US Army Corps
of Engineers
Seattle District

Public Notice of Application for Permit

US Army Corps of Engineers
Regulatory Branch
4735 E. Marginal Way S., Bldg 1202
Seattle, WA 98134-2388
Telephone: (360) 393-2867
ATTN: Randel Perry,
Project Manager

Public Notice Date: May 14, 2025
Expiration Date: June 13, 2025

Reference No.: NWS-2024-943
Name: Pacific Northwest National Laboratory (Clallam Bay Research)

Interested parties are hereby notified that an application has been received for a Department of the Army permit in accordance with Section 10 of the Rivers and Harbors Act of 1899, for certain work described below and shown on the enclosed drawings dated May 6, 2025.

APPLICANT: Pacific Northwest National Laboratory (PNNL)
Attention: Mr. Christian Meinig
1529 West Sequim Bay Road
Sequim, Washington 98382
Telephone: (509) 371-6613

AGENT: PNNL
Attention: Ms. Ioana Bociu
1529 West Sequim Bay Road
Sequim, Washington 98382
Telephone: (360) 582-2564

LOCATION: In Clallam Bay, near Clallam Bay, Clallam County, Washington

WORK: The applicant proposes to install structures and undertake activities to implement a 5-year program of research related to renewable energy development.

PURPOSE: The purpose of the project is to conduct research to support development of standardized and cost-effective environmental monitoring technologies for marine renewable energy applications.

ADDITIONAL INFORMATION: The applicant proposes to conduct in-water research activities throughout a five-year period. Activities include the installation of scientific monitoring equipment, surface platforms, buoys, and cables, sediment imaging and sampling, and marine in-water energy generation devices. Scientific devices, instrumentation, cables, and sensors may be installed on the seabed. Cabling may accompany these installations for power/data exchange or to attach small devices. Any singular cable diameter would not exceed 6 inches

and would be installed by divers and sited to avoid areas with kelp and other underwater vegetation. Floating platforms and buoys associated with the project would be composed of non-toxic materials and the size of any single platform would not exceed 400 square feet. Surfaces would either be solid decking or a minimum of 50% grated and all grating would have a minimum of 60% open space.

Anchoring for devices, cabling, etc. would be by diver-installed helical anchors, or if necessary due to current or wave action, by concrete or non-corrosive metal anchors that rest on the sediment. Sediment sampling would occur with a grab sampler, small coring device, or trowel. Marine energy devices may be deployed no larger than 400 square feet. Devices would be anchored using diver-installed helical anchors (preferred), concrete or corrosion resistant metal anchors. Anchors would be chosen to minimize seabed disturbance. If necessary, mid-line floats would be added to keep mooring lines from scouring the bottom or creating line entanglement.

Cables may be installed in-water for various scientific installations, including but not limited to power/data transfer and EMF research. Divers and/or boats would be utilized to run cable from points on the existing marina and jetty out to the deployed device/equipment. Cable diameters would not exceed 6 inches, would be either housed together or spaced appropriately to avoid entanglement and clutter, and would be temporary for the duration of the project.

The project would involve temporary installation of a variety of marine energy devices, excluding tidal turbines. Power produced by energy generation devices would not be delivered to the power grid and would be limited to up to hundreds of kW of power generation. Generators/turbines and/or exposed rotating parts will be housed in a manner to prevent impingement or areas of entrapment. Screens will be used around parts open to both the environment and generator/turbine and will be of mesh size sufficient to omit life stages of all protected species that could enter into the device. Exposed rotating parts will operate slow enough to avoid impacts to protected species. Divers will confirm anchoring on unconsolidated habitat. The footprint for any device would be less than 200 square feet. Devices would be anchored using diver-installed helical anchors (preferred), concrete or corrosion resistant metal anchors.

Autonomous underwater and surface vehicles would be used for data collection. Photography or video may be required for documentation or monitoring purposes. Underwater photography may use ambient light or require illumination from an artificial source such as flood lights or strobes. Intermittent light illuminators such as optical camera strobes may be used as an artificial source. Continuous light illuminators for biofouling prevention or research may also be used. Spotlights and strobes for monitoring, photography, etc. will be intermittent and not continuous. Continuous lighting used to prevent biofouling, typically associated with sensors, will be shrouded, and not interfere with the surrounding water column.

Best management practices would be used as appropriate to prevent impacts to species (i.e., screens around moving parts). The work would be completed over a 5-year period. All proposed in-water and overwater structures would be removed following completion of the project.

Copies of this public notice which have been mailed or otherwise physically distributed feature project drawings in black and white. The electronic version features those drawings in color, which we think more accurately communicates the scope of project impacts. To access the electronic version of this public notice, go to the Seattle District's web page at http://www.nws.usace.army.mil/ and under the heading Open Public Comment Periods select Regulatory Public Notices. Recently issued public notices are listed in chronological order of the date of issuance. Select and view the listing for this project.

