Tillamook County

DEPARTMENT OF COMMUNITY DEVELOPMENT
BUILDING, PLANNING & ON-SITE SANITATION SECTIONS
1510 – B Third Street
Tillamook, Oregon 97141
www.tillamook.or.us

Building (503) 842-3407
Planning (503) 842-3408
Sanitation (503) 842-3409
FAX (503) 842-1819
Toll Free 1(800) 488-8280

Land of Cheese, Trees and Ocean Breeze

ESTUARY DEVELOPMENT PERMIT #851-21-000212-PLNG: MILLER

Approval Date: March 8, 2022

Request: An Estuary Development Permit for aquaculture/oyster farming activities on leased area within Tillamook Bay (Exhibit B).

Location: 57.55 Acres in Tillamook Bay

Zone: Estuary Conservation (EC1) Zone & Estuary Natural (EN) Zone

Applicant: Damon Miller, P.O. Box 19301, Portland, OR 97280

Jurisdictional Authority: Oregon Department of Agriculture, Oregon Department of State Lands, Oregon Department of Land Conservation & Development, US Army Corps of Engineers

After reviewing the Estuary Floodplain Development Permit for aquaculture/oyster farming activities in a specified lease area of Tillamook Bay, your permit has been **APPROVED WITH CONDITIONS**.

I. FINDINGS

TCLUO Section 3.106(2) and TCLUO Section 3.102(2) list aquaculture and limited aquaculture facilities as a regulated activity permitted with standards, subject to the procedure of TCLUO Section 3.120: Regulated Activities and Impact Assessments and TCLUO Section 3.140: Estuary Development Standards.

Regulated activities are those which require State and/or Federal Permits and include aquaculture activities. Tillamook County procedures for review of regulated activities are subject to the requirements of the zone(s) in which the proposed uses and activities are to be located (Section 3.100 to 3.110), standards relevant to the proposed uses and activities (Section 3.140), an impact assessment (Section 3.120 (5)), requirements for degradations or reductions of estuarine natural values where applicable (Section 3.120 (7)) and comments from State and Federal agencies having responsibility for permit review (Section 3.120 (8). Uses that are permitted with standards must comply with the standards of Section 3.140.

A copy of this application was noticed in accordance with those provisions outlined in TCLUO Section 3.120: Regulated Activities and Impact Assessments as well as Article 10: Administrative Provisions. Due to the location of the projects, no private landowners were noticed as these projects did not fall within 250-feet of a

privately owned property. State and federal agencies were noticed in accordance with Section 3.120. The US Army Corps of Engineers as provided a copy of the USACE permit for this proposal (Exhibit C). No other agency comments were received.

TCLUO SECTION 3.120: REGULATED ACTIVITIES AND IMPACT ASSESSMENT

Federal Environmental Impact Statements or Assessments may be substituted if made available to the Planning Department. The following considerations must be addressed in the impact assessment:

(a) The type and extent of alterations expected.

- No alterations are expected beyond use biodegradable mesh bags made of cellulose to hold oyster seed and secured with wooden stakes to the area if necessary.
- Bags are placed apart to allow for other aquatic species access and movement.
- The bags will be placed on the sea floor. As the seeds grow, and the bags degrade, the oysters will rest unencumbered on the sea floor until adulthood.
- Monthly trips will be taken to seed more of the plat and tumble the existing oysters.
- Oysters will be manually tumbled within the mesh bags on the sea floor.
- Site access is limited by boat and on foot to the low tide channels of Tillamook Bay flowing east of the plat area.
- All-terrain vehicles (ATV) or other motorized equipment is prohibited within the project area or anywhere below the MHW of Tillamook Bay during cultivation and harvesting.

(b) The type of resource(s) affected including, but not limited to aquatic life and habitats, riparian vegetation, water quality and hydraulic characteristics.

- Project location is identified as Tillamook Bay Management Unit 17EN in the Tillamook County Comprehensive Plan Goal 16: Estuarine Element. Eelgrass beds are identified as an important estuarine resource with significant biological functions providing habitat for salmonids, other fish and wildlife.
- Applicant states area proposed for oyster farming activities was selected in consultation with ODFW and have low density eel grass and ghost shrimp. Application states no other species have been identified with potential impacts (Exhibit B).
- US Army Corps of Engineers (USACE) has reviewed the project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. The requirements of the Endangered Species Act have been determined by the USACE to be met through a programmatic biological opinion (Exhibit C).
- The complete text of the biological opinion is available for review at https://www.nwp.usace.army.mil/environment/.
- The USACE has determined the project compliance (Exhibit C).

(c) The expected extent of impacts of the proposed alteration on water quality and other physical characteristics of the estuary, living resources, recreation and aesthetic use, navigation and other existing and potential uses of the estuary.

- Applicant states there will be no dredging, fill or other activities that will cause significant impacts, reductions or degradations of the site (Exhibit B).

(d) The methods which could be employed to avoid or minimize adverse impacts.

- The USACE Permit NWP-2021-202 includes terms and conditions that must be followed (Exhibit C).
- Applicant has provided a copy of the Oregon Department of Agriculture (ODA) lease agreement and final order. Conditions of approval were also made part of the approval decision rendered by the ODA as part of the Final Order for lease of state-owned estuary lands in Tillamook County (Exhibit B).

In review of the permit and lease identified above, staff finds that Applicant is required to employ best management practices to minimize waterway effects and impacts on estuarine resources. These include coordination with the Oregon Department of Fish and Wildlife, the USACE and the Oregon Department of Agriculture captured within the terms and conditions of the permit and lease order.

Tillamook County Comprehensive Plan Goal 16: Estuarine Element Discussion

As mentioned previously, Project location is identified as Tillamook Bay Management Unit 17EN in the Tillamook County Comprehensive Plan Goal 16: Estuarine Element. Eelgrass beds are identified as an important estuarine resource with significant biological functions providing habitat for salmonids, other fish and wildlife.

TCLUO SECTION 3.140: ESTUARY DEVELOPMENT STANDARDS

(1) AQUACULTURE FACILITIES: Aquaculture facilities in estuary zones shall be subject to the following standards:

(a) Evidence shall be provided by the applicant and findings made by the County that aquaculture facilities do not prevent access to navigation channels, and that obstruction of access to publicly-owned lands and recreation use areas is minimized.

(b) Aquaculture facilities should be designed to minimize their visual impact (view obstruction). Whenever feasible, submerged structures are preferred over floating structures.

