

Fact Sheet for NPDES Permit No. WA0032174

Marine Fluid Systems, Inc.

Date of Public Notice: June 20, 2024

Permit Effective Date: xx/xx/xxxx

Purpose of this fact sheet

This fact sheet explains and documents the decisions the Department of Ecology (Ecology) made in drafting the proposed National Pollutant Discharge Elimination System (NPDES) permit for Marine Fluid Systems, Inc.

This fact sheet complies with Section 173-220-060 of the Washington Administrative Code (WAC), which requires Ecology to prepare a draft permit and accompanying fact sheet for public evaluation before issuing an NPDES permit.

Ecology makes the draft permit and fact sheet available for public review and comment at least thirty (30) days before issuing the final permit. Copies of the fact sheet and draft permit for Marine Fluid Systems, Inc. NPDES permit WA0032174, are available for public review and comment from June 20, 2024 until July 22, 2024. For more details on preparing and filing comments about these documents, please see Appendix A - Public Involvement Information.

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

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

Summary

Marine Fluid Systems is a family owned and operated ship repair facility on the Lake Washington Ship Canal. Ecology issued the previous permit for this facility on November 20, 2007, and reauthorized it on February 14, 2018. Marine Fluid Systems collects and discharges their stormwater and process wastewater to King County Metro sanitary sewer. This permit covers floodwater discharges from their marine railway into the Lake Washington Ship Canal during ship launches.

Effluent limits for the conventional pollutants Oil and Grease are unchanged from the permit issued in 2018. The proposed permit will add turbidity to the effluent limit. The Best Management Practices (BMPs) in the permit have been updated to include additional BMP requirements. The proposed permit will also require sediment sampling and monitoring to characterize sediment quality (nature and extent of chemical contamination and biological toxicity) in the vicinity of Marine Fluid Systems' discharge location.

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I. Introduction

The Federal Clean Water Act (FCWA, 1972, and later amendments in 1977, 1981, and 1987) established water quality goals for the navigable (surface) waters of the United States. One mechanism for achieving the goals of the Clean Water Act is the National Pollutant Discharge Elimination System (NPDES), administered by the federal Environmental Protection Agency (EPA). The EPA authorized the state of Washington to manage the NPDES permit program in our state. Our state legislature accepted the delegation and assigned the power and duty for conducting NPDES permitting and enforcement to Ecology. The Legislature defined Ecology's authority and obligations for the wastewater discharge permit program in 90.48 RCW (Revised Code of Washington).

The following regulations apply to industrial NPDES permits:

- Procedures Ecology follows for issuing NPDES permits (chapter 173-220 WAC)
- Water quality criteria for surface waters (chapter 173-201A WAC)
- Water quality criteria for ground waters (chapter 173-200 WAC)
- Whole effluent toxicity testing and limits (chapter 173-205 WAC)
- Sediment management standards (chapter 173-204 WAC)
- Submission of plans and reports for construction of wastewater facilities (chapter 173-240 WAC)

These rules require any industrial facility owner/operator to obtain an NPDES permit before discharging wastewater to state waters. They also help define the basis for limits on each discharge and for performance requirements imposed by the permit.

Under the NPDES permit program and in response to a complete and accepted permit application, Ecology must prepare a draft permit and accompanying fact sheet and make them available for public review before final issuance. Ecology must also publish an announcement (public notice) telling people where they can read the draft permit, and where to send their comments, during a period of thirty days (WAC 173-220-050). (See *Appendix A-Public Involvement Information* for more detail about the public notice and comment procedures). After the public comment period ends, Ecology may make changes to the draft NPDES permit in response to comment(s). Ecology will summarize the responses to comments and any changes to the permit in **Appendix E**.

II. Background information

Table 1 - Facility information

Applicant:	
Facility name and address	Marine Fluid Systems, Inc. 801 NW 42nd Street Seattle, WA 98107

Applicant:	
Contact at facility	Name: Gregory Bostwick Title: General Manager Telephone: 206-706-0858
Responsible official	Name: Gregory Bostwick Title: General Manager Address: 801 NW 42nd Street, Seattle WA 98107 Telephone: 206-706-0858
Industry type	Ship Repair and Maintenance
Type of treatment	Sand filter and media filter
Fee category	Shipyard d. Per marine way/ramp
SIC codes	3731
NAIC codes	336611
Facility location (NAD83/WGS84 reference datum)	Latitude: 47.657329 Longitude: -122.367392
Discharge waterbody name and location (NAD83/WGS84 reference datum)	Lake Washington Ship Canal Latitude: 47.657329 Longitude: -122.367392

