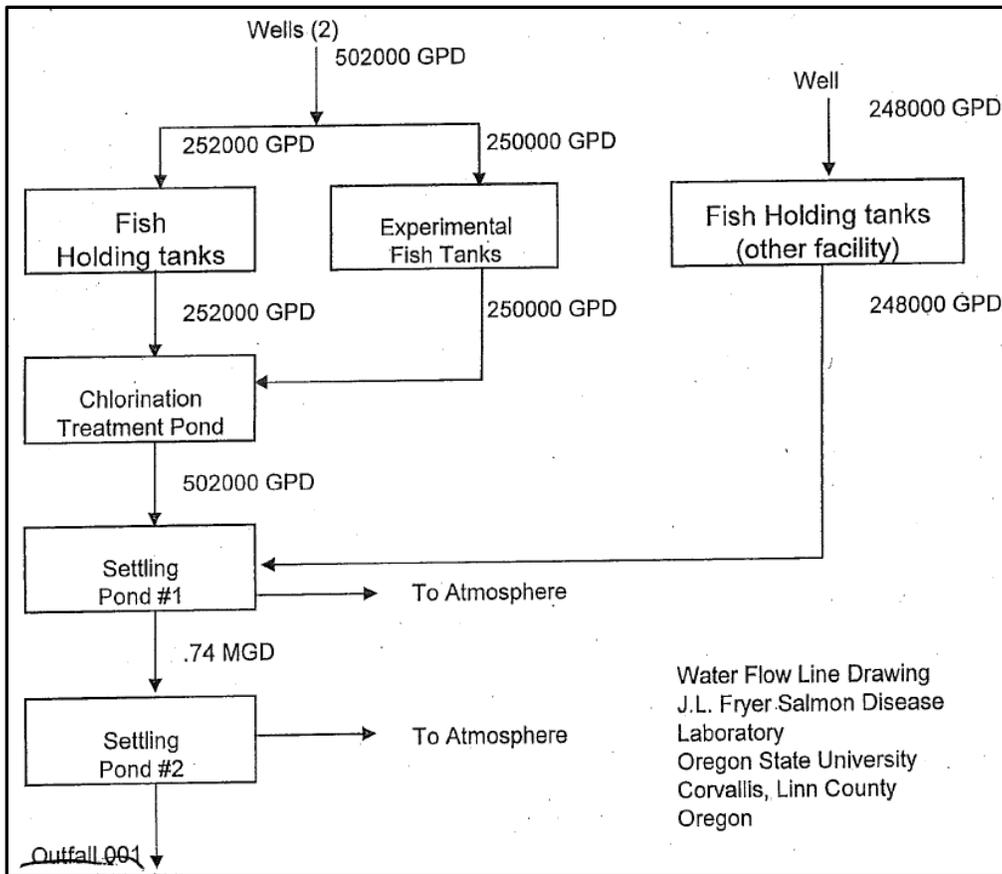
Research at FPGL is focused primarily on fish growth and metabolism. Fish disease and pathogen testing are not part of their operations and there is no chlorine disinfection nor monitoring conducting on their wastewater. The FPGL facility has a similar distribution of indoor and outdoor research tanks, ranging in size from 3-foot diameter (90 gallons) to 10-foot diameter (2,000 gallons) tanks, as well as incubation trays for fish egg incubations. Their influent water is supplied by a separate set of well pumps with a typical flow rate of 400 gpm (0.58 MGD). Regarding drug and chemical applications, FPGL utilizes the same treatments as AAHL for fish on a needs-based approach, as is common for fish-rearing facilities. Unlike AAHL however, FPGL does not have the infrastructure available to divert treated tank waters out of their waste stream, all waters are discharged directly to the settling ponds. FPGL discharges approximately 450 gpm (0.65 MGD) of water from their fish holding facilities directly into the chlorine dissipation pond (Pond 1). A new requirement for this permit renewal will be for both facilities to maintain a drug and chemical applications log, for best management practices.

Prior to discharge, wastewater from the indoor tanks at AAHL is treated with sodium hypochlorite (chlorine) to prevent the release of any pathogenic organisms associated with laboratory disease research to the Willamette River. AAHL also discharges untreated wastewater from the outdoor stock tanks. The stock tanks do not hold fish exposed to pathogens. Water from FPGL's tanks joins the discharge after the chlorine contact basin and is not disinfected. AAHL is a flow-through facility, influent water makes a single pass through the research tanks and then drains to a common floor channel. This channel leads to a chlorine contact basin; a serpentine trough designed to provide a three-hour contact time for disinfection. There is no dechlorination system in place, chlorine dissipates through residence time in the contact basin and a series of two retention ponds. In their 2011 permit renewal application, the facility reported they switched from gaseous chlorine to liquid chlorine treatment for safety concerns. A hydraulic pump is manually adjusted to maintain a chlorine residual of about 1 mg/L at the end of the contact basin. A chlorine sensor at the tail end of the basin monitors chlorine levels to determine treatment effectiveness. The sensor is connected to an alarm system to notify if chlorine levels are outside of specification. The chlorine contact basin is vacuumed out to control solids deposition every ten to fourteen days, this is pumped directly to Pond 1. Discharge flows are gravity-dependent, disinfected water flows from the contact basin to a surface impoundment (Dissipation Pond 1), for chlorine dissipation. Dissipation Pond 1 connects to a subsequent settling pond (Settling Pond 2) for solids settling. From this pond, the water discharges to Outfall 001, situated in a protected

backwater of the Willamette River at river mile 130.3. Discharge rates to Outfall 001 from the combined facility discharges are maintained around a consistent 0.54 MGD, based on their flow-through operations and the gravity flow from the two ponds. The residence time in the ponds allows the residual chlorine to attenuate naturally via reactions with sunlight, algae and other organics. Estimated residence times are five hours for Pond 1, followed by thirteen hours for Pond 2. No residuals are generated at the facility from the wastewater treatment system. Levels of solids in the wastewater that flows through the two ponds are very low. Small amounts of organic material (e.g., leaves and debris) collect on the pond bottom, but the ponds have never required dredging. The settling ponds are located adjacent to OSU's Trysting Tree golf course fairways; past observations have noted pond maintenance performed by golf course operations, mainly vegetation removal. It is a permit condition in Schedule D that the permittee is required to notify DEQ and request approval if the settling ponds require dredging at any time. The monitoring and compliance point is a concrete flume that directs discharge from Pond 2 to Outfall 001. The flume has a weir and staff gauge to measure effluent flow. AAHL also installed an Onset HOBO logger here for continuous temperature monitoring, data is downloaded monthly. AAHL performs all sample collection, analysis and reporting for this permit.



Figure 2-1: Aerial view of OSU facilities on the Willamette River, east of Corvallis.



