FACTSHEET
(pursuant to NAC 445A.236)

Permittee Name: ECOSAFE MARINAS LLC

493 SCHOONER LANE
NORTHFIELD CENTER, OH 44067

Permit Number: NV0024261

Permit Type: MANUFACTURING, COMMERCIAL, MINING AND SILVICULTURAL FACILITY THAT DISCHARGES NON-PROCESS WASTEWATER

Designation: MINOR NPDES

New/Existing: NEW

Location: CALLVILLE BAY MARINA, CLARK
100 CALLVILLE BAY ROAD, OVERTON, NV 89040
LATITUDE: 36.1360, LONGITUDE: -114.7060

Outfall / Well Num	Outfall / Well Name	Location Type	Well Log Num	Latitude	Longitude	Receiving Water
001	INSIDE WASH BASIN	Internal Outfall		36.1361	-114.7059	LAKE MEAD
002	RECEIVING WATER - AMBIENT/OUTSIDE WASH BASIN	Receiving Water - Ambient		36.1358	-114.7059	LAKE MEAD

Permit History/Description of Proposed Action
This is a new permit. The Permittee, Ecosafe Marinas LLC, has applied for a new National Pollutant Discharge Elimination System (NPDES) permit for the "Callville Bay Marina boat wash" project. The Permittee is proposing to operate heavy equipment (hydraulic power equipment) within Lake Mead for the operation of a vessel containing a hydraulic/mechanical boat wash system. The vessel is moored within the Callville Bay Marina, in Lake Mead, Clark County. The Permittee has been issued temporary permit (180 days) NVW52013 to begin operation and data collection. During wash operation a gate at the stern of the vessel is lowered to allow a boat to enter the system. When the boat is inside the bounds of the boat wash system the gate is raised and the boat is moored. The brushes then scrub along the hull of the boat from bow to stern and back again; each wash lasts approximately 15 minutes in duration. Once the wash is complete the boat will unmoor, the gate will be lowered, the boat will exit the vessel, and the gate will be raised again until the next boat is ready. The gate and scrubber controls will be operated by an on-site attendant. This permit is for the ongoing operation of the floating hydraulic/mechanical boat wash system. Best Management Practices (BMPs) shall be utilized to prevent degradation of Waters of the U.S. and Waters of the State. A water sample from the proposed operation site within Lake Mead was provided to the Division. The sample was analyzed for various constituents. No constituents of concern exceeded water quality criteria in that sample.

Facility Overview
The Permittee is proposing to operate a floating vessel containing a hydraulic/mechanical boat wash system in the Callville Bay Marina in, in Lake Mead, Clark County. The hydraulic/mechanical boat wash system is contained within a floating u-shaped dock secured to the existing Callville Bay Marina dock. A bladder located beneath the scrubbers collects organic material brushed off the hulls. The boat wash

system will be operated by an on-site attendant. The purpose of this activity is to remove biologic growth and buildup from the hull of retail customers boats.

Outfall Summary
001 - Inside wash basin

002 - Ambient water, outside wash basin

Effluent Characterization
This permit will authorize the discharge of process wash water containing biological growth cleaned/removed from boat hulls to Lake Mead. The discharge of detergents, soaps, solvents or other chemicals is not authorized by this permit.

Pollutants of Concern

Pollutants of concern are any pollutant, or parameters, that are believed to be present in the discharge and could affect or alter the physical, chemical, or biological, conditions of the receiving water. Pollutants of concern include:

Total Petroleum Hydrocarbons (TPH) : potential accidental TPH discharge from equipment operating in the Lake.
Total Suspended Solids : wash activities are designed to remove biological growth from boat hulls and discharge to Lake Mead, this will increase dissolved solids in the receiving water during operation.
Turbidity : wash activities are designed to remove biological growth from boat hulls and discharge to Lake Mead, this will produce turbidity plume events during operation.
Total Dissolved Solids : wash activities are designed to remove biological growth from boat hulls and discharge to Lake Mead, this will increase dissolved solids in the receiving water during operation.
Zinc : this constituent may be present in antifouling paint applied to boat hulls. Paint chips may become dislodged during wash operation and enter the receiving water.
Copper : this constituent may be present in antifouling paint applied to boat hulls. Paint chips may become dislodged during wash operation and enter the receiving water.
Tin : this constituent may be present in antifouling paint applied to boat hulls. Paint chips may become dislodged during wash operation and enter the receiving water.
Lead : this constituent may be present in antifouling paint applied to boat hulls. Paint chips may become dislodged during wash operation and enter the receiving water.

Monitoring and sampling is required to ensure protection of waters.

Total Residual Chlorine
The process will not use or add chlorine.

Receiving Water
The receiving water is Lake Mead. Historic and current sampling of the project area provides a record of water quality in the area of the project. Lake Mead is presently sampled regularly in several locations and will continue to be sampled during the project. Lake Mead serves as the drinking water supply for the majority of the Las Vegas Valley.

Applicable Water Quality Standards/Beneficial Uses
The water quality standards (WQSs) for “Lake Mead” (NAC 445A.2152) apply. WQSs for Lake Mead includes beneficial uses for watering of livestock, irrigation, aquatic life, recreation involving contact with the water, recreation not involving contact with the water, municipal or domestic supply, industrial supply, and propagation of wildlife. Additional WQSs applicable to Lake Mead include toxic materials (NAC 445A.1236). Furthermore, water quality narrative standards applicable to all surface waters (NAC 445A.121) apply.

303 (d) Listing Status
According to Nevada's 2020 – 2022 Water Quality Integrated Report the Lake Mead is Category 1 - Attaining all designated uses.

TMDL
Per section 303(d)(1)(C) of the Clean Water Act (CWA), states are required to develop Total Maximum Daily Loads (TMDLs) for parameters that do not meet water quality standards for a waterbody. TMDLs are implemented during the permitting process by limiting the load of that parameter that may be discharged to the receiving water. TMDLs have not been established for Lake Mead.

Waste Load Allocation
At this time there are no approved TMDLs with waste load allocations that apply to Lake Mead.

Compliance History
This is a new permit. The facility is in compliance with temporary permit NVW-52013.

Proposed Effluent Limitations
The discharge shall be limited and monitored by the Permitee as specified below:

Discharge Limitations Table for Sample Location 001 (Inside Wash Basin) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Turbidity	Maximum		<= 25 Nephelometric Turbidity Units (NTU)	See Footnote[1]	001	Monthly When Discharging	GRAB
Solids, total dissolved	Maximum		<= 723 Milligrams per Liter (mg/L)	See Footnote[1]	001	Monthly When Discharging	GRAB
Solids, total suspended	Maximum		<= 25 Milligrams per Liter (mg/L)	See Footnote[1]	001	Monthly When Discharging	GRAB
Tin, total recoverable	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Monthly When Discharging	GRAB
Copper, dissolved (as Cu)	Maximum		<= 200 Micrograms per Liter (ug/L)	See Footnote[1]	001	Monthly When Discharging	GRAB
Zinc, dissolved (as Zn)	Maximum		<= 2000 Micrograms per Liter (ug/L)	See Footnote[1]	001	Monthly When Discharging	GRAB
Lead, dissolved (as Pb)	Maximum		<= 50 Micrograms per Liter (ug/L)	See Footnote[1]	001	Monthly When Discharging	GRAB

Notes (Discharge Limitations Table):

1. Sample within wash basin after wash has completed and before gate opens and boat exits.

Discharge Limitations Table for Sample Location 001 (Inside Wash Basin) To Be Reported Once During The Permit Term