The location of the line of mean high water/high tide line shown on the project drawings have not yet been verified by the U.S. Army Corps of Engineers (Corps). If the Corps determines the boundaries of the wetland/waters are substantially inaccurate a new public notice may be published.

MITIGATION: No compensatory mitigation is proposed for this work.

ENDANGERED SPECIES: The Endangered Species Act (ESA) requires federal agencies to consult with the National Marine Fisheries Service (NMFS) and/or U.S. Fish and Wildlife Service (USFWS) pursuant to Section 7 of the ESA on all actions that may affect a species listed (or proposed for listing) under the ESA as threatened or endangered or any designated critical habitat. The U.S. Department of Energy, as the lead agency for ESA consultation, will consult with the NMFS and/or the USFWS as required under Section 7 of the ESA.

ESSENTIAL FISH HABITAT: The Magnuson-Stevens Fishery Conservation and Management Act, as amended by the Sustainable Fisheries Act of 1996, requires all Federal agencies to consult with the NMFS on all actions, or proposed actions, permitted, funded, or undertaken by the agency, that may adversely affect Essential Fish Habitat (EFH). The proposed action would impact EFH in the project area. The U.S. Department of Energy, as the lead agency for a determination regarding EFH, will consult with the National Marine Fisheries Services if necessary. They have determined that the project is likely to adversely affect EFH species.

CULTURAL RESOURCES: The U.S. Department of Energy, as the lead agency for determining compliance with Section 106 of the National Historic Preservation Act, will consult with the State Historic Preservation Officer and Native American Nations as appropriate.

PUBLIC HEARING: Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

EVALUATION: The decision whether to issue a permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefits, which reasonably may be expected to accrue from the proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered, including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands,

historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. The Washington Department of Ecology has or will evaluate the proposed project in accordance with Section 401 of the Clean Water Act and for consistency with the Coastal Zone Management Act.

The U.S. Army Corps of Engineers is soliciting comments from the public; Native American Nations or tribal governments; Federal, State, and local agencies and officials; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for the work. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity.

COMMENT AND REVIEW PERIOD: Conventional mail or e-mail comments on this public notice will be accepted and made part of the record and will be considered in determining whether authorizing the work would not be contrary to the public interest. In order to be accepted, e-mail comments must originate from the author's e-mail account and must include on the subject line of the e-mail message the permit applicant's name and reference number as shown below. All e-mail comments should be sent to randel.j.perry@usace.army.mil. Conventional mail comments should be sent U.S. Army Corps of Engineers, Regulatory Branch, 4735 E. Marginal Way S, Bldg. 1202, Seattle, Washington, 98134-2388. Either conventional mail or e-mail comments must include the permit applicant's name and reference number, as shown below, and the commenter's name, address, and phone number. All comments received will become part of the administrative record and are subject to public release under the Freedom of Information Act including any personally identifiable information such as names, phone numbers, and addresses.