**Figure 2-2: Line diagram of Aquatic Animal Health Lab facility**

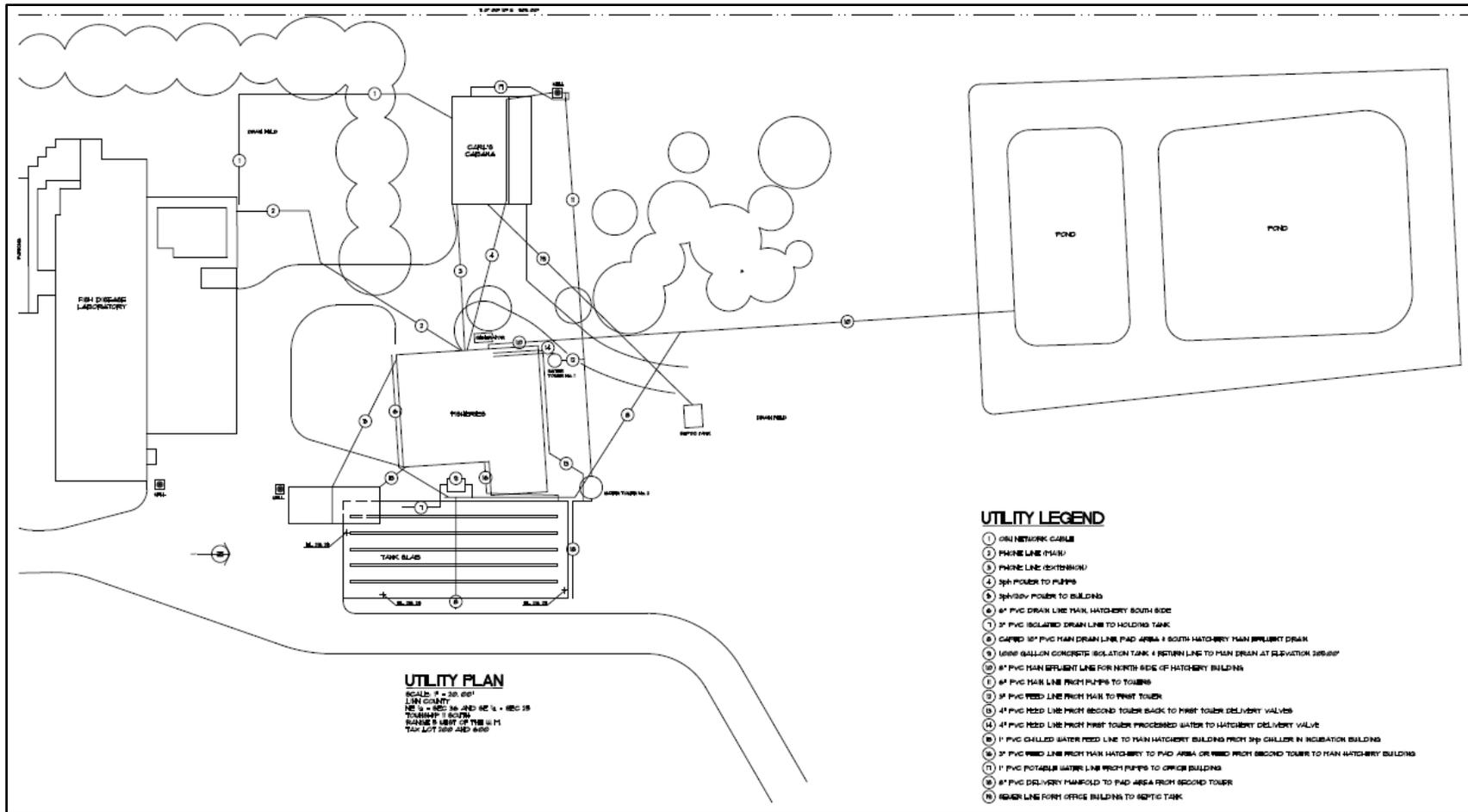


Figure 2-3: Line diagram for Fish Performance and Genetics Lab facility (AAHL at left edge)

**Table 2-1: List of Outfalls**

<b>Outfall Number</b>	<b>Type of Waste</b>	<b>Lat/Long</b>	<b>Design Flow <sup>1</sup> (mgd)</b>	<b>Existing Flow <sup>2</sup> (mgd)</b>
001	Treated discharge from fish holding facilities	44.57755, -123.24139	0.563	0.583
1. Design Flow = design average dry weather flow 2. Existing Flow = existing average monthly dry weather flow				

## 2.2 Stormwater

Stormwater is not addressed in this permit. General NPDES permits for stormwater are not required for facilities with a design flow of less than 1 MGD that do not have a pretreatment program. In addition, although AAHL is an industrial discharger, the facility Standard Industrial Classification (SIC) codes do not fall under the scope of 1200-Z permits for industrial dischargers.

## 2.3 Wastewater Classification

The permittee is classified as an industrial facility. AAHL and FPGL do not treat their own domestic wastewater and are not included in the municipal wastewater classification system.

## 2.4 Industrial Rating

DEQ uses EPA’s non-municipal rating system to classify a permittee as a major or a minor facility. EPA developed a rating worksheet that considers factors such as type of facility, relative flow rate, potential to impact human health and other water quality factors. DEQ completed the rating worksheet and determined the permittee is a minor facility. The rating sheet is part of the administrative record.

# 3. Schedule A: Effluent Limit Development

Effluent limits serve as the primary mechanism in NPDES permits for controlling discharges of pollutants to receiving waters. Effluent limitations can be based on either the technology available to control the pollutants or limits that are protecting the water quality standards for the receiving water. DEQ refers to these two types of permit limits as technology-based effluent limitations (TBELs) and water quality-based effluent limits (WQBELs) respectively. When a TBEL is not restrictive enough to protect the receiving stream, DEQ must include a WQBEL in the permit.

## 3.1 Existing Effluent Limits

The table below shows the limits contained in the existing permit.

**Table 3-1: Existing Effluent Limits for Outfall 001 (from Settling Pond)**

Parameter	Limitations
Total Flow	1.2 MGD
TSS	5.0 mg/L
Floating Solids	Non-visible.
Settleable Solids	0.1 mL/L
Total Residual Chlorine	Shall not exceed 0.04 mg/L daily maximum and 0.01 mg/L monthly average (see Note 1).
pH	Year Around: Shall be within the range of 6.2 to 9.0 SU
Excess Thermal Load (May 16 through October 14)	Shall not exceed a rolling 7-day average of 1.71 million Kcals/day.
Excess Thermal Load (April 1 through May 15 and October 15 through October 31)	Shall not exceed a rolling 7-day average of 3.44 million Kcals/day.
Note:	
1. When the total residual chlorine limitation is lower than 0.10 mg/L, the Department will use 0.10 mg/L as the compliance evaluation concentration (i.e., daily maximum concentrations below 0.10 mg/L will be considered in compliance with the limitations).	

The 2007 NPDES permit Schedule A also contained language describing AAHL’s mixing zone and restrictions regarding chemical usage and groundwater considerations.