(c) In the design and construction of aquaculture facilities, reclamation and reuse of wastewater should be considered.

(d) Water diversion structures or man-made spawning channels shall be constructed so as to maintain required stream flows for aquatic life in adjacent streams and avoid significant reduction or acceleration of average water flow in an associated marsh. Water Quality policies shall apply.

(e) Shellfish culture facilities shall either be located more than 2,000 feet away from sanitary sewer outfalls so that there will be no potential health hazard, or shall make provision for purification of water used in the aquaculture operation.

(f) Water discharge from an aquaculture facility shall meet all Federal and State water quality standards and any conditions attached to a waste discharge permit. Water Quality policies shall apply.

(g) All State and Federal laws governing environmental quality, resource protection, public health and safety, and engineering standards shall be met in the design, siting, construction and operation of aquaculture facilities. This determination shall be made by the Oregon Department of Fish and Wildlife or other State or Federal agencies with regulatory authority over aquaculture facilities.

(h) Aquaculture facilities in Estuary Conservation (EC) Zones, Estuary Development (ED) Zones, and Estuary Natural (EN) Zones shall be permitted only if evidence can be provided by the applicant and findings made by the County that:

(1) Aquaculture facilities in Estuary Conservation (EC) Zones will require a resource capability determination where dredging, fill or other alterations of the estuary is needed, other than incidental dredging for harvest of benthic species or removal of in-water structures.

(2) Aquaculture facilities in Estuary Development (ED) Zones will not preclude the provision or maintenance of navigation or other needs for commercial and industrial water dependent uses, and will not preempt the use of shorelands especially suited for water-dependent development.

(3) Aquaculture facilities in Estuary Natural (EN) Zones will be consistent with the resource capabilities and purpose of the management unit(s) in which they are to be located. The Oregon Department of Agriculture shall provide these findings for oyster culture and the Oregon Department of Fish and Wildlife shall provide them for other types of aquaculture in instances when Tillamook County finds that it does not have the technical expertise or resources to make them.

(4) Aquaculture facilities in Estuary Natural (EN) Zones will not require dredging or fill other than incidental dredging for harvest of benthic species or removal of in-water structures.

(i) Leasing of publicly-owned estuarine waters, intertidal areas or tidal wetlands for aquaculture shall be subject to the requirements of the Division of State Lands.

(j) Dredge, fill, shoreline stabilization, piling/dolphin installation or other activities in conjunction with an aquaculture facility shall be subject to the respective standards for these activities.

Findings: Applicant states that the plat does not extend into channels in the bay and the intent is to farm on low-tide sandbars. Applicant confirms that as part of permit approvals, aquaculture facilities are limited to bottom culture, resulting in minimal visual impact at low tides. No water source outside of the waters of Tillamook Bay is proposed for aquaculture activities. No diversion structures or man-made spawning channels will be constructed. Culture facilities are more than 2,000 feet in distance from sewer outfalls and there will be no water discharge from any aquaculture facility (Exhibit B).

As stated previously, the Applicant has provided a copy of the Oregon Department of Agriculture (ODA) lease agreement and final order. Conditions of approval were also made part of the approval decision rendered by the ODA as part of the Final Order for lease of state-owned estuary lands in Tillamook County (Exhibit B). A Condition of Approval has been made to require the conditions of approval made part of the ODA lease agreement and final order be adhered to.

Conclusion: Given the information outlined above and the documentation in the record, Staff concludes that the resource capabilities within this area of Tillamook Bay will not be adversely affected and should be able to continue to function.

Staff concludes that the applicant has satisfied the review criteria and can meet all applicable ordinance requirements at the time of application. Therefore, the Department approves this request subject to the Conditions of Approval in Section II of this report.

Appeal of this decision. This decision may be appealed to the Tillamook County Planning Commission, who will hold a public hearing. The forms and fees must be filed in the office of this Department before **4:00 PM on March 21, 2022.**

II. CONDITIONS OF APPROVAL

The Conditions of Approval are as follows. Failure to comply with the Conditions of Approval may result in both nullification of this permit approval and enforcement action.

1. The applicant shall obtain all required permits from the Federal, State and local agencies prior to development.
2. Applicant shall adhere to the conditions of approval outlined in the Corps Nationwide Permit Verification for Alava Ocean Company - Shellfish Production Tillamook Bay, NWP-2021-202 and the conditions of approval outlined in the Oregon Department of Agriculture (ODA) lease agreement and final order.
3. This approval becomes null and void two years post approval date unless all conditions are met, or an extension is requested from and approved by this Department.