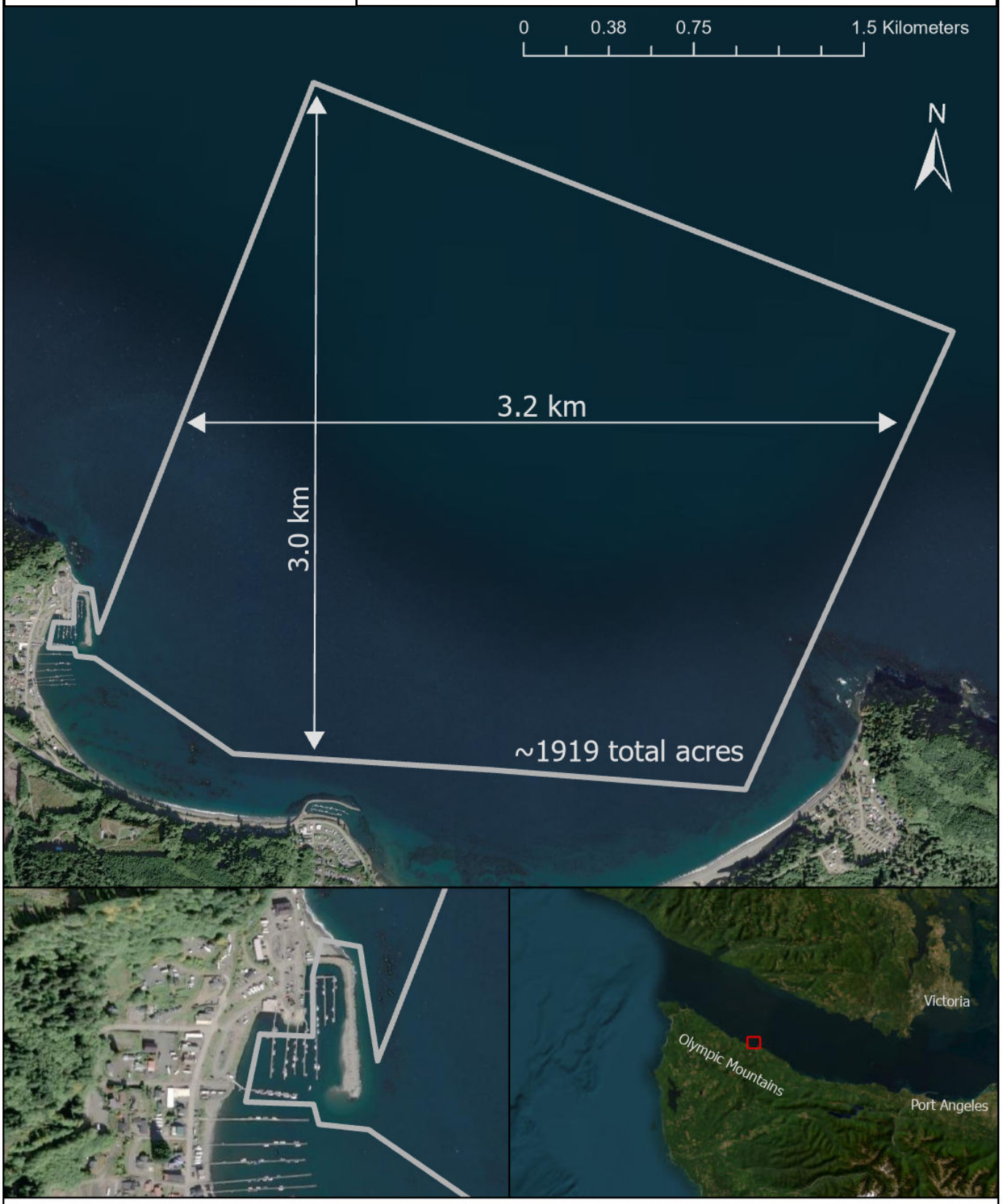
You may also now submit project specific comments to the Corps through the new Regulatory Request System (RRS) through this link: https://rrs.usace.army.mil/rrs ; Click Public Notices and filter to Washington State to see all current Seattle District Public Notices, including this notice. You may submit your comments directly through this portal.

All comments whether through the Regulatory Request System, conventional mail or e-mail must reach this office, no later than the expiration date of this public notice to ensure consideration. Please include the following name and reference number:

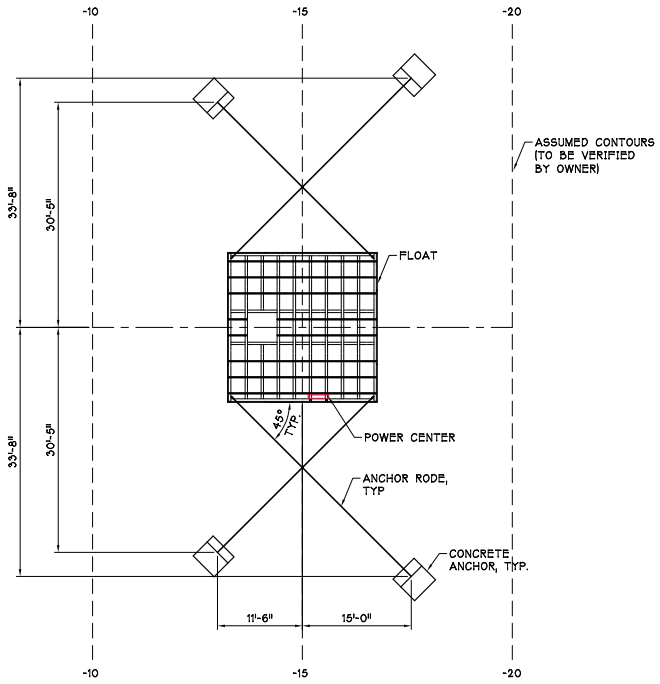
Pacific Northwest National Laboratory, NWS-2024-943

Encl: Figures (8)