### 3.2 Technology-Based Effluent Limit Development

EPA is required to develop technology-based effluent limits for categories of industrial facilities. These limits are called effluent limitation guidelines (ELGs). EPA established these based on available treatment technologies for facilities within an industrial category or subcategory. ELGs are applied in NPDES permits as TBELs. If there are no applicable ELGs developed by EPA, best professional judgment technology based effluent limits (BPJ TBELs) may be applied (40 CFR § 125.3(c)(2)). As described in Section 2.1, AAHL is classified as a Concentrated Aquatic Animal Production (CAAP) facility, which is addressed in EPA’s ELGs listed under 40 CFR § 451. Under the General Applicability section at 40 CFR § 451.10, this rule applies to permitted facilities that produce at least 100,000 pounds of aquatic animals annually in a flow-through or recirculating system. AAHL is a flow-through facility with an estimated production capacity of less than 1,000 pounds annually. Therefore, conditions under 40 CFR § 451 do not directly apply to this facility.

As stated above, if there are no applicable ELGs, BPJ TBELs may be applied. It is appropriate to apply BPJ TBELs when ELGs are available for the industry category but are not applicable to the NPDES permit applicant. When considering the application of best practicable control technology currently available (BPT; see 40 CFR § 451.3 and 451.11) as BPJ TBELs in this proposed permit, DEQ must consider the following factors:

- 1) The age of equipment and facilities involved,
- 2) The process(es) employed,
- 3) The engineering aspects of the application of various types of control techniques,
- 4) Process changes,
- 5) Non-water quality environmental impact including energy requirements,
- 6) The total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application.

DEQ considered the factors in the following ways:

- 1) The facility was built in 1990, and no major updates or additions have been made to the facility. DEQ determined BPT is appropriate for a facility of this age.
- 2) AAHL and FPGL are flow-through facilities that consist of fish rearing and holding tanks, a chlorine dosing and contact chamber, a 50-foot by 100-foot chlorine dissipation pond and a 100-foot by 110-foot settling pond. DEQ determined the processes used at these facilities are similar enough to other concentrated aquatic animal production facilities in Oregon that application of the ELGs is appropriate.
- 3) The ELGs for the concentrated aquatic animal production point source category are narrative in nature and primarily involve reporting requirements and the use of Best Management Practices plans (BMPs). The ELGs do not prescribe different control techniques for complying with the rule. DEQ determined that implementing the BMPs would have no impact on the applicability of the ELGs to the facility.
- 4) There was only one process change noted in the application by the facility. In 2011 AAHL switched from gaseous chlorine to liquid chlorine treatment for safety concerns. DEQ determined no physical process changes would be needed for AAHL to comply with the ELGs.
- 5) No physical changes to the facilities are needed to comply with the ELGs. DEQ determined complying with the ELGs would not have an impact on the non-water quality environmental impacts of the facilities.
- 6) The ELGs for the concentrated aquatic animal production point source category are narrative in nature and primarily involve reporting requirements and the use of Best Management Plans. DEQ determined no physical changes to the facilities would be needed to comply with the ELGs and the cost for additional reporting and the development and implementation of BMPs would be *de minimis*.

Using knowledge of the facility and best professional judgment, DEQ has determined the following ELGs will be applied as TBELs to the Aquatic Animal Health Lab and will also apply to the Fish Performance and Genetics Lab for this permit:

**Schedule A:**

**A.2 Operating Requirements**

(40 CFR § 451.11)

- a. ***Solids control.*** The permittee must:
  - i. Employ efficient feed management and feeding strategies that limit feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth in order to minimize potential discharges of uneaten feed and waste products to waters of the U.S.
  - ii. In order to minimize the discharge of accumulated solids from settling ponds and basins and production systems, identify and implement procedures for routine cleaning of rearing units and offline settling basins, and procedures to minimize any discharge of accumulated solids during the inventorying, grading and harvesting of aquatic animals in the production system.
  - iii. Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.
- b. ***Materials storage.*** The permittee must:
  - i. Ensure proper storage of drugs, pesticides, and feed in a manner designed to prevent spills that may result in the discharge of drugs, pesticides or feed to waters of the U.S.
  - ii. Implement procedures for properly containing, cleaning, and disposing of any spilled material.
- c. ***Structural maintenance.*** The permittee must:
  - i. Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.
  - ii. Conduct regular maintenance of the production system and the wastewater treatment system in order to ensure that they are properly functioning.
- d. ***Recordkeeping.*** The permittee must:
  - i. In order to calculate representative feed conversion ratios, maintain records documenting the feed amounts and estimates of the numbers of aquatic animals.
  - ii. Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

- e. **Training.** The permittee must:
  - i. In order to ensure the proper clean-up and disposal of spilled material adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill.
  - ii. Train staff on the proper operation and cleaning of production and wastewater treatment systems including training in feeding procedures and proper use of equipment.

### **A.3 Chemical Use**

- a. Chemical residuals generated from the treatment of fish disease or parasites are permitted provided that the chemicals are applied in accordance with EPA, FDA or other labeling requirements.
- b. Unless DEQ approves in writing before use, the permittee must use chemicals approved or allowed for hatchery use by the US Food and Drug Administration (USFDA) or the US Environmental Protection Agency (USEPA). USFDA-approved chemicals include the following:
  - a) Investigational New Animal Drugs (INADs), Low Regulatory Priority (LRP) listed drugs,
  - b) Deferred Regulatory Status (DRS) drugs, and
  - c) Veterinary Extra-labelled drugs.
- c. The permittee must follow the conditions detailed in a facility's INAD application, treatment restrictions for LRP and DRS drugs, product label instructions for environmental protection, and precautions on labels of chemicals that are Extra-labelled by prescription. INADs must be labelled correctly, used in accordance with established protocols, and must not violate the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA).
- d. The permittee must report all chemicals on the chemical use log retained onsite and made available to DEQ or EPA staff upon request. The permittee must document the disposal of all spent chemical disinfection treatment solutions according to the procedure described in the permittee's Best Management Practices Plan (See Schedule D, Condition 1).

### **Schedule B:**

#### **B.3 Additional Reporting Requirements**

(40 CFR § 451.3)

- a. Except as noted below, a permittee subject to this part must notify the permitting authority of the use of any investigational new animal drug (INAD) or any extra-label drug use where such a use may lead to a discharge of the drug to waters of the U.S. Reporting is not required for an INAD or extra-label drug use that has been previously approved by FDA for a different species or disease if the INAD or extra-label use is at or below the approved dosage and involves similar conditions of use.