Sincerely,
Tillamook County Department of Community Development

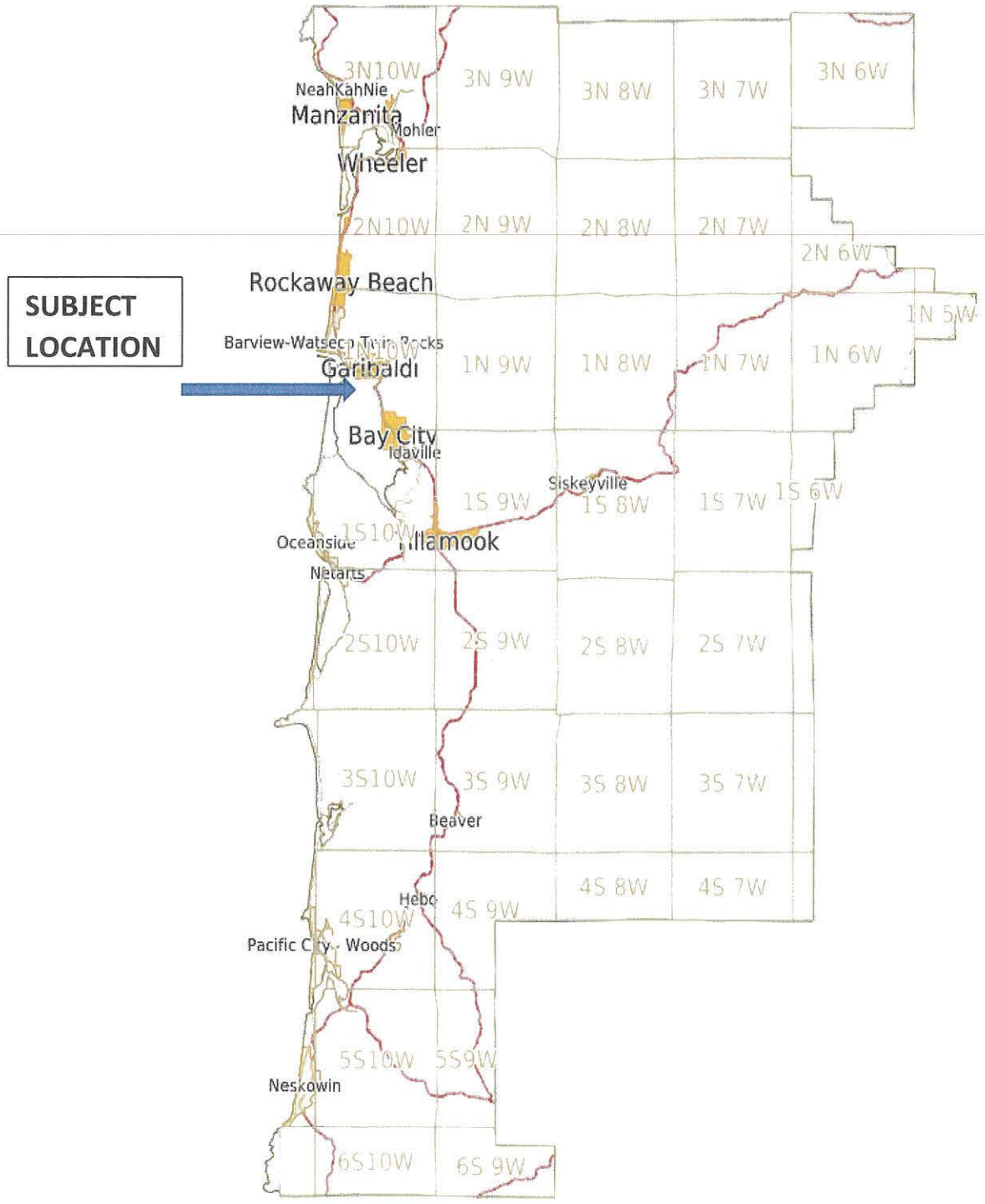
Sarah Absher

Sarah Absher, CFM, Director
503-842-3408 x 3317 or sabsher@co.tillamook.or.us

EXHIBITS
Exhibit A: Maps
Exhibit B: Applicant's Submittal
Exhibit C: USACE Permit

