



**Weyerhaeuser NR Company – Longview Lumber • PO BOX 931 • Longview, WA 98632**

January 31, 2025

Kelsey Brotherton, PE  
Environmental Engineer  
Washington State Department of Ecology  
Waste 2 Resources, Industrial Section  
P.O. Box 47600  
Olympia, WA 98504-7600

Subject: Weyerhaeuser NR Company – Longview Lumber  
NPDES Permit No. WA0991014  
Operations and Maintenance Manual Update – September 2024

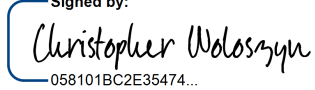
Dear Ms. Brotherton:

The Weyerhaeuser NR Company – Longview Lumber Facility is submitting an update to the facility Operations and Maintenance manual through the Secure Access Washington (SAW) web portal in coordination with the other Weyerhaeuser entities (whose discharges are authorized by NPDES Permit WA0991014). The overall submittal will be certified by the Responsible Official at Weyerhaeuser Lumbermill. The certification by the Responsible Official covers the respective reporting requirements for NPDES Permit WA0991014.

If you have questions about the site's O&M Manual update, please contact me or Carter Marr, Environmental Manager, at 780-851-3378 or email [carter.marr@weyerhaeuser.com](mailto:carter.marr@weyerhaeuser.com).

*I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete and I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.*

Sincerely,

Signed by:  


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Christopher Woloszyn

Weyerhaeuser Longview Lumber Plant Manager

Enclosure: O&M Manual

# Operations and Maintenance Manual

## Weyerhaeuser NR Company – Longview

### NPDES Waste Discharge Permit No. WA0991014

This Operation and Maintenance Manual was prepared by Weyerhaeuser NR Company (Weyerhaeuser) consistent with Special Condition S4.A outlined in the National Pollutant Discharge Elimination System (NPDES) Waste Discharge Permit No. WA0991014 (Permit) and the Washington Administrative Code (WAC) 173-240-150 (1) and (2). This manual is also prepared to be consistent with the facility's Storm water Pollution Prevention Plan (SWPPP).

**WAC 173-240-150 (1)** – *A detailed operation and maintenance manual must be prepared for an industrial wastewater facility that includes mechanical components before completing the construction. The manual is to be submitted to the department for review and approval. The purpose of the manual is to present technical guidance and regulatory requirements to the operator to enhance operation under both normal and emergency conditions.*

The Permit covers discharges from the Weyerhaeuser facility located at 2901 Industrial Way, Longview, WA 98632 (the Facility). The Facility has been in operation for many years, and in 2016 was divided, creating three independent facilities. Each facility was issued its own NPDES Permit by Washington State Department of Ecology (Ecology). Weyerhaeuser was issued Permit No. WA0991014 and Special Condition S4.A requires that an Operation and Maintenance Manual be prepared per the conditions of the Permit and WAC 173-240-150 and submitted to Ecology. The Permit authorizes Weyerhaeuser to discharge process wastewater to Nippon Dynawave Packaging Company's (Nippon) industrial process wastewater treatment plant. This Operation and Maintenance Manual covers Weyerhaeuser's storm water management system and discharges.

In addition to the requirements outlined in WAC 173-240-150, Permit Special Condition S4.A. also directs the Operation and Maintenance Manual include:

1. Emergency procedures for plant shutdown and cleanup in the event of any wastewater or storm water system upset, spill, or failure, or upon demand by the privately owned treatment system treating the discharge.
2. A review of all the wastewater and storm water systems components which if failed could pollute surface water, could cause impacts to the privately owned treatment system, or could impact human health. Provide a procedure for a routine schedule of checking the function of these components.
3. Wastewater and storm water system maintenance procedures that contribute to the generation of process wastewater.
4. Any directions to maintenance staff when cleaning or maintaining other equipment or performing other tasks which are necessary to protect the operation of the wastewater system (for example, defining maximum allowable discharge rate for draining a tank, blocking all floor drains before beginning the overhaul of a stationary engine).

5. Wastewater and storm water sampling protocols and procedures for compliance with the sampling and reporting requirements in the wastewater discharge permit.
6. Minimum staffing adequate to operate and maintain the collection and treatment processes and carry out compliance monitoring required by the permit.
7. Outfall 003B Drainage Area operation and maintenance activities, including:
  - a. A description of all maintenance activities required at the East Pond, the Export Dock area, and the storm water conveyance ditches which are required to comply with the discharge limits for Outfall 003B.
  - b. An overview of the automated pH adjustment system and procedures for maintaining the system.
  - c. Procedures for monitoring and maintaining the storm water conveyance ditches.
  - d. Procedures for monitoring and maintaining the turbidity curtain and the East Pond.
  - e. Procedures for monitoring and maintaining the inlet protection in the Export Dock area.

## **WAC 173-240-150 (2)**

WAC 173-240-150(2) specifies the operation and maintenance manual shall include the following topics:

- (a) The names and phone numbers of the responsible individuals.
- (b) A description of plant type, flow pattern, operation, and efficiency expected.
- (c) The principal design criteria.
- (d) A process description of each plant unit, that includes function, relationship to other plant units, and schematic diagrams.
- (e) An explanation of the operational objectives for the various wastewater parameters, such as sludge age, settleability, etc.
- (f) A discussion of the detailed operation of each unit and a description of various controls, recommended settings, fail-safe features, etc.
- (g) A discussion of how the facilities are to be operated during anticipated startups and shutdowns, maintenance procedures, and less than design loading conditions, so as to maintain efficient treatment.
- (h) A section on laboratory procedures that includes sampling techniques, monitoring requirements, and sample analysis.
- (i) Recordkeeping procedures and sample forms to be used.
- (j) A maintenance schedule that incorporates manufacturer's recommendations, preventative maintenance and housekeeping schedules, and special tools and equipment usage.
- (k) A section on safety.
- (l) A section that contains the spare parts inventory, address of local suppliers, equipment warranties, and appropriate equipment catalogues.
- (m) Emergency plans and procedures.

Each of the specified topics is discussed as follows:

*(a) The names and phone numbers of the responsible individuals.*

The storm water pollution prevention plan team members are listed below in Table 1. Grounds staff and millwrights are responsible for performing housekeeping and maintenance tasks across the Facility. The pollution prevention team will ensure that the appropriate staff are aware of their roles and responsibilities to operate and maintain the storm water management system.

Table 1: Storm water Pollution Prevention Team

Name	Title	Contact Information
Chris Woloszyn	Mill Manager	406-751-1994
Brian Hamilton	Export Operation Manger	360-414-3416
Erik Wilson	WA Trucking Manager	360-414-3449
Carter Marr	Environmental Manager	564-262-8852

*(b) A description of plant type, flow pattern, operation, and efficiency expected.*

Weyerhaeuser has four storm water outfalls that may discharge offsite:

- Outfall 003B (East Pond)
- Outfall 004B (North Ditch)
- Outfall 009B (Export Dock)
- Decommissioned Outfall 007B (Adjacent to Export Dock)

A layout of the Facility storm water system that shows the storm water collection and conveyance system including ditches, sumps, pump stations, and treatment systems is shown on the attached Site Plan and summarized in the following paragraphs.

### **Outfall 003B**

Outfall 003B includes storm water runoff from approximately 211 acres that include the Timberlands Log Sort Yard, the Export Dock, the area adjacent to the Export Dock, and a portion of Nippon's chip storage area.

Storm water from the Weyerhaeuser log yard and portion of Nippon's chip storage area flows by gravity through a series of ditches equipped with oil booms and check dams to a pH adjustment system where the comingled streams are treated to raise the pH to within the permitted range prior to discharge into the East Pond.

Outfall 007B historically drained a relatively small portion of the log sort yard near the Export Dock and the chip unloading facility. The outfall was decommissioned, and the area was regraded to direct storm water to the Export Dock Pump Station located near Outfall 009B. The Export Dock pump station transfers water to a ditch that ultimately flows to Outfall 003B.

Storm water in the eastern log deck storage area sheet flows into the East Sump. The sump acts as a debris and sediment trap and discharges supernatant effluent via gravity to a nearby drainage ditch.