- i. The permittee must provide a written report to the permitting authority of an INAD's impending use within 7 days of agreeing or signing up to participate in an INAD study. The written report must identify the INAD to be used, method of use, the dosage, and the disease or condition the INAD is intended to treat.
  - ii. For INADs and extra-label drug uses, the permittee must provide a written report to the permitting authority within 30 days after initiating use of that drug. The written report must identify the drug used and include: the reason for treatment, date(s) and time(s) of the addition (including duration), method of application; and the amount added.
- b. Failure in, or damage to, the structure of an aquatic animal containment system resulting in an unanticipated material discharge of pollutants to waters of the U.S. In accordance with the following procedures, any permittee subject to this part must notify the permitting authority when there is a reportable failure.
- i. The permittee must provide an oral report within 24 hours of discovery of any reportable failure or damage that results in a material discharge of pollutants, describing the cause of the failure or damage in the containment system and identifying materials that have been released to the environment as a result of this failure.
  - ii. The permittee must provide a written report within 7 days of discovery of the failure or damage documenting the cause, the estimated time elapsed until the failure or damage was repaired, an estimate of the material released as a result of the failure or damage, and steps being taken to prevent a recurrence.
- c. In the event a spill of drugs, pesticides or feed occurs that results in a discharge to waters of the U.S., the permittee must provide an oral report of the spill to the permitting authority within 24 hours of its occurrence and a written report within 7 days. The report shall include the identity and quantity of the material spilled.

#### **Schedule D:**

##### **D.1 Best management practices (BMP) plan.**

(40 CFR § 451.3)

The permittee subject to this part must:

- a. Develop and maintain a plan on site describing how the permittee will achieve the requirements of Schedule A.2, A.3, and the following:
  - i. The permittee must collect process wastewaters containing hatchery approved treatment chemicals, such as anesthetic (i.e., MS-222), that are not to be discharged to waters of the state. These wastewaters must be disposed of according to hazardous waste disposal practices required by the Oregon State University's Environmental Health and Safety department.

- ii. The permittee must maintain a log of chemical applications at the facility, made available to DEQ by request. The permittee must document the disposal of all spent chemical disinfection solutions.
  - iii. The chlorine dissipation and solids settling ponds must not be drained or dredged without prior written approval from DEQ.
  - iv. Management practices for the settling ponds and surrounding grounds must be coordinated with the adjacent OSU Trysting Tree Golf Course to prevent the introduction of chemicals (e.g., fertilizers, pesticides or herbicides) into the research facility treatment ponds.
- b. Make the plan available to the permitting authority upon request.
  - c. The permittee subject to this part must certify in writing to the permitting authority that a BMP plan has been developed within three months of permit issuance.

### **3.3 Water Quality-Based Effluent Limit Development**

40 CFR 122.44(d) requires that permits include limitations more stringent than technology-based requirements where necessary to meet water quality standards. Water quality-based effluent limits may be in the form of a wasteload allocation required as part of a Total Maximum Daily Load (TMDL). They may also be required if a site-specific analysis indicates the discharge has the reasonable potential to cause or contribute to an exceedance of a water quality criterion. DEQ establishes effluent limits for pollutants that have a reasonable potential to exceed a criterion. The analyses are discussed below.

#### **3.3.1 Designated Beneficial Uses**

The permittee discharges to the Willamette River at River Mile (RM) 130.3. NPDES permits issued by DEQ must protect the following designated beneficial uses of the mainstem Willamette River. These uses are listed in OAR-340-041-0340 (Table 340A) for the Willamette basin.

- Public and private domestic water supply
- Industrial water supply
- Irrigation and livestock watering
- Fish and aquatic life (including salmonid rearing, migration and spawning)
- Wildlife and hunting
- Fishing
- Boating
- Water contact recreation
- Aesthetic quality

#### **3.3.2 303(d) Listed Parameters and Total Maximum Daily Loads**

The following table lists the parameters that are on the 2022 303(d) list (Category 5) within the discharge's stream reach. If a parameter is listed under Category 5, the data in the assessment unit (or nearby assessment unit) indicates a designated use is not supported or a water quality standard is not attained and a TMDL is needed. The table also lists any parameters with an

approved TMDL for the discharge’s stream reach (Category 4A). If a parameter is listed under Category 4A, TMDLs that will result in attainment of water quality standards and beneficial use support have been approved.

**Table 3-2: Category 5 and Category 4A Parameters**

<b>Water Quality Limited Parameters (Category 5)</b>	
AU ID:	OR_SR_1709000306_05_103854
AU Name:	Willamette River
AU Status:	Impaired
Year Listed	1998
Year Last Assessed	2022
Category 5 Parameters	Dissolved oxygen (spawn); Biocriteria (narrative); Temperature (spawn, year-round); Iron (total); Chlordane; Aquatic Weeds
<b>Category 4A Parameters</b>	
Dioxin (2,3,7,8-TCDD); Methylmercury; Temperature	

For temperature and mercury, DEQ has developed TMDLs in the Willamette River basin to address these impairments. These TMDLs were approved by the EPA in September 2006. Discussion of water temperature in the Willamette River is presented in section 3.3.7, and mercury in section 3.3.9.6. There is a Columbia River basin TMDL for dioxin (2,3,7,8-TCDD); however, as a minor industrial facility in animal production AAHL is not expected to contribute to dioxin impairment in the basin. Category 5 impairments include dissolved oxygen, biocriteria, temperature, total iron, chlordane, aquatic weeds. The mainstem Willamette River is water quality limited for dissolved oxygen during the spawning season (October 15 through May 15) from river mile 149 through river mile 50. No TMDL has been written to address the Willamette River dissolved oxygen listing and therefore no WLA for oxygen demanding pollutants have been assessed for AAHL. The aquatic weeds parameter is used to implement the statewide narrative criterion that prohibits deleterious or injurious effects on aquatic and human beneficial uses from biological growths (OAR 340-041-0007(9)). The growth of aquatic weeds or algae does not identify whether a pollutant or which pollutant is causing the impairment, nor does it identify which pollutant should be addressed by point source controls. Until there is specific evidence that a pollutant produced by the facility is causing the impairment it is assumed that the limits contained within the NPDES permit are protective of the narrative criterion.<sup>1</sup>

AAHL and FPGL are classified as Concentrated Aquatic Animal Production Facilities and are not reasonably expected to be a significant contributor to impairment from Category 4A (dioxin nor methylmercury) nor Category 5 (chlordane nor aquatic weeds) parameters.

<sup>1</sup> Oregon Integrated Report: Frequently Asked Questions. Water Quality Assessment, Oregon DEQ. Sept. 1, 2022.

### 3.3.3 TMDL Wasteload Allocations

DEQ issued a temperature TMDL for the mainstem Willamette River in 2006. The wasteload allocation (WLA) in the Willamette TMDL that is applicable to AAHL is addressed in the “bubble allocations” portion of the TMDL. Discussion of this can be found in section 3.3.7 below. In 2019 the Environmental Protection Agency (EPA) issued a revised Willamette Basin mercury TMDL for DEQ to implement. This is discussed in section 3.3.9.6.

**Table 3-3: Applicable WLAs**

Parameter	WLA	Time Period
NA	NA	NA
Comment: AAHL is included in a collection of eighteen “small point sources” that discharge to the Willamette River between river miles 108-186. No individual WLA is allocated to AAHL.		