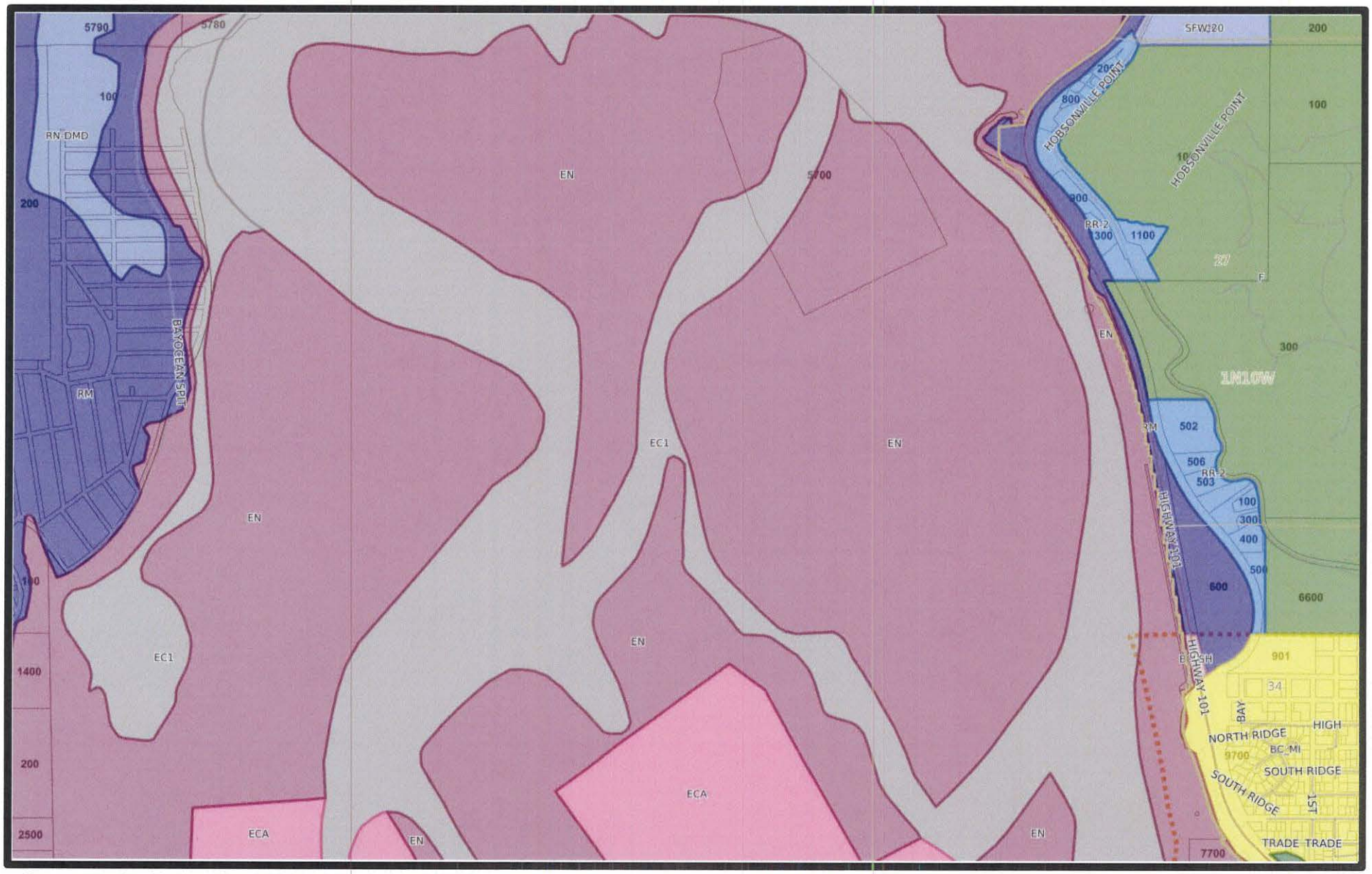
EXHIBIT A

VICINITY MAP



#851-21-000212-PLNG: MILLER AQUACULTURE/OYSTER FARM REQUEST

Map



Generated with the GeoMOOSE Printing Utilities

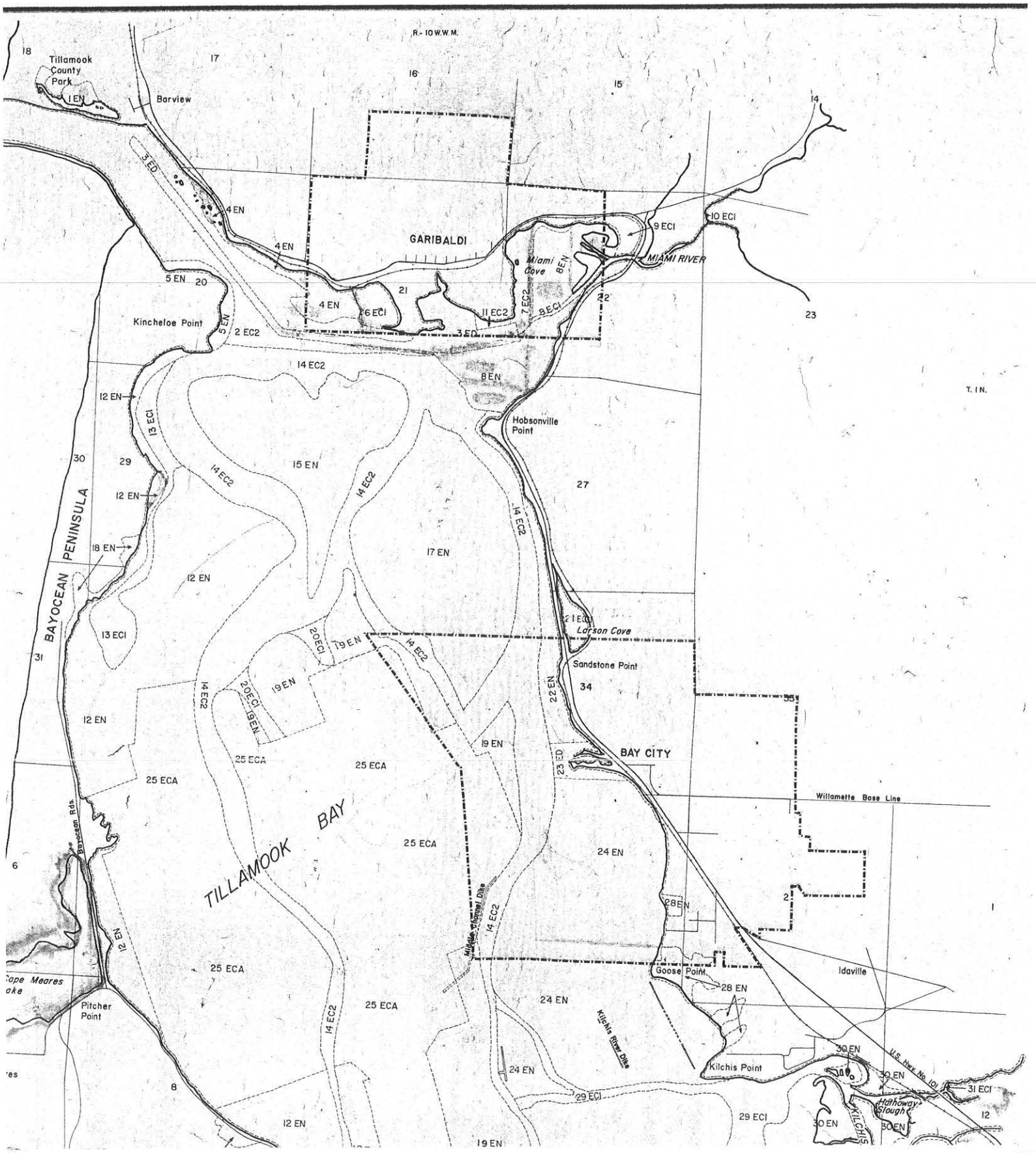

R. 10 W.W.M.
T. 1 N.
Tillamook County Park
Barview
GARIBALDI
Miami Cove
MIAMI RIVER
Kinchelloe Point
Hobsonville Point
BAYOCEAN PENINSULA
Larson Cove
Sandstone Point
BAY CITY
Willamette Base Line
TILLAMOOK BAY
Middle Channel Dike
Kilchis River Dike
Goose Point
Idaville
Kilchis Point
Pitcher Point
Cape Meares
Bayocean Rds.
Hathaway Slough
KILCHIS
U.S. Hwy No. 101
1 EN
3 ED
4 EN
5 EN
6 ECI
7 EC2
8 EN
9 ECI
10 ECI
11 EC2
2 EC2
3 ED
14 EC2
12 EN
13 ECI
15 EN
17 EN
18 EN
19 EN
20 ECI
21 ECI
22 EN
23 ED
25 ECA
24 EN
28 EN
29 ECI
30 EN
31 ECI

EXHIBIT B

Tillamook County Department of Community Development
1510-B Third Street. Tillamook, OR 97141 | Tel: 503-842-3408 Fax: 503-842-1819
www.co.tillamook.or.us

RECEIVED
MAY 21 2021
BY mail

PLANNING APPLICATION

OFFICE USE ONLY
Date Stamp
☐Approved ☐Denied
Received by: SS
Receipt #: 120633
Fees: 983.00
Permit No: 851-21-000212-PLNG

Applicant ☐ *(Check Box if Same as Property Owner)*

Name: DAMON Miller Phone: 503.888.3458
Address: P.O. BOX 19301
City: PORTLAND State: OR Zip: 97280
Email: DAMONAMILLER@GMAIL.COM

Property Owner

Name: DAMON Miller Phone: 503.888.3458
Address: P.O BOX 19301
City: PORTLAND State: OR Zip: 97280
Email: DAMON A MILLER@GMAIL.COM

Request: PERMIT to farm oysters

Type II	Type III	Type IV
☐ Farm/Forest Review	☐ Appeal of Director's Decision	☐ Appeal of Planning Commission Decision
☐ Conditional Use Review	☐ Extension of Time	☐ Ordinance Amendment
☐ Variance	☐ Detailed Hazard Report	☐ Large-Scale Zoning Map Amendment
☐ Exception to Resource or Riparian Setback	☐ Conditional Use (As deemed by Director)	☐ Plan and/or Code Text Amendment
☐ Nonconforming Review (Major or Minor)	☐ Ordinance Amendment	
☑ Development Permit Review for Estuary Development	☐ Map Amendment	
☐ Non-farm dwelling in Farm Zone	☐ Goal Exception	
☐ Foredune Grading Permit Review		
☐ Neskowin Coastal Hazards Area		

Location:

Site Address: See attached documentation
Map Number: (1N10 00000 5700 - owner State)
Township Range Section Tax Lot(s)

Clerk's Instrument #: _____

Authorization

This permit application does not assure permit approval. The applicant and/or property owner shall be responsible for obtaining any other necessary federal, state, and local permits. The applicant verifies that the information submitted is complete, accurate, and consistent with other information submitted with this application.