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
pH	Maximum		M&R Standard Units (SU)	See Footnote[1]	001	Once Per Permit Term	GRAB
Oxygen, dissolved (DO)	Minimum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Nitrogen, inorganic total	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Nitrogen, nitrate total (as N)	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Nitrogen, nitrite total (as N)	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Ammonia nitrogen, total, (as N) 30 day	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Chlorophyll A	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Solids, total suspended	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Turbidity	Maximum		M&R Nephelometric Turbidity Units (NTU)	See Footnote[1]	001	Once Per Permit Term	GRAB
Color, apparent (unfiltered sample)	Maximum		M&R Color - Platinum Cobalt Unit (col unit (pc))	See Footnote[1]	001	Once Per Permit Term	GRAB
Solids, total dissolved	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Chloride (as Cl)	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
Sulfate (as S)	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	001	Once Per Permit Term	GRAB
E. coli	Maximum		M&R Colony Forming Units per 100ml T (CFU/100mL)	See Footnote[1]	001	Once Per Permit Term	GRAB

Discharge Limitations Table for Sample Location 001 (Inside Wash Basin) To Be Reported Once During The Permit Term

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Coliform, fecal general	Maximum		M&R Number per 100 Milliliters T (#/100mL)	See Footnote[1]	001	Once Per Permit Term	GRAB

Notes (Discharge Limitations Table):

1. Sample within wash basin after wash has completed and before gate opens and boat exits.

Discharge Limitations Table for Sample Location 002 (Receiving Water - Ambient/Outside Wash Basin) To Be Reported Monthly

Discharge Limitations				Monitoring Requirements			
Parameter	**Base**	**Quantity**	**Concentration**	**Monitoring Loc**	**Sample Loc**	**Measurement Frequency**	**Sample Type**
Turbidity	Maximum		M&R Nephelometric Turbidity Units (NTU)	See Footnote[1]	002	Monthly When Discharging	GRAB
Solids, total dissolved	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	002	Monthly When Discharging	GRAB
Solids, total suspended	Maximum		M&R Milligrams per Liter (mg/L)	See Footnote[1]	002	Monthly When Discharging	GRAB
Tin, total recoverable	Maximum		M&R Micrograms per Liter (ug/L)	See Footnote[1]	002	Monthly When Discharging	GRAB
Copper, dissolved (as Cu)	Maximum		M&R Micrograms per Liter (ug/L)	See Footnote[1]	002	Monthly When Discharging	GRAB
Zinc, dissolved (as Zn)	Maximum		M&R Micrograms per Liter (ug/L)	See Footnote[1]	002	Monthly When Discharging	GRAB
Lead, dissolved (as Pb)	Maximum		M&R Micrograms per Liter (ug/L)	See Footnote[1]	002	Monthly When Discharging	GRAB

Notes (Discharge Limitations Table):

1. Sample ambient water outside of the wash basin.

Summary of Changes From Previous Permit
N/A, this is a new permit.

Technology Based Effluent Limitations
Technology based effluent limitations are not applicable to this permit.

Water Quality Based Effluent Limitations
This is a new permit, water quality based effluent limits (WQBELs) have been implemented in the permit for all monitored constituents to ensure water quality standards are not exceeded. NAC 445A.1236, NAC.445A.2152 and NAC 445A.121 (combination of requirement to maintain higher quality (RMHQ) and most restrictive water quality standards for beneficial uses (WQSBU)) are applied to this permit.

Reasonable Potential Analysis (RPA)
This is a new permit, effluent concentration data is not available, this is a novel facility and does not have an analogue in Nevada, therefore a Reasonable Potential Analysis (RPA) was not performed. The permittee will not use any chemicals, soaps, detergents or solvents during the wash process. During the first permit

phase water quality data will be collected.

