

**PORT OF BROOKINGS HARBOR**  
**Special Commission Meeting**  
**Friday, January 28, 2022 • 10:00am**  
**Teleconference / Meeting Room** *(limited capacity)*  
**16350 Lower Harbor Road Suite 202, Harbor OR, 97415**

---

**Teleconference Call-In Number: 1 (253) 215-8782**

**Meeting ID: 771 205 4017**

**Passcode: 76242022**

**(to mute/unmute: \* 6)**

---

**TENTATIVE AGENDA**

**1. CALL MEETING TO ORDER**

- Roll Call
- Modifications, Additions, and Changes to the Agenda
- Declaration of Potential Conflicts of Interest

**2. APPROVAL OF AGENDA**

**3. PUBLIC COMMENTS** – (Limited to a maximum of three minutes per person. Please email your comments to [portmanager@portofbrookingsharbor.com](mailto:portmanager@portofbrookingsharbor.com) prior to the meeting, if you are calling in. \*\*\*Please wait to be called on before speaking\*\*\*)

**4. ACTION ITEMS**

A. DEQ Tier 2 Corrective Action Report..... **Page** 2

**5. INFORMATION ITEMS**

A. Moorage License Agreement – Recommended Revisions..... 33

**6. COMMISSIONER COMMENTS**

**7. NEXT REGULAR MEETING DATE** – Wednesday, February 16, 2022 at 2:00pm

**8. ADJOURNMENT**

A request for an interpreter for the hearing impaired, for those who want to participate but do not have access to a telephone, or for other accommodations for persons with disabilities should be made at least 48 hours in advance of the meeting to Port of Brookings Harbor Office at 541-469-2218.

# ACTION ITEM - A

---

**DATE:** January 28, 2022  
**RE:** DEQ Tier 2 Corrective Action Report  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

## OVERVIEW

- Port received notice in October 2021 that DEQ completed its review of our facilities stormwater monitoring data, and the reports have triggered Tier II corrective actions.
- Four locations will be impacted by the Tier II Report:
  - 1) Boat Yard (Copper)
  - 2) Gear storage near Hallmark dock (Total Suspended Solids)
  - 3) Gear storage near cold storage (Total Suspended Solids & Copper)
  - 4) Gear storage near Pacific Seafood processing plant. (Total Suspended Solids & Copper).
- Tier II corrective actions response must be submitted no later than January 31, 2022. If approved, the project must be installed and implemented no later than September 30, 2023.
- Jack Akin-EMC Engineers/Scientists reviewed the FEMA Project with Aquarius Environmental which provided the Tier II corrective actions report. Report must be certified by an engineer.

## DOCUMENTS

- Draft Tier II Corrective Actions Report, 30 pages

## COMMISSIONERS ACTION

- **Recommended Motion:**  
Motion to approve Aquarius Environmental Tier II Corrective Actions Report for submission to Oregon Department of Environmental Quality.

January 25, 2022

DRAFT

---

---

# Port of Brookings Harbor Harbor, Oregon

## Tier 2 Report

Tier 2 corrective action and reporting as part of the NPDES  
Industrial Stormwater Discharge General Permit No. 1200-Z

Prepared by:

Aquarius Environmental, LLC  
2117 NE Oregon St., Ste 502  
Portland, OR 97232  
503.828.0265  
[www.aquariusenv.com](http://www.aquariusenv.com)

Prepared for Site Owner/Operator:

Port of Brookings Harbor  
16330 Lower Harbor Road  
Harbor, OR 97415  
Curry County

Mailing Address:

Port of Brookings Harbor  
PO Box 848  
Brookings, OR 97415

DEQ File# 126385

# Port of Brookings Harbor

## Tier 2 Report

### Table of Contents

- 1 Certification..... 1**
- 2 Site Summary.....2**
  - 2.1 Site General Description & Location..... 2**
- 3 Tier 2 Background & Summary .....2**
  - 3.1 Geometric Mean Benchmark Exceedance..... 3**
- 4 Existing Stormwater Conditions .....3**
  - 4.1 Drainage Basin 1 (DB-1)..... 3**
  - 4.2 Drainage Basin 2 (DB-2) ..... 4**
  - 4.3 Drainage Basin 3 (DB-3) ..... 4**
  - 4.4 Receiving Waters..... 4**
- 5 Design Hydrology.....5**
- 6 Proposed Tier 2 Stormwater Improvements.....5**
  - 6.1 Proposed DB-1 Stormwater Management Improvements .....5**
    - 6.1.1 DB-1 Asphalt Encapsulation (Paving & Grading) .....6
    - 6.1.2 Vessel Basin 2 (South) Riprap Embankment Improvements .....6
    - 6.1.3 Travel Lift Rinse Water Segregation & Treatment.....6
  - 6.2 Proposed DB-2 Stormwater Management Improvements..... 6**
    - 6.2.1 DB-2a Asphalt Encapsulation (Paving & Grading) .....6
    - 6.2.2 Reduced DB-2a Industrial Exposure.....6
  - 6.3 Proposed DB-3 Stormwater Management Improvements.....7**
    - 6.3.1 DB-3 Asphalt Encapsulation (Paving & Grading).....7
    - 6.3.2 Reduced DB-3 Industrial Exposure .....7
  - 6.4 Rationale for Treatment (and Source Control) Selection.....7**
    - 6.4.1 DB-1 .....7
    - 6.4.2 DB-2a.....8
    - 6.4.3 DB-3.....8
- 7 Expected Treatment Performance..... 8**
  - 7.1 Projected Reduction of Pollutant Concentration ..... 8**
- 8 Percent of Design Storm Volume Infiltrated.....9**
- 9 Operation & Maintenance (O&M) .....9**
- 10 Cost of Installation .....9**
- 11 Tier 2 Implementation Schedule .....9**
- 12 Tier 2 Requirements Cross-Reference ..... 10**

### Tables

**Table 1.** 2020-2021 DMR geometric mean exceedances compared to the Permit benchmark levels.

**Table 2.** Calculated peak flows and runoff volumes from existing surfaces/DBs.

**Table 3.** Estimated asphalt encapsulation pollutant reduction range.

**Table 4.** Projected pollutant concentration reduction.

**Table 5.** Estimated cost of proposed Tier 2 Improvements.

**Table 6.** Proposed implementation schedule for Tier 2 Improvements.

**Table 7.** Tier 2 requirements cross-reference checklist.

### Figures

**Figure 1:** General Location (Vicinity) Maps

**Figure 2:** Proposed Stormwater Improvements Conceptual Plan: DB-1 & DB-2a

**Figure 3:** Proposed Stormwater Improvements Conceptual Plan: DB-3

### Appendices

**Appendix A:** Hydrocad Modeling Output Calculations

## Abbreviations

ac	acres
af	acre-feet
AE	Aquarius Environmental
CB	catch basin
cf	cubic feet
cfs	cubic feet per second
DB	Drainage Basin
DEQ	Oregon Department of Environmental Quality
DP	Discharge Point
gpm	gallons per minute
in	inch
hr	hour
LF	linear feet
MH	manhole
ML	Monitoring Location
NPDES	National Pollutant Discharge Elimination System
SBUH	Santa Barbara Urban Hydrograph
SD	storm drain or drainage
sq ft	square feet
SWPCP	<i>Stormwater Pollution Control Plan</i>
yr	year

## 1 Certification

---

I hereby certify that this Tier 2 Report for the Port of Brookings Harbor has been prepared by me or under my supervision and meets minimum standards of the Oregon Department of Environmental Quality, and normal standards of engineering practice.

Aquarius Environmental, LLC  
Daniel A. Scarpine, P.E.  
Principal Engineer

## 2 Site Summary

---

### 2.1 Site General Description & Location

The Port of Brookings Harbor (Port or Site) is located at 16330 Lower Harbor Road in Harbor, Oregon (Curry County). The Port marine operations property occupies approximately 69 acres along the southern Oregon coast at the mouth of the Chetco River to the Pacific Ocean. The Port occupies several tax lots (TLs) in Township 41S Range 13W, Section 08A and has multiple addresses. The Site discharges stormwater pursuant to assigned coverage under the National Pollutant Discharge Elimination System (NPDES) Industrial Stormwater Discharge General Permit No. 1200-Z (DEQ File#126385).

See Figure 1 for General Location (Vicinity) Maps showing the Site location and surroundings.

## 3 Tier 2 Background & Summary

---

During the July 2020 through June 2021 monitoring year, the Port triggered a mandatory Tier 2 Corrective Action Response under the 1200-Z Permit due to the following geometric mean exceedances.

- Total copper at Monitoring Location 103 (ML103).
- Total suspended solids (TSS) at Monitoring Location 202 (ML202).
- TSS and total copper at Monitoring Location 302 (ML302).
- TSS and total copper at Monitoring Location 305 (ML305).

In response, the Port proposes the following corrective actions, further detailed in this Tier 2 Report.

- ML103
  - Asphalt-encapsulate (pave and grade) existing gravel surfaces in the DB-1 Boat Yard to new and existing stormwater drainage (SD) infrastructure (catch basins, underground SD gravity pipes, etc.) to new settling (clarification) & oil/water separation (OWS) before discharging at Discharge Point 103 (DP103).
  - Install travel lift/ramp rinse water treatment system to segregate, treat, and discharge rinse water (3-4 boats rinsed per week maximum) at Discharge Point 103 (DP103).
- ML202
  - Asphalt-encapsulate (pave and grade) existing gravel surfaces in the DB-2a Fuel Dock & Storage Area to new and existing stormwater drainage (SD) infrastructure (catch basins, underground SD gravity pipes, etc.) to divert runoff to new Discharge Point 205 (DP205).
  - Decrease DB-2 industrial area (i.e., decrease industrial exposure to stormwater).
- ML302 & ML305
  - Asphalt-encapsulate (pave and grade) existing gravel surfaces in the DB-3 Receiving Docks, Storage, & Processing Plant Area to new and existing stormwater drainage (SD) infrastructure (catch basins, underground SD gravity pipes, etc.) to divert runoff to existing Discharge Point 305 (DP305).
  - Decrease DB-3 industrial area (i.e., decrease industrial exposure to stormwater).