### 3.3.4 Pollutants of Concern

To ensure that a permit is protecting water quality, DEQ must identify pollutants of concern. These are pollutants that are expected to be present in the effluent at concentrations that could adversely impact water quality. DEQ uses the following information to identify pollutants of concern:

- Effluent monitoring data.
- Knowledge about the permittee’s processes.
- Knowledge about the receiving stream water quality.
- Pollutants identified by applicable federal effluent limitation guidelines.

DEQ identified the following pollutants of concern for this facility listed in the following table.

**Table 3-4: Pollutants of Concern**

Pollutant	How was pollutant identified?
pH	Effluent Monitoring
Temperature	Effluent Monitoring
Total Residual Chlorine	Effluent Monitoring
Total Ammonia Nitrogen	Application Requirement
Formaldehyde	Application Requirement

The sections below discuss the analyses that were conducted for the pollutants of concern to determine if water quality based effluent limits are needed to meet water quality standards.

### 3.3.5 Regulatory Mixing Zone

The proposed permit contains a mixing zone as allowed per OAR 340-041-0053. The regulatory mixing zone from the existing permit is described as:

*The allowable mixing zone is that portion of the Willamette River beginning ten feet upstream and fifty feet downstream from the outfall. The Zone of Immediate Dilution (ZID) shall be defined as that portion of the allowable mixing zone that is within five feet of the point of discharge.*

The proposed permit contains an updated regulatory mixing zone description which is described as follows. The description was updated because a 2009 mixing zone study found that when the discharge enters the Willamette River it moves upstream about 50 feet, due to a back eddy, before then flowing downstream.

*The allowable mixing zone is that portion of the Willamette River where the discharge enters a small side inlet and extends fifty feet upstream and fifty feet downstream from where the side channel enters the mainstem Willamette River. The Zone of Immediate Dilution (ZID) is that portion of the allowable mixing zone that is within five feet of the point where the discharge enters the mainstem Willamette River.*

The dilution factors at the edge of the Regulatory Mixing Zone and Zone of Initial Dilution are shown in Table 3-5. These dilutions are based on a 2024 mixing zone analysis conducted by DEQ. The mixing zone memo documenting this analysis is in a February 14, 2024, Mixing Zone Memo which is part of the administrative record. DEQ’s mixing zone analysis is based on velocity and depth information measured within the mixing zone and submitted by OSU. This information also included an observation that the discharge enters the river where there is a small back eddy that pushes the effluent plume upstream about fifty feet prior to flowing downstream. DEQ modeled the discharge using CORMIX v 12.0 based on the information provided by OSU. The predicted dilutions are based on worst-case low river flow conditions. Dilution is expected to be higher when river flows are higher.

The location of Outfall 001 in relation to the Willamette River and the mixing zone for AAHL are presented in Figure 3-1 below for clarity.

**Table 3-5: Mixing Zone Dilution Summary**

<b>Dilution Summary – Year-round</b>						
<b>Water Quality Standard</b>	<b>Stream Flow (cfs)</b>		<b>Effluent Flow (mgd)</b>		<b>Dilution Factor</b>	<b>Location</b>
	<b>Statistic</b>	<b>Flow</b>	<b>Statistic</b>	<b>Flow</b>		
Aquatic Life, Acute	1Q10	3430	<input type="checkbox"/> ADWDF x PF <input checked="" type="checkbox"/> Max Daily Avg <input type="checkbox"/> Other	0.75	1.8	ZID
Aquatic Life, Chronic	7Q10	3524	<input type="checkbox"/> ADWDF <input checked="" type="checkbox"/> Max Monthly Avg <input type="checkbox"/> Other	0.54	3.9	RMZ

Human Health, Non-Carcinogen	30Q5	4070	<input type="checkbox"/> ADWDF <input checked="" type="checkbox"/> Max Monthly Avg <input type="checkbox"/> Other	0.54	3.9	RMZ
Human Health, Carcinogen	Harmonic Mean	7357	<input type="checkbox"/> Annual Avg Design <input checked="" type="checkbox"/> Annual Avg <input type="checkbox"/> Other	0.54	5.4	RMZ
<i>ADWDF = Average dry weather design flow</i> <i>PF = Peaking factor (1.5)</i>						
<b>Comments:</b> Critical stream flows are based on USGS gage #14166000 – Willamette River at Harrisburg.						



**Figure 3-1: Outfall 001, mixing zone and outlet to the mainstem Willamette River**

### 3.3.6 pH

The pH criterion for this basin is 6.5 – 8.5 per OAR 340-041-0345. DEQ determined there is reasonable potential for the discharge to exceed the pH criterion at the edge of the mixing zone for Outfall 001 if the current pH limits stay in place. The existing permit limits for pH are 6.2 – 9.0. The permit will propose a new pH limit range of 6.3 – 9.0. The lower limit is a WQBEL as it is more stringent than the federal secondary treatment standard. The upper limit is a TBEL, it is less stringent than the federal secondary treatment standard. The following provides a summary of the data used for the analysis.

**Table 3-6: pH Reasonable Potential Analysis**

<b>INPUT</b>	<b>Lower pH Criteria</b>	<b>Upper pH Criteria</b>
1. Dilution at mixing zone boundary	3.9	3.9
2. Upstream characteristics		
a. Temperature (°C)	19.3	6.5
b. pH	7.0	7.8
c. Alkalinity (mg CaCO <sub>3</sub> /L)	22.0	22.0
3. Effluent characteristics		
a. Temperature (°C)	19.0	12.4
b. pH (S.U.)	6.2	9.0
c. Alkalinity (mg CaCO <sub>3</sub> /L)	109.9	109.9
4. Applicable pH criteria	6.5	8.5
<b>pH at mixing zone boundary</b>	6.4	8.2
<b>Is there reasonable potential?</b>	Yes	No
<b>Proposed effluent limits</b>	6.3	9.0
<b>Effluent data source:</b> ICIS data pull for date range August-2019 to July-2023.		
<b>Ambient data source:</b> AWQMS data pull for DEQ stations 10352, 10355, 29043, 33750, 37095, 37098, 37103 and City of Eugene stations FAMBMWDS, FAMBOB for date range 2014 - 2023.		

### 3.3.7 Temperature

#### 3.3.7.1 Temperature Criteria OAR 340-041-0028

The following table summarizes the temperature criteria that apply at the discharge location, along with whether the receiving stream is water quality-limited for temperature and whether a TMDL wasteload allocation has been assigned. Using this information, DEQ performed several analyses to determine if effluent limits were needed to comply with the temperature criteria.

**Table 3-7: Temperature Criteria Information**

<b>Applicable Temperature Criterion</b>	Rearing/Migration 18°C (OAR 340-041-0028(4)(c))
Applicable dates: May 16 – October 14	
<b>Salmon/Steelhead Spawning 13 °C?</b> OAR 340-041-0028(4)(a)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Applicable dates: October 15 – May 15	
<b>WQ-limited?</b>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>TMDL wasteload allocation assigned?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Applicable dates: NA	
TMDL based on natural conditions criterion?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
<b>Cold water summer protection criterion applies?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Cold water spawning protection applies?</b>	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Comments: The 2006 Willamette TMDL established a wasteload allocation under the TMDL’s “bubble allocations” portion. The TMDL did not designate a specific effluent limit for individual small point sources in the “bubble”.	