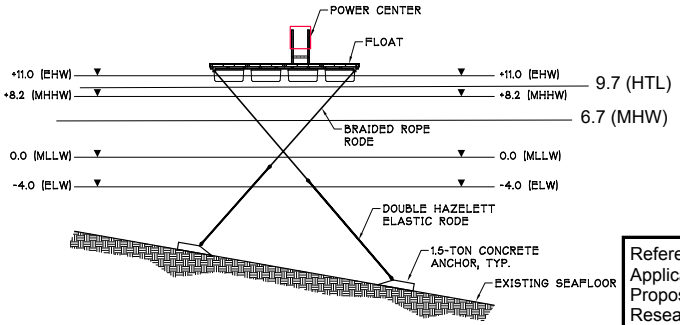
Reference:NWS-2024-943 Applicant: Pacific Northwest National Laboratory Date: May 6, 2025	Location: Clallam Bay, Clallam County, WA Lat/Long: 48.265690, -124.277560 Proposed Project: PNNL Marine Research Activities in Clallam Bay Sheet: 1 of 8



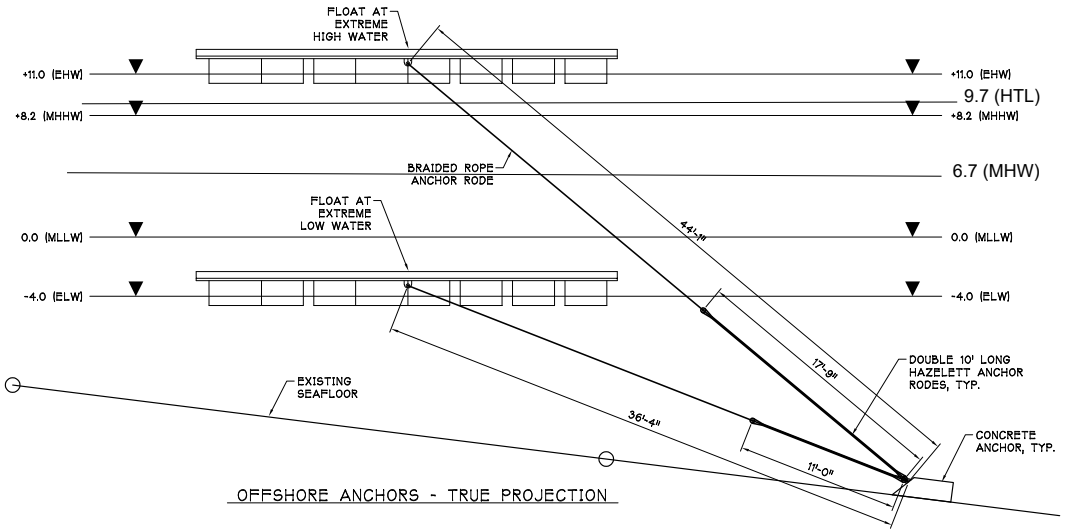
Earthstar Geographics, Esri, CGIAR, USGS, Maxar, WA State Parks GIS, Esri Canada, Esri, TomTom, Garmin, FAO, NOAA, USGS, Bureau of Land Management, EPA, USFWS, NRCan, Parks Canada



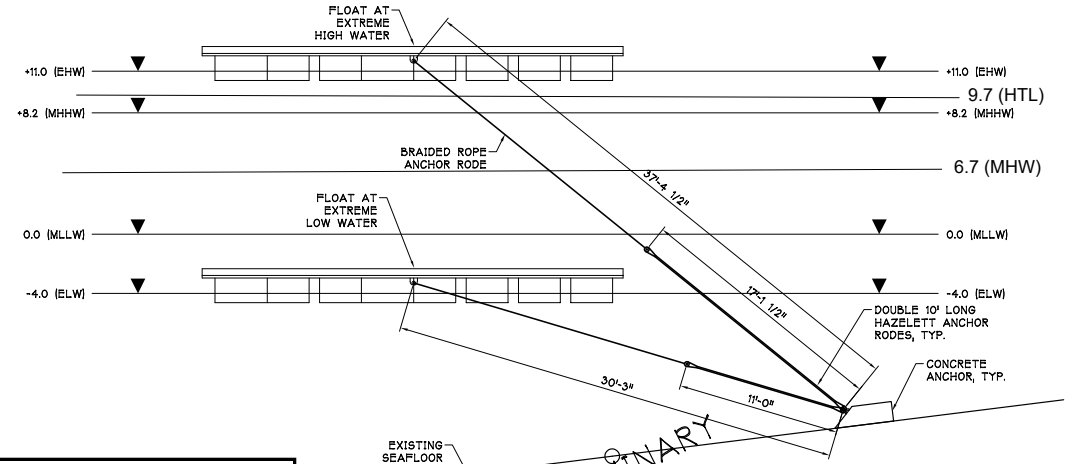
ANCHORING PLAN



ANCHORING ELEVATION



OFFSHORE ANCHORS - TRUE PROJECTION



ONSHORE ANCHORS - TRUE PROJECTION

PRELIMINARY

12 DEC 23

Reference Number:
Applicant Name: Christian Meinig
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Sheet: 2 of 8
Date: May 6, 2025