### 3.1 Geometric Mean Benchmark Exceedance

Table 1 summarizes geometric mean benchmark exceedances at the Port Site for the 2020-2021 1200-Z Permit monitoring year. Calculated geometric means are compared to 1200-Z Permit benchmark levels.

**Table 1.** 2020-2021 DMR geometric mean exceedances compared to the Permit benchmark levels.

Monitoring Location (ML) ID#	TSS (mg/L) <i>Benchmark = 100*</i>	Total Copper (mg/L) <i>Benchmark = 0.020*</i>
103		<i>0.507</i>
202	<i>185</i>	
302	<i>106</i>	<i>0.021</i>
305	<i>419</i>	<i>0.034</i>

Geometric means in ***bold italics*** exceeded 1200-Z Permit benchmarks levels.

\*Previous Permit benchmark.

## 4 Existing Stormwater Conditions

The Port is comprised of four (4) stormwater drainage basins (DBs). Three (3) DBs – DB-1, DB-2, & DB-3 – contain industrial activities and partially infiltrate or channel stormwater to a system of catch basins (CBs), strip drains, surface drainage ditches, and underground storm drainage (SD) pipes discharging at multiple locations – or discharge points (DPs) – throughout the Site. The Recreational Boat Rinse is considered a non-industrial drainage basin (DB-4) and will not be discussed further in the context of this Tier 2 Report.

See the following subsections for brief descriptions of DB-1 through DB-3. See full *Stormwater Pollution Control Plan (SWPCP)* text for further existing DB descriptions. See Figures 2 & 3 for DB delineation.

### 4.1 Drainage Basin 1 (DB-1)

DB-1 – or Boat Yard area – is approximately 3 acres. Existing DB-1 surfaces consist mostly of pervious gravel/dirt, an impervious concrete travel lift ramp/wash pad, an impervious Warehouse building rooftop, and perimeter vegetation along the edge of the water (Vessel Basin 2). Generally, stormwater partially infiltrates or sheetflows to surface catch basins (CB11 through 13) and discharges at three locations: Discharge Point 101 (DP101), Discharge Point 102 (DP102), & Discharge Point 103 (DP103).

CB11 and CB12 (DP101 & DP102) currently drain directly to the Tuttle Creek 84" corrugated galvanized pipe culvert maintained by Curry County<sup>1</sup> that runs under the Boat Yard and outlets west of the travel lift ramp at DP103. The 84" County culvert conveys Tuttle Creek flow, natural runoff, runoff from county and state roads, and from companies and residents upstream. Stormwater not infiltrated or drained via CB11 or CB12 sheetflows to a strip drain at the north end of the concrete travel lift ramp. This strip drain flows to CB13 via a notch outlet from the northwest corner of the travel lift ramp. CB13 then discharges to DP103 via private SD gravity pipe east of the 84" SD culvert.

<sup>1</sup> Curry County-owned 60" culvert. Tuttle Creek Drainage Easement Inst#: 2002-3748.

Boat rinsing occasionally occurs on the concrete ramp over a sump. The existing sump settles and collects solids. Non-stormwater is collected from the sump and stored in totes. The excess water is currently profiled and either used for dry weather dust control or hauled offsite for disposal. Hot water, soap, or other detergents are not allowed at the Boat Yard' rinse' rack.

## 4.2 Drainage Basin 2 (DB-2)

DB-2 – or Fuel Dock & Storage Area – is approximately 6 acres. Existing DB-2 surfaces consist mostly of pervious gravel/dirt storage areas & driveways, gasoline/diesel concrete pad, asphalt paving, and perimeter vegetation along the edge of the water (Vessel Basin 2). Generally, stormwater in storage areas partially infiltrates or sheetflows to surface catch basins (CB21 through CB25) and discharges at four locations: Discharge Point 201 (DP201), Discharge Point 202 (DP202), Discharge Point 203 (DP203) and Discharge Point 204 (DP204).

Uninfiltrated stormwater runoff from the south portion of DB-2 (receiving dock, storage areas, etc.) drains to CB21, CB22 and CB25 and discharges at DP201, DP202 and DP204, respectively. Stormwater runoff from the gasoline/diesel concrete tank pad drains to the adjacent CB23 or runs off the concrete pad onto surrounding pervious dirt/vegetation to infiltrate. CB23, CB24, and CB26 connect to the existing OWS vault, prior to discharging at DP203 next to the floating fuel dock.

## 4.3 Drainage Basin 3 (DB-3)

DB-3 – Receiving Docks, Storage, & Processing Plant – is approximately 8 acres. Existing DB-3 surfaces consist mostly of pervious gravel/dirt storage areas & driveways, concrete receiving docks, asphalt paving, and perimeter vegetation along the edge of the water (Vessel Basin 1). Generally, stormwater in storage areas partially infiltrates or sheetflows to a surface drainage ditch and catch basins (CB31 through CB36) and discharges at five locations: Discharge Point 301 (DP301) through Discharge Point 305 (DP305).

Stormwater runoff enters CB31 (DP301) that is directly connected to the County-owned culvert crossing Port property to discharge into the harbor. A surface drainage ditch collects area sheetflow and reaches CB35 prior to discharge at DP305 (discharge pipe to Vessel Basin 1). CB36 also connects to the SD gravity pipe to DP305. County-owned culvert water originates from natural runoff, county/state roads, and from companies/residents upstream run on (via surface ditches) and under (County culvert) prior to discharge.

Stormwater runoff from Bandon Pacific Seafood cold storage loading dock enters CB32 and discharges to DP302. CB33 also connects to the SD gravity pipe to DP302. An open drainage pipe west of cold storage discharges to DP303 near Harbor Ice. The south receiving docks and commercial fish unloading area primarily drains to DP 304 via CB34. Condensate from Harbor Ice docks discharges adjacent to the ice dock.

## 4.4 Receiving Waters

Stormwater runoff from Port industrial areas partially infiltrates and/or discharges to Port Vessel Basins 1 & 2, ultimately to the Chetco River and the Pacific Ocean.

## 5 Design Hydrology

Hydrologic analysis modeling calculations were conducted. Design hydrology was calculated using HydroCAD 10 modeling software and the Santa Barbara Urban Hydrograph (SBUH) Method<sup>2</sup>. Based on Tier 2 Corrective Action requirements, the 2-year/24-hour design storm (Q<sub>2</sub>) of 5.00”<sup>3</sup> multiplied by the Water Quality Design Storm (Zone 2 = 50%) results in the Tier 2 Design Storm (Q<sub>wq</sub>) used to perform peak flow and runoff volume calculations. See the following boxes for Water Quality Design Storm calculation and modeling assumptions. See Table 2 for calculated flow rates and runoff volumes for existing conditions. See Appendix A for HydroCAD® Modeling Output calculations.

$$(2\text{-year, 24-hour Rainfall Depth}) \times (\text{Water Quality Design Storm Factor}) = \text{Tier II Design Storm}$$

$$5.0'' \times 0.50 = \boxed{2.50''}$$

Standard Modeling Assumptions:  
 SCS Curve Number (runoff coefficient):  
 98 for all paved surfaces and rooftops  
 76 for gravel surface  
 39 for planted grass

**Table 2.** Calculated peak flows and runoff volumes from existing surfaces/DBs (Hydrocad 10, December 2021).

Drainage Basin (DB)*	Area	CN <sup>^</sup>	Q <sub>wq</sub> (Tier II = 2.50")		
			Peak Flow		Vol
			cfs	gpm	af
DB-1	2.83	98	1.45	651	0.435
DB-2a	6.21	83	1.08	485	0.488
DB-3	7.79	90	2.29	1028	0.900

<sup>^</sup>CN (unitless) is weighted average of all surfaces per HydroCAD 10.

## 6 Proposed Tier 2 Stormwater Improvements

The following subsections describe proposed Tier 2 stormwater management improvements at the Port. See Figures 2 & 3 for locations of proposed stormwater improvements.

### 6.1 Proposed DB-1 Stormwater Management Improvements

Currently, DB-1 – or Boat Yard – drains to three (3) DPs – DP101, DP102, & DP103. DB-1 is monitored (sampled) at Monitoring Location 103, which exceeded the benchmark level for total copper, and discharges at DP103. DP101 and DP102 are considered substantially similar to DP103.

See the following subsections for proposed stormwater management improvements.

<sup>2</sup> The Santa Barbara Urban Hydrograph (SBUH) method was used to account for release rates as well as total runoff volume.

<sup>3</sup> Precipitation Frequency Data Output. NOAA Atlas 2. Oregon 42.05°N 124.26°W. Site-specific Estimates.

### 6.1.1 DB-1 Asphalt Encapsulation (Paving & Grading)

The Port proposes to asphalt encapsulate (pave and grade) ~106,000 sq ft (2.4 ac) of the DB-1 Boat Yard to new/existing CBs to prevent sheetflow runoff from mobilizing gravel surface sediment – or suspended solids (and associated pollutants) – and reaching Vessel Basin 2. The new asphalt cap will be graded to existing CBs 11, 12, & 13 with the grated inlets adjusted to finished grade (FG) and five (5) new CBs. A system of new underground SD gravity pipes will convey collected runoff to a new settling (clarification) and OWS vault with a solids pre-settling chamber with the capacity to receive DB-1 peak flows (~650 gpm), to then discharge to the Vessel Basin 2 at the existing DP103 SD gravity pipe.

### 6.1.2 Vessel Basin 2 (South) Riprap Embankment Improvements

To prevent erosion sediment and stormwater sheetflow from entering Vessel Basin 2 (south), the Port proposes to upgrade the existing rock riprap embankment. Class 2000 riprap 2'-3' thick angular rock will be placed and underlain with woven geotextile for ~215 linear feet (LF) along the south bank of Vessel Basin 2, east and west of the travel lift ramp.

### 6.1.3 Travel Lift Rinse Water Segregation & Treatment

The existing travel lift boat rinse area (at the south end of the boat lift/ramp) is graded to an existing sump. A proposed rinse water treatment unit will be installed adjacent to the existing sump to treat collected boat rinse water and discharge at DP103. Approximately 3-4 boats per week are rinsed at this travel lift (below the limit of 8 boats per week to allow the discharge of treated rinse water).