DEQ utilizes Fish Use Designation maps and Salmon and Steelhead Spawning Use Designations maps to identify applicable temperature criteria for each river basin. Located at river mile 130.3 in Corvallis, AAHL discharges to a section of the Willamette River designated for salmon and steelhead spawning use during the period October 15 – May 15. This spawning designation is found in the Fish Use Designation map for the Willamette Basin, OAR 340-041, Figure 340B. OAR 340-041-0028(a) assigns a temperature criterion not to exceed 13.0 °C as a 7-day average maximum temperature during this period. For the remainder of the year, OAR 340-041, Figure 340A designates this reach of the mainstem Willamette River for salmon and trout rearing and migration. For rearing and migration, OAR 340-041-0028(4)(c) assigns a criterion of 18.0 °C as a 7-day average maximum temperature.

The Willamette River is listed as water quality impaired for temperature in DEQ’s List of Water Quality Impaired Waters (also called the 303(d) List). The TMDL determined that the temperature standard is not attained from April 1 through October 31 in the Willamette River. For streams with a TMDL that do not meet water quality standards, OAR 340-041-0028(12)(b)(B) states the following:

Following a temperature TMDL or other cumulative effects analysis, waste load and load allocations will restrict all NPDES point sources and nonpoint sources to a cumulative increase of no greater than 0.3 degrees Celsius (0.5 Fahrenheit) above the applicable criteria after complete mixing in the water body, and at the point of maximum impact.

The Mainstem Willamette Waste Load Allocation (WLA) chapter of the Willamette TMDL contains a subsection, “Bubble Allocations for Small Point Sources”. The intent of this WLA subsection is to address the cumulative effects of small point sources, such as AAHL, to the

Willamette system. Under the TMDL’s “bubble allocation”, no individual effluent limit is required for AAHL (the facility was deemed small enough that its temperature discharge is not required to be regulated at this time). AAHL’s discharge is accounted for in a “bubble” of small point sources that discharge between river miles 108 – 186. Discharges from these sources are accounted for in collective WLAs for rearing and migration (May 16 – October 14) and spawning (October 15 – May 15).

The existing permit was issued concurrent to the 2006 Willamette TMDL issuance. At the time, AAHL was erroneously assigned an effluent excess thermal load limit (ETTL), based on a misinterpretation of the individual WLA rules. The Department has determined that the previous ETLL is not applicable to AAHL. After conducting an antidegradation and anti-backsliding review to ensure compliance with water quality standards, the Department has determined that the previous ETLL will not be included in this proposed permit.

Based on these analyses, no temperature limit associated with the applicable temperature criteria is included in the proposed permit.

Final effluent limits are listed in the following table.

**Table 3-8: Temperature Criterion Effluent Limits**

Effluent limit needed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>TMDL WLA Limit:</b> No Limit
Applicable time period: Dates <input checked="" type="checkbox"/> NA
<b>Temperature Criterion Limit:</b> No Limit
Applicable time period: Dates <input checked="" type="checkbox"/> NA
Comments:

**3.3.7.2 Thermal Plume OAR 340-041-0053(2)(d)**

In addition to compliance with the temperature criteria, OAR 340-041-0053(2)(d) contains thermal plume limitation provisions designed to prevent or minimize adverse effects to salmonids that may result from thermal plumes. The discharge was evaluated for compliance with these provisions as follows:

- OAR 340-041-0053(2)(d)(A): Impairment of an active salmonid spawning area where spawning redds are located or likely to be located. This adverse effect is prevented or minimized by limiting potential fish exposure to temperatures of 13 °C or more for salmon and steelhead, and 9 °C or more for bull trout.

*AAHL discharge:* In a January 2024 conversation, the Oregon Department of Fish and Wildlife (ODFW) District Biologist confirmed there are no active salmonid spawning redds in the vicinity of the AAHL effluent discharge. Since there are no active salmonid spawning areas within the mixing zone, the impairment of an active spawning area is prevented or minimized, and this provision does not apply.

- OAR 340-041-0053(2)(d)(B): Acute impairment or instantaneous lethality is prevented or minimized by limiting potential fish exposure to temperatures of 32 °C or more to less than 2 seconds.

*AAHL discharge:* Facility-submitted DMR data show that the maximum daily effluent temperature reported from the period August 2019 to August 2023 was 20.5 °C, effluent temperatures do not exceed 32 °C. Therefore, the facility’s discharge does not have the potential for acute impairment or instantaneous lethality.

- OAR 340-041-0053(2)(d)(C): Thermal shock caused by a sudden increase in water temperature is prevented or minimized by limiting potential fish exposure to temperatures of 25 °C or more to less than 5% of the cross-section of 100% of the 7Q10 flow of the water body.

*AAHL discharge:* Facility-submitted DMR data show that the maximum daily effluent temperature reported for the period August 2019 to August 2023 was 20.5 °C, effluent temperatures do not exceed 25 °C. Therefore, impairment due to thermal shock caused by the facility’s discharge is prevented or minimized and this provision is met.

- OAR 340-041-0053(2)(d)(D): Unless ambient temperature is 21 °C or greater, migration blockage is prevented or minimized by limiting potential fish exposure to temperatures of 21 °C or more to less than 25% of the cross-section of 100% of the 7Q10 flow of the water body.

*AAHL discharge:* As described in Table 3-7 above, the Willamette River is listed as water quality impaired for temperature on DEQ’s 2022 303(d) list. Maximum ambient temperature for the period October 2013 to June 2023 was 22.6 °C. AAHL effluent temperature maximum was 20.5 °C. As a protective measure, DEQ performed a temperature RPA for migration blockage (See Appendix A: Thermal Plumes RPA) using facility monitoring data. The results showed the discharge does not have the potential to exceed the criterion, and migration blockage caused by the discharge is prevented or minimized.

Effluent limits needed to comply with the thermal plume requirements are shown in the following table.

**Table 3-9: Thermal Plume Effluent Limit**

<b>Effluent limit needed?</b> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<b>Calculated limit:</b> NA
<b>Applicable timeframe:</b> NA

### 3.3.8 Bacteria

AAHL is an industrial facility that does not treat municipal wastewater. Bacteria limits are not a component of this permit.

**Table 3-10: Proposed *E. coli* Limits**

<i>E. coli</i> (#/100 ml)	Geometric Mean	Maximum
Existing Limit	NA	NA
Proposed Limit	NA	NA

### 3.3.9 Toxic Pollutants

DEQ typically performs the reasonable potential analysis for toxics according to EPA guidance provided in the Technical Support Document for Water Quality-Based Toxics Control (TSD) (Office of Water Enforcement and Permits, U.S. EPA, March 1991). The factors incorporated into this analysis include:

1. Effluent concentrations and variability
2. Water quality criteria for aquatic life and human health
3. Receiving water concentrations
4. Receiving water dilution (if applicable)

DEQ performs these analyses using spreadsheets that incorporate EPA's statistical methodology. The following sections describe the analyses for various toxic pollutants below.