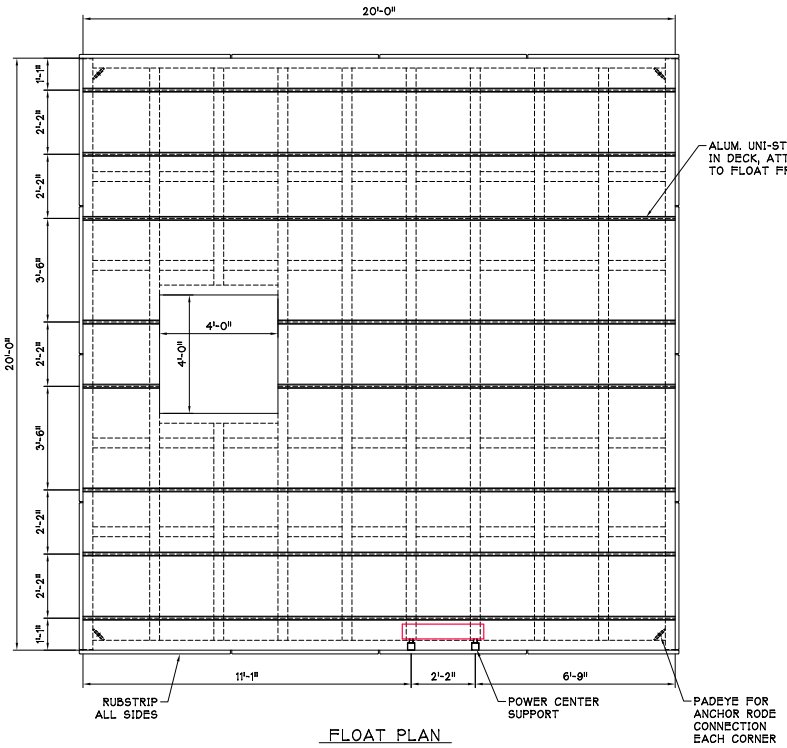
MARINE STRUCTURES ENGINEERING, INC.
1004 COMMERCIAL AVE, #364, ANACORTES, WA 98221 (360) 466-8627

SCALE:	APPROVED BY:	DRAWN BY: KDL
DATE: DEC '23		REVISED:

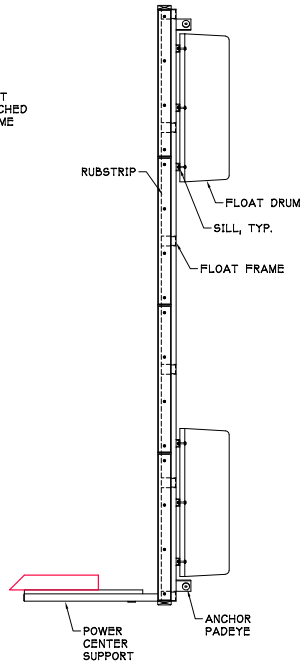
IRES FLOATING PLATFORM
PNNL, SEQUIM, WA

ANCHORING PLAN AND ELEVATIONS — DRAWING NUMBER 1 OF 3

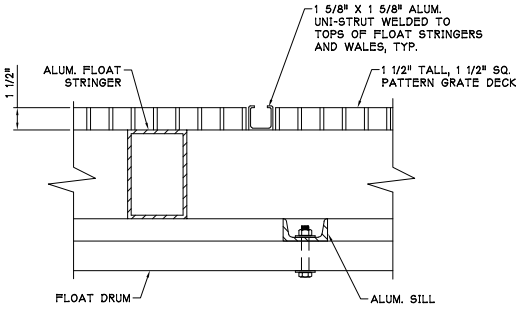
3350-IRES_FLOAT/IRES00.DWG
12 DECEMBER 2023



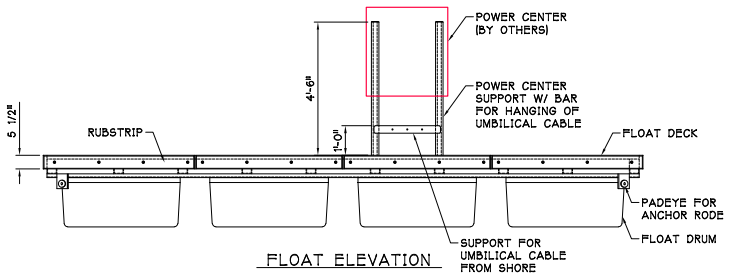
FLOAT PLAN



TRANSVERSE FLOAT ELEVATION



DECK SECTION



FLOAT ELEVATION

METALS:
ALUMINUM SHAPES, BARS, AND PLATES SHALL BE 6061-T6.