DM Miller — 5.21.21
Property Owner Signature (Required) Date

DM Miller — 5.21.21
Applicant Signature Date

Section 3.120: Review of Regulated Activities

(2) REGULATED ACTIVITIES:

A. There will be no fill per the requests of ODF&W and U.S. Army Corps of engineers
B. There will be no dredging per the requests of ODF&W and U.S. Army Corps of engineers
C. There will be no dredging per the requests of ODF&W and U.S. Army Corps of engineers
D. There will be no piling/dolphin installation per the requests of ODF&W and U.S. Army Corps of engineers
E. There will be no shoreline stabilization, bank line or streamline alteration as the plat is in the bay
F. There will be no in-water lot storage

(5) IMPACT ASSESSMENTS:

A. No alterations are to be expected. I will be farming oysters via bottom culture
B. The plat area was chosen with guidance from ODF&W, I will be farming in areas that have low density of eel grass and ghost shrimp. No other species have been identified with potential impacts
C. Because of the low density of eel grass and ghost shrimp, I expect no impacts
D. I plan to farm in the areas that have low density eel grass and ghost shrimp
E.

(7) SIGNIFICANT DEGRADATIONS OF REDUCTIONS OF ESTUARINE NATURAL VALUES:

A. There will be no dredging, fill or other activities that will cause significant impacts
B. There will be no dredging or fill or any other reductions or degradations

Section 3.140: Estuary Development Standards

(1) AQUACULTURE FACILITIES:

A. Though my plat does extend into channels in the bay, I plan to only farm on the low tide sandbars.
B. As a result of input and guidance by ODF&W and U.S. Army Corps of Engineers, my aquaculture facilities will be limited to bottom culture. Because of this, there will be very minimal visual impact at low tides and none at high tides
C. There will be no water of any kind needed for my aqua culture facilities other than the waters of Tillamook Bay
D. There will be no diversion structures or man-made spawning channels constructed

E. The shellfish culture facilities will be located more than 2000 feet from sanitary sewer outfalls
F. There will be no water discharge from the aquaculture facility
G. As a result of input and guidance by ODF&W and U.S. Army Corps of Engineers, my aquaculture facilities will be limited to bottom culture. Because of this, there will be little to no impact to environmental quality, resources, public health and safety. Additionally, aquaculture facilities construction will be limited to the design requirements by ODF&W and U.S. Army Corps of Engineers
H.

(3) The ODA Final Order (included in this application) for the proposed plat includes input and approval from ODA and ODF&W

(4) There will be no dredging or fill per requirements by ODA and ODF&W and U.S. Army Corps of Engineers

I. Division of State Lands is in receipt of my Joint Permit Application along with the U.S. Army Corps of Engineers and Oregon Department of Environmental Quality
J. There will be no dredge, fill, shoreline stabilization, piling/dolphin installation or other activities in conjunction with the aquaculture facilities

BEFORE THE OREGON DEPARTMENT OF AGRICULTURE

IN THE MATTER OF	)	
THE APPLICATION OF	)	**PROPOSED/FINAL**
DAMON MILLER FOR LEASE	)	**ORDER**
OF STATE-OWNED ESTUARY	)	
LANDS IN TILLAMOOK COUNTY	)	

BASIS AND SCOPE OF REVIEW

Damon Miller, hereinafter known as the applicant, has applied to the Oregon Department of Agriculture (Department) for the lease of state-owned estuary lands in Tillamook Bay, Tillamook County, Oregon, for commercial oyster cultivation. The proposed cultivation methods are rack and bag, and loose bottom culture.

The Applicant proposes an inter-tidal operation of approximately 57.55 acres and is described as:

> Commencing at a 3" Tillamook County Surveyor brass cap stamped "1/4 27,34, RS, 287, 1968" latitude N45° 32'10.37" and longitude of W123°53'42.86"). Which has one Quarter Corner common to Sections 27 & 34, T1N, R10W, W.M., Thence S 82-3-46 W, 5140 feet to the True Point of Beginning (latitude N45°32'01.2" and longitude of W123°54'53.9"). Thence N 0-35-0 E, 1,934.399 (latitude N45°32'20.4" and longitude of W123°54'54.7"); Thence N 84-57-4 W, 2595 feet (latitude N45°32'21.5" and longitude of W123°55'31.1"); Thence S 49-48-15 E, 3350 feet back to the True Point of Beginning (latitude N45°32'01.2" and longitude of W123°54'53.9").

1. Oregon Revised Statute (ORS) 622.240 authorizes the Department to consider shellfish plat applications and grant leases upon demonstration the proposed lands are "suitable for oyster, clam cultivation." The Department is required to consult with appropriate local, state, and federal agencies to determine whether lands proposed for shellfish cultivation are suitable for shellfish cultivation. The Applicant is also required to provide notice of the proposal in a local newspaper of general circulation in the subject county.

ORS 622.250(2) requires that the Department determine that the area is known to be available and has been classified as suitable for oyster cultivation.

Factors used by the Department to determine suitability are established in Oregon Administrative Rule (OAR) 603-082-0050 and include the following:

a) Consistency with local land use regulations, plans, and zoning requirements and with the Statewide Planning Goals as required by ORS Chapter 197.
b) Consistency with other applicable state and federal laws.
c) Impacts on recreational activities, commerce, or other public uses or public trust values.
d) Impacts on navigation.
e) Impacts on fish and wildlife habitat.
f) Impacts on commercial fishing, crabbing, shrimping, and clamming activities.
g) Impacts on existing shellfish operations.

2. ORS 622.320 requires that oyster, clam, and mussel plats shall not restrict the rights of the public to the use of the waters of the state in a normal and customary manner.