Permit status

Renewal date of previous permit: 2/14/2018

Application for permit renewal submittal date: 9/26/2022

Date of Ecology acceptance of application: 1/27/2023

Inspection status

Date of last non-sampling inspection: 07/26/2023

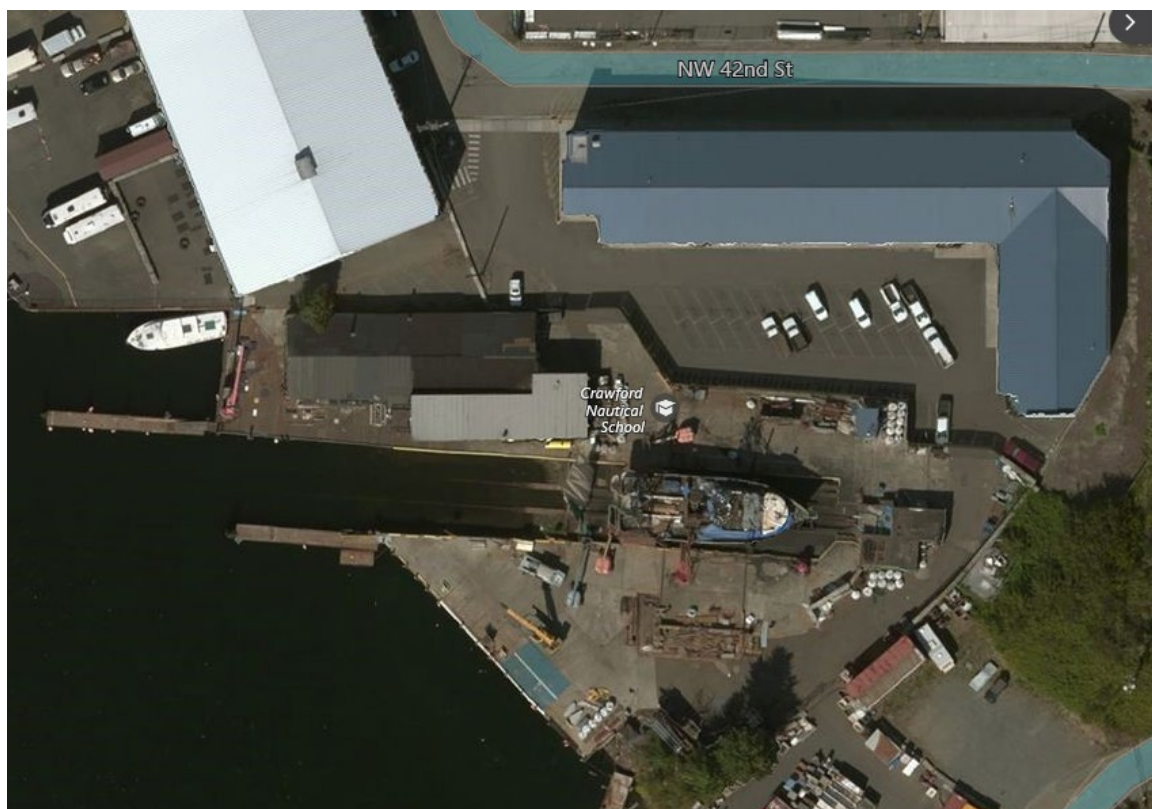


Figure 1 - Facility location map (Source: Google map)

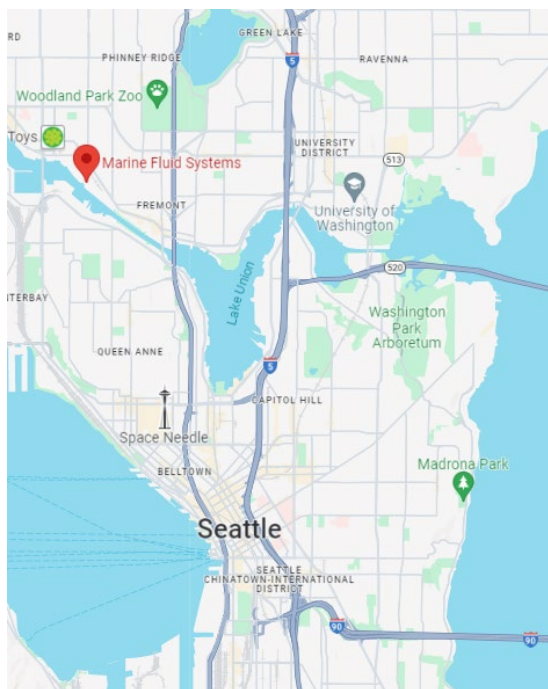


Figure 2 - Facility vicinity map (Source: Google map)

II.A. Facility description

1. History

Marine Fluid Systems (Marine Fluid) is located on the north side of Lake Washington Ship Canal (Figure 1) and is owned and operated by Marine Fluid. Maintenance and repair activities such as ship repair, sandblasting, painting, cutting, and welding are performed onsite. Vessels serviced at the facility are fishing vessels (80%), cruise boats (10%), barges (8%), and tugboats (2%). The facility works on approximately 24 vessels per year on the average. The site is relatively small and is primarily paved.

2. Industrial processes

Marine Fluid provides maintenance and repair services to commercial & private vessels with hull lengths ranging from 58' to 130'. The facility employs 7 to 12 production employees. The facility utilizes a marine railway for ship conveyance and repair.