Proposed Water Quality Based Effluent Limits (monthly/weekly/daily)
WQBELs: NAC 445A.1236, NAC.445A.2152 and NAC 445A.121 (combination of requirement to maintain higher quality (RMHQ) and most restrictive water quality standards for beneficial uses (WQSBU)),
Limit set for the outfall 001 (Monthly):

Turbidity <= 25 Nephelometric Turbidity Units (NTU) (Aquatic)

Solids, total dissolved <= 723 Milligrams per Liter (mg/L) (Municipal)

Solids, total suspended <= 25 Milligrams per Liter (mg/L) (Aquatic)

Copper, dissolved (as Cu) <= 200 Micrograms per Liter (ug/L) (Irrigation)

Zinc, dissolved (as Zn) <= 2000 Micrograms per Liter (ug/L) (Irrigation)

Lead, dissolved (as Pd) <= 50 Micrograms per Liter (ug/L) (Municipal)

Tin, dissolved (as Sn) - M&R. Nevada has not set a limit for Tin.

Basis for Effluent Limitations
Lake Mead Water Quality Standards Parameters not included as Pollutants of Concern
Temperature : operation of the hydraulic/mechanical boat wash system will generate thermal energy during operation however the process does not discharge heated or cooled effluent. Operation of the hydraulic/mechanical boat wash system is not anticipated to result in a temperature change in the receiving water.
pH : operation of the hydraulic/mechanical boat wash system will generate a plume of biological material during operation. The decomposition of organic matter will lead to the production of organic acids, thus lowering pH of surrounding water, however settled biological material will be regularly cleaned and removed from the boat wash system therefore operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in pH in the receiving water.
DO : operation of the hydraulic/mechanical boat wash system will generate a plume of biological material during operation. Oxygen will be removed from the water by decomposition of organic matter, thus lowering the DO concentration of the surrounding water in the wash basin, however settled biological material will be regularly cleaned and removed from the boat wash system therefore operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in DO in the receiving water.
Total Inorganic Nitrogen : Nitrogen is present in sediments accumulated within the wash basin. Settled biological material will be regularly cleaned and removed from the boat wash system therefore operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in Total Inorganic Nitrogen in the receiving water.
Nitrate (as N) Nitrate is common in detergents and cleaning products. The applicant has stated that the system relies on mechanical removal and no detergents, solvents or soaps will be used.
Nitrite (as N) Nitrite is common in detergents and cleaning products. The applicant has stated that the system relies on mechanical removal and no detergents, solvents or soaps will be used.
Total Ammonia (as N) Ammonia may be present in sediments accumulated within the wash basin as a result from bacterial decomposition of organic matter that has accumulated. Settled biological material will be regularly cleaned and removed from the boat wash system therefore operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in Total Ammonia in the receiving water.
Chlorophyll a : the operation of the hydraulic/mechanical boat wash system will generate a plume of biological material during operation which could contribute to conditions that could result in algal blooms, however regular cleaning including removal of settled biological material proposed by the applicant would prevent the conditions that could contribute to algal blooms and increased levels of Chlorophyll a. Therefore, operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in Chlorophyll a in the receiving water.

Color : the operation of the hydraulic/mechanical boat wash system will generate a plume of biological material during operation which could contribute to conditions that could result in a color change to the receiving water, however regular cleaning including removal of settled biological material proposed by the applicant would prevent the conditions that could contribute to a change in color to the receiving water. Therefore, operation of the hydraulic/mechanical boat wash system is not anticipated to result in a change in color in the receiving water.
Chloride : will not be added during the wash process and is not anticipated to be present in the process water.
Sulfate : Sulfate is common in detergents and cleaning products. The applicant has stated that the system relies on mechanical removal and no detergents, solvents or soaps will be used.
E. coli : operation of the hydraulic/mechanical boat wash system will not generate this constituent. The discharge of sewage, bilge and/or ballast water is not authorized by this permit.
Fecal Coliform : operation of the hydraulic/mechanical boat wash system will not generate this constituent. The discharge of sewage, bilge and/or ballast water is not authorized by this permit.
Toxic Materials : Zinc, Copper and Tin may be present in antifouling paint applied to boat hulls. Paint chips may become dislodged during wash operation and enter the receiving water. Other than these 3 constituents no other toxic materials are anticipated to be generated in this process.