FACTUAL CIRCUMSTANCES

Tillamook Bay has historically been a clam and oyster producing area. This was evidenced by the mounds of discarded shells made by the Killamook Indians and visible on Kilchis Point as late as the 1950's. The potential oyster culture area (approximately 3,000 acres) extends from Hobsonville Point up to a line drawn between Bay City and Dick Point. Two areas of Tillamook Bay are closed to commercial harvest of shellfish by the Oregon Department of Agriculture, Food Safety Division, for health reasons. These areas are north and seaward of a line drawn from Hobsonville Point across the bay to Kincheloe Point and up the bay from the line drawn between the Bay City pier and Dick Point. The lower bay is a heavy recreational use area by clammers, crabbers, and anglers.

Currently approximately 2,500 acres of state-owned land in Tillamook Bay are granted under lease to seven grower entities on 16 plats for the production of oysters. Bottom culture is the most common cultural method utilized, although long line operations are conducted in some areas. Soft mud or the presence of eelgrass has restricted bottom culture in some areas. During 2019, lessors reported harvesting 107,500 bushels of oysters for singles and processed 7,000 gallons of oysters from Tillamook Bay.

Eelgrass beds are an important estuarine habitat for salmonids, other fish and wildlife. State and federal wildlife agencies have and continue to comment to the Department that eelgrass habitat must be preserved and enhanced. The Oregon Department of Fish and Wildlife (ODFW) has provided general comments in the past to the Department regarding the importance of eelgrass and references to research that has shown correlation between loss of eelgrass and negative impacts to fish and wildlife habitat.

PUBLIC COMMENTARY ON APPLICATION

Copies of the application and supporting data for proposed plat were mailed on November 23, 2020, to the known interested or affected federal, state, and local government agencies and to individuals and local oyster producers and other interested parties. This included:

- Ron Schweizer, Pacific Oyster Company
- Jesse Hayes, Hayes Oyster Company
- Thomas Benke, Tillamook Bay Shellfish Company LLC
- Brad Farmer, Brad Farmer and Oregon Coast Seafood
- Levi Cherry, Oregon Coast Clam Co.
- Craig Andes, Clam Up Fisheries
- Doug Creasy, Bay Ocean Oyster Company
- Alex Manderson, ODA, Food Safety
- Judy Dowell, ODA, Food Safety
- Marine Resources Program, ODFW
- Matt Hunter, Shellfish Project Leader, ODFW
- Program Leader, Marine Reserves, ODFW
- North Coast Watershed District Office, ODFW
- Portland State Office Bldg. #640, OR Health Division
- OR Dept. of Environmental Quality
- Aquatic Resources Management, OR Department of State Lands
- DSL Statewide Archaeologist, OR Dept. of State Lands
- Shellfish Aquaculture Policy Coordinator, OR DLCD
- OR State Historic Preservation Office
- Policy and Environmental Program Manager, OR State Marine Board
- National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- U.S. Fish and Wildlife Service
- Command Officer, U.S. Coast Guard
- Board of Commissioners, Tillamook County
- Planning Commission, Tillamook County
- William K. Sargent, Tillamook County Legal Counsel
- District Manager, Tillamook County Soil and Water Cons. District
- City Manager, City of Tillamook
- Planning Commission, Tillamook County
- General Manager, Port of Tillamook
- Planning Commission, Bay City
- Planning Commission, Garibaldi
- Port Manager, Port of Garibaldi
- Jim Coon, Wilson River Bait
- Executive Director, Pacific Shellfish Growers Association
- Joe Conchelos, Oregon Coast Crab Association
- Reynold Leno, Chairman, Confederated Tribes of Grande Ronde
- David Fullerton, General Manager, Confederated Tribes of Grand Ronde
- Mike Kennedy, Natural Resources Manager, Confederated Tribes of the Siletz Indians
- Board of Directors, North, Coast Land Conservancy
- Executive Director, Oregon Coast Alliance
- Executive Director, The Wetlands Conservancy
- Executive Director, Oregon Shores Conservation Coalition
- Oregon Policy Manager, Oregon Surf Rider
- Executive Director, Tillamook Estuaries Partnership
- North Coast Watershed District Office, ODFW

The following summary is of comments received by the Oregon Department of Agriculture for the comment period that ended on January 15, 2021:

Rachel Hagerty, Chief of Staff, Tillamook County Board of Commissioners has no comments

Margaret A. Pilaro, Executive Director, Pacific Coast Shellfish Growers Association (PCSGA), has no objections, but comments very much in support of this application. The activities proposed will benefit the marine ecosystem and provide high quality protein for the community.

Mike Kennedy, Natural Resources Manager, Confederated Tribes of the Siletz, mail had been returned as not deliverable as addressed.

Dan Cary, Senior Aquatic Resource Coordinator Columbia, Clatsop and Tillamook Counties, Aquatic Resource Management Program, Department of State Lands (DSL) commented that if it is bottom culture of oysters proposing non-mechanical (by-hand) harvesting, we will not, at this time, be seeking a removal-fill permit. If mechanical (raking, dredging) harvest of oysters is proposed may seek a removal-fill permit for the harvest action. If rack or suspended culture is proposed may seek a removal-fill permit in this case. Oregon Department of Agriculture only manages the platting program for state-owned submerged and submersible lands. Any proposed shellfish cultivation on non-state-owned lands should be evaluated for a removal-fill permit. A subsequent email to the Department indicated that a removal-fill permit would not be sought for rack or suspended culture where biodegradable materials could be used such as wood, and plant fibers for bags and nets.

Kristi Foster, Executive Director, Tillamook Estuaries Partnership, has no objections, but comments the area description does not include GPS Coordinates. The agency has a concern about potential impact to eelgrass beds, but cannot make a better assessment without more detail. The agency lacks the expertise with the type of cultivation, but would be concerned about impact to habitat water quality, and aquatic organisms.

Therese O'Rourke, Oregon Coast Branch Chief, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), identifies key concerns as the potential impacts on eelgrass and estuarine habitat from the proposed plat application, which could reduce shelter, food, and rearing habitat for our trust resources. Plat access (i.e., use of boats/all-terrain vehicles (ATVs) and foot access) can physically damage eelgrass plants and introduce chemical contaminants such as fuel and oil into estuaries. Negative effects on water quality from the potential for increased use of vehicles (i.e., motor boats and ATVs) that may introduce chemical contaminants.