Table 2 - Facility Operations

Operation	Tonnage	Length	Width
Small Marine Railway	600 tons	127 feet	36 feet

The basic functions of the marine railway are to repair ships and to clean and paint ship bottoms, propellers, rudders, and the external parts below the waterline. Marine railways consist of a carriage (which holds keel blocks) that is positioned on a railway located adjacent to the shoreline and extending into the water. The carriage can be moved out underwater or brought inland to above the high-water level. The carriage is mobilized by a large chain that is attached to the carriage and then to a pulley run by a large engine. The keel blocks are initially set to a predetermined height, and the carriage is slowly brought inland until the vessel is above the high-water level (or at least above the current water surface elevation) for servicing.

Usually less than 5 percent of the jobs require full hull sandblasting, 5 percent need half hull sandblasting, and 70 percent need quarter hull sandblasting. Approximately 10 percent of the jobs require high-pressure wash (hydroblasting), while another 10 percent necessitate paint removal through sanding and scraping. Sandblasting is propelling a metallic or nonmetallic grit by compressed air to forcibly impinge on the surface being cleaned. Metallic grit includes utility slag, copper slag, or aluminum. The constituents of abrasive blast vary somewhat, but their primary components are silicon dioxide 20-50 percent, iron oxide 15-40 percent, aluminum oxide 0-25 percent, and calcium oxide 0-25 percent. These four components comprise 80 to 99 percent of the abrasive grit composition. Trace elements in these abrasive grits include potassium oxide, sodium oxide, copper, titanium, and sulfur. Nonmetallic grit includes recycled glass of various sizes and sodium bicarbonate. Dry blasting is only used to

prepare hulls for paints that require a new profile for paint adherence such as polyethylene. On the marine railway, most of the blasting is applied to the superstructure and the remaining to the ship holds.

Sandblasting is principally done to the ships brought onshore from the small marine railway. Remaining grit, paint chips, caulking, and other debris can then be collected. The debris from the sandblast operations is picked up by hand shovels or by vacuum truck or other methods for transfer to hoppers or skip boxes. Spent sandblast and waste oil is stored in a bermed area and picked up when full by a local contractor for recycling. The amount of abrasive material used in sandblasting is usually about 200 tons per year. About 20 percent of overall grit use is in the sandblast grit shed.

Hydroblasting is applied with pressure wash water between 1,000 to 3,000 pounds per square inch. No acid solution is used when hydroblasting. All hydroblasting used water is collected in the railway sump and goes through the treatment system. Two to four engines are serviced annually. Solvents are not distilled but sometimes are recycled after settling or disposed off-site. Waste paint is collected for disposal onshore by a contract disposal firm. Crews rarely stay onboard the ships during maintenance and repair operations and no ship sanitary wastes or gray waters are allowed to be discharged to surface water.

Process water from ship maintenance activities and stormwater runoff from process areas are collected and treated prior to discharge to the King County Sanitary Sewer System.

In addition to abrasive grit, solid waste material includes metal waste, wood, used batteries, municipal waste, universal waste, and non-regulated waste oil. All materials are collected, stored under cover, and recycled or disposed of offsite in accordance with the solid waste plan.

3. Wastewater treatment processes

Process water used on-site is captured, treated, and discharged to King County sewer line under discharge permit #518-06. Stormwater from the shipyards' working surfaces is captured, treated, and discharged to King County sewer line. During vessel launches at the marine railway, the discharge of process water or stormwater to surface water is strictly prohibited. All water in the railway is collected in the sump and ran through the treatment system. A site map (Figure 2) is attached in Appendix D.

4. Solid wastes

Solid waste material generated at the facility is handled and disposed of in a proper manner to prevent its entry into groundwater or surface water per S4.C. Solid Waste Control Plan. Marine Fluid maintains a program of regular housekeeping and cleanup in collection and transfer areas. In the active working areas of the facility, housekeeping and cleanup is conducted daily or as needed.

5. Discharge outfall

There is no discharge to surface water from this facility other than the floodwater from launches at the railway. The railway is thoroughly cleaned prior to launch.

The possibility exists that pulley and wheel grease could enter the ship canal during launches, so oil and grease is monitored.

II.B. Description of the receiving water

Marine Fluid discharges floodwater to the Lake Washington Ship Canal. Section IIID of this fact sheet describes any receiving waterbody impairments.

The ambient background data used for this permit includes the following from King County Lake Union station 0512 from 4/2018 - 12/2023.

Table 3 - Ambient background data

Parameter	Units	# of Samples	Average value	Maximum value
Temperature	°C	265	15.0	23.7
pH	standard units	265	7.5	8.4
Dissolved Oxygen	mg/L	265	0.5	0.5
Fecal Coliform OR E.coli OR Enterococci	colony forming units (CFU)	265	29	210

II.C. Marine railway floodwater characterization

Marine Fluid reported the concentration of pollutants in the discharge in the permit application and in discharge monitoring reports. The tabulated data represents the quality of the wastewater effluent discharged from 6/30/2019 to 6/30/2023. The wastewater effluent is characterized as follows:

Table 4 - Marine railway floodwater characterization

Parameter	Units	# of Samples	Average value	Maximum value
Oil and Grease	mg/L	16	3	6

II.D. Summary of compliance with previous permit

The previous permit placed effluent limits on oil sheen and oil & grease.