#### 3.3.9.1 Total Residual Chlorine

The existing permit contains chlorine limits. New chlorine limits were calculated based on updated information. The newly calculated Daily Maximum limit is more stringent than the existing limits, so the new limits are being proposed. Proposed limits are listed in the following table.

**Table 3-11: Proposed Chlorine Limits**

	Chronic (mg/L)	Acute (mg/L)
<b>Chlorine Criteria</b>	0.011	0.019
	Average Monthly Limit (mg/L)	Maximum Daily Limit (mg/L)
<b>Existing Limit</b>	0.01	0.04
<b>Calculated Limit</b>	0.01	0.03
<b>Proposed Limit</b>	<b>0.01</b>	<b>0.03</b>
Effluent data source: Existing Maximum Daily Limit		
Receiving water data source: Assumed to be zero		

### 3.3.9.2 Total Ammonia Nitrogen

DEQ’s ammonia criteria vary with changes in pH and temperature. DEQ performed a reasonable potential analysis for ammonia because it is a major byproduct of fish cultivation activities. A separate analysis was conducted for the summer and winter seasons to parse out the effect of seasonal Willamette River temperatures. This analysis accounts for changes in the effluent and receiving water pH and temperature to determine the appropriate ammonia criteria. Tables 3-12 and 3-13 below provide a summary of the data used for the ammonia analysis and the results of the analysis.

The existing permit does not contain effluent limits for ammonia, only the requirement to monitor on a quarterly basis. DEQ performed a reasonable potential analysis, relying on ambient water quality data for the Willamette River and effluent monitoring data from facility submitted NetDMR reports. The results showed no reasonable potential for AAHL’s discharge to exceed water quality criteria. No ammonia limits are proposed during this permit renewal.

**Table 3-12: Ammonia Analysis Information – Summer**

	Acute	Chronic	
		4-day	30-day
Dilution	1.8	3.9	3.9
Ammonia Criteria	1.9	1.5	0.6
<b>Effluent Data Used</b>			
Ammonia (mg/L)	0.0	0.0	
pH (SU)	8.6	8.6	
Temperature (°C)	19.6	19.6	
Alkalinity (mg/L CaCO <sub>3</sub> )	112.0	112.0	
<b>Receiving Stream Data Used</b>			
Ammonia (mg/L)	0.0	0.0	
pH (SU)	7.8	7.8	
Temperature (°C)	20.7	20.7	
Alkalinity (mg/L CaCO <sub>3</sub> )	23.1	23.1	
Ammonia Limit Needed?	<b>No</b>		
<b>Calculated Limits</b>	<b>AML</b>	<b>MDL</b>	
Ammonia (mg/L)	<b>NA</b>	<b>NA</b>	
<b>Effluent data source</b>			
ICIS data pull on 8/31/2023, date range Aug-2019 to July-2023.			
<b>Ambient data source</b>			
AWQMS data pull for DEQ stations 10352, 10355, 29043, 33750, 37095, 37098, 37103 and City of Eugene stations FAMBMWDS, FAMBOB for date range 2014 - 2023.			

**Table 3-13: Ammonia Analysis Information – Winter**

	Acute	Chronic	
		4-day	30-day
Dilution	1.8	3.9	3.9
Ammonia Criteria	3.7	2.9	1.2
<b>Effluent Data Used</b>			
Ammonia (mg/L)	0.0	0.0	
pH (SU)	8.4	8.4	
Temperature (°C)	16.7	16.7	
Alkalinity (mg/L CaCO <sub>3</sub> )	109.5	109.5	
<b>Receiving Stream Data Used</b>			
Ammonia (mg/L)	0.1	0.1	
pH (SU)	7.7	7.7	
Temperature (°C)	12.4	12.4	
Alkalinity (mg/L CaCO <sub>3</sub> )	22.0	22.0	
Ammonia Limit Needed?	<b>No</b>		
<b>Calculated Limits</b>	<b>AML</b>	<b>MDL</b>	
Ammonia (mg/L)	<b>NA</b>	<b>NA</b>	
<b>Effluent data source</b>			
ICIS data pull on 8/31/2023, date range Aug-2019 to July-2023.			
<b>Ambient data source</b>			
AWQMS data pull for DEQ stations 10352, 10355, 29043, 33750, 37095, 37098, 37103 and City of Eugene stations FAMBMWDS, FAMBOB for date range 2014 - 2023.			

### 3.3.9.3 Formaldehyde

Facility personnel at AAHL and FPGL occasionally use *Parasite-S*, which is a brand name for formalin (a 37% solution of formaldehyde dissolved in water). *Parasite-S* is used to control external parasites on the fish and their eggs. In addition to FDA application requirements, during the development of hatchery NPDES permits, DEQ developed acute and chronic guidance criteria for formaldehyde. DEQ developed these guidance criteria to implement Oregon’s narrative Toxic Substances standard (OAR 340.041-0033(1)). The guidance values are a chronic criterion of 1.6 mg/L and an acute criterion of 4.6 mg/L. Quarterly monitoring for formaldehyde concentrations is required of the permittee during the period of highest formalin use for each quarter it is used. Monitoring results dating back to 2010 show formalin concentrations in the combined facility effluent as non-detect (i.e., at levels below the minimum detection using approved methodology). DEQ performed a reasonable potential analysis using this data and found no reasonable potential for formaldehyde to exceed criteria at the discharge point.

Monitoring will remain in effect for this permit. If the permittee does not use formalin in a quarter, they may report that the chemical was not used, in lieu of collecting a formaldehyde sample.

#### **3.3.9.4 Copper Biotic Ligand Model**

DEQ determined that this facility is not a likely source of copper. Therefore, no additional controls or monitoring will be required.

#### **3.3.9.5 Aluminum**

DEQ determined that this facility is not a likely source of aluminum. Therefore, no additional controls or monitoring will be required.

#### **3.3.9.6 Mercury – Human Health Criterion**

A Willamette Basin Mercury TMDL was established by EPA on December 30, 2019. According to the EPA TMDL and the State of Oregon Water Quality Management Plan, the potential mercury load from minor wastewater treatment plant discharges is very small. The TMDL states that no additional controls or monitoring will be required for minor facilities. AAHL is not a wastewater treatment facility. AAHL is a minor industrial facility, the industrial classification that describes AAHL is not considered to be a likely source of mercury. Therefore, no additional controls or monitoring for mercury will be required in this permit.

### **3.4 Antibacksliding**

The proposed permit complies with the antibacksliding provisions of CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l). Except for the temperature (excess thermal load) limits, the proposed limits are the same or more stringent than the existing permit so the antibacksliding provision is satisfied.