Storm water from the former truck wash area flows into an oil-water separator before discharging via gravity flow into Nippon's Chip Sump. The oil-water separator is a remnant feature from previous operations (truck washing) in this area of the Facility but was left in place. This storm water stream rejoins the Outfall 003B drainage network after flowing through Nippon's chips-solids separator.

Storm water from all the areas that drain to Outfall 003B flows by gravity through a 6-foot culvert located just upstream of the East Pond where a sodium hydroxide solution is added to the flow to adjust the pH to within the permitted range. The sodium hydroxide is stored in a 1000-gallon double walled chemical storage tank located adjacent to the culvert. An in-line Walchem W600 series chemical metering pump injects sodium hydroxide to the storm water flowing in the culvert. The pH of the dosed effluent is measured in the East Pond as storm water discharges to the pond. The Walchem W600 metering pump is controlled using a PID controller which maintains a setpoint at the inlet to the pond. This setpoint can be changed inside of the controller. The appropriate setpoint is determined by monitoring data at the pond outfall (003B). The flow of stormwater into the pond is measured with an AVFM 5.0 flow meter. This flow meter does not impact pH control in any way.

After pH adjustment, the treated storm water discharges to the East Pond. In 2017, the east pond was dredged to a depth of 11 feet. A turbidity curtain placed near the inlet of the East Pond to confine the accumulation of sediment in the upstream portion of the pond and reduce future dredging efforts. The pond was again dredged in the spring of 2024. The pond discharges to the Consolidated Diking Improvement District (CDID) Ditch No. 3 via Outfall 003B, a V-notch weir located on the northeast end of the pond.

#### **Outfall 004B**

A 260-acre drainage area discharges to Outfall 004B. The drainage area includes drainage from the area surrounding Weyerhaeuser's sawmill, the decommissioned kilns and Goods In Processing (GIP) yard, planer mill, a lumber storage yard, shipping and the carrier garage. The area also collects drainage from NORPAC, NDP's hog fuel storage area, Patriot Rail's "MAINTENANCE SHOP", the parking area for the main visitor entrance as well as various other support facilities. Some portions in this drainage area are authorized to pump to Nippon Dynawave's process wastewater treatment system through Outfalls 002B, 005B and 006B. Weyerhaeuser maintains an updated emergency contact list for applicable personnel at the adjacent facilities in the event there are any problems with overflow of pump stations operated by others, overflow from NORPAC's storm water isolation valves, or any other problems that have the potential to cause stormwater quality impairments or an improper discharge to surface water.

There are two oil water separators located in this drainage area. One is located downstream of the lumber storage yard on the north side of the lumbermill and treats water from the lumber storage area and NORPAC discharges. The second oil water separator treats drainage from a lumber storage area west of the dimension planer as well as discharges from NORPAC. Locations of oil water separators in the facility storm drain system are shown on the figures in the SWPPP.

Effluent from the oil water separators flows into the North Ditch, along with additional runoff in this area that flows into the North ditch through twelve pipe networks. The ditch is approximately 20 feet across and flows by gravity to Outfall 004B. The North Ditch eventually discharges to CDID Ditch No. 3.

#### **Outfall 009B**

Storm water from the Export Dock drains into the Export Dock Pump Station and is pumped to a ditch running along the east side of the log yard. The ditch conveys the runoff via gravity to the pH adjustment system and East Pond. Treated runoff from the East Pond discharges to CDID Ditch No. 3 via Outfall 003B. During significant storm events, the pumping capacity of the pump station may be exceeded. If the maximum pumping capacity is exceeded or there is a pump failure, storm water from the Export Dock Pump Station may discharge to the Columbia River via Outfall 009B.

Runoff from the Export Dock sheet flows to a low elevation and then drains into the sump at the pump station. The inlet to the pump station is protected with a basket screen and booms placed around the structure inlet to reduce debris and sediment from entering the pump station. The basket screen and oil absorbent booms are inspected as part of the weekly facility SWPPP inspection, and the basket is cleaned out and booms replaced as necessary based on those weekly observations.

#### **Wastewater Streams**

Weyerhaeuser has multiple discharge points of process wastewater to the Nippon's Industrial Wastewater Treatment Plant.

The Log Stacker Shop Sump (Outfall 001B) is located near the log stacker shop and the chip storage area in the south portion of the Facility. Process wastewater is pumped from the sump through an aboveground pipe to a pump station operated by Nippon.

The Log Yard Sump (Pump Station 6; Outfall 002B) is located near the log storage area for the sawmill on the north edge of the site. Process wastewater is pumped from the sump to Pump Station 7, Outfall 005B.

The Sawmill East Log Yard (Pump Station 7; Outfall 005B) is located near the chip storage area between the sawmill log yard and the log sort yard in the north-central portion of the Facility. Process wastewater flows through an oil-water separator and is pumped to the treatment plant.

The Planer Sump (Pump Station 1; Outfall 006B) is located on the western side of the planer mill and process wastewater is pumped to the treatment plant.

The Timberlands Truck Maintenance & Wash (Outfall 008B) is located on the southwestern portion of Facility along the Columbia River. Process wastewater flows over the paved area to a drain which gravity flows to a pump station and is pumped to the Nippon treatment plant.

*(c) The principal design criteria*

#### **East Pond**

The East Pond discharges through a v-notch weir located on the east side of the pond. The discharge is a 48" weir box with 90° V-notch weir cut into each side. The distance from the top edge of the weir box to the bottom point on the v-notches is 17". A staff gauge is installed in the pond approximately ten feet away from the weir box platform. The gauge is adjusted so the 1.0' mark on the gauge corresponds to the bottom point on the v-notches. Storm water flows through a culvert under Industrial Way to CDID Ditch No. 3. The diameter and slope of this culvert is not known and unsafe to access underwater to measure, so its hydraulic capacity has not been determined.

In 2017, a turbidity curtain was installed in the east pond to reduce sediment accumulation in the pond. The curtain is intended to confine sediment accumulation to a smaller area of the pond, reducing future dredging efforts.

The 2016 AKART analysis determined that a minimum depth of 8 feet was required for the East Pond to maintain a capacity of 6.5 million gallons and a retention time of at least 7 days. In 2017, the pond was dredged to a depth of 11 feet to provide sediment storage volume. The pond was dredged again in 2024. Starting in the summer of 2025 sections of the East Pond will be dredged yearly.

### **pH Adjustment System**

The pH adjustment system is designed to ensure that storm water entering the East Pond has a pH between 6.0 and 9.0 by adding sodium hydroxide. The pH of the dosed effluent is measured as it enters the East Pond. The pH of the storm water after dosing is controlled using a PID controller to maintain a pH setpoint in the water as it flows into the pond. This setpoint can be adjusted in order to ensure pH compliance at the 003B outfall.

A water line to the northern ditch flowing to Outfall 003B was identified in September 2021. This water line appears to have been previously installed to provide steady flow and increased mixing to assist with the pH adjustment process. See HydroCon, AKART Analysis Report, Section 5 (2016) (hereinafter, "AKART Study"). However, that water flow was shut off in September, as it is believed that addition of fresh water should not be necessary for adequate pH control.

### **Recirculation pump**

A recirculation line was installed in 2022 to bring water from East Pond back through the storm drain line leading to East Pond, where the sodium hydroxide injection and pH adjustment occur. The addition of the recirculation line helps avoid stagnant and low-flow conditions between storm events when pH monitoring and adjustment become more challenging, without the need to bring in another water source. Adjusting the specific location of the pH probe where the storm drain line discharges into East Pond could also help enhance mixing and provide for more accurate pH monitoring and adjustment.

### **Aeration units:**

Two Ixom 1800 Aerators were installed in 2022 using the shallow water application installation. The air hoses for these units are to be submerged no more than 8'. Aerators consist of weather resistant 120 watt rated air pumps (2 cubic ft per minute) @ 2.5 psi, connected to a ¾' stem. The



units are placed in shaded areas with adequate ventilation to minimize overheating. The circulation equipment is capable of passing up to 10-inch spherical solids. The circulation equipment has a submersible flotation system designed to support the mixer without breaking the surface of the water and is held in position by an anchor that rests on the bottom of the basin / reservoir. A minimum of 3' of water is required to float and operate the unit. The chain from anchor to the bottom of the aeration unit determines the intake level. The intake draws water in a horizontal layer from the set distance off of the reservoir floor. If the pond level is less than 3', aerators will be turned off. See Appendix D for additional information.