Matthew Hunter, Oregon Department of Fish and Wildlife (ODFW), requested that the application be denied due to concerns regarding tidal elevation, native eelgrass, burrowing shrimp, and access for recreational boaters and anglers. Four areas of concern were identified:

1. Tidal Elevation: The proposed plat encompasses a mix of intertidal elevations related to Mean Low Lower Water. Regions of the proposed plat that occur in the shallow subtidal zone are located predominantly along the western and eastern sides of the plat, and the area in intertidal zone is located predominantly in the middle of the proposed plat. Tidal elevation within the proposed plat indicated that substantial area is likely too deep and unsuitable for the types of shellfish cultivation methods proposed.

2. Native Eelgrass: Moderate-dense eelgrass beds require a 50-meter buffer away from commercial shellfish cultivation activities to reduce impacts. The required buffer will further reduce the area available for shellfish cultivation use by almost 50% (estimated 14.4 acres).

3. Burrowing Shrimp: This high-density area for burrowing shrimp is used by commercial bait-harvesters for digging, extraction, and collection of shrimp. The high-density of burrowing shrimp located within the majority of the unvegetated region of the proposed shellfish plat is not considered to be conducive to the types of shellfish cultivation methods proposed (tide-tumbled suspension tray and rack and bag), and further reduces the available area by about 50% (estimated 7 acres).

4. Access for Recreational Boaters and Anglers: The southeast corner of the proposed shellfish plat includes a portion of a tidal channel. This tidal channel is frequently used by recreational boaters to access the middle channel of Tillamook Bay. The channel should not be impeded by placement of suspended lines, stakes, trays, racks, moorings, buoys, or other structures associated with the commercial cultivation of shellfish.

ODFW recommends the plat application be denied unless the applicant meets the following conditions:

1.) Provide a legal description of the proposed plat including GPS coordinates or a legal survey.
2.) Provide a current description of habitats located within the proposed plat.
3.) Provide a more detailed description of the proposed shellfish culture methods, including species of shellfish, type/methods for cultivation, an operation plan, and mitigation plans to avoid or offset any disturbances to native fish and wildlife.
4.) Maintain maximum buffers of at least 50 meters from the moderate-high density native eelgrass beds (greater than 53 shoots per square meter) for all aspects of the shellfish aquaculture operation.
5.) Shellfish culture activities are limited to oyster bottom culture with no mechanical seeding or harvesting allowed.
6.) The applicant also must obtain any and all ODFW permits that may be required for shellfish aquaculture operations as per Oregon Administrative Rules.

FINDINGS OF FACT AND CONCLUSIONS

The Department's conclusions are in italics below.

In conclusion of the matter set forth in the Basis and Scope of Review, the investigation of the Department, the contents of the application, and the public input, the following Findings of Fact and Conclusions are made:

1. The application, map, and legal description, the fee of $250, Notice of Application, and an Affidavit of Publication were received and are considered complete. The application is consistent with ORS 622.250(1).

2. Although no comments were received relating to consistency with local land use regulation, the Department recognizes that land use authorization will be required from Tillamook County. Review by Tillamook County would establish consistency with local land use standards as required by OAR 603-082-0050(a).

   A condition requiring land use authorization from Tillamook County will need to be obtained before a final Grant Certificate is issued.

3. The Department received comments from Dan Cary, Senior Aquatic Resource Coordinator Columbia, Clatsop and Tillamook Counties, Aquatic Resource Management Program, Department of State Lands (DSL), stating that a removal-fill permit may be required depending on how the applicant harvests such as mechanical, racking, or suspended culture. Any proposed shellfish cultivation on non-state-owned lands should be evaluated for a removal-fill permit.

   The Department acknowledges the potential need for a removal-fill permit. The applicant will work with Department of State Lands, if permit is needed. Clarification from DSL indicated that a removal- fill permit would not be required if the applicant utilized only biodegradable materials for any aquaculture structures and equipment placed in the bay.

4. The Department received comments from Kristi Foster, Executive Director, Tillamook Estuaries Partnership, concern about potential impact to eelgrass beds, habitat water quality, and aquatic organisms.

   The Department acknowledges that eelgrass is highly valued resource in the estuary and conditions protecting eelgrass during aquaculture activities will be required.

5. The Department received comments from Therese O'Rourke, Oregon Coast Branch Chief, U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), concern about the potential impacts on eelgrass and estuarine habitat, which could reduce shelter, food, and rearing habitat for our trust resources. Plat access can physically damage eelgrass plants.

The Department acknowledges that eelgrass and estuarine habitat are highly valued resource in the estuary. The Department acknowledges the concerns of plat access damaging eelgrass and conditions protecting eelgrass during aquaculture activities will be required. If a negative impact is found to have occurred affecting native eelgrass beds, forage fish, ground fish, Endangered Species Act species or Magnuson-Stevens Fishery Conservation and Management Act species, or their habitat, this grant order may be revised or revoked.

6. The Department received comments from Matt Hunter, Oregon Department of Fish and Wildlife (ODFW), requested that the application be denied due to concerns regarding tidal elevation, native eelgrass, burrowing shrimp, and access for recreational boaters and anglers. Four areas of concern were identified:

   a) Tidal Elevation: The proposed plat encompasses a mix of intertidal elevations related to Mean Low Lower Water. Regions of the proposed plat that occur in the shallow subtidal zone are located predominantly along the western and eastern sides of the plat, and the area in intertidal zone is located predominantly in the middle of the proposed plat. Tidal elevation within the proposed plat indicated that substantial area is likely too deep and unsuitable for the types of shellfish cultivation methods proposed.

      The Department acknowledges that according to current bathymetry data, certain areas of the proposed plat may be too deep for the proposed cultivation methods. The Department also recognizes that tidal elevations in the bay change over time as channels move. Observations made at this time may be quite different years from now.

   b) Native Eelgrass: Moderate-dense eelgrass beds require a 50-meter buffer away from commercial shellfish cultivation activities to reduce impacts. The required buffer will further reduce the area available for shellfish cultivation use by almost 50% (estimated 14.4 acres).

      The Department acknowledges that eelgrass is highly valued resource in the estuary and conditions protecting eelgrass during aquaculture activities will be required.

   c) Burrowing Shrimp: This high-density area for burrowing shrimp is used by commercial bait-harvesters for digging, extraction, and collection of shrimp. The high-density of burrowing shrimp located within the majority of the unvegetated region of the proposed shellfish plat is not considered to be conducive to the types of shellfish cultivation methods proposed (tide-tumbled suspension tray and rack and bag), and further reduces the available area by about 50% (estimated 7 acres).