Marine Fluid has complied with the effluent limits and permit conditions throughout the duration of the permit issued on 04/01/2018. Ecology assessed compliance based on its review of the facility's information in the Ecology Permitting and Reporting Information System (PARIS), discharge monitoring reports (DMRs) and on inspections.

Table 5 - Violations and permit triggers (April 2018 - October 2023)

Violation date	Parameter type	Unit type	Max limit	Measurement value quantity	Statistical base type	Violation
9/29/2021	Oil & Grease	mg/L	5	< 6	Grab	Monitoring requirement violation ^a

Footnotes:

^a Method detection limit for the contract lab is 6 mg/L, which is more than the effluent limit.

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

Table 6 - Permit submittals

Submittal name	Submittal status	Due date	Received date
Application for Permit Renewal	Submitted	October 1, 2022	September 22, 2022

II.E. State environmental policy act (SEPA) compliance

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

III. Proposed permit limits

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

- Technology-based limits are based upon the treatment methods available to treat specific pollutants. Technology-based limits are set by the EPA and published as a regulation, or Ecology develops the limit on a case-by-case basis (40 CFR 125.3, and chapter 173-220 WAC).
- Water quality-based limits are calculated so that the effluent will comply with the Surface Water Quality Standards (chapter 173-201A WAC), Ground Water Standards (chapter 173-200 WAC), Sediment Quality Standards (chapter 173-204 WAC), or the Federal Water Quality Criteria Applicable to Washington (40 CFR 131.45).
- Ecology must apply the most stringent of these limits to each parameter of concern. These limits are described below.

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

Some pollutants are not treatable at the concentrations reported, are not controllable at the source, are not listed in regulation, and do not have a reasonable potential to cause a water quality violation.

Ecology does not usually develop limits for pollutants not reported in the permit application but may be present in the discharge. The permit does not authorize discharge of the non-reported pollutants. During the five-year permit term, the facility's effluent discharge conditions may change from those conditions reported in the permit application. The facility must notify Ecology if significant changes occur in any constituent [40 CFR 122.42(a)]. Until Ecology modifies the permit to reflect additional discharge of pollutants, a permitted facility could be violating its permit.

III.A. Technology-based effluent limits

To date, the United States Environmental Protection Agency (USEPA) has not promulgated effluent guidelines for the shipyard industry. However, the Draft Development Document for Proposed Effluent Limitations Guidelines for Shipbuilding and Repair (EPA 440/1-79/76b) identifies the following pollutant parameters as those that discharge or have the potential to be discharged to receiving water:

The following technology-based effluent limitation are established for Marine Fluid:

All process wastewater such as pressure wash wastewater and hydroblast wastewater, bilge water, and contaminated stormwater from the marine railway must be collected and pretreated prior to being discharged to King County's wastewater treatment plant.

Marine Fluid must clean the marine railway and the nearby working surface to remove spent blasting abrasives and other solid wastes.

The oil sheen, and oil & grease limits have remained unchanged from the previous permit. These limits are based on the permit writer's best professional judgement and experience with this industry.

Table 7 - Technology-based limits

Parameter	Maximum daily limit
Oil Sheen	No visible sheen
Oil & Grease	5 mg/L

III.B. Surface water quality-based effluent limits

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

allocation or on a waste load allocation developed during a basin wide total maximum daily load study (TMDL).

1. Numeric criteria for the protection of aquatic life and recreation

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

2. Numeric criteria for the protection of human health

Numeric criteria for the protection of human health are promulgated in Chapter 173-201A WAC and 40 CFR 131.45. These criteria are designed to protect human health from exposure to pollutants linked to cancer and other diseases, based on consuming fish and shellfish and drinking contaminated surface waters. The water quality standards also include radionuclide criteria to protect humans from the effects of radioactive substances.

3. Narrative criteria

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

- Adversely affect designated water uses.
- Cause acute or chronic toxicity to biota.
- Impair aesthetic values.
- Adversely affect human health.

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

4. Antidegradation

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

- Restore and maintain the highest possible quality of the surface waters of Washington.
- Describe situations under which water quality may be lowered from its current condition.
- Apply to human activities that are likely to have an impact on the water quality of surface water.

- Ensure that all human activities likely to contribute to a lowering of water quality, at a minimum, apply all known, available, and reasonable methods of prevention, control, and treatment (AKART).
- Apply three tiers of protection (described below) for surface waters of the state.

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

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

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

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

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

Facility specific requirements – This facility must meet Tier I requirements.

- Dischargers must maintain and protect existing and designated uses. Ecology must not allow any degradation that will interfere with, or become injurious to, existing or designated uses, except as provided for in chapter 173-201A WAC.
- Ecology's analysis described in this section of the fact sheet demonstrates that the proposed permit conditions will protect existing and designated uses of the receiving water.