WELDING:
ALL WELDING SHALL CONFORM TO THE LATEST AWS D1.2 (ALUMINUM) STRUCTURAL WELDING CODES AND SHALL BE PERFORMED BY AWS OR WABO QUALIFIED STRUCTURAL WELDERS USING QUALIFIED WELDING PROCEDURES.

BOLTS AND HARDWARE:
ALL CONNECTING BOLTS SHALL BE TYPE 316 STAINLESS STEEL WITH APPROPRIATE WASHERS AND NUTS.

DECK:
DECKING SHALL 1 1/2" TALL 1 1/2" SQUARE PATTERN AND SHALL BE LIGHT GRAY IN COLOR.

RUBSTRIPS:
RUBSTRIPS SHALL BE 2 X 6 (1 1/2" X 5 1/2") RECYCLED HDPE PLASTIC LUMBER AND SHALL BE GRAY IN COLOR.

FLOAT DRUMS:
FLOAT DRUMS SHALL BE HENDREN PLASTICS (EAGLE FLOATS) OR OWNER APPROVED EQUIVALENT. FLOAT DRUMS SHALL BE SECURELY ATTACHED TO FLOAT SYSTEM SUPPORTS. EACH FLOAT DRUM SHALL HAVE A MINIMUM OF SIX (6) MOLDED MOUNTING HOLES OR SLOTS.

Reference Number:NWS-2024-943 Applicant Name: Pacific Northwest National Laboratory
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Sheet: 3 of 8
Date: May 6, 2025

PRELIMINARY

12 DEC 23

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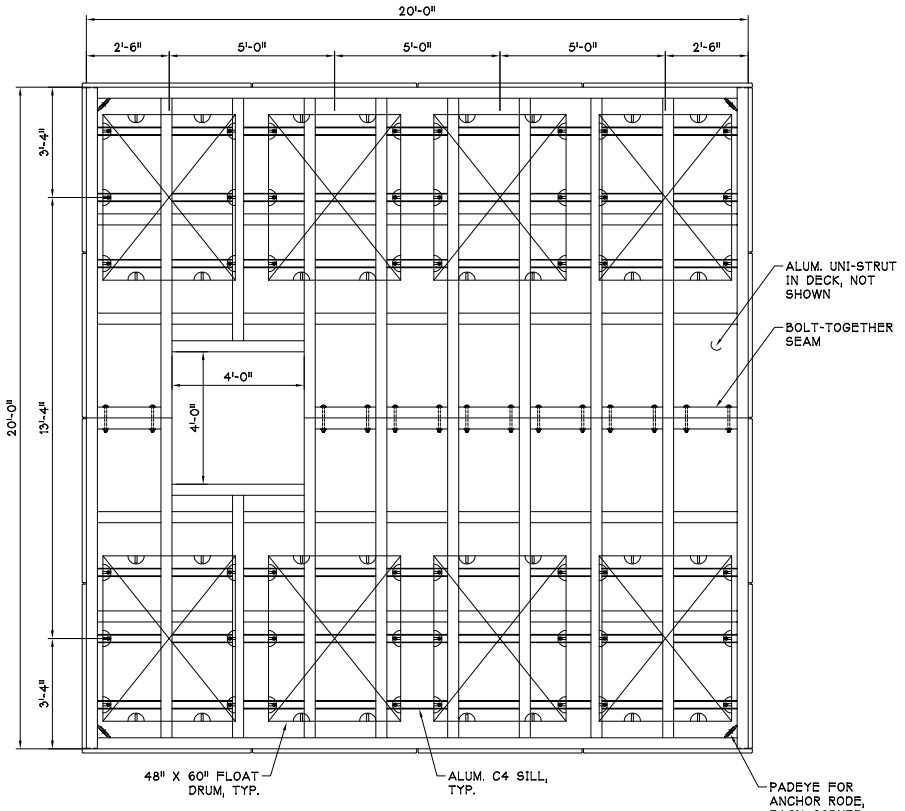
1004 COMMERCIAL AVE, #364, ANACORTES, WA 98221 (360) 466-8627

SCALE:	APPROVED BY:	DRAWN BY: KDL
DATE: DEC '23		REVISED:

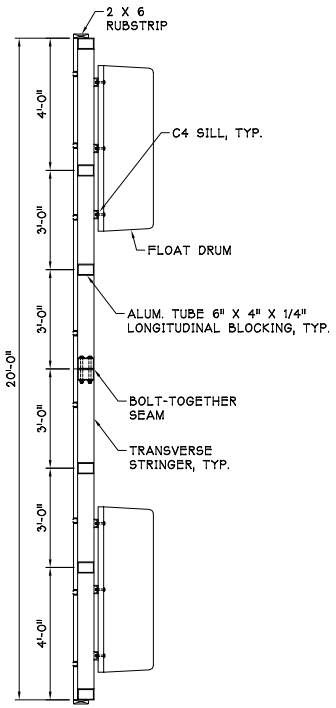
IRES FLOATING PLATFORM
PNNL, SEQUIM, WA

FLOAT PLANS AND ELEVATIONS — DRAWING NUMBER 2 OF 3

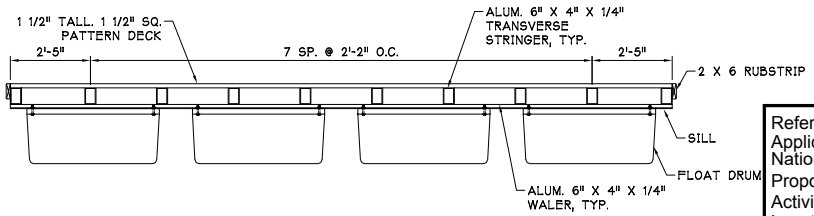
3350-IRES_FLOAT/IRES00.DWG
12 DECEMBER 2023



FLOAT PLAN



TRANSVERSE FLOAT SECTION



LONGITUDINAL SECTION

Reference Number:NWS-2024-943
Applicant Name: Pacific Northwest National Laboratory
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Sheet: 4 of 8
Date: May 6, 2025

PRELIMINARY

12 DEC 23

MARINE STRUCTURES ENGINEERING, INC.
1004 COMMERCIAL AVE, #364, ANACORTES, WA 98221 (360) 466-8627

SCALE:	APPROVED BY:	DRAWN BY: KDL
DATE: DEC '23		REVISED:

IRES FLOATING PLATFORM
PNNL, SEQUIM, WA

FLOAT FRAMING PLANS AND SECTIONS

DRAWING NUMBER 3 OF 3

3350-IRES FLOAT/IRES00.DWG
12 DECEMBER 2023

Reference Number:NWS-2024-943
Applicant Name: Pacific Northwest National Laboratory
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Date: May 6, 2025 Sheet: 5 of 8