## 6.2 Proposed DB-2 Stormwater Management Improvements

Currently, DB-2 – or Fuel Dock & Storage Area – drains to four (4) DPs – DP201, DP202, DP203, & DP204. DB-2 is monitored (sampled) at Monitoring Location 202, which exceeded the benchmark level for TSS, and Monitoring Location 203, and discharges at DP202 and DP203, respectively. DP201 and DP204 are considered substantially similar to DP202.

See the following subsections for proposed structural source control and treatment measures.

### 6.2.1 DB-2a Asphalt Encapsulation (Paving & Grading)

The Port proposes to asphalt encapsulate (pave and grade) ~95,000 sq ft (2.2 ac) of the DB-2 Fuel Dock & Storage Area to new/existing CBs to prevent sheetflow runoff from mobilizing existing gravel surface sediment (and associated pollutants) and reaching Vessel Basin 2. In addition, ~28,000 sq ft (0.6 ac) of new driveway access the Fuel Dock & Storage Area will be paved. Existing gravel surface will be excavated then repaved to match existing concrete elevations. New pavement will be graded away from the fuel dock area to sheetflow directly and via new CBs to discharge to Vessel Basin 2 via new discharge point – Discharge Point 205 (DP205) – to become sub-drainage basin DB-2a.

The Fueling Tanks Area (0.4 ac), which has an existing OWS vault installed prior to discharging at DP203, will be segregated to become sub-drainage basin DB-2b.

### 6.2.2 Reduced DB-2a Industrial Exposure

To reduce industrial exposure to stormwater in DB-2a, the Port proposes to convert some existing industrial storage areas to non-industrial parking and install covered storage/buildings as part of asphalt encapsulation. These improvements may be in the Federal Emergency Management Agency (FEMA) flood damage mitigation plan. Exact areas to be converted to non-industrial and storage building(s) location(s) are to be determined as the FEMA mitigation plan moves forward.

## 6.3 Proposed DB-3 Stormwater Management Improvements

Currently, DB-3 – or the Receiving Docks, Storage, & Processing Plant Area – drains to five (5) DPs – DP301, DP302, DP303, DP304, & DP305. DB-3 is monitored (sampled) at Monitoring Location 302, which exceeded the benchmark levels for TSS and total copper, Monitoring Location 304, and Monitoring Location 305, which also exceeded the benchmark levels for TSS and total copper, and discharges at DPs 302, 304, and 305, respectively. DP301 is considered substantially similar to DP302. DP303 is considered substantially similar to DP305.

See the following subsections for proposed structural source control and treatment measures

### 6.3.1 DB-3 Asphalt Encapsulation (Paving & Grading)

The Port proposes to asphalt encapsulate (pave and grade) ~134,000 sq ft (3.1 ac) of the DB-3 Receiving Docks, Storage, & Processing Plant Area to new/existing CBs to prevent sheetflow runoff from mobilizing existing gravel surface sediment (and associated pollutants) and reaching Vessel Basin 1 via direct sheetflow or DP. In addition, ~16,000 sq ft (0.4 ac) of new driveway access will be paved. Existing gravel surface will be excavated then repaved to match existing concrete elevations. New pavement will be graded away from the dock areas to sheetflow directly and via CBs/pipes to Vessel Basin 1 via existing Discharge Point 305 (DP305).

### 6.3.2 Reduced DB-3 Industrial Exposure

To reduce industrial exposure to stormwater in DB-3, the Port proposes to convert some existing industrial storage areas to non-industrial parking and install covered storage/buildings as part of asphalt encapsulation. These improvements may be in the Federal Emergency Management Agency (FEMA) flood damage mitigation plan. Exact areas to be converted to non-industrial and storage building(s) location(s) are to be determined as the FEMA mitigation plan moves forward.

## 6.4 Rationale for Treatment (and Source Control) Selection

### 6.4.1 DB-1

In DB-1, the exceedance in total copper is highly correlated with high levels of TSS and total zinc (although not benchmark-exceeding). These pollutants are commonly associated with unpaved boat yards, and in some cases boat rinse areas, with copper and zinc often highly correlated with TSS levels. Paving and grading the boat yard where vessel maintenance occurs to new SD infrastructure is expected to reduce overall suspended solids and associated pollutants. The asphalt encapsulation will act as treatment by greatly reducing the TSS (and associated pollutants) from entering the DB-1 storm system and adjacent surface waters and is likely capable of consistently meeting effluent Permit benchmarks. The installation of a settling (clarification)/OWS vault will provide additional settling and pollutant removal prior to discharge, likely capable of consistently meeting Permit benchmarks at DP103.

In addition, segregating boat rinse water at the travel lift/ramp to proposed rinse water treatment consisting of the collection of rinse water from the existing sump to treat collected rinse water and discharge at DP103. Note: Approximately 3-4 boats per week are rinsed at this travel lift (below the limit of 8 boats per week to allow the discharge of treated rinse water).

### 6.4.2 DB-2a

In DB-2a, TSS (benchmark exceedance) is the primary pollutant of concern and can be highly correlated with other pollutants. Paving and grading DB-2a to new SD infrastructure is expected to reduce overall suspended solids and associated pollutants. The asphalt encapsulation will act as treatment by greatly reducing the TSS (and associated pollutants) from entering the DB-2a storm system and adjacent surface waters and is likely capable of consistently meeting effluent Permit benchmarks.

### 6.4.3 DB-3

In DB-3, TSS and copper are the primary pollutants of concern. Paving and grading to new SD infrastructure is expected to reduce overall suspended solids and associated pollutants (i.e., copper). The asphalt encapsulation will act as treatment by greatly reducing the TSS (and associated pollutants) from entering the DB-2a storm system and adjacent surface waters and is likely capable of consistently meeting effluent Permit benchmarks.

## 7 Expected Treatment Performance

### 7.1 Projected Reduction of Pollutant Concentration

For DB-1, the primary pollutant sources are likely the unpaved yard and rinse water potentially reaching the trench drain at the end of the boat ramp. The proposed asphalt encapsulation of the yard, new SD infrastructure, clarification/OWS vault, and rinse water treatment system is expected to greatly minimize copper, correlated TSS, and other pollutants to DP103.

For DB-2a and DB-3, the primary pollutant source is likely the unpaved yard. The proposed asphalt encapsulation of the yard and new SD infrastructure will likely minimize the TSS (and associated copper, zinc, and other pollutants) to new DP205 and existing DP305.

Proposed asphalt encapsulation and new SD infrastructure is expected to reduce TSS and total copper concentrations to DP205 and DP305 to meet Permit benchmarks.

Based on the results of a similar boatyard facility<sup>4</sup> (Charleston Shipyard at the Oregon International Port of Coos Bay), an engineered asphalt cap will likely greatly reduce TSS (and associated pollutants) in stormwater discharge to below benchmarks levels.

Table 3 summarizes estimated pollutant reduction range in the similar asphalt encapsulated boatyard.

**Table 3.** Estimated asphalt encapsulation pollutant reduction range.

Pollutant Parameter	Estimated Percent Reduction Range (%)
Total Copper	~40 – 60%
TSS	~80 – 90%

<sup>4</sup> Reducing the Runoff – A Case Study of Stormwater Management at a Small Coastal Industrial Facility, Proceedings of the Water Environment Federation, (January 2004)

See Table 4 for projected reduction of pollutant concentration for benchmark-exceeding pollutants/DPs with asphalt encapsulation.

**Table 4.** Projected pollutant concentration reduction.

	Total Copper mg/L		TSS mg/L		
	ML302	ML305	ML202	ML302	ML305
<i>Current 1200-Z Benchmarks (mg/L)</i>	0.020		100		
<b>Projected % Reduction</b>	~40 – 60%		~80 – 90%		
<b>Pre-improvements (2020-2021 geomean)</b>	0.021	0.034	185	106	419
<b>Post-improvements (projected)</b>	0.013 – 0.008	0.014 – 0.020	18 - 37	11 - 21	42 - 84

## 8 Percent of Design Storm Volume Infiltrated

No infiltration is proposed at the Site as part of this Tier 2 Report.

## 9 Operation & Maintenance (O&M)

Routine maintenance of the proposed settling/OWS vault will be required to ensure proper functioning. The Port will develop and include an operation and maintenance (O&M) schedule for operating and maintaining vaults, DPs, and stormwater infrastructure upon construction, to remain onsite for use in association with the 1200-Z Permit and SWPCP.

## 10 Cost of Installation

In terms of cost analysis there is a shared purpose of proposed Paving and grading elements included in the Federal Emergency Management Agency (FEMA) flood damage mitigation plan, since these elements prevent erosion and impacts to Port maintained waterways as well as dramatically improve stormwater quality. However, it is our judgment the settling/OWS treatment vault along with design/engineering are considered in Tier II estimated cost as indicated in Table 5 below.

**Table 5.** Estimated cost of proposed Tier 2 Improvements.

	Settling/OWS Vault (DB-1)
<b>Capital Investment</b>	\$40,000
<i>Annual O&amp;M Costs</i>	\$1,000

## 11 Tier 2 Implementation Schedule

The implementation schedule for improvements described in this Tier 2 Report will follow the schedule set forth as part of the Federal Emergency Management Agency (FEMA) flood damage mitigation plan. Parts or all this plan may be subject to FEMA scheduling or requirements, and/or local permitting requirements.

Table 6 below indicates tentative key target dates as part of the Tier 2 Implementation process.