### **Outfall 003B Conveyance System Ditches, Check Dams and Oil Water Separators**

A series of ditches convey storm water to the East Pond and Outfall 003B. The dimensions and capacity of the ditches vary across the Facility but are generally approximately 20 feet wide at the top and several feet deep.

The ditches are equipped with four check dams. These dams are designed to reduce velocity and suspended solids/turbidity. A 2016 AKART study found that check dams have the capacity to remove between 83 to 93 percent of total suspended solids.

In the former truck wash station area, there is an old oil water separator. The location of the truck wash has been moved, eliminating the need for the oil water separator, but the separator was left in place. Storm water flows through the oil water separator into Nippon's chip separator sump where it eventually discharges to conveyance ditches to the East Pond pH adjustment system. The size and design capacity of the oil water separator is unknown. Locations of the oil water separators in the facility storm drain system are shown in the figures in the SWPPP.

### **Outfall 004B Oil-Water Separators**

There are two oil-water separators located in the Outfall 004B drainage area. Locations of the oil water separators in the facility storm drain system are shown in the figures in the SWPPP. The dimensions and capacities of these separators are not known. The separators are underground and only have access through hatches for inspection, cleaning, and maintenance, but do not allow for easy measurement of the structures.

### **Outfall 004B and North Ditch**

Storm water flows through several conveyance ditches and underground pipes into the North Ditch. The North Ditch is vegetated, has retention dams on the east and west side of the concrete weir structure. Oil booms, sediment booms and biochar booms have been installed on either side of the discharge structure at Outfall 004B. Locations of booms and check dams are shown on the figures in the SWPPP. After passing through the booms, effluent discharges through a v-notch weir to a culvert which flows under Industrial Way to the CDID Ditch No. 3.

Twelve pipes discharge into the ditch and are shown on the attached Site Plan. The sizes and materials of these pipes is included below in Table 1.



<b>Table 1</b> <b>Storm water system Discharge Pipes to North Ditch and Outfall 004B</b>		
<b>Pipe</b>	<b>Size(in)/Type</b>	<b>Notes</b>
A	12" reinforced concrete	Adjacent to Outfall 004B
B	36" reinforced concrete	Adjacent to Outfall 004B
D	10" metal	
F	8" metal	
H	18" reinforced concrete	Adjacent to Pump Station 3
J	10" corrugated metal	
K	8" reinforced concrete	
L	8" corrugated metal	
M	8" corrugated metal	Underwater at time of investigation
N	48" reinforced concrete	Main discharge point for west portion of the drainage basin into the North Ditch
N-2	Unknown	Small pipe unable to safely access
P	36" reinforced concrete	Discharge to the North Ditch from west side of main gate Admin complex

Based on past facility observations, it appears that pipe diameters, pipe slopes and associated storm water flow velocities are adequate to keep the pipes free of excessive accumulated sediment and allow adequate flow and discharge. Camera inspections and/or pipe jet cleaning would only need to be performed if unusual backup or ponding is observed at an area of the facility.

### **Pump Stations**

The Export Dock pump station contains two Flygt Model F3152 20 horsepower chopper pumps. The dual pump system operates in a lead-lag configuration. The flow capacity of this pump station is not known, but overflows are very infrequent and routed to the Columbia River via Outfall 009B.

Outfall 001B The Log Stacker Shop Sump conveys process wastewater to a pump station operated by Nippon. The wastewater is pumped with an ½ horsepower Everbilt SP05002VD submersible sump pump. The flow capacity of this pump station is not known. Any potential overflow would pool on the pavement near the sump and flow back into the sump when the pump is returned to normal operation.

Outfall 002B The Log Yard Sump Pump Station 6 conveys process wastewater to the Outfall 005B Pump Station 7. The station has two Gorman-Rupp® 6" T6 pumps with a 10" outlet pipe. The flow capacity of each pump is approximately 900 gpm. Any potential overflow would pool near the sump and flow back into the sump when the pump is returned to normal operation.

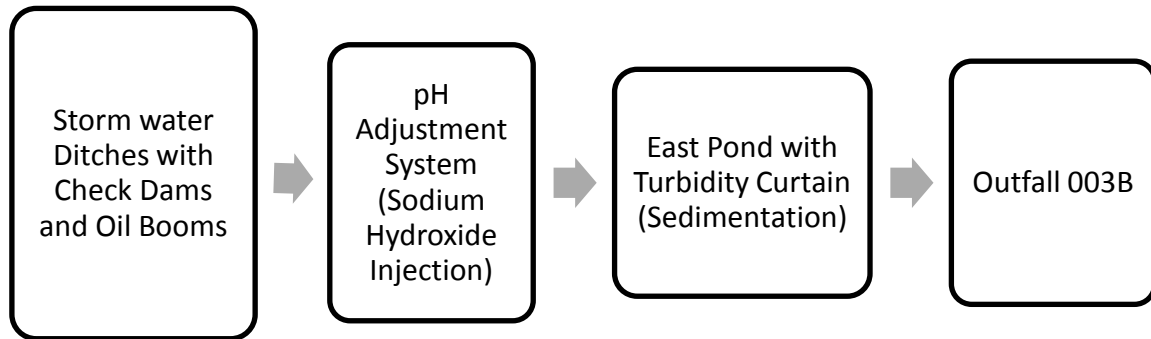
Outfall 005B The Sawmill East Log Yard Pump Station 7 has one 6” Vaughn chopper pump and one Gorman-Rupp® T8 8” pump with a 10-inch diameter outlet pipe. The flow capacity of the chopper pump is 600 gpm. The capacity of the T8 pump is 2000 gpm. Any potential overflow would pool near the sump and flow back into the sump when the pump is returned to normal operation.

Outfall 006B The Planer Sump has two Gorman-Rupp® T4 4” pumps with a 6-inch diameter outlet pipe. The flow capacity of this pump station is 500 gpm. Any potential overflow would pool on the pavement near the sump and flow back into the sump when the pump is returned to normal operation.

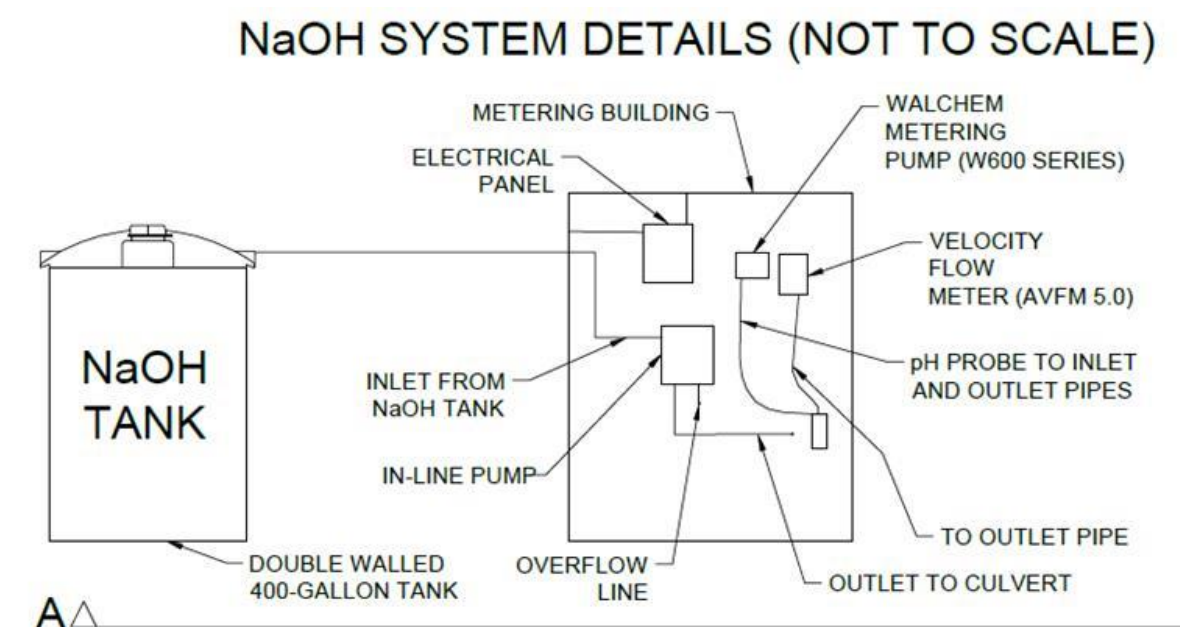
Outfall 008B The Timberlands Truck Maintenance & Wash pump station has a Homa Pump Model AV 444 with a 4-inch diameter outlet pipe and conveys wastewater from the parking lot to the wash station area, which then flows via Outfall 008B to Nippon’s treatment plant. The flow capacity of this pump station is a minimum of 400 gpm. Pump station overflows discharge to Nippon’s trench to the southeast. Controls for the pump station are on Nippon’s side of the fence and are to be inspected by truck shop employees in coordination with NDP. Potential overflows would be managed with contract services to pump from the southeast side of the parking lot up to the wash pad and discharge to 008B which flows to Nippon on the northeast.