III.C. Designated uses and surface water quality criteria

Applicable designated uses and surface water quality criteria are defined in chapter 173-201A WAC. The table included below summarizes the criteria applicable to this facility's discharge.

1. Freshwater aquatic life uses and associated criteria

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

Table 8 - Core summer salmonid habitat

Criteria	Value
Temperature – Highest 7-DAD MAX	16°C (60.8°F)
Dissolved oxygen	9.5 mg/L
Turbidity	5 NTU over background when the background is 50 NTU or less; or A 10 percent increase in turbidity when the background turbidity is more than 50 NTU.
Total dissolved gas	Total dissolved gas must not exceed 110 percent of saturation at any point of sample collection.
pH	The pH must measure within the range of 6.5 to 8.5, with a human-caused variation within the above range of less than 0.2 units.

2. Recreational use and criteria

The recreational use for this receiving water is primary contact recreation. *E.coli* organism levels must not exceed a geometric mean value of 100 CFU or MPN per 100 mL, with not more than 10 percent of all samples (or any single sample when less than ten sample points exist) obtained within the averaging period exceeding 320 CFU or MPN per 100 mL.

3. Water supply uses

The water supply uses are domestic, agricultural, industrial, and stock watering.

4. Miscellaneous freshwater uses

The miscellaneous freshwater uses are wildlife habitat, harvesting, commerce and navigation, boating, and aesthetics.

III.D. Water quality impairments

Lake Washington Ship Canal is listed on the current 303(d) and is impaired for aldrin, fecal coliform, temperature and escherichia coli (Ecology Water Quality Atlas). Currently there is no Total Maximum Daily Load (TMDL) Analysis for Lake Washington Ship Canal.

III.E. Evaluation of surface water quality-based effluent limits for narrative criteria

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

Ecology considers narrative criteria when it evaluates the characteristics of the wastewater and when it implements all known, available, and reasonable methods of treatment and prevention (AKART) as described above in the technology-based limits section. When Ecology determines if a facility is meeting AKART it considers

the pollutants in the wastewater and the adequacy of the treatment to prevent the violation of narrative criteria.

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

Turbidity has been added to the proposed permit, because it is common pollutant of concern in shipyard industry.

III.F. Evaluation of surface water quality-based effluent limits for numeric criteria

1. Mixing zones and dilution factors

Ecology has not authorized a mixing zone in the permit.

III.G. Human health

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

Ecology determined the applicant's discharge does not contain chemicals of concern based on existing effluent data and site operations. Ecology will reevaluate this discharge for impacts to human health at the next permit reissuance.

III.H. Sediment quality

The aquatic sediment standards (chapter 173-204 WAC) protect aquatic biota and human health. Under these standards Ecology may require a facility to evaluate the potential for its discharge to cause a violation of sediment standards (WAC 173-204-400). You can obtain additional information about sediments at the [Aquatic Lands Cleanup Unit website](#)¹.

Ecology determined that this discharge has potential to cause a violation of the sediment quality standards because of information in Ecology's [Water Quality Assessment](#) and in the [Cleanup and Tank Search](#). Within the Water Quality Assessment, the waterbody in the vicinity of Marine Fluid Systems has been listed as a Category 2, which indicates further monitoring or investigation. The listing is based on exceedances of bioassay in sediments. Within Ecology's Cleanup and Tank Search, Marine Fluid Systems is listed as "cleanup started" in groundwater and soil based on confirmed contaminants above the state's cleanup screening levels. Sediment sampling shall be performed to determine if upland activities have impacted the sediment. The proposed permit includes a Special Condition requiring Marine Fluid to demonstrate either:

- The point of discharge is not an area of deposition, or

¹ <https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Sediment-cleanups>

- Toxics do not accumulate in the sediments even though the point of discharge is a depositional area.

III.I. Groundwater quality limits

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

Marine Fluid Systems does not discharge wastewater to the ground. No permit limits are required to protect groundwater.

III.J. Whole effluent toxicity

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

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

III.K. Comparison of effluent limits with the previous permit issued on February 14, 2018.

Turbidity has been added to the proposed permit as water quality based limit.

Table 9 - Comparison of previous and proposed effluent limits – Marine Railway

Limit	Basis of limit	Existing permit limit	Proposed permit limit
Visible oily sheen	Technology	No visible sheen	No visible sheen
Oil and Grease	Technology	5 mg/L	5 mg/L
Turbidity	Water Quality	N/A	< 5 NTU above background

IV. Monitoring requirements

Ecology requires monitoring, recording, and reporting (WAC 173-220-210 and 40 CFR 122.41) to verify that the treatment process is functioning correctly and that the discharge complies with the permit's effluent limits.

If a facility uses a contract laboratory to monitor wastewater, it must ensure that the laboratory uses the methods and meets or exceeds the method detection levels required by the permit. The permit describes when facilities may use alternative methods. It also describes what to do in certain situations when the laboratory

encounters matrix effects. When a facility uses an alternative method as allowed by the permit, it must report the test method, detection level (DL), and quantitation level (QL) on the discharge monitoring report or in the required report.