**Table 6.** Proposed implementation schedule for Tier 2 Improvements.

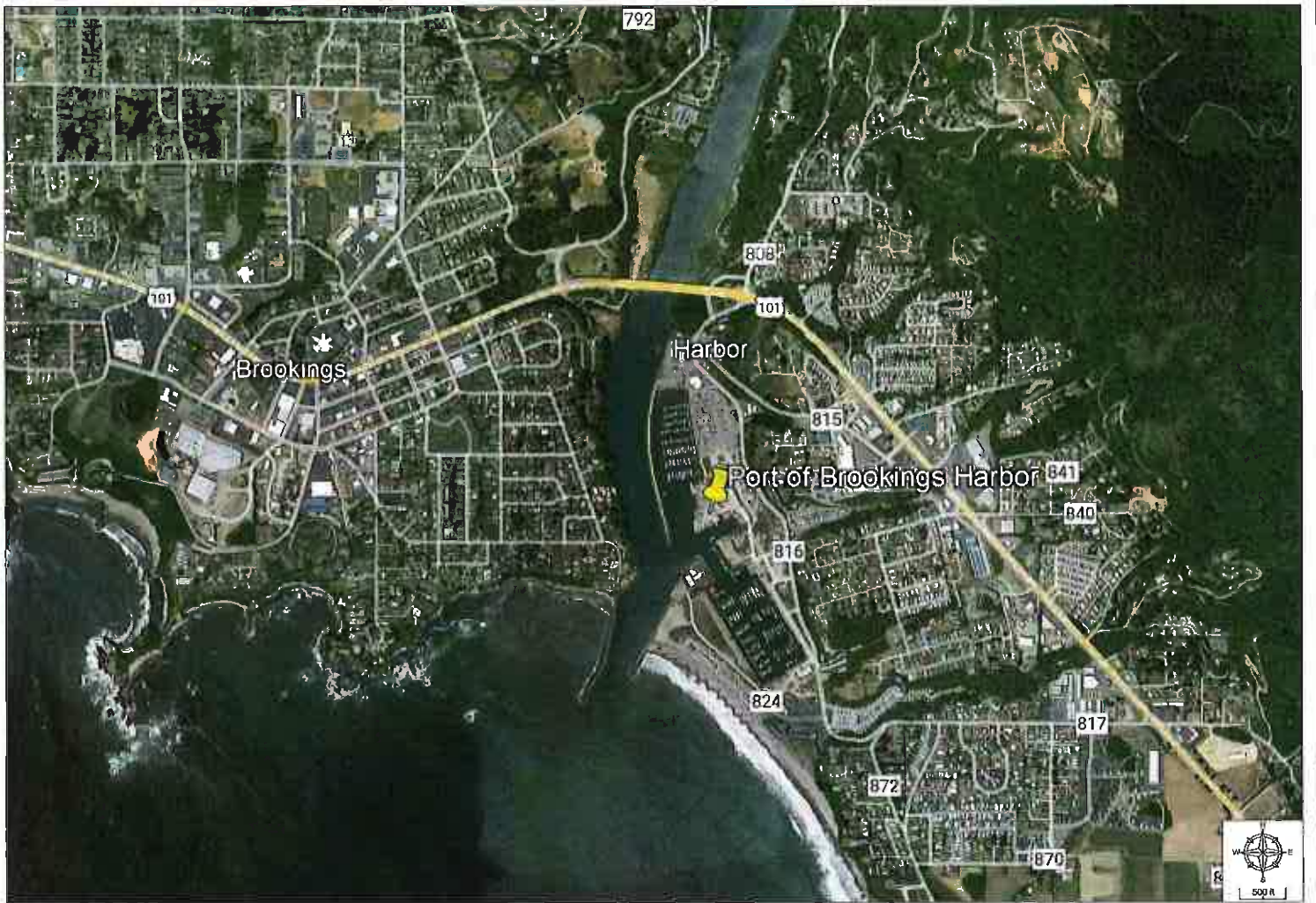
Task	Target Completion
Prepare and Submit Tier 2	December 2021
Submit for permits	Spring-Summer 2022
Target Dredging / Construction / Installation	Fall-Spring 2022-23
Target Facility Start-up and Online	Spring 2023
Full Implementation Date (Tier 2 Deadline)	June 30 <sup>th</sup> , 2023

## 12 Tier 2 Requirements Cross-Reference

**Table 7.** Tier 2 requirements cross-reference checklist.

Permit Schedule	Tier II Report Requirement	page#
A.11.f	Date revised Plan submitted	i (cover)
A.11	Discharge points, exceedances, % reduction concentration, % design storm infiltration	2-3, 6-7
A.11.j	Design storm in inches	3
A.11.j.i	Rationale for the selection of the measures	6
A.11.j.i	Schedule for implementing these measure	7
A.11.j.ii	Stamped by PE or CEG	1
Additional Requirements (DEQ Tier II Revised SWPCP Checklist)	Cost of installation	7
Additional Requirements (DEQ Tier II Revised SWPCP Checklist)	Treatment system schematic/operational plan	Figures 2 & 3
Additional Requirements (DEQ Tier II Revised SWPCP Checklist)	Operation and maintenance schedule for treatment measure	7





VICINITY MAPS  
AS NOTED

1
1

**GENERAL NOTES & DISCLAIMERS**

1. AERIAL IMAGES PROVIDED BY GOOGLE EARTH PRO & GOOGLE MAPS.
2. AQUARIUS ENVIRONMENTAL CLAIMS NO RESPONSIBILITY FOR INACCURACIES THAT MAY BECOME APPARENT IN THE FUTURE. WHILE THIS INFORMATION IS DEEMED RELIABLE, NO GUARANTEE OF THE ACCURACY OF THIS INFORMATION IS MADE.

17

FIGURE	REVISIONS		
	Rev	Date	Description
1			

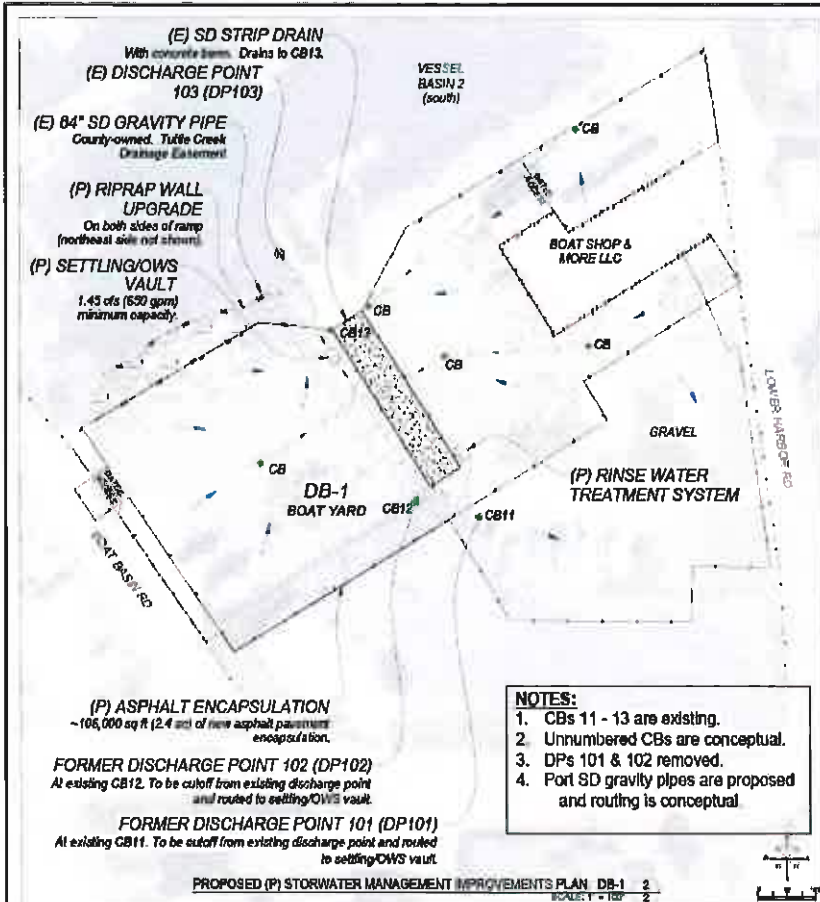
PROJECT NO.  
0290

**PORT OF BROOKINGS HARBOR**  
16330 LOWER HARBOR ROAD, HARBOR, OREGON 97415  
GENERAL LOCATION (VICINITY) MAPS

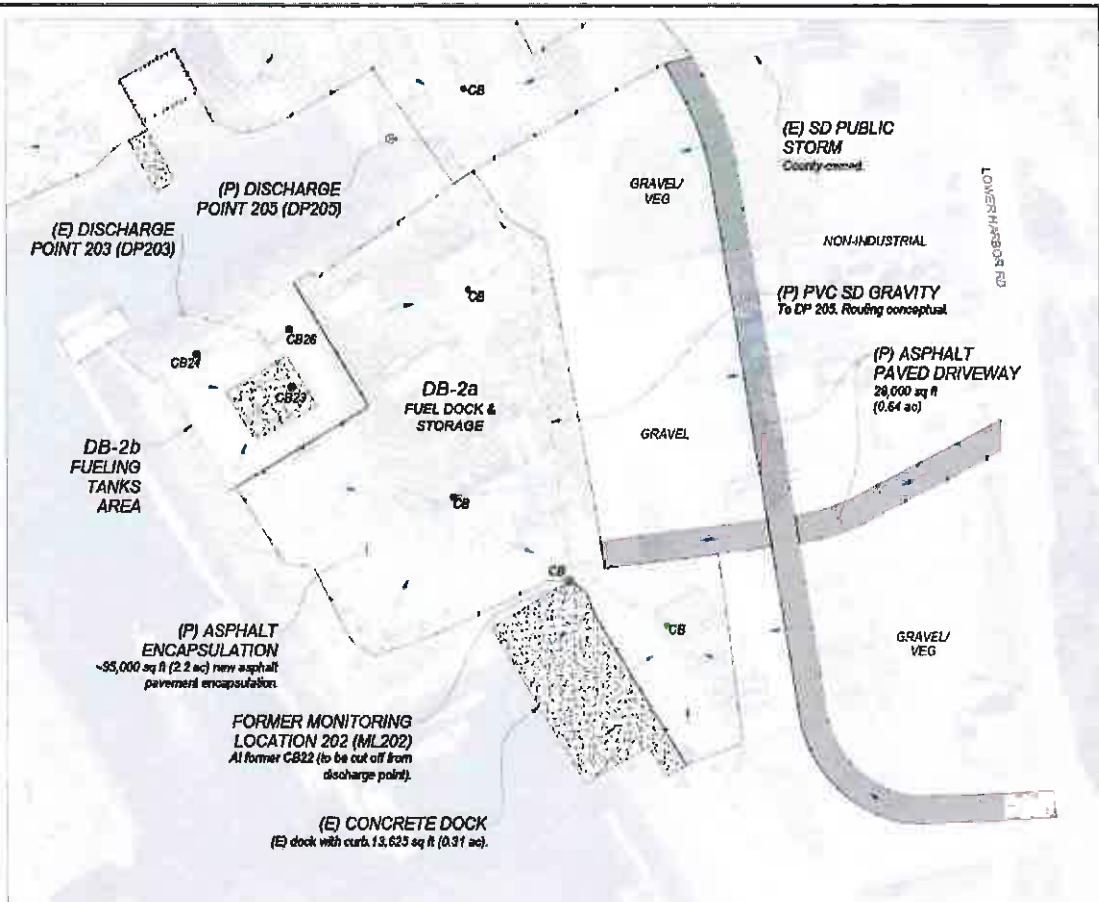
Design: N/A	
Draw: KRK	
Check: DS	
Date: 1/25/22	
Scale: AS NOTED	

www.aquariusem.com

File: PortOfBrookings\_Tier1Figures.mxd



- NOTES:**
1. CBs 11 - 13 are existing.
  2. Unnumbered CBs are conceptual.
  3. DPs 101 & 102 removed.
  4. Port SD gravity pipes are proposed and routing is conceptual.