As noted in section 3.3.7, above, the excess thermal loads in the current permit were included due to an erroneous interpretation of the applicable TMDL and wasteload allocation (WLA). To be consistent with the TMDL these limits have been removed from the proposed permit. Although antibacksliding provisions generally do not allow relaxation of effluent limits in renewal permits, section 303(d)(4)(A) of the Clean Water Act allows relaxation when the receiving water is not in attainment for the limiting or related pollutant, the effluent limit is based on a TMDL WLA, and it can be shown that relaxation is consistent with antidegradation requirements. As noted above, the receiving water is water quality limited, and removal of the limits is based on a TMDL WLA. The relaxation of the limit is also consistent with antidegradation requirements as detailed below. Therefore, this change complies with the antibacksliding provisions of CWA sections 402(o) and 303(d)(4) and 40 CFR 122.44(l).

The existing permit Schedule A included a condition requiring whole effluent toxicity (WET) testing for the AAHL discharge. As noted in Section 3.6, below, this WET testing requirement will not be continued in the proposed permit. This requirement was removed because other conditions in the proposed permit, along with associated permitting mechanisms, address the original intent of this testing (formaldehyde toxicity) in a more direct manner (see discussion above, 3.3.9.3). This change also maintains consistency with DEQ permitting practices for

permittees in the Concentrated Aquatic Animal Production industry classification. This process is documented in DEQ's Antidegradation and Antibacksliding memo, which is part of the facility permit file for this renewal.

### **3.5 Antidegradation**

DEQ must ensure the permit complies with Oregon's antidegradation policy found in OAR 340-041-0004. This policy is designed to protect water quality by limiting unnecessary degradation from new or increased sources of pollution.

DEQ has performed an antidegradation review for this discharge. The proposed permit contains the same discharge loadings as the existing permit, with the exception of the temperature (excess thermal load) limits as discussed in Section 3.3.7, above. Under Oregon's Antidegradation Rule, discharges with insignificant temperature increases are not considered degradation (OAR 340-041-0004(3)(c)). Specifically, the rule states that insignificant temperature increases authorized under OAR 340-041-0028(11) and (12) are not considered a reduction in water quality. The applicable temperature TMDL provided an analysis of the temperature impacts of this discharge and determined that the discharge results in temperature increases at or below those authorized under OAR 340-041-0028(11) and (12). Based on OAR 340-041-0004 and the TMDL, the discharge from the facility does not have the potential to reduce water quality as it pertains to temperature.

All other permitted discharge loadings under the proposed permit are the same or more stringent than those in the existing permit. Permit renewals with the same or more stringent discharge loadings as the previous permit are not considered to lower water quality from the existing condition. DEQ is not aware of any information that existing limits are not protecting the receiving stream's designated beneficial uses. DEQ is also not aware of any existing uses present within the water body that are not currently protected by standards developed to protect the designated uses. Therefore, DEQ has determined that the proposed discharge complies with DEQ's antidegradation policy. DEQ's antidegradation worksheet for this permit renewal is available upon request.

### **3.6 Whole Effluent Toxicity**

DEQ determined that whole effluent toxicity (WET) testing is not warranted due to the low levels of toxics present in the final effluent. WET testing was previously a requirement in AAHL's 2007 permit. This requirement was removed to maintain consistency with DEQ permitting practices for aquatic animal production facilities, as well as consideration for the relatively low levels of chemicals applied at AAHL and FPGL. The guidance criteria and effluent monitoring for formalin (formaldehyde) discussed in section 3.3.9.3 above will serve to replace WET testing requirements contained in the current permit, which were included to address potential toxicity associated with formalin.

## **3.7 Groundwater**

It is likely that each of the surface impoundments could incur seepage of water into the nearby soils and eventually into the groundwater aquifer. Considering the high quality of the settling pond water and the absence of any toxic pollutants, aside from chlorine, there is very low potential for negative impacts to groundwater. Any residual chlorine that may seep through the pond bottom will likely be reduced by interactions with the organic material in the soil profile. No groundwater monitoring or limits are required.

## **4. Schedule A: Other Limitations**

### **4.1 Mixing Zone**

Schedule A describes the regulatory mixing zone as discussed above in section 3.

## **5. Schedule B: Monitoring and Reporting Requirements**

Schedule B of the permit describes the minimum monitoring and reporting necessary to demonstrate compliance with the proposed effluent limits. In addition, monitoring for other parameters is required to better characterize the effluent quality and the receiving stream. This data will be used during the next permit renewal. Detailed monitoring frequency and reporting requirements are in Schedule B of the proposed permit. The required monitoring, reporting and frequency for many of the parameters are based on DEQ's monitoring and reporting matrix guidelines, permit writer judgment, and to ensure the needed data is available for the next permit renewal.

## **6. Schedule C: Compliance Schedule**

The permittee is expected to meet all effluent limits once the permit becomes effective and therefore a compliance schedule is not needed.

## **7. Schedule D: Special Conditions**

The proposed permit contains the following special conditions. The conditions include the following:

### **7.1 Best Management Practices (BMP) plan**

This condition outlines the best management practices that must be implemented by the permittee to achieve requirements of Schedules A.2 and A.3.

### **7.2 Emergency Response and Public Notification Plan**

A requirement to develop and submit an emergency and spill response plan or ensure the existing one is current per General Condition B.7 in Schedule F.

## **7.3 Environmental Supervisor**

The permit holder is required to have an environmental supervisor. This special condition describes the requirements relating to the role of environmental supervisor.

## **7.4 Spill/Emergency Response Plan**

The permittee must have an up-to-date spill response plan for prevention and handling of spills and unplanned discharges.

## **7.5 Outfall Inspection**

A condition that requires the permittee to inspect the outfall and submit a report regarding its condition.

# **8. Schedule F: NPDES General Conditions**

Schedule F contains the following general conditions that apply to all NPDES permittees. These conditions are reviewed by EPA on a regular basis.

- Section A. Standard Conditions
- Section B. Operation and Maintenance of Pollution Controls
- Section C. Monitoring and Records
- Section D. Reporting Requirements
- Section E. Definitions

# Appendix A: Thermal Plumes RPA

OAR 340-041-0053(2)(d)(D): Migration Blockage			
21 deg C at 25% of the stream cross section			
Enter data into white cells below:		Data Metric/Source	
7Q10 =	3980	cfs	Willamette TMDL, App. 4.5 Small Point Source RM 108
Ambient Temperature =	21	°C	Default; AWQMS data insufficient for 7 daM
Effluent Flow =	0.75	mgd	MZ Memo (0.5 cfs) * 1.5 (peaking factor)
Max 7dAM Effluent Temperature =	20.49	°C	ICIS Aug 2019 - Aug 2023; Conservative, all-time Daily Max
25% of 7Q10 =	995.0	cfs	
25% dilution =	859	dilution = $(Q_r * 0.25) / Q_e + 1$	
Temperature at 25% cross section =	21.0	°C	
$\Delta T$ at 25% Stream Flow =	0.0	°C	<b>No Reasonable Potential</b>

Figure A-1: Thermal plumes reasonable potential analysis following OAR 340-041-0053(2)(d)(D) to assess salmonid migration blockage.