IV.A. Lab accreditation

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

V. Other permit conditions

V.A. Reporting and record keeping

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

V.B. Spill plan

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

Marine Fluid developed a spill plan for preventing the accidental release of pollutants to state waters and for minimizing damages if such a spill occurs. The proposed permit mandates that the facility update and submit its spill plan to Ecology.

V.C. Solid waste control plan

Marine Fluid could cause pollution of the waters of the state through inappropriate disposal of solid waste.

This proposed permit requires this facility to update the approved solid waste control plan designed to prevent solid waste from causing pollution of waters of the state. The facility must submit the updated plan to Ecology for approval (RCW 90.48.080). Refer to the Ecology guidance document, [Developing a Solid Waste Control Plan](https://apps.ecology.wa.gov/publications/documents/0710024.pdf)².

V.D. Stormwater pollution prevention plan (SWPPP)

In accordance with 40 CFR 122.44(k) and 40 CFR 122.44 (s), the proposed permit includes requirements for the development and implementation of a SWPPP along with BMPs to minimize or prevent the discharge of pollutants to waters of the state. BMPs constitute Best Conventional Pollutant Control Technology (BCT) and Best Available Technology Economically Achievable (BAT) for stormwater discharges. Ecology has determined that Marine Fluid must develop a SWPPP and implement adequate BMPs in order to meet the requirements of “all known, available, and reasonable methods of prevention, control, and treatment” (AKART). A SWPPP requires a facility to implement actions necessary to manage stormwater to comply

² <https://apps.ecology.wa.gov/publications/documents/0710024.pdf>

with the state's requirement under chapter 90.48 RCW to protect the beneficial uses of waters of the state.

The SWPPP must identify potential sources of stormwater contamination from industrial activities and identify how it plans to manage those sources of contamination to prevent or minimize contamination of stormwater. Marine Fluid must continuously review and revise the SWPPP as necessary to assure that stormwater discharges do not degrade water quality. It must retain the SWPPP on-site or within reasonable access to the site and available for review by Ecology.

1. Best Management Practices (BMPs)

BMPs are the actions identified in the SWPPP to manage, prevent contamination of, and treat stormwater. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment systems, operating procedures, and practices used to control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage. Marine Fluid must ensure that its SWPPP includes the operational and structural source control BMPs listed as "applicable" in Ecology's stormwater management manuals. Many of these "applicable" BMPs are sector-specific or activity-specific and are not required at facilities engaged in other industrial sectors or activities.

2. Ecology-approved Stormwater Management Manuals

Consistent with RCW 90.48.555 (5) and (6), the proposed permit requires the facility to implement BMPs contained in the Stormwater Management Manual for Western Washington (Ecology, 2019) or any revisions thereof, or practices that are demonstrably equivalent to practices contained in stormwater technical manuals approved by Ecology. This should ensure that BMPs will prevent violations of state water quality standards and satisfy the state AKART requirements and the federal technology-based treatment requirements under 40 CFR part 125.3. The SWPPP must document that the BMPs selected provide an equivalent level of pollution prevention, compared to the applicable Stormwater Management Manuals. The SWPP must include the technical basis for the selection for all stormwater BMPs (scientific, technical studies, and/or modeling) which support the performance claims for the BMPs selected.

3. Operational source control BMPs

Operational source control BMPs include a schedule of activities, prohibition of practices, maintenance procedures, employee training, good housekeeping, and other managerial practices to prevent or reduce the pollution of waters of the state. These activities do not require construction of pollution control devices but are very important components of a successful SWPPP. Employee training, for instance, is critical to achieving timely and consistent spill response. Pollution prevention is likely to fail if the employees do not understand the importance and

objectives of BMPs. Prohibitions might include eliminating outdoor repair work on equipment and certainly would include the elimination of intentional draining of crankcase oil on the ground. Good housekeeping and maintenance schedules help prevent incidents that could result in the release of pollutants. Operational BMPs represent a cost-effective way to control pollutants and protect the environment. The SWPPP must identify all the operational BMPs and how and where they are implemented. For example, the SWPPP must identify what training will consist of, when training will take place, and who is responsible to assure that employee training happens.

4. Structural source control BMPs

Structural source control BMPs include physical, structural, or mechanical devices or facilities intended to prevent pollutants from entering stormwater. Examples of source control BMPs include erosion control practices, maintenance of stormwater facilities (e.g., cleaning out sediment traps), construction of roofs over storage and working areas, and direction of equipment wash water and similar discharges to the sanitary sewer or a dead end sump. Structural source control BMPs likely include a capital investment but are cost effective compared to cleaning up pollutants after they have entered stormwater.

5. Treatment BMPs

Operational and structural source control BMPs are designed to prevent pollutants from entering stormwater. However, even with an aggressive and successful program, stormwater may still require treatment to achieve compliance with water quality standards. Treatment BMPs remove pollutants from stormwater. Examples of treatment BMPs are detention ponds, oil/water separators, biofiltration, and constructed wetlands.