- NOTES:**
1. CBs 23, 24, & 26 are existing.
  2. Unnumbered CBs are conceptual.
  3. DPs 201, 202, & 204 removed.
  4. Port SD gravity pipes are proposed and routing is conceptual.

**KEY**

BUILDING	[Symbol]
DRAINAGE BASIN 1 (DB-1)	[Symbol]
DRAINAGE BASIN 2a (DB-2a)	[Symbol]
DRAINAGE BASIN 2b (DB-2b)	[Symbol]
DRAINAGE BASIN 3 (DB-3)	[Symbol]
PROPERTY BOUNDARY (approximate)	[Symbol]
SD CATCH BASIN (CB)	[Symbol]
SD GRAVITY PIPE (County)	[Symbol]
SD GRAVITY PIPE (Port)	[Symbol]
SURFACE COVER (asphalt-proposed)	[Symbol]
SURFACE COVER (asphalt-existing)	[Symbol]
SURFACE COVER (concrete existing)	[Symbol]
SURFACE COVER (gravel/veg)	[Symbol]
SURFACE FLOW	[Symbol]

**ABBREVIATIONS**

CB	CATCH BASIN
DB	DRAINAGE BASIN
DP	DISCHARGE POINT
(E)	EXISTING
ML	MONITORING LOCATION
OWS	OIL-WATER SEPARATOR
(P)	PROPOSED
SD	STORM DRAIN or DRAINAGE

**GENERAL NOTES & DISCLAIMER**

1. EXISTING PROPERTY LINES AND SURFACE DRAINAGE FEATURES ARE BASED ON RECORDS IN LIEU OF AVAILABLE EXISTING DATA AND MAPS PROVIDED BY GOOGLE EARTH FROM COUNTY COUNTY MAPS ACQUISITION & ENVIRONMENTAL CITY MAP, PORT HARBOR, 2015 PERIODIC AND CONCEPTUAL PLANS BY THE PORT.
2. AERIAL IMAGES FROM AERIAL PHOTOGRAPHY (2021) AND DRURY CORPORATION WERE USED TO CORRECT (E) SD IN THESE AREAS ONLY.
3. AQUARIUM SYSTEMS HAS NO RESPONSIBILITY OR LIABILITY FOR ANY ERRORS THAT MAY OCCUR OR BE MADE IN THE FUTURE. WHILE THE INFORMATION IS BELIEVED RELIABLE, NO WARRANTIES OF THE ACCURACY OF THIS INFORMATION IS MADE.

**KEY ABBREVIATIONS & NOTES**

DATE	1/27	ISSUED	1/27	DATE	1/27	DATE	1/27
BY	XXX	CHKD	XXX	DATE	1/27	DATE	1/27
APP'D	XXX	APP'D	XXX	DATE	1/27	DATE	1/27



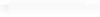








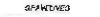





PORT OF BROOKINGS HARBOR  
18380 LOWER HARBOR ROAD  
HARBOR, OREGON 97416

PROPOSED STORMWATER IMPROVEMENTS  
DB-1 & DB-2a

FIGURE NO  
**2**  
PROJECT NO  
0302

**KEY**

- BUILDING 
- DRAINAGE BASIN 1 (DB-1) 
- DRAINAGE BASIN 2a (DB-2a) 
- DRAINAGE BASIN 2b (DB-2b) 
- DRAINAGE BASIN 3 (DB-3) 
- PROPERTY BOUNDARY (approximate) 
- SD CATCH BASIN (CB) 
- SD GRAVITY PIPE (County) 
- SD GRAVITY PIPE (Port) 
- SURFACE COVER (asphalt-proposed) 
- SURFACE COVER (asphalt-proposed driveway) 
- SURFACE COVER (asphalt-existing) 
- SURFACE COVER (concrete existing) 
- SURFACE COVER (gravel/veg) 
- SURFACE FLOW 

**ABBREVIATIONS**

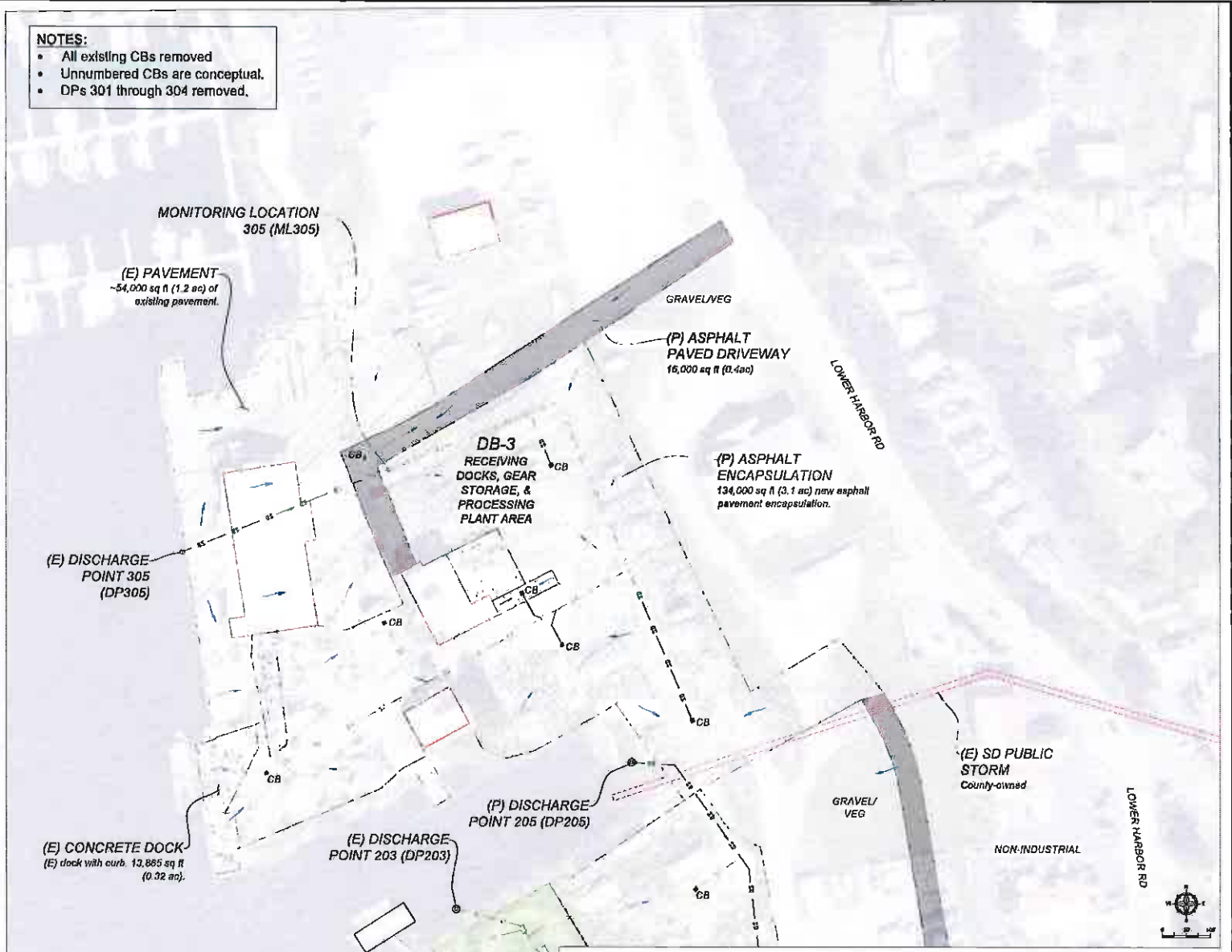
- CB CATCH BASIN
- DB DRAINAGE BASIN
- DP DISCHARGE POINT
- (E) EXISTING
- ML MONITORING LOCATION
- OWS OIL-WATER SEPARATOR
- (P) PROPOSED
- SD STORM DRAIN or DRAINAGE

**GENERAL NOTES & DISCLAIMER**

1. EXISTING PROPERTY LINES AND SURFACE DRAINAGE FEATURES ARE BASED ON RECORD RESEARCH OF AVAILABLE EXISTING DATA AND MAPS PROVIDED BY GOOGLE EARTH PRO, CLATSOP COUNTY MAPS, AQUARIUS ENVIRONMENTAL SITE VISIT, PORT PERSONNEL INTERVIEW, AND CONCEPTUAL PLANS BY THE PORT.
2. AERIAL IMAGERY FROM AUTODESK GLOBEMAPS (©2011 MICROSOFT CORPORATION) 2021 MAXAR INC (2021) DISTRIBUTION AIRBUS DS.
3. AQUARIUS ENVIRONMENTAL CLAIMS NO RESPONSIBILITY FOR INACCURACIES THAT MAY BECOME APPARENT IN THE FUTURE. WHILE THIS INFORMATION IS DEEMED RELIABLE, NO GUARANTEE OF THE ACCURACY OF THIS INFORMATION IS MADE.

KEY, ABBREVIATIONS, & NOTES 1/3

- NOTES:**
- All existing CBs removed
  - Unnumbered CBs are conceptual.
  - DPs 301 through 304 removed.