- (d) A process description of each plant unit that includes function, relationship to other plant units, and schematic diagrams.

A process flow diagram for the storm water treatment system that discharges to Outfall 003B is included below.



A schematic of the pH adjustment system equipment is included below.



- (e) An explanation of the operational objectives for the various wastewater parameters, such as sludge age, settleability, etc.

#### pH Adjustment System Design

The pH adjustment system was designed to raise the pH of the influent storm water to within the permitted range (6.0 to 9.0 s.u.) by injecting sodium hydroxide.

- (f) A discussion of the detailed operation of each unit and a description of various controls, recommended settings, fail-safe features, etc.

### **pH Adjustment System Operation**

The pH adjustment system is designed to ensure that storm water entering the East Pond has a pH between 6.0 and 9.0 by adding sodium hydroxide. The pH of the dosed effluent is measured as it enters the East Pond. The pH of the storm water after dosing is controlled using a PID controller to maintain a pH setpoint in the water as it flows into the pond. This setpoint can be adjusted in order to ensure pH compliance at the 003B outfall.

- (g) *A discussion of how the facilities are to be operated during anticipated startups and shutdowns, maintenance procedures, and less than design loading conditions, so as to maintain efficient treatment.*

The storm water system does not have any anticipated startups and shutdowns except for potential emergency maintenance and repair of pump station pumps, which is done during dry weather.

### **pH Adjustment System Restart**

If the in line chemical dosing pump breaks during a storm event, storm water will continue to flow into the East Pond as the pump is replaced with a spare pump. The sodium hydroxide dose rate would be subsequently increased to raise the pH of the storm water in the pond to within the permitted range prior to discharge.

### **Pump Stations**

Most of the pump stations, except for the Log Stacker Pump Station, operate with dual pumps so that the pump station can continue to function if one of the pumps breaks or malfunctions. In the unlikely event that both pumps fail during a storm event (i.e., a power outage), storm water will overflow via the pump station overflow system or back up into the drainage area until the pumps could be brought back online.

### **Aeration Units:**

In the event that one or both of the aeration units failed or lost power, they will not impact the flow of storm water at 003B. Units and/or components would be replaced as needed.

- (h) *A section on laboratory procedures that includes sampling techniques, monitoring requirements and sample analysis.*

Grab samples for pH are collected 4 times per week from Outfall 003B, and one time per week from Outfall 004B. Grab samples are collected from Outfalls 003B and 004B on Tuesday and delivered to the laboratory the same day by courier service. Holiday and laboratory schedules can alter weekly Tuesday sample collection events.

Grab samples for pH are collected from Outfalls 001B, 002B, 005B 006B and 008B weekly; grab samples are collected monthly for BOD, TSS and oil and grease, then delivered to the laboratory the same day by the courier service.

Grab samples are collected at Outfall 009B quarterly if a discharge occurs. Outfall 009B only discharges when extreme rain events exceed the pumping capacity of the Export Dock Pump Station. Outfall 007B is unlikely to discharge storm water since the structure inlet has been capped and paved so that flow has been diverted to Outfall 009B. Grounds crew monitor rain events and collect samples if there is a discharge at Outfall 009B.

pH meters are calibrated prior to use consistent with the manufacturer's instructions and pH is measured in the field with the calibrated meter within 15 minutes of sample collection. The pH reading is recorded on the chain of custody form or on a pH records form. The meter calibration procedures are as follows:

- Turn on meter (hit second time after started to turn on light)
- Rinse probe off with distilled water
- Place probe in pH 7 buffer and stir slightly
- Press f1 to calibrate
- Start calibration (f3)
- Let meter stabilize (stop blinking)
- Accept calibration (f2) and then hit next (f2)
- Rinse probe off with distilled water
- Place probe in pH 4 buffer and stir
- Press start (f3) then let stabilize (stop blinking).
- Press accept (f2) and then press cal. Done (f3)
- Write down both pH's, temperatures, and the slope.
- Rinse probe off with distilled water
- Place probe in pH 6 buffer and stir
- Hit meas (f1)
- Write down results once stabilized
- Rinse probe off with distilled water
- Place probe in pH 10 buffer and stir
- Hit Measure button and let stabilize
- Record pH reading
- Rinse probe off in distilled water
- Place probe back in storage solution and tighten cap
- Turn off meter

RDO/DO meters are calibrated prior to use consistent with the manufacturer's instructions. DO is measured in the field with the calibrated meter within 15 minutes of sample collection. The DO reading is recorded on the pH records form. The meter calibration procedures for air calibration include:

1. In the measurement mode, press f1 (cal). Press or to highlight DO-Channel and press f2 (select).
2. Press up or down arrow to highlight Air and press f3 (select).
3. Rinse the RDO optical DO probe or polarographic DO probe with distilled water, blot dry with a lint-free tissue and place into the prepared calibration sleeve or BOD bottle. Allow the probe and water-saturated air to reach equilibrium.
4. When the probe and water-saturated air are ready, press f3 (start).
5. Wait for the dissolved oxygen reading on the meter to stabilize and stop flashing. Once the reading is stable, the meter will display Accepting Auto % Sat. Calibration and 100.0 % if using an RDO optical DO probe or 102.3 % if using a polarographic DO probe.
6. Press f3 (cal done) to export the data to the calibration log or press f2 (print) to export the data to the calibration log and a printer or computer. The meter will proceed to the measurement mode

Samples are collected directly into laboratory-provided containers and labeled with:

- The sample location
- Sampling date and time
- Sampler's initials

Sample containers are placed into a cooler filled with ice and a chain of custody form is filled out, signed by the sampler, and placed inside a Ziplock bag inside the cooler. The cooler is taped shut with a laboratory-provided chain of custody seal. A courier then picks up the cooler and delivers the samples to the laboratory.

Samples are delivered to Specialty Labs in Clackamas Oregon, and bacteria samples are delivered to Water Management Laboratory in Tacoma, Washington. Both labs are accredited under WAC173-50, *Accreditation of Environmental Laboratories*. The laboratory follows the analytical procedures and minimum quantitation levels outlined in 40 CFR 136 and Appendix B.

The monitoring schedule and parameters are outlined in the following table as noted in NPDES Waste Discharge Permit No. WA0991014.



Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
<b>(1) Process Wastewater Discharges to Nippon Dynawave Industrial Treatment Plant – Outfalls 001B, 002B, 005B, 006B, and 008B</b>			
See Special Condition S3.A. for Reporting and Recording Requirements.			
Biochemical Oxygen Demand (BOD <sub>5</sub> )	milligrams/L (mg/L)	Monthly <sup>a</sup>	Grab <sup>b</sup>
Total Suspended Solids (TSS)	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
pH	standard units	Weekly	Grab <sup>b</sup>
Oil & Grease	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
<b>(2) Stormwater Discharge to CDID Ditch #3 – Outfall 003B (East Pond)</b>			
See Special Condition S3.A. for Reporting and Recording Requirements.			
Flow	1000 gallons/day (gpd)	Continuous <sup>c</sup>	Metered/recorded Report Daily Maximum and Monthly Average
pH <sup>d</sup>	standard units	4/Week	Grab <sup>b</sup>
BOD <sub>5</sub>	mg/L	Weekly	Grab <sup>b</sup>
Dissolved Oxygen	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
Oil and Grease	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
Zinc (Total)	micrograms/liter (µg/L)	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Copper (Total)	µg/L	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Fecal Coliform <sup>f</sup>	# /100 mL	Weekly	Grab <sup>b</sup>
Klebsiella <sup>†</sup>	# /100 mL	Weekly	Grab <sup>b</sup>
E. coli <sup>f</sup>	# /100 mL	Weekly	Grab <sup>b</sup>
Settleable Solids	mL/L	Weekly	Grab <sup>b</sup>
Turbidity	NTU	Weekly	Grab <sup>b</sup>
<b>(3) Stormwater Discharge to CDID Ditch #3 – Outfall 004B</b>			
See Special Condition S3.A. for Reporting and Recording Requirements.			
Flow	1000 gallons/day (gpd)	Continuous <sup>c</sup>	Metered/recorded Report Daily Maximum and Monthly Average
pH <sup>d</sup>	standard units	Weekly	Grab <sup>b</sup>

Parameter	Units & Speciation	Minimum Sampling Frequency	Sample Type
BOD <sub>5</sub>	mg/L	Weekly	Grab <sup>b</sup>
COD	mg/L	Weekly	Grab <sup>b</sup>
Dissolved Oxygen	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
Oil and Grease	mg/L	Monthly <sup>a</sup>	Grab <sup>b</sup>
Zinc (Total)	micrograms/liter (µg/L)	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Copper (Total)	µg/L	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Fecal Coliform <sup>†</sup>	# /100 mL	Monthly <sup>a</sup>	Grab <sup>b</sup>
Klebsiella <sup>‡</sup>	# /100 mL	Monthly <sup>a</sup>	Grab <sup>b</sup>
E. coli <sup>†</sup>	# /100 mL	Monthly <sup>a</sup>	Grab <sup>b</sup>
Settleable Solids	mL/L	Weekly	Grab <sup>b</sup>
Turbidity	NTU	Weekly	Grab <sup>b</sup>
<b>(4) Stormwater Discharges to Columbia River – Outfalls 007B &amp; 009B</b>			
See Special Condition S3.A. for Reporting and Recording Requirements.			
Chemical Oxygen Demand (COD)	mg/L	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Turbidity	NTU	Quarterly <sup>e</sup>	Grab <sup>b</sup>
pH <sup>d</sup>	standard units	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Oil Sheen	Yes / No	Quarterly <sup>e</sup>	Visual Observation
Copper (Total)	micrograms/liter (µg/L)	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Zinc (Total)	µg/L	Quarterly <sup>e</sup>	Grab <sup>b</sup>
Total Suspended Solids (TSS)	mg/L	Quarterly <sup>e</sup>	Grab <sup>b</sup>

(i) *Recordkeeping procedures and sample forms to be used.*

Records are maintained in files at associated Weyerhaeuser business functions and respective electronic servers. Records for Outfalls 001B, 003B, 007B and 009B are maintained at the Export Sort Yard. Records for Outfalls 002B, 004B, 005B and 006B are stored at the Lumbermill. Records for Outfall 008B are stored at the Truck Shop. Sample chain of custody forms for each outfall are stored at respective sites as noted above. Analytical results are stored electronically on servers for each respective Weyerhaeuser business function. Weekly inspection forms are kept in paper and electronic form at respective Weyerhaeuser facilities.

As of January 2025, Weyerhaeuser has moved to using a proprietary software system (Weyerhaeuser Environmental Information System, or WEIS) to conduct and document SWPPP and SPCC inspections. This software requires an individual to sign in using a personal username and password, and the date, time and person responsible for all entries being created is automatically recorded by the software system. The entries are made electronically using a tablet. The weekly/daily pH checks are also recorded in this software package.

Calibration data for the pH and DO probes are recorded in a Microsoft Excel file.

Discharge monitoring reports and periodic reports are stored on respective business servers for each permitted outfall.

- (j) *A maintenance schedule that incorporates manufacturer's recommendation, preventative maintenance and housekeeping schedules, and special tools and equipment usage.*

Housekeeping best management practices (BMPs) implemented at the Facility include:

- Maintain equipment which may be exposed to storm water on a regular schedule.
- Paved areas of log yards are swept regularly to reduce debris and dust.
- Sweep main mill-site roadways regularly.
- Remove hog fuel on regular basis.
- Train employees to be aware of potential pollutants that may get into the storm water system.
- Teach employees that control of storm water pollution at the source can be obtained by regular cleanup operations, maintaining organized work areas, and having generally good housekeeping practices.

A housekeeping checklist is included in Appendix C.

Preventative maintenance BMPs implemented at the Facility include:

- The storm water drainage system is inspected and maintained regularly.
- All solids or fines collection locations are pumped on a regular basis.
- Storm water ditches are dug out on an as needed basis.
- All conveyance systems will be inspected weekly as a part of the SWPPP inspection
- Any oil observed in catch basins will be promptly removed.
- Spilled or leaked materials that could be transported by storm water will also be removed by using absorbents or other means after the source has been eliminated.

The following table “Weyerhaeuser Longview Preventive Maintenance Activities/Schedule” further describes the preventative maintenance BMPs and schedule.

<b>Weyerhaeuser Longview</b> <b>Preventive Maintenance for Source Control and Treatment BMPs</b>		
<b>Activity</b>	<b>Objective</b>	<b>Existing Schedule</b>
Equipment Pre-Use inspections	Ensure that equipment is operating correctly and that no leaks or spills have occurred.	Mobile equipment inspected each shift prior to use.
East Sump and conveyance ditch Sediment Removal	Allow for deposition of solids in ditch before discharge to East Pond	Inspections are conducted weekly. Sump and ditches are dredged quarterly. Sump and ditches may be cleaned more frequently if inspections indicate necessity.
East Pond Sediment Removal (at discharge to pond) Outfall 003B.	Allow for deposition of solids at discharge point, increase efficiency of SS and TSS removal.	The pond is dredged as needed, approximately every five years to remove the accumulated solids.
East Pond Inspection and pH Adjustment Outfall 003B.	<p>Runoff pH is controlled by the addition of sodium hydroxidethe inlet to the pond.</p> <p>Ensure aerators and recirculation pump are operating properly.</p>	<p>During operations the pond is visually inspected weekly, and a grab sample of pH is collected 4 times per week at Outfall 003B.</p> <p>The pH system is fully automated to measure and adjust the pH level of incoming flow.</p> <p>Aerators and recirculation pump operate continuously, inspect to ensure equipment is operating. If not, remove unit and replace failed components.</p>
Oil Skimmers-Sorbent Boom and Pad Inspection and Replacement Drainage areas 003B and 004B.	Identify need for replacement of sorbents to maximize oil removal.	<p>Inspections are conducted weekly at the locations identified on the SWPPP drawings.</p> <p>Pad and boom replacement occur as needed</p>
Straw bales and waddles Drainage areas 003B, 004B and 008B	Identify need for replacement of straw materials to maximize solids removal.	Inspections conducted weekly at locations identified on the SWPPP drawings. Replacement occurs as needed.
Inlet Guard/Drain cover	Identify need for replacement to maximize removal of sediment, oil and grease.	<p>Inspections conducted weekly at locations identified on the SWPPP drawings.</p> <p>Replacement occurs as needed.</p>