6. Volume/flow control BMPs

Ecology recognizes the need to include specific BMP requirements for stormwater runoff quantity control to protect beneficial water uses, including fish habitat. New facilities and existing facilities undergoing redevelopment must implement the requirements for peak runoff rate and volume control identified in the Western Washington SWMM or the Eastern Washington SWMM as applicable to their development. Controlling the rate and volume of stormwater discharge maintains the health of the watershed. Existing facilities should identify control measures that they can implement over time to reduce the impact of uncontrolled release of stormwater.

V.E. Best management practices

Best management practices (BMPs) are the actions identified to manage, prevent contamination of, and treat stormwater. BMPs include schedules of activities, prohibitions of practices, maintenance procedures, and other physical, structural and/or managerial practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment systems, operating procedures, and practices used to

control plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.

The proposed permit has shipyard-specific BMPs as outlined in permit section S8.

V.F. General conditions

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

VI. Permit issuance procedures

VI.A. Permit modifications

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

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

VI.B. Proposed permit issuance

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

VII. References for text and appendices

Ecology. (2010). *Water Quality Program Guidance Manual: Procedures to Implement the State's Temperature Standards through NPDES Permits, Publication 06-10-100*. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/0610100.html>

Ecology. (2011). *Water Quality Program Guidance Manual: Supplemental Guidance on Implementing Tier II Antidegradation, Publication 11-10-073*. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/1110073.html>

Ecology. (2018). *Water Quality Program Permit Writer's Manual, Publication 92-109*. Retrieved from <https://apps.ecology.wa.gov/publications/summarypages/92109.html>

Ecology. (2019). *Developing a Solid Waste Control Plan, Publication 07-10-024*. Retrieved from <https://apps.ecology.wa.gov/publications/SummaryPages/0710024.html>

NPDES Permit #WA0032174 Renewal Application, Received 9/22/2022

Fact Sheet for NPDES Permit WA0032174

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Washington State and Ecology website general reference links:

[Laws and Regulations](#)³

[Permit and Wastewater Related Information](#)⁴

³ <http://leg.wa.gov/LawsAndAgencyRules/Pages/default.aspx>

⁴ <https://ecology.wa.gov/Regulations-Permits/Guidance-technical-assistance/Water-quality-permits-guidance>

Appendix A – Public Involvement Information

Ecology proposes to reissue a permit to Marine Fluid Systems, Inc. The permit includes wastewater discharge limits and other conditions. This fact sheet describes the facility and Ecology's reasons for requiring permit conditions.

Ecology will place a Public Notice of Draft on June 20, 2024 in the Seattle Times to inform the public and to invite comment on the proposed draft National Pollutant Discharge Elimination System permit and fact sheet.

The notice:

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

[Frequently Asked Questions about Effective Public Commenting⁵](#)

You may obtain further information from Ecology by telephone, 206-594-0000, or by writing to the address listed below.

Water Quality Permit Coordinator Department of Ecology
Northwest Regional Office
P.O. Box 330316
Shoreline, WA 98133-9716

The primary author of this permit and fact sheet is Joey Jiang.

⁵ <https://apps.ecology.wa.gov/publications/SummaryPages/0307023.html>

Appendix B – Your Right to Appeal

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

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

File your appeal and a copy of this permit with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours as defined in WAC 371-08-305 and -335. “Notice of appeal” is defined in WAC 371-08-340.

Serve a copy of your appeal and this permit on Ecology on the Department of Ecology mail, in person, or by email (see addresses below).

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

Filing with the PCHB

For the most current information regarding filing with the PCHB:
visit <https://eluho.wa.gov/6> or call 360-664-9160.

Service on Ecology

Street Address:

Department of Ecology
Attn: Appeals Processing Desk
300 Desmond Drive SE
Lacey, WA 98503

Mailing Address:

Department of Ecology
Attn: Appeals Processing Desk
PO Box 47608
Olympia, WA 98504-7608

E-Mail Address:

ecologyappeals@ecy.wa.gov

⁶ <https://eluho.wa.gov/>

Appendix C – Glossary

AKART – The acronym for “all known, available, and reasonable methods of prevention, control and treatment.” AKART is a technology-based approach to limiting pollutants from wastewater discharges, which requires an engineering judgment and an economic judgment. AKART must be applied to all wastes and contaminants prior to entry into waters of the state in accordance with RCW 90.48.010 and RCW 90.48.520, WAC 173-200-030(2)(c)(ii), and WAC 173-216-110(1)(a).

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

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

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

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

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

Detection level – or method detection limit means the minimum concentration of an analyte (substance) that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results as determined by the procedure given in 40 CFR part 136, Appendix B.

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

National pollutant discharge elimination system (NPDES) – Section 402 of the Clean Water Act, the federal wastewater permitting system for discharges to navigable waters of the United States. Many states, including the state of Washington, have been

delegated the authority to issue these permits. NPDES permits issued by Washington State are joint NPDES/State permits issued under both state and federal laws.