PROPOSED (P) STORMWATER IMPROVEMENTS PLAN, DB-3  
SCALE: 1" = 100' 1/3

REV	DATE	DESCRIPTION	OWNED BY	DESIGNED BY	CHECKED BY	APP BY



PORT OF BROOKINGS HARBOR  
16330 LOWER HARBOR ROAD  
HARBOR, OREGON 97415

PROPOSED STORMWATER IMPROVEMENTS  
DB-3

FIGURE NO.  
**3**

PROJECT NO.  
0299

# **Appendix A: Hydrocad Modeling Output Calculations**



DB-1



Settling/OWS vault



Routing Diagram for Port of Brookings\_120721\_DB1  
Prepared by Aquarius Environmental LLC, Printed 1/25/2022  
HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

**Port of Brookings\_120721\_DB1**

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 2

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
2.830	98	(1S)
<b>2.830</b>	<b>98</b>	<b>TOTAL AREA</b>

**Port of Brookings\_120721\_DB1**

Type IA 24-hr Tier 2 2.50" Rainfall=2.50"

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 3

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Pond 3P: Settling/OWS vault**

Inflow=1.45 cfs 0.435 af

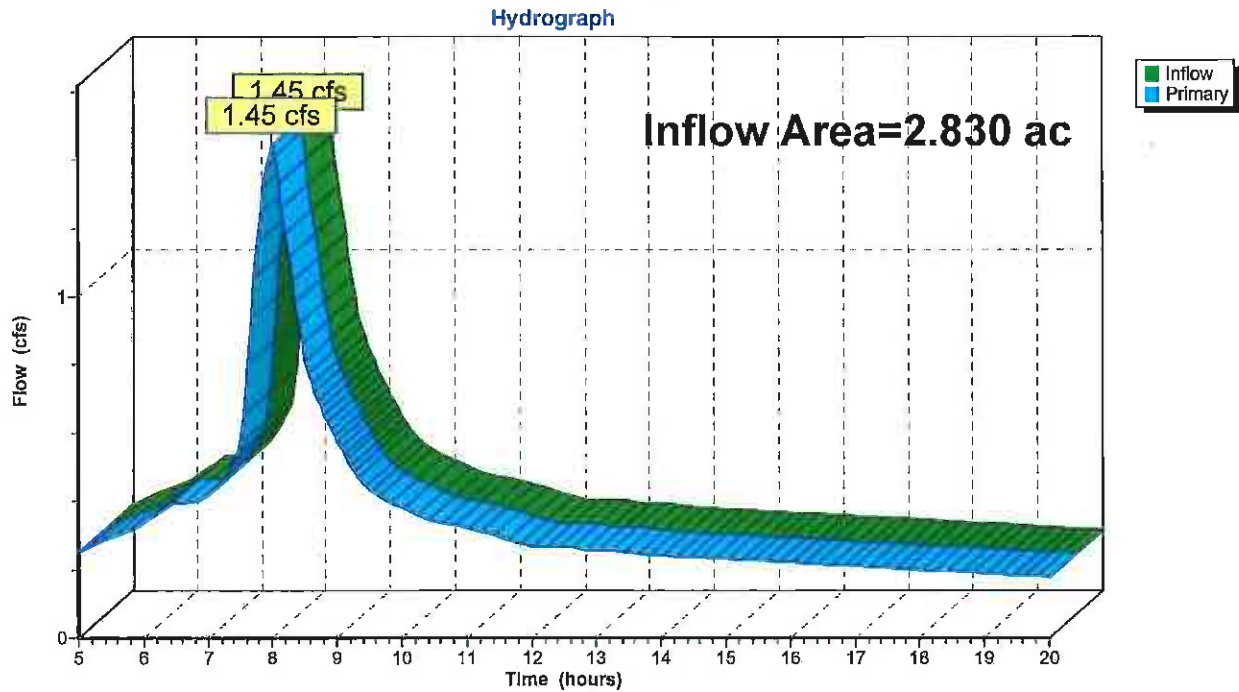
Primary=1.45 cfs 0.435 af

### Summary for Pond 3P: Settling/OWS vault

Inflow Area = 2.830 ac, 100.00% Impervious, Inflow Depth > 1.84" for Tier 2 2.50" event  
Inflow = 1.45 cfs @ 8.00 hrs, Volume= 0.435 af  
Primary = 1.45 cfs @ 8.00 hrs, Volume= 0.435 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Pond 3P: Settling/OWS vault







DB-2a



Discharge Point



Routing Diagram for Port of Brookings\_DB2a\_012522  
Prepared by Aquarius Environmental LLC, Printed 1/25/2022  
HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

**Port of Brookings\_DB2a\_012522**

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 2

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
4.325	76	(1S)
1.884	98	(1S)
<b>6.208</b>	<b>83</b>	<b>TOTAL AREA</b>

**Port of Brookings\_DB2a\_012522**

Type IA 24-hr Tier 2 2.50"/24 Rainfall=2.50"

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 3

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Pond 7P: Discharge Point**

Inflow=1.08 cfs 0.488 af

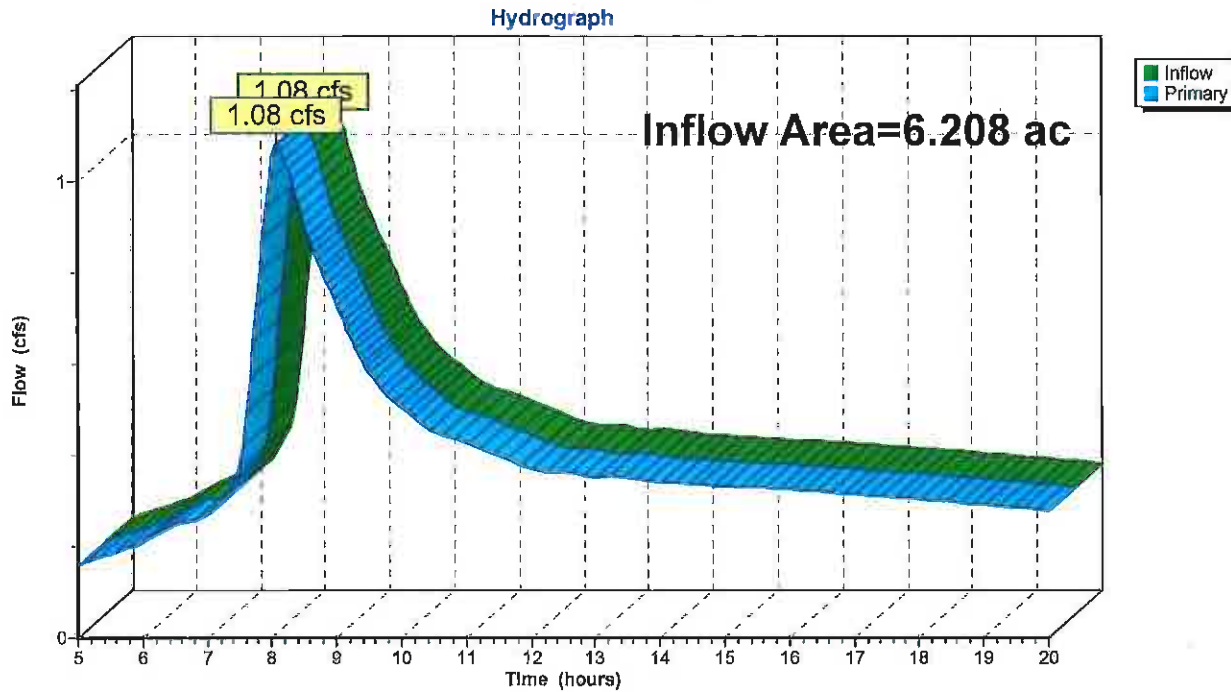
Primary=1.08 cfs 0.488 af

### Summary for Pond 7P: Discharge Point

Inflow Area = 6.208 ac, 30.34% Impervious, Inflow Depth > 0.94" for Tier 2 2.50"/24 event  
Inflow = 1.08 cfs @ 8.07 hrs, Volume= 0.488 af  
Primary = 1.08 cfs @ 8.07 hrs, Volume= 0.488 af, Atten= 0%, Lag= 0.0 min

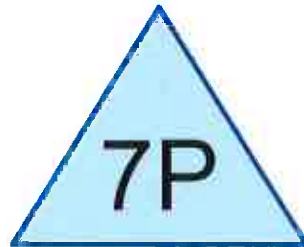
Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Pond 7P: Discharge Point





DB-3



Discharge Point



Routing Diagram for Port of Brookings\_DB3\_012522  
Prepared by Aquarius Environmental LLC, Printed 1/25/2022  
HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

**Port of Brookings\_DB3\_012522**

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 2

**Area Listing (all nodes)**

Area (acres)	CN	Description (subcatchment-numbers)
5.057	98	(4S)
2.733	76	Gravel roads, HSG A (4S)
<b>7.790</b>	<b>90</b>	<b>TOTAL AREA</b>

**Port of Brookings\_DB3\_012522**

*Type IA 24-hr Tier 2 2.50"/24 Rainfall=2.50"*

Prepared by Aquarius Environmental LLC

Printed 1/25/2022

HydroCAD® 10.10-6a s/n M24662 © 2020 HydroCAD Software Solutions LLC

Page 3

Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points

Runoff by SBUH method, Split Pervious/Imperv.