Anti-backsliding
N/A, this is a new permit.

Antidegradation
The Division has developed an antidegradation regulation that is applied on a statewide basis, and which meets the statutory requirements of Nevada's water pollution control law found at Nevada Revised Statute (NRS) 445A.520 and NRS 445A.565 and is consistent with the federal antidegradation policy found at Title 40 in the CFR section 131.12. The objective of the Division's antidegradation regulation is to prevent degradation of Nevada's surface waters and maintain the unique attributes and special characteristics and water quality associated with high-quality waters. This objective is achieved through the implementation of procedures to ensure that waters are protected from regulated activities that have the potential to degrade the water quality. The regulation uses four (4) tiers of antidegradation protection. Tier 1 protects water quality for beneficial uses of the water on a parameter-by-parameter basis. Tier 2 protects high-quality waters where data show the water quality is better than levels needed to protect beneficial uses (on a parameter-by-parameter basis). Tier 2.5 and Tier 3 protect water quality and the special characteristics of waterbodies designated with the beneficial use of "extraordinary, ecological, aesthetic or recreational value" (NAC 445A.122). The Division will conduct an antidegradation review only when a permit application is submitted for a new or expanding point source discharge to a surface water or for a new or altered zone of mixing.

Furthermore, NAC 445A.243 requires the Division to consider the establishment of effluent limitations necessary to meet WQSs.
This is a new permit and no water samples were submitted, so water quality based effluent limits (WQBELs) have been implemented in the permit for all monitored constituents to ensure water quality standards are not exceeded.

WET Testing
WET Testing is not required for this permit.

Special Conditions
The Special Conditions listed below are to protect the waters where work will be performed onsite and downstream.

SA – Special Approvals / Conditions Table

Item #	Description

Item #	Description
1	The Permittee shall prevent trash and/or garbage, including food waste, cigarette butts, bottles, and caps from entering and being discharged in any waste stream covered by this permit. The Permittee shall have and maintain appropriate receptacles for retaining trash or garbage on board or near by the floating hydraulic/mechanical boat wash system. Examples of appropriate receptacles include secured trash bags or coolers, bins, or trash cans with secure lids. Store any toxic or hazardous materials in secure containers and dispose of them properly at onshore disposal facilities.
2	The Permittee shall minimize the discharge of paint chips and residue during cleaning. Examine the water while cleaning hulls coated with anti-fouling paint while the vessel is in the water to assure that it is not causing a plume or cloud of paint to form. Stop immediately if any visible plume or cloud of paint appears in the water. Production of a plume or cloud of sediment or hull growth is normal in some cases during vessel hull cleaning, but this plume or cloud must be substantially paint free (i.e., paint should not be clearly identifiable in the plume or cloud).
3	As required by 40 CFR § 122.44(p), the Permittee must comply with any applicable regulations promulgated by the Secretary of the Department in which the Coast Guard is operating, that establish specifications for transportation, handling, carriage, and storage of pollutants.
4	As required by NRS 488.320 no sewage from vessels shall be discharged to Waters of the State.
5	No bilge or ballast water from vessels shall be discharged to Waters of the United States.
6	The Permittee shall maintain spill containment equipment in a readily available location for immediate deployment in the event of a spill.
7	Clear and visible signage shall be present on site to inform the public that the services permitted at the station do not fulfill the Nevada Department of Wildlife's requirements for vessel decontamination under Nevada Revised Stature (NRS) 488.530. Signage shall state "This cleaning service does not comply with Aquatic Invasive Species decontamination processes as required by Nevada Revised Statute (NRS) 488.530. Your vessel must be decontaminated at an official decontamination station before you launch the vessel on any other body of water in Nevada."

Discharges From Future Outfalls/ Planned Facility Changes

The Permittee may add an additional hydraulic/mechanical boat wash system at a different location (to be determined) within Lake Mead if this hydraulic/mechanical boat wash system is financially successful.