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

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

Quantitation level (QL) – also known as Minimum level (ML) – The term “minimum level” refers to either the sample concentration equivalent to the lowest calibration point in a method or a multiple of the method detection limit (DL), whichever is higher. Minimum levels may be obtained in several ways: They may be published in a method; they may be based on the lowest acceptable calibration point used by a laboratory; or they may be calculated by multiplying the DL in a method, or the DL determined by a laboratory, by a factor of 3. For the purposes of NPDES compliance monitoring, EPA considers the following terms to be synonymous: “quantitation limit,” “reporting limit,” and “minimum level”.

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

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

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

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

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

Total suspended solids (TSS) – Total suspended solids is the particulate material in an effluent. Large quantities of TSS discharged to a receiving water may result in solids accumulation. Apart from any toxic effects attributable to substances leached out by

water, suspended solids may kill fish, shellfish, and other aquatic organisms by causing abrasive injuries and by clogging the gills and respiratory passages of various aquatic fauna. Indirectly, suspended solids can screen out light and can promote and maintain the development of noxious conditions through oxygen depletion.

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

Appendix D — Site Map

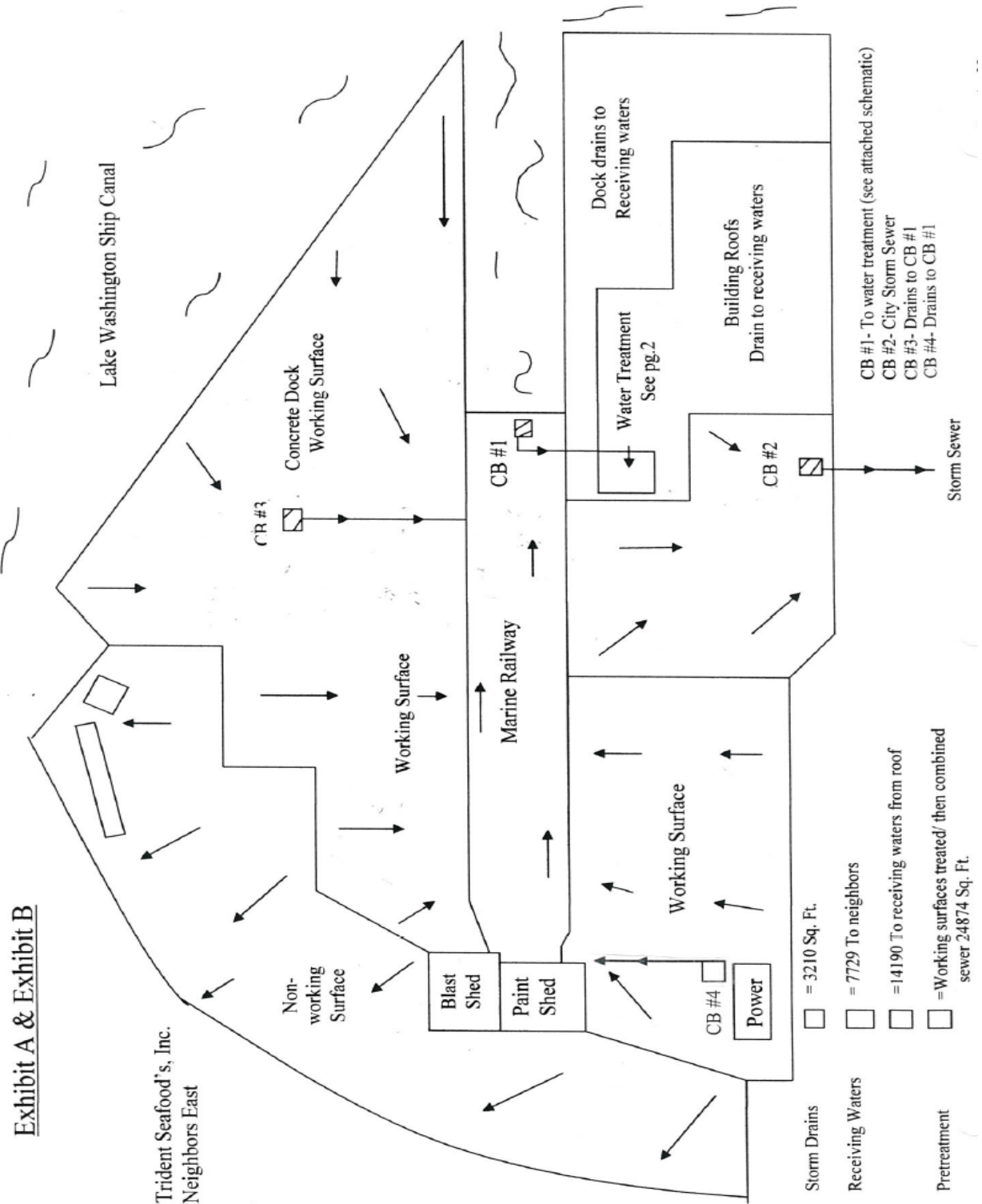


Figure 3 - Site Drainage Schematic

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Fact Sheet for NPDES Permit WA0032174

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Appendix E — Response to Comments

[Ecology will complete this section after the public notice of draft period.]

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