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

**Pond 7P: Discharge Point**

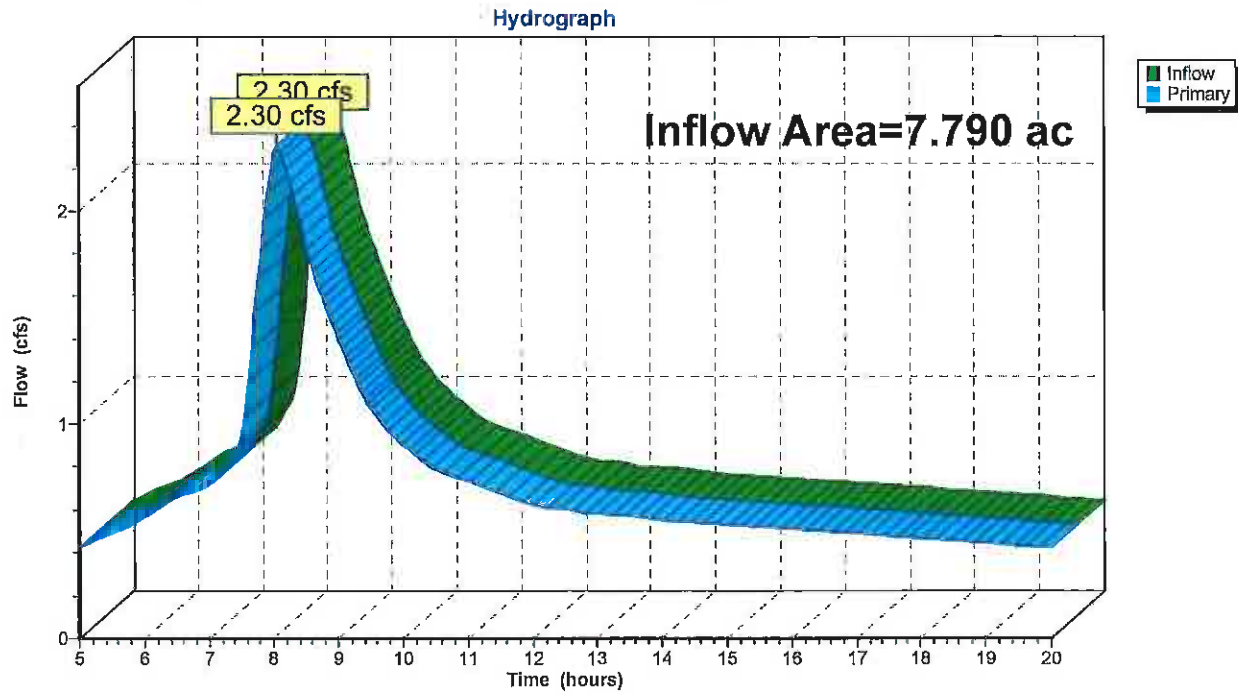
Inflow=2.30 cfs 0.904 af  
Primary=2.30 cfs 0.904 af

### Summary for Pond 7P: Discharge Point

Inflow Area = 7.790 ac, 64.91% Impervious, Inflow Depth > 1.39" for Tier 2 2.50"/24 event  
Inflow = 2.30 cfs @ 8.05 hrs, Volume= 0.904 af  
Primary = 2.30 cfs @ 8.05 hrs, Volume= 0.904 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

### Pond 7P: Discharge Point





## INFORMATION ITEM - A

---

**DATE:** January 28, 2022  
**RE:** Moorage License Agreement – Recommended Revisions  
**TO:** Honorable Board President and District Board Members  
**ISSUED BY:** Gary Dehlinger, Port Manager

---

### OVERVIEW

- Port legal counsel provided the revisions to strengthen the agreement for abandon vessels, changing ownership and adding a guarantor for corporate owner/operator.

### DOCUMENTS

- Moorage License Agreement (redlined revisions), 6 pages



**Port of Brookings Harbor**  
 16330 Lower Harbor Road / PO Box 848  
 Brookings, Oregon 97415  
 Phone (541) 469-2218  
 Fax (541) 359-3999  
 www.portofbrookingsharbor.com

**Board of Commissioners**  
 Richard Heap, President  
 Joseph Speir, Vice-President  
 Sharon Hartung, Secretary/Treasurer  
 Kenneth Ronge  
 Larry Jonas

**MOORAGE LICENSE AGREEMENT**

Slip No.: \_\_\_\_\_ Permit No.: \_\_\_\_\_

**BILL TO:**     Owner     Operator

**BOAT OWNER:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Telephone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Cell Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Email: \_\_\_\_\_

**BOAT OPERATOR:**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Telephone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Email: \_\_\_\_\_  
 Driver's License Verification:     Yes     No  
 Commercial Fishing License:     Yes     No     N/A  
 Proof of Ownership: Bill of Sale or Registration/Title

**GUARANTOR FOR CORPORATE OWNER/OPERATOR**

Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_  
 Telephone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Cell Phone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_  
 Email: \_\_\_\_\_

**IN CASE OF EMERGENCY PLEASE NOTIFY:**

(When Owner/Operator is away and cannot be reached)

Name \_\_\_\_\_  
 Telephone: (\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_

**INSURANCE INFORMATION:**

Insurance Co.: \_\_\_\_\_  
 Policy #: \_\_\_\_\_  
 Exp. Date: \_\_\_\_\_

**BOAT INFORMATION:**

Boat Name \_\_\_\_\_  
 Reg / Doc #: \_\_\_\_\_  
 Length Overall: \_\_\_\_\_ Beam: \_\_\_\_\_ Draft: \_\_\_\_\_  
 Year: \_\_\_\_\_ Make: \_\_\_\_\_  
 Check all that apply:     Sail     Inboard     Outboard  
 Other: \_\_\_\_\_  
 Recreational     Commercial     Charter

**MOORAGE LICENSE TERM & TYPE:**

From \_\_\_\_\_ To \_\_\_\_\_  
 Type:     Recreational     Commercial  
 Annual     Semiannual     Monthly     Weekly  
 Daily     Transient    Other \_\_\_\_\_  
 Fee\*: \_\_\_\_\_

This Moorage License Agreement is subject to the terms and conditions set forth on the Moorage License Agreement and to the Port of Brookings Harbor ordinances, presently in effect or that become in effect in the future, and which may be accessed on the Port's website.

Renewal letter will be sent out 60 days prior to expiration date. Fees for moorage are due and payable in advance for the entire term, Moorage License Agreements that are not signed will be terminated 30 days after the renewal date.

Permission to "live-aboard" and "Storage" must be specifically authorized in writing by the Port of Brookings Harbor by separate agreement.

\*Moorage fees are payable in advance. Moorage agreement automatically reverts to a monthly rate if not paid in full within 30 days. Past due accounts will be assessed a late charge of \$1.00 or 1.5% per month (18% per annum) whichever is greater. In the event, suit or action is instituted to collect any amount owed on this account, the undersigned applicant agrees to pay any reasonable attorney fees, collection agency fees and any other costs associated with such action. A \$50.00 fee will be assessed on any Return Payment.

I AGREE TO THE TERMS AND CONDITIONS ATTACHED TO THIS DOCUMENT:

Owner/Operator: \_\_\_\_\_ Port of Brookings Harbor  
Representative: \_\_\_\_\_

Formatted: Font: Bold

Signature \_\_\_\_\_ Date \_\_\_\_\_ Signature \_\_\_\_\_

Formatted: Left

Guarantor(s) for Corporate Owner/Operator

Signature \_\_\_\_\_ Date \_\_\_\_\_

Formatted: Space After: 0 pt, Line spacing: single

Signature \_\_\_\_\_ Date \_\_\_\_\_

35

**PORT OF BROOKINGS HARBOR  
MARINA BEST MANAGEMENT PRACTICES**

Formatted: Font: 11 pt

**ENGINES AND BILGES**

- Use absorbent bilge pads or socks to soak up oil and fuel.
- Recycle and/or dispose of petroleum products properly.
- Dispose of used oil filters properly and make sure they are thoroughly drained.
- Do NOT discharge bilge water if there is a sheen to it.
- Do NOT dispose of any fuels or used oil in the marina's dumpsters.
- Contact the Port Office for the nearest oil recycling locations.
- Fueling of boats inside marina slips is prohibited.
- Immediately report all releases of fuels, oils and observed sheens on water.

**PAINTING AND VARNISHING**

- It is prohibited to do any in-water hull scraping or any process that occurs underwater which removes paint from the boat hull.
- Limit the amount of open solvents or paints on dock to one gallon or less.
- Always mix paints and epoxy over tarp.
- Always use a drip pan and/or drop cloth (tarp) when painting.
- Spray painting is not allowed within the marina.
- Do NOT dispose of paints or solvents in the marina's dumpster.

**SURFACE PREPARATION**

- Use biodegradable, non-toxic, phosphate free cleaners and/or soaps.
- Liberally use tarps to capture all scrapings, debris and drips or use a vacuum sander.
- Stretch tarps between the side of the boat and the dock when working over the water.

**SEWAGE**

- Untreated sewage should never be discharged directly overboard.
- Store sewage in holding tanks and dispose of properly at pump-out stations.
- Ensure Marina Sanitation Devices (MSD's) Type I and II systems are working properly and discharge the treated waste only when your boat is underway (in coastal waters and rivers navigable from the ocean). DO NOT DISCHARGE ANY MSD while moored in the marina or at any time on inland lakes and reservoirs.
- Type III MSD's are NOT treatment systems; they are only holding tanks and are always required to use pump-out stations.
- Use shore-side facilities as often as possible.

**SOLID WASTE DISPOSAL**

- Pets must remain on a leash at all times and immediately pick up after your pet and dispose of the waste in a garbage receptacle.
- Harvested fish must be cleaned using the designated fish cleaning stations or on vessels and disposed of properly. All solid fish waste must be disposed of into garbage receptacles or as approved by OSMB, as it is illegal to dispose of fish carcasses in Oregon waterways.
- Dispose of all garbage in the proper shore-side receptacles.
- Recycle all plastics, newspapers, cardboard and aluminum in appropriate receptacles.

No open burning is allowed in the marina from petroleum-containing waste or garbage that would generate black smoke or noxious fumes.

Unattended storage items are not allowed on marina docks.

**ALL HAZARDOUS WASTE MUST BE DISPOSED OF PROPERLY. CONTACT THE PORT OFFICE FOR  
MORE INFORMATION AT: (541) 469-2218.**

Formatted: Font: 11 pt

Thank you for helping us to protect the environment and keep a clean and enjoyable facility!