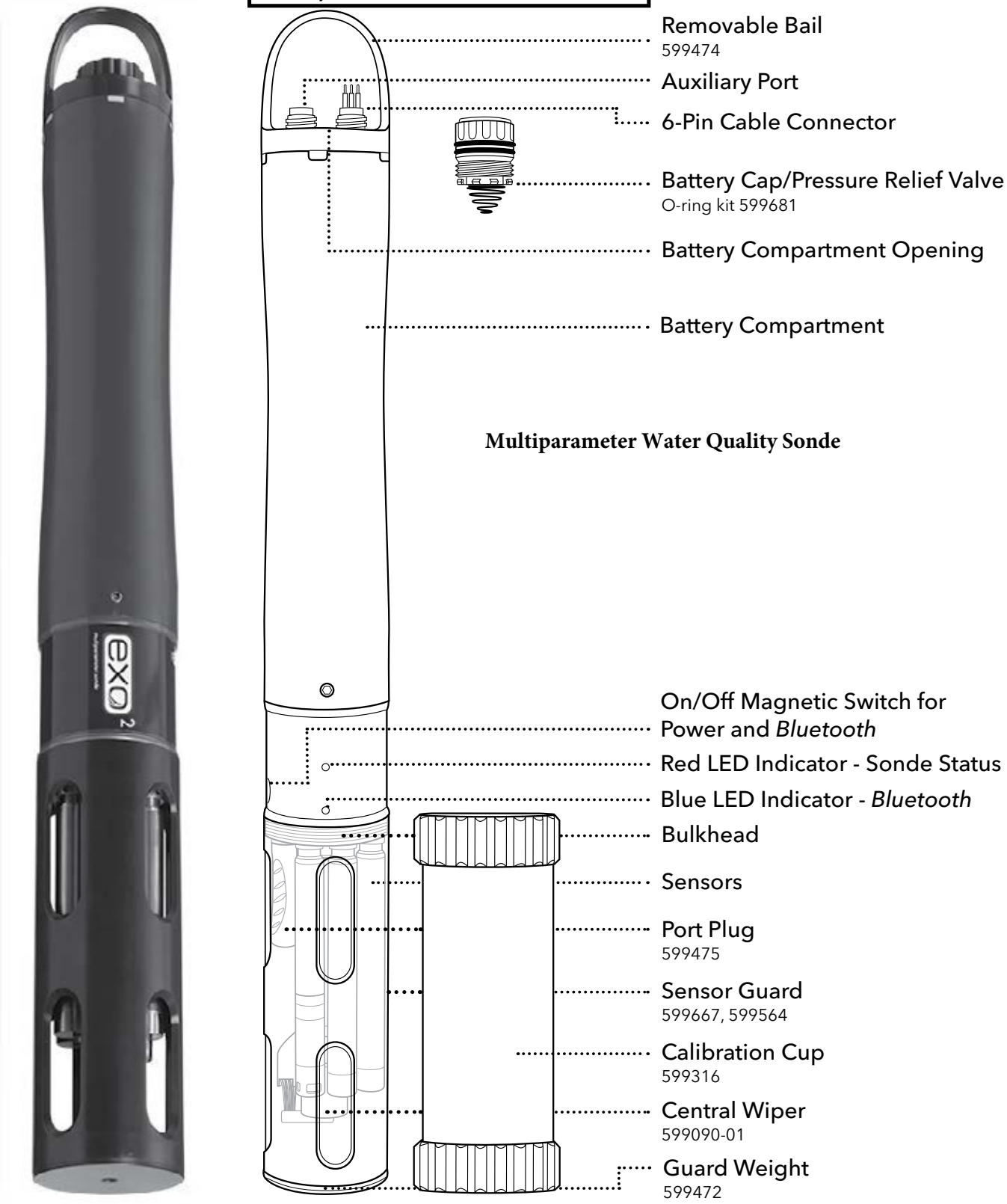
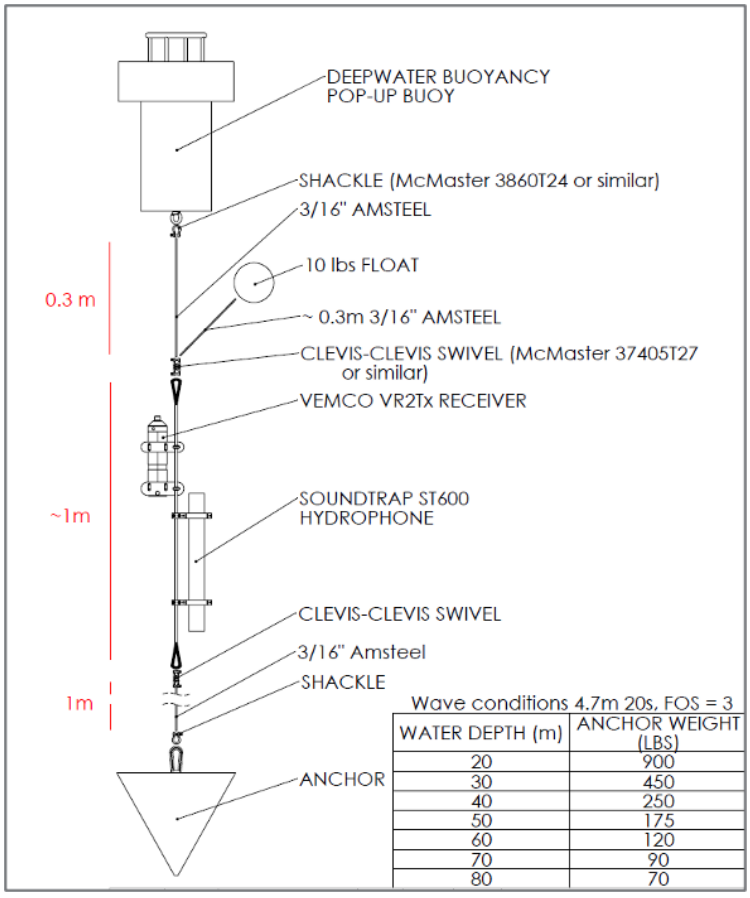


Figure from p.8 of YSI Manual found at:
https://www.ysi.com/File%20Library/Documents/Manuals/EXO-User-Manual-Web.pdf?srsltid=AfmBOop8rzeUFg9dIk_GmD6hoUbURo86IFV-RI4pYZ91K1hQFd3CEypM

Reference Number:NWS-2024-943
Applicant Name: Pacific Northwest National Laboratory
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Date: May 6, 2025 Sheet: 6 of 8



Wave conditions 4.7m 20s, FOS = 3

WATER DEPTH (m)	ANCHOR WEIGHT (LBS)
20	900
30	450
40	250
50	175
60	120
70	90
80	70

SolidWorks figure of VIVACE marine energy device from: Branch, R., et al. "University Marine Energy Research Community."

Reference Number:NWS-2024-943
Applicant Name: Pacific Northwest National Laboratory
Proposed Project: PNNL Marine Research Activities in Clallam Bay
Location: Clallam Bay
Date: May 6, 2025 Sheet: 8 of 8