      The Department acknowledges that burrowing shrimp are used by commercial bait-harvesters for digging, extraction, and collection. However, it has not been

established whether the site in question occupies an area where significant commercial burrowing shrimp harvesting occurs. The Department did not receive any correspondence during the public comment period from commercial burrowing shrimp harvesters operating in Tillamook Bay.

d) Access for Recreational Boaters and Anglers: The southeast corner of the proposed shellfish plat includes a portion of a tidal channel. This tidal channel is frequently used by recreational boaters to access the middle channel of Tillamook Bay. The channel should not be impeded by placement of suspended lines, stakes, trays, racks, moorings, buoys, or other structures associated with the commercial cultivation of shellfish.

The Department acknowledges the concerns of a tidal channel within the lease area. Conditions that ensure customary use of navigation channels will be unimpaired by aquaculture activities is required.

The Department had additional conversations with ODFW regarding all their concerns. Following those conversations ODFW provided an additional letter indicating that the plat lease with the listed conditions is satisfactory. This letter will be included in the plat lease file.

ULTIMATE CONCLUSION AND DECISION:

Based upon the comments provided and the Findings of Fact and Conclusions above, the Department concludes that the lands proposed for oyster cultivation, described above in the Basis and Scope of Review is found to be consistent with ORS 622.240, ORS 622.250, ORS 622.320, and OAR 603.082 The application is hereby approved with the following conditions;

1. The proposed plat as defined in the legal description dated November 25, 2020, must be surveyed by a licensed surveyor, and a stamped map shall be prepared and submitted to the Department before a Grant Certificate is issued.

2. The boundary corners of the plat shall be plainly and distinctly marked by a means that does not disrupt the normal use of the bay by the public for navigation purposes.

3. Culture methods shall comply with Tillamook County Land Use Ordinances. Any required land-use permits must be obtained before a Final Grant Certificate is issued and cultivation operations are established.

4. Culture methods are limited to bottom culture, and rack and bag culture methods only. All materials used for rack and bag methods must be biodegradable in composition, and be formed of natural fibers, wood or other organic materials only.

5. Culture methods shall not permanently reduce eelgrass productivity within the plat. The Applicant is required to maintain maximum buffers of at least 50 meters around "moderate-high" density of eelgrass beds (greater than 53 shoots per meter square) for all aspects of the mariculture operation. Limit seeding densities to 100 bushels per acre in "light" density areas of eelgrass beds (11-22 shoots per meter square), and limit seeding densities to 50 bushels per acre in "light-moderate" (23-52 shoots per meter square) density areas of eelgrass beds. The Department acknowledges that eelgrass is a highly valued resource in the bay. If eelgrass productivity increases in any given area of the plat, seeding rates shall be reduced to comply with the rates established above.

6. No mechanical seeding or harvesting of oysters is allowed.

7. Leaseholder is to limit the number and types of plat access points, anchorages, or parking areas to mitigate eelgrass protection from vehicle and foot traffic destruction, shall not disturb naturally occurring marine debris, and shall operate in such a manner as to prevent potential chemical contamination.

8. The applicant, their agents or assigns, will obtain all local, state or federal approvals or permits that may be required for this activity, and shall comply with all applicable state and federal laws and regulations.

9. Recognizing that the plat and its environs have been identified as an area supporting spawning and harvestable clams, Leaseholder should avoid cultivating oysters in known public clamming and spawning areas and must allow recreational clamming inside plat boundaries, as long as active oyster cultivation areas are not disturbed.

10. Leaseholder is required to stop all aquaculture activities upon the discovery of actual or potential cultural resources, and must obtain a cultural resources survey using accepted standards as determined by the Oregon State Historic Preservation Office.

11. In the event it is determined by a court of competent jurisdiction that the activity authorized by this lease will or is resulting in the take of a species listed as threatened or endangered under the State or Federal Endangered Species Acts, the Oregon Department of Agriculture reserves the right to terminate this lease/plat.

12. The Oregon Department of Agriculture may conduct inspections of the subject plat at any time to determine compliance with these conditions.

13. Authorization from the U.S. Army Corps of Engineers is obtained before a final Grant Certificate will be issued.

14. Violation of any of the above listed conditions shall be cause for revocation of the lease granted herein.

NOTICE OF RIGHT TO REQUEST A HEARING

You have the right to a hearing to contest this order. The hearing, if requested, will be conducted according to the Administrative Procedures Act, ORS Chapter 183. If you want a hearing, you must file a written request with the Oregon Department of Agriculture within 21 days of the date the order was mailed. The request should be mailed to the attention of Isaak Stapleton, Director, Food Safety and Animal Health Program Area, Oregon Department of Agriculture, 635 Capitol Street N.E., Salem, Oregon 97301. If you make a timely request for a hearing, you will be notified of the time and date of such hearing. The rights and procedures in a contested case are available from the Department upon request.

If you do not make a timely request for a hearing, this order will become final and effective 22 days after the date this order was mailed. If this order becomes final in this manner, you will have the right to appeal the order to the Oregon Court of Appeals pursuant to ORS 183.482. To appeal, you must file a petition for judicial review with the Court of Appeals within 82 days from the date this order was mailed. If you do not file a petition for judicial review within the 82-day time period, you will lose the right to appeal.

Dated: April 13, 2021 at Salem, Oregon.

Alexis Taylor, Director
Oregon Department of Agriculture

STATEWIDE LAND SURVEYING INC.

DAMON MILLER OYSTER LEASE DESCRIPTION 05/11/2021

A TRACT OF LAND SITUATED IN THE SOUTH ONE-HALF OF SECTION 28 AND THE NORTH ONE-HALF OF SECTION 33, ALL IN TOWNSHIP 1 NORTH, RANGE 10 WEST, OF THE WILLAMETTE MERIDIAN, COUNTY OF TILLAMOOK, STATE OF OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT:

COMMENCING AT THE SOUTH ONE QUARTER SECTION CORNER OF SECTIONS 27 AND 34, MARKED WITH A 3-IN TILLAMOOK COUNTY SURVEYOR BRASS CAP STAMPED "1/4 27/34, RS287, 1968" LATITUDE (LAT): N45°32'10.38", LONGITUDE (LON): W123°53