BioChar and synthetic fiber boom/sock	Identify need for replacement of filter media to maximize removal of metals and sediment.	Inspections conducted weekly at locations identified on the SWPPP drawings. Replacement occurs as needed.
Activity	Objective	Existing Schedule
Oil/Water Separator- Inspection and Pumping Drainage areas 00B3 and 004B.	Identify need for pumping of sump to maximize oil removal. Inspections to include probe rod to estimate sediment thickness and pulling sample for visual gauge of floating oil thickness.	Inspections are conducted weekly at the oil water separator locations identified on the SWPPP drawings. Pumping occurs at least annually, more frequently as needed based upon depth of sediment.
Log Storage Deck Clean-up-bark swept to center of deck and hauled to the hog fuel storage area. Drainage area 003B.	Minimize materials entering runoff.	Debarker and storage docks are swept after every log deck turnover. Log dock is swept daily (5 times/week) using large pusher attached to the log stacker.
Log Storage Deck Rerocking Drainage area 003B.	Repair and/or stabilize significant soft spots, ponding, wheel ruts that lead to erosion and transport of sediments.	Rock yard areas are routinely cleaned and re-rocked based upon observations from the weekly SWPPP inspections.
Log Export Dock Pump Station Debris Basket Cleaning Drainage area 003B.	Cleaning minimizes the potential for pump and associated pipe clogging.	Basket screen emptied monthly, or as needed.
Street/Parking Area Sweeping All drainage areas.	Minimize materials entering runoff.	<b>Site primary roads and residuals area-</b> twice weekly, or as needed. <b>Timberlands Log yards-</b> daily using pusher on log stacker, or as needed. <b>Parking Lots and lumber storage areas:</b> Sweep/vac paved areas at least quarterly.
Inspection and Cleaning of Storm Drainage Ditch System Drainage areas 003B and 004B.	Cleaning minimizes the potential for culvert and pipe sedimentation which decreases biofiltration effects and carrying capacity.	Shovel or probe rod used during semi-annual inspections to estimate thickness of accumulated sediment.

		The North Ditch has been divided into 5 sections and the ditch is cleaned on a rotation, so any given section will be cleaned once per 5 years. This cleaning is typically done during the dry season. Sections of ditches are cleaned at least annually, typically during the dry season or as needed if noticeable sediment or floatable are present.
<p>Inspection and Maintenance of Pipe A filter baskets</p> <p>There are 2 sets of the filter baskets so that one could be in the vault while the other is out for media cleaning.</p>	Filter media is placed within the inline retrievable steel baskets and used to filter out suspended solids and associated pollutants from stormwater in Pipe A	Pull up and inspect the structural filter elements on a monthly basis. Filter media can be washed and reused and change out is expected every 3 months.
<b>Activity</b>	<b>Objective</b>	<b>Existing Schedule</b>
Inspection of 003B and 004B Discharge Locations	Inspected for presence of visible pollutants and correct operation.	Inspected weekly
<p>Inspection of Fuel/Oil Tanks</p> <p>All drainage areas.</p>	Observe leaks or spills and effect clean-up activities.	Per SPCC Plan



**Outfall 003B**

Outfall 003B is checked for blockages and debris during sampling events consistent with the pH monitoring frequency required in the Permit. Obstructions are removed from the weir structure at the time of observation. During sample collection the outfall is also checked for the presence of visible pollutants such as oil.

**Sodium Hydroxide Tank**

Sodium hydroxide levels in the tank are monitored by Univar Solutions, the chemical distributor, using a telemetry system. The sodium hydroxide tank also has a level indicator on the outside of the tank that is monitored by the facility grounds staff on a weekly basis while they conduct their housekeeping and inspections, and twice weekly by ChemStone. When the sodium hydroxide levels in the tank are low, Univar travels out to the Facility and fills the tank.

**East Pond**

Effluent samples from the East Pond are collected and analyzed for pH in the field four times a week. If there are any exceedances of the permitted range for pH (<6.0 or >9.0 s.u.), the Environmental Manager is notified immediately. The Environmental Manager will modify the PID setpoint in the controller to ensure compliance is maintained, if necessary.

As the pond accumulates sediment, it needs to be dredged to retain its storage capacity. The pond was dredged to a depth of 11 feet in 2017 and again in 2024. A turbidity curtain was installed to limit the sedimentation to a smaller portion of the pond and reduce future solids removal efforts. A 2016 AKART study determined that a minimum uniform depth of 8 feet should be maintained for the pond to have a storage capacity of 6.5 million gallons and a retention time of 7 days.

Measurement of the pond depth would require staff to contract use of a boat and attempt to gauge the depth using a pole or other measuring device. With the depth of the pond and the soft nature of the sediment, accurately measuring the depth of the pond is difficult. Additionally, there are safety concerns associated with having staff attempting to collect measurements from a boat. To prevent unnecessary risk to facility employees, the pond is observed visually for signs of increased sediment accumulation on a weekly basis. When aquatic plants such as *Typha latifolia* (broadleaf cattails) are observed to be growing in the perimeter of the pond, further assessment of pond depth is required.

If the depth of the East Pond is determined to have been reduced to 8 feet or less due to sediment accumulation, sediment will be dredged from the pond. Sediment is dredged from the pond during the dry season using an excavator and a hydraulic suction dredge. These activities do not require the pond to be drained. Dredged material is placed in an adjacent impervious surfaced location and left out in dry weather to dewater. Weyerhaeuser may also use rented manufactured dewatering devices such as presses or separators to dewater the dredged material. Dewatered material is disposed of offsite in accordance with all applicable solid waste regulations. The liquid generated during dewatering evaporates. If this is not possible due to weather issues, the material will be mixed with dry bark material to prevent liquids from dewatering to ground or effluent.

The turbidity curtain should not require routine maintenance, but visual observations are made during large storm events to identify if the curtain has become plugged with solids such that

storm water is bypassing. The weekly turbidity readings at Outfall 003B are also reviewed to verify that the 372 NTU monthly average is not exceeded. The turbidity curtain should be inspected following each pond sediment dredging operation to see if the material needs to be cleaned or replaced.

**Aerators:**

Aerators (Ixom Model 1800) were installed in 2022.

If debris is caught on the unit, it may restrict the flow pattern at the manifold or through the intake housing. Debris may get caught in the air manifold, either being too large to pass through or resistant to sliding up the manifold housing. Often debris will eventually work its way loose and pass through the unit or may be pulled through as other debris passing through the unit will pull or slide snagged debris through. If significant debris is causing the unit to clog, occasional maintenance and cleaning may be required. If required, debris should be carefully removed from the manifold and be wiped clean from any scum buildup on the outside of the pipes that may contribute to preventing debris from passing through the unit.

**pH Adjustment System**

The pH of the stormwater runoff entering the East Pond is controlled through the addition of sodium hydroxide to the stormwater in a culvert upstream of the point of entry into the East Pond. The pH is controlled to a setpoint entered into a PID controller which turns a dosing pump on and off, as required. This setpoint is adjusted as necessary to maintain pH compliance at the 003B outfall.

The pH probe is inspected, cleaned, and the calibration is verified weekly using a pH 6 buffer solution.

**Outfall 003B Conveyance System Ditches, Check Dams, and Oil Water Separators**

Conveyance ditches, oil water separators, and pump stations are inspected weekly as a part of the SWPPP inspections.

Trash or large debris observed in the ditches are removed during these inspections. If an inaccessible blockage is observed in a conveyance pipe, a vacuum truck is used to clean the pipe. At a minimum, ditches are cleaned annually during the dry season.

If sediment accumulation is observed behind the check dams, maintenance is scheduled to remove accumulated material. Unless observed accumulation is inhibiting the function of the check dam, maintenance is scheduled for the dry season. Material is excavated from the ditch, placed in an on-site impervious surfaced location, and mixed with dry bark material to prevent dewatering to ground or effluent. Material will be disposed of offsite in accordance with all applicable solid waste regulations. If necessary, additional rock will be added to repair the check dam.

The oil-water separator is inspected monthly. If a significant oil sheen is observed, the oil water separator is cleaned. The separator is also cleaned annually during the dry season. Liquids and solids removed from the separators are disposed in accordance with waste disposal regulations.

### **Outfall 004B**

Outfall 004B is checked for blockages and debris during weekly sampling events. Obstructions are removed from the weir structure at the time of observation. During sample collection the outfall is also checked for the presence of visible pollutants such as oil.

### **Outfall 004B Oil-Water Separators**

Oil-water separators are inspected monthly. If a significant oil sheen is observed, the oil water separator is cleaned. The separators are cleaned annually during the dry season. Liquids and solids removed from the separators are disposed in accordance with waste disposal regulations.

### **Outfall 004B North Ditch, Drainage Area Pipes, and Oil Booms**

Assigned Millwright conducts a weekly check of the sumps, pumps, and drainage areas as a part of the weekly SWPPP inspection.

Trash or large debris observed in the ditches are removed when observed. If an inaccessible blockage is observed in a conveyance pipe, a vacuum truck is used to clean the pipe. At a minimum, ditches are evaluated for annual cleaning during the dry season.

The two oil booms, two sediment booms and two biochar booms are located directly near the outfall weir. Locations of booms and check dams are shown on the figures in the SWPPP. During weekly sample collection, field staff inspect the conditions of the booms, and if necessary, replace them.

### **Pump Stations**

The Export Dock Pump Station is inspected monthly. If any debris or trash is present in the basket, the basket is removed, cleaned and placed back in the sump. Accumulated sediment or debris in the sump are cleaned out as necessary based on inspections. Unless observed accumulation is currently inhibiting the function of the pump station, maintenance is scheduled for the dry season. Material is removed from the sump and placed in an on-site impervious surface location and mixed with dry bark material to prevent dewatering to ground or effluent. Material is disposed of in accordance with applicable solid waste regulations.

The Log Stacker Shop Sump (Outfall 001B) is inspected weekly. Accumulated sediment or debris in the sump are cleaned out semi-annually. Removed material is disposed of in accordance with all applicable solid waste regulations.

The Log Yard Sump (Outfall 002B) Pump Station is inspected weekly. Accumulated sediment or debris in the sump are cleaned out as necessary based on inspections. Unless observed accumulation is currently inhibiting the function of the pump station, maintenance is scheduled for the dry season. Material is removed from the sump and placed in an on-site impervious surface location and mixed with dry bark material to prevent dewatering to ground or effluent. Material is disposed of in accordance with applicable solid waste regulations.

The Sawmill East Log Yard (Outfall 005B) Pump Station is inspected weekly. Accumulated sediment or debris in the sump are cleaned out as necessary based on inspections. Unless observed accumulation is currently inhibiting the function of the pump station, maintenance is

scheduled for the dry season. Material is removed from the sump and placed in an on-site impervious surface location and mixed with dry bark material to prevent dewatering to ground or effluent. Material is disposed of in accordance with applicable solid waste regulations.

The Planer Sump (Outfall 006B) Station is inspected weekly. Accumulated sediment or debris in the sump are cleaned out as necessary based on inspections. Unless observed accumulation is currently inhibiting the function of the pump station, maintenance is scheduled for the dry season. Material is removed from the sump and placed in an on-site impervious surface location and mixed with dry bark material to prevent dewatering to ground or effluent. Material is disposed of in accordance with applicable solid waste regulations.

The Timberlands Truck Maintenance & Wash (Outfall 008B) is inspected weekly. Accumulated sediment or debris on the wash pad is cleaned out as necessary based on inspections. Unless observed accumulation in the catch basins or drainage areas are currently inhibiting the function of the pump station, maintenance is scheduled for the dry season. Material is removed from the catch basins and drainage areas are placed on the wash pad and left to dewater. Dewatered material is disposed in accordance with applicable solid waste regulations. Sumps and pump stations are located on Nippon Dynawave property. Weyerhaeuser will access the pumps in cooperation with NDP and site security to perform inspections and maintenance on the equipment.

*(k) A section on safety.*

The company has an intensive program to promote safe employee behaviors and practices. It is based on the R.A.D.A.R.+ system of Recognizing risk, Assessing the situation, Developing a safe solution, Acting safely, and Reporting any upset condition or situations needing follow up. The elements of the safety program can be provided upon request.

*(l) A section that contains the spare parts inventory, address of local suppliers, equipment warranties and appropriate equipment catalogues.*

Gorman Rupp flapper assemblies in 4, 6, and 8 inches are kept onsite.

A spare pump of each manufacturer and model used at the Facility is kept onsite.

The Log Stacker Shop Sump (Outfall 001B) pump can be easily replaced at The Home Depot. The nearest store is located at 580 7th Ave in Longview.

Several pH meters are utilized at the Facility to collect pH measurements. Spare pH meters are not kept, but if one-meter breaks, one of the functional meters can be used until a replacement is delivered.

*(m) Emergency plans and procedures*

The general emergency response plan for the operation of Outfalls 001B through 009B is listed below. Emergency response for the Nippon treatment facilities is available in Appendices A and B. The truck shop area has the risk of potentially discharge to the Columbia in the event of a system failure, a specific response plan for this possibility is included below.

**General Emergency Response Plan**

- 1) Detect the operational problem through direct observation or instrument signal
- 2) Notify the mill management team
- 3) Troubleshoot the source of the problem consistent with safe work practices
- 4) Assign maintenance personnel to correct the problems
- 5) Report to supervisor and Environmental Manager
- 6) Report to Ecology and other Agencies, if required.

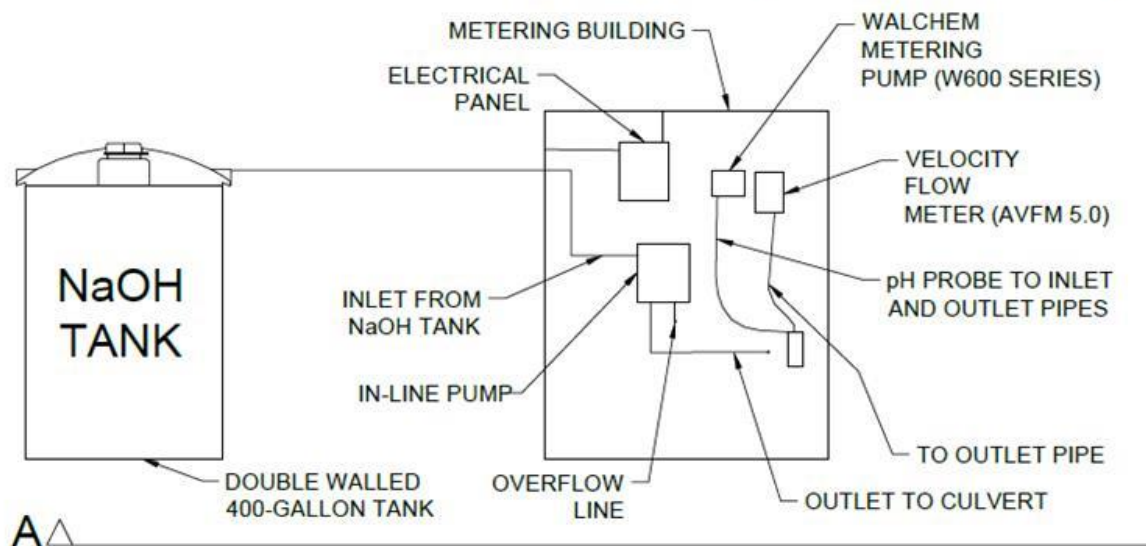
**Truck Shop Lift Station**

During a large storm event or in the case of a pump failure, the lift station in the truck shop area and the drainage area near the south pad bypass flow to an adjacent channel on the Nippon facility. This channel has the potential to discharge to the Columbia River. The channel outlet can be closed using a valve. If storm water from the truck shop drainage area bypasses the lift station and begins to flow into the channel during regular business hours, the channel will be closed to prevent a discharge of untreated storm water to the river.

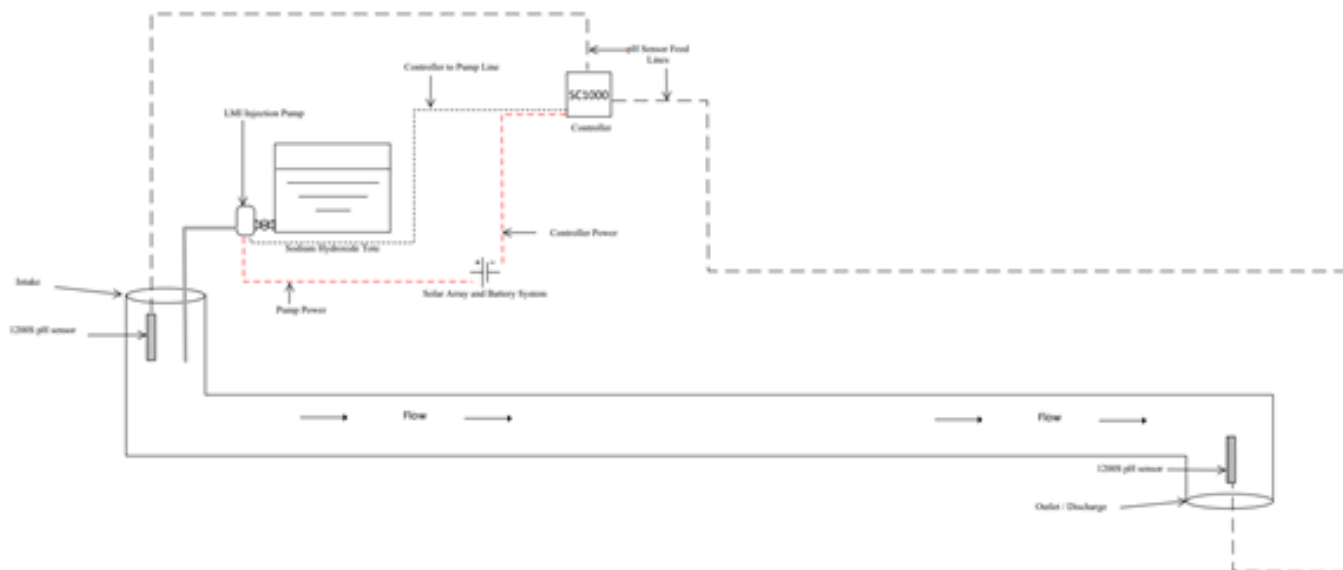
Contractor services may be used to pump 008B wash pad drainage area to prevent discharge to the channel.

## Appendix A East Pond pH Adjustment System

### NaOH SYSTEM DETAILS (NOT TO SCALE)



A schematic of the pH monitoring equipment is also provided for reference:





Appendix B  
Analytical Methods and Minimum Quantitation Levels

**CONVENTIONAL POLLUTANTS**

Pollutant	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L unless specified	Quantitation Level (QL) <sup>2</sup> µg/L unless specified
Biochemical Oxygen Demand		SM5210-B		2 mg/L
Biochemical Oxygen Demand, Soluble		SM5210-B <sup>3</sup>		2 mg/L
Fecal Coliform		SM 9221E,9222	N/A	Specified in method - sample aliquot dependent
Oil and Grease (HEM) (Hexane Extractable Material)		1664 A or B	1,400	5,000
pH		SM4500-H <sup>+</sup> B	N/A	N/A
Total Suspended Solids		SM2540-D		5 mg/L

**NONCONVENTIONAL POLLUTANTS**

Pollutant & CAS No. (if available)	CAS Number (if available)	Recommended Analytical Protocol	Detection (DL) <sup>1</sup> µg/L unless specified	Quantitation Level (QL) <sup>2</sup> µg/L unless specified
Alkalinity, Total		SM2320-B		5 mg/L as CaCO <sub>3</sub>
Aluminum, Total	7429-90-5	200.8	2.0	10
Ammonia, Total (as N)		SM4500-NH <sub>3</sub> -B and C/D/E/G/H		20
Barium Total	7440-39-3	200.8	0.5	2.0
BTEX (benzene +toluene + ethylbenzene + m,o,p xylenes)		EPA SW 846 8021/8260	1	2
Boron, Total	7440-42-8	200.8	2.0	10.0
Chemical Oxygen Demand		SM5220-D		10 mg/L
Chloride		SM4500-Cl B/C/D/E and SM4110 B		Sample and limit dependent
Chlorine, Total Residual		SM4500 Cl G		50.0
Cobalt, Total	7440-48-4	200.8	0.05	0.25
Color		SM2120 B/C/E		10 color units
Dissolved oxygen		SM4500-OC/OG		0.2 mg/L

## Appendix C Housekeeping Checklist

<b>YARD STORMWATER</b>			
<b>MONTHLY HOUSEKEEPING CHECKLIST</b>			
<b>Areas to clean</b>	<b>Good</b>	<b>Cleaned</b>	<b>Comments</b>
Dock Sump			
Graveyard Bunks			
Next to Debarker Shop			
East Sump			
<b>Ditches free of trash/material</b>			
900 Road			
Domestic Yard			
TOB			
<b>Oil/Water Seperators</b>			
Shop Sump			
East Sump			
Baysaver 5000			
<b>Oil Booms/Pads</b>	<b>Good</b>	<b>Replaced</b>	
Shop Sump			
Dock Sump - Before			
Dock Sump - Spillover			
Next to Debarker Shop breezeway			
East Sump			
TOB Ditch South			
TOB Ditch North			
East Pond inlet			
East Pond Outlet			
Westside Debarker Ring			
<b>Inspector:</b>			
<b>Additional Comments:</b> (Please list any other concerns or suggestions)			

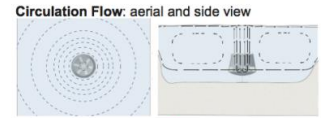
Appendix D  
Aerator System Information

AerationPlus AP1800 / AP2800 Systems



For Ponds, Small Lakes & Marinas AerationPlus air powered submersible circulation systems provide a cost effective solution for improving water quality, aesthetics, and biodiversity.

**AP1800 / AP2800 Circulation Systems:** Include air-powered circulator, air unit, air hose, timer, anchor and SS chain. The system is easy to install and maintain. The mixing unit is not visible from the surface, but the impact is visible.

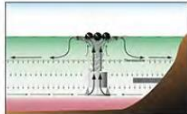


Medora Corporation

Air-Powered Mixers and Circulators



Epilimnetic Circulation for Algae Control in Lakes



Hypolimnetic Circulation for Iron and Manganese Control in Lakes

Lakes, Raw Water Reservoirs, and Estuaries

- Can be deployed for blue-green algae (BGA) control or hypolimnetic oxygenation
- Low-profile; easily disguised with artificial plants or rocks
- Small footprint (6 feet diameter or less) reduces boating interference
- No electricity in water for swimmers; safer for humans and pets
- Easy to mount on the end of docks
- Excellent for de-icing marinas

Stormwater

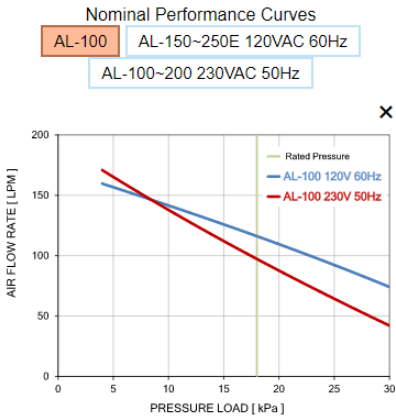
- Thorough mixing provides increased detention and improved nutrient reduction
- Effective control of blue-green algae and odors
- No electricity in the water; safer for humans and pets
- Low lifecycle cost when compared to fountains

Medora Corporation

Pump information:

Model AL-100, AL-120, AL-125E, AL-150, AL-200, AL-250E

- Solid construction, low noise and long lasting.
- Aluminum alloys housings.
- Oil-less operation.



Specification					
Model	AL-100	AL-120	AL-150	AL-200	AL-250E
Voltage & Frequency	AC 120V, 230V, 240V & 50/60Hz				
Rated Pressure (kPa, psig)	18, 2.6	20, 2.90			
Rated Performance (±5%) (lpm, cfm)	100, 3.5	120, 4.2	150, 5.3	200, 7.0	250, 8.8
Rated Input Power (W)	120	124	160	261	295
Sound Level (dB)	41	42	44	45	46
Discharge O.D. (mm, in)	18, 5/8				
Weight (kg, lb)	8.3, 18.2	8.3, 18.2	10.1, 22.3	10.1, 22.3	10.1, 22.3

Specifications and performance data are subject to change without notice