Corrective Action Sites

There is one closed BCA site located within a one-mile radius of the project. The site (8-000065) is under the LUST program.

Wellhead Protection Program

The closest Public Water System (PWS) well is located approximately 11 miles to the southwest of the outfall. The closest intake is located approximately 3.5 miles away from the outfall. The outfall is not located within a Drinking Water Protection Area, which is defined by a 3,000-foot radius around a PWS well, or a Wellhead Protection Area, which represents an approximate 10-year capture zone of a PWS well. The discharge is not anticipated to affect any PWS well based on the distance from the nearest PWS.

Schedule of Compliance:

SOC – Schedule of Compliance Table

Item #	Description	Due Date
1	The Permittee shall submit for review and approval two (2) copies (one (1) electronic and one (1) hard copy) of a new Operations & Maintenance Manual, prepared in accordance with the Division's WTS2A guidance: Minimum Information Required for an Operations and Maintenance Manual.	9/28/2024
2	All Discharge Monitoring Reports (DMRs) and all subsequent DMRs shall be submitted electronically through the Nevada NetDMR website.	10/28/2024

Deliverable Schedule:

DLV– Deliverable Schedule for Reports, Plans, and Other Submittals

Item #	Description	Interval	First Scheduled Due Date
1	Quarterly Discharge Monitoring Reports	Quarterly	10/28/2024
2	Annual Report	Annually	1/28/2025

Procedures for Public Comment:

The Notice of the Division's intent to issue a permit authorizing the facility to discharge to groundwater of the State of Nevada subject to the conditions contained within the permit, is being mailed to interested persons on our mailing list and will be posted on our website at https://ndep.nv.gov/posts. Anyone wishing to comment on the proposed permit can do so in writing until 5:00 P.M. **7/29/2024,** a period of 30 days following the date of the public notice. The comment period can be extended at the discretion of the Administrator.

A public hearing on the proposed determination can be requested by the applicant, any affected State, any affected interstate agency, the Regional Administrator of EPA Region IX or any interested agency, person or group of persons. The request must be filed within the comment period and must indicate the interest of the person filing the request and the reasons why a hearing is warranted. Any public hearing determined by the Administrator to be held must be conducted in the geographical area of the proposed discharge or any other area the Administrator determined to be appropriate. All public hearings must be conducted to accordance with NAC 445A.238.

The final determination of the Administrator may be appealed to the State Environmental Commission pursuant to NRS 445A.605.

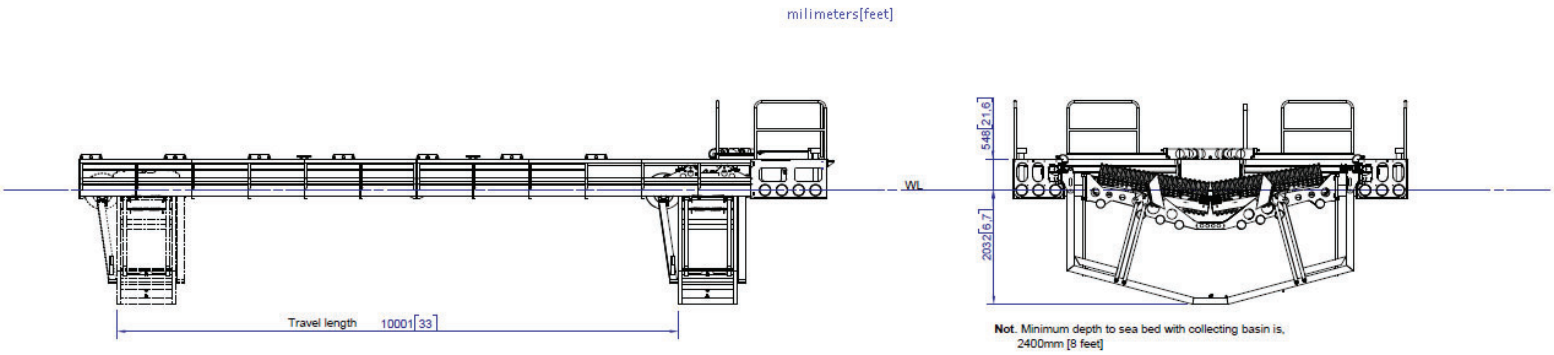
Proposed Determination:

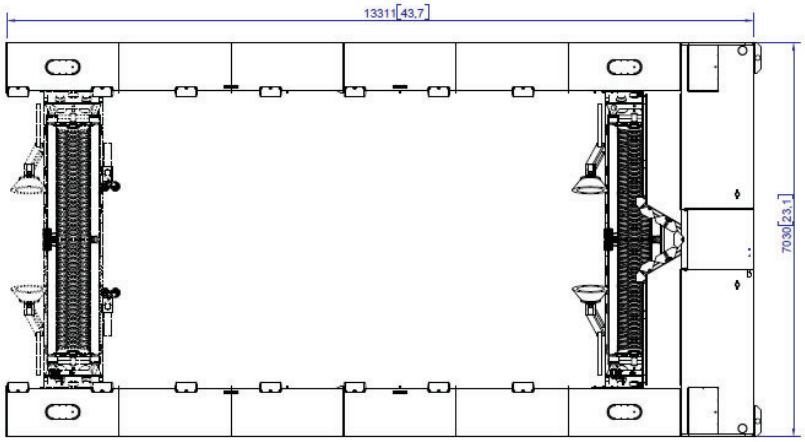
The Division has made the tentative determination to issue/re-issue the proposed 5-year permit.

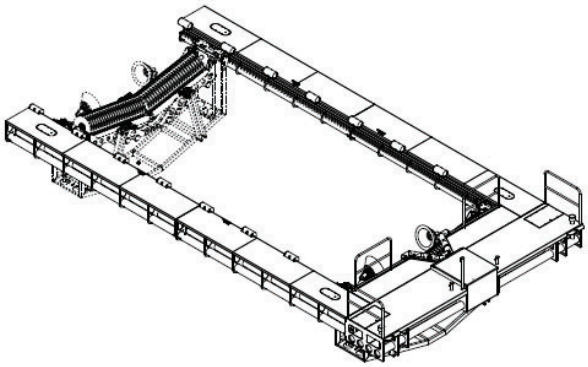
Prepared by: **Aaron Park**
Date: **6/27/2024**
Title: **Staff I, Associate Engineer**

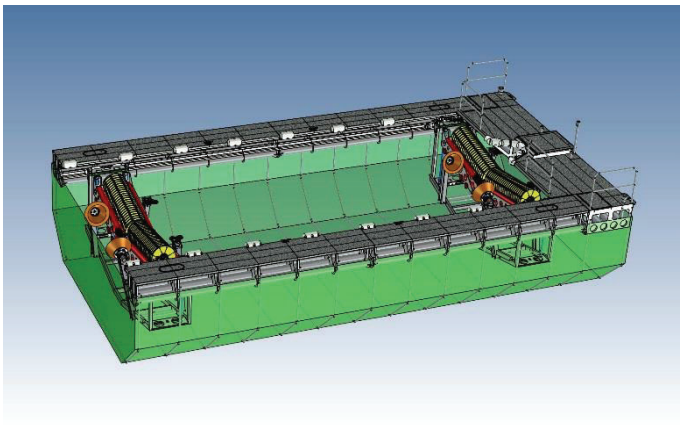
Representative Example

The model system of the boat wash:









The bladder beneath the washer, caches and contains organic material that is being brushed off the hull. Often it is barnacles that ingested a big amount of toxic AFP, what would otherwise end up in the marina food chain, this method prevents that from happening by capturing this and store it until proper disposal is being made with CBI.

This is a picture of the washer in Nykoping, Sweden. The structure binding are temporary and does not affect the pier, it can easily be towed away, uninstalled or relocated.