Formatted: Font: 11 pt

**Moorage License Agreement  
General Terms and Conditions**

1. **MOORAGE SPACE:** The Port of Brookings-Harbor ("Port") grants to the designated Owner/Operator ("Licensee") a license for moorage of the designated vessel in the moorage space identified on the front of this Agreement. The Port reserves the right in its sole discretion and without notice to reassign any vessel or stored material to an alternate site of the Port's choosing, permanently or temporarily, to accommodate emergency situations, repairs or administrative needs.
2. **FEES & CHARGES; FEES ARE BASED ON SIZE OF SLIP OR LENGTH OF BOAT, WHICHEVER IS THE GREATER.** Fees for moorage are due and payable in advance for the entire term of this Agreement. Moorage fees are NON-REFUNDABLE in whole or in part for daily, weekly, monthly and semiannual payments. Annual moorage, upon 30-days' notice from Licensee, will be refunded on a pro-rated basis at monthly rates. In addition to items covered specifically in this Agreement, Licensee agrees to pay whatever other fees or charges for additional services provided by the Port. The Port shall have right to recover any and all costs, ~~including attorney fees,~~ associated with the collection of any sums hereunder, whether or not suit is filed, or incurred in the salvage, termination, removal or sale of the vessel or personal property pursuant to this Agreement or any applicable Port ordinance. Past due accounts will be assessed a late charge of \$1.00 or 1.5% per month (18% per annum) whichever is greater.
3. **UTILITIES:** The Port does not guarantee the functionality, continuity or characteristics of the electricity or water provided by the Port. All risk associated with electricity supply, including risk to any of the vessel's electrical components or circuitry is entirely at Licensee's risk. Water, power and trash are included in the moorage rate. Licensee is responsible for any abuse of utilities and will be charged accordingly during the term of moorage, whether the vessel is physically in the assigned slip or not.
4. **RULES AND REGULATIONS:** Licensee agrees to comply at all times with any and all Rules and Regulations promulgated by any Federal, State, Local or this Port. Further, Licensee agrees to abide by special requests made in the interests of public or vessel safety by Port Manager or his/her designee. It is Licensee's responsibility to stay abreast of all rules and regulations concerning vessel use and the use of Port facilities. A copy of the Port's Ordinance is available from the Port Office or website.
5. **INSURANCE:** Licensee agrees to provide a marine/watercraft insurance policy with general liability limits of at least \$500,000. Said policy must include coverage for wreckage removal and fuel spill liability. The policy shall be endorsed to add the Port of Brookings Harbor as an additional insured and to provide ~~not less than~~ 30 day advance notice to the Port of any cancellation or modification of the policy. A copy of said insurance shall be provided to the Port. Failure to provide or keep in force such insurance shall be construed as a default of this Agreement and the Port will exercise its right to terminate.
6. **VESSEL ACCESS:** Licensee grants the Port free access at all times to the vessel for purpose of inspection for compliance with this Agreement or with Port ordinances, movement of the vessel, fighting fire or other casualty, or at the discretion of the Port, the prevention of any casualty or potential hazard. The Port assumes no responsibility for any damage that may occur arising from the assertion of this right.
7. **WAIVER OF RESPONSIBILITY:** The obligation of the Port under this Agreement is limited to furnishing a portion of dock space reasonably necessary for vessel moorage. The Port does not accept vessels or personal property for storage and accepts no responsibility or liability for the safe keeping thereof, including, loss of any kind, theft or damage of any kind or cause. Licensee is fully responsible for himself, his family, his employees, ~~his~~ or invitees to the Port's premises, and for the vessel, and agrees to hold the Port harmless and free from all expense, including attorney fees, for claims for any damages, injury or loss resulting from the acts or ~~failure to act~~ omissions of Licensee, his family, his employees, ~~or invitees or arising from the vessel.~~
8. **ACCEPTANCE OF PREMISES:** Licensee acknowledges he has inspected the premises for use under this Agreement and accepts them in their present "AS-IS" condition. Licensee agrees to keep the assigned premises neat, clean, free of hazardous or flammable materials and to preserve the assigned space in as good condition and repair as is now or may be put hereafter by the Port. Unattended storage items are not allowed on marina docks.
9. **CONDITION OF VESSEL:** Licensee shall keep the vessel in seaworthy condition and fully operable at all times while in the water and shall secure and otherwise attend to the needs of the vessel. Failure to do so may result in the vessel being deemed a hazardous vessel in accordance with Port ordinance and removed at Licensee's risk and expense. Licensee understands that this action is taken to protect the Port and does not imply any responsibility for storage on the part of the Port. Upon the request of Port Licensee will promptly provide Port with a current report prepared by a marine surveyor accepted or approved by the Port confirming the seaworthiness of the vessel.
10. **ASSIGNMENT, TRANSFER AND SUB-LEASE:** This license is not assignable or transferable to any other party. Licensee may replace vessel with another of like size ~~but must notify the Port immediately of the vessels~~ particulars with the prior written consent of the Port, which

consent shall be at the Port's sole discretion. Licensee may change operators but must notify the Port within 5 days with the particulars of the new operator, including name, address and telephone. Licensee must notify the Port ~~within at least 10 days prior to any of the sale of the vessel and prior to any transfer of title to the vessel~~ the vessel must be removed or the new owner must be accepted as a new Licensee by the Port in writing, which acceptance shall be completed a new Moorage License Agreement which may or may not be granted by the Port, at the Ports sole discretion.

**11. MOORAGE RENEWAL AND TERMINATION:**

Vessels remaining on the Port's premises after the expiration of this agreement shall be deemed abandoned and subject to removal or sale by the Port, ~~and the moorage fee shall thereafter be increased by 150% and continue to accrue until the vessel is removed, but the continuing accrual of moorage fees or payment thereof after termination shall not affect the effectiveness of the termination of this Agreement unless otherwise agreed in writing.~~ The Port may, upon 30 days written notice cancel long term Moorage License Agreement for repeated violations of Port Ordinances, Rules or Regulations. ▲

**12. PORT'S RIGHTS UPON NON-PAYMENT OR**

**ABANDONMENT:** Any vessel deemed to be abandoned for any of the reasons stated herein is subject to seizure by the Port. A vessel shall be deemed abandoned thirty (30) days from the due date of payment or the failure to renew and prepay the license. The Port may claim, lock or remove the vessel from its assigned location on the Port premises at its sole discretion and refuse access by Licensee to such property until all accounts are paid in full including the Ports costs of seizure, including attorney fees and other costs of collection. The Port shall not be responsible for any loss or damage to the vessel seized during the entire time said vessel remains in the Port's possession. At any time following the date of seizure the Port's, in its sole discretion, may offer for sale to the highest bidder, upon public notice in accordance with the Port's ordinance, the vessel or property so seized.

**13. CHANGE OF ADDRESS:** Licensee is responsible to notify the Port of any change of mailing address or email address or change of telephone number. All billings will be deemed delivered when mailed to the address of record supplied by Licensee.

**14. NON-WAIVER AND JURISDICTION:** The failure of the Port to enforce all or any part of this Agreement shall not constitute a waiver of any rights, including that which may have failed to enforce, under this Agreement. This Agreement shall be construed under the laws of the State of Oregon.

**15. PERSONAL GUARANTY OF PRINCIPAL OF CORPORATE OWNER/OPERATOR:** All Moorage License Agreements with corporate Owners or Operators must be personally guaranteed by one or more controlling

principal(s) of the corporate Owner/Operator. Any and all Guarantor(s) signing this Agreement acknowledge that they are personally benefitted by this Agreement, and that they unconditionally guarantee the timely performance of all of the Licensee's obligations hereunder. The liability of each Guarantor under this Guaranty is not limited and extends to all of Licensee's obligations hereunder, including indemnities. The liability of each Guarantor is continuing, joint and several, and continues until all of Licensee's obligations hereunder have been fully satisfied. Guarantor(s) shall not be released by or because of the taking, or failure to take, any action that might in any manner or to any extent vary the risks of Guarantor under the Guaranty or (but for this paragraph, might discharge or otherwise reduce, limit, or modify Guarantor's obligations under this Guaranty. Guarantor waives and surrenders to the fullest extent allowed by law any defense to any liability under this Guaranty based upon any such action by or on behalf of the Port. It is the express intent of Guarantor that Guarantor's obligations under this Guaranty are and shall be absolute, unconditional, and irrevocable. Guarantor agrees to pay all reasonable attorneys' fees and all other costs and expenses that may be incurred by the Port in the enforcement of the Guaranty or in the preservation, protection, or enforcement of any rights of the Port in any case commenced by or against Guarantor under the Bankruptcy Code (Title 11, United States Code) or any similar or successor statute. ▲

**15.16. "LICENSEE" FURTHER AGREES:**

- No moorage will be allowed unless designated by the Port Manager or his/her representative. The right is reserved to refuse moorage if in the best interest of the "PORT"
- Departure from or cancellation of moorage space will not be recognized unless the "PORT" office is notified by the owner or operator and a record is made of the departure or cancellation.
- Annual moorage rates are described as paid in advance for one full year.
- All moorage rates will be paid according to overall length of "VESSEL" or length of dock, whichever is greater.
- Annual moorage rates not renewed by full payment within thirty (30) days of due date become delinquent and automatically revert to the monthly rate charge.
- All rentals which are thirty (30) days past due shall accrue a late payment charge of \$1.00 or 1.5% (18.0% APR), whichever is greater.
- All rates and charges of any "PORT" facilities or services are considered on a NO REFUND basis. Annual moorage, upon 30-days' notice from Licensee, will be refunded on a pro-rated basis at monthly rates.
- Personal subleasing or sublicensing of any "PORT" facilities is prohibited.
- Failure to pay for charges or misuse of "PORT" facilities may result in relinquishing all privileges or access to facilities and service of the Port of Brookings Harbor.
- The storage is a matter of license to use space rather than a bailment. "LICENSEE" agrees to hold "PORT" harmless

Formatted: Font: (Default) Times New Roman, 10 pt

Formatted: Font: Not Bold, No underline

Formatted: Font: Not Bold, No underline

Commented [WJG1]: Note that federal admiralty law may apply to an agreement to provide moorage, but even so it can be supplemented by state law. I don't think any change necessary to this language.

from any responsibility for preservation, security, or protection of items stored within the storage facility.

- No fabrication or repair of hull, wheelhouse cabin or deck gear.
  - No sandblasting, welding or fiber glassing.
  - No exterior painting of hull, cabin or deck gear.
  - No storage of hazardous materials or chemicals.
  - All items must be kept on board "VESSEL".
  - No storage of miscellaneous gear will be allowed on the docks around "VESSEL".
- No electrical service is available in storage yard without prior arrangements made with Harbormaster or Port Manager. Additional fees will be charged for this service.
  - Licensee further agrees that before over the water "VESSEL" maintenance and repairs take place at the Port of Brookings Harbor, the "PORT" will be immediately contacted to ensure conformity with the State of Oregon Best Management Practices.
  - The Port expressly retains, and does not waive, all rights and remedies provided under federal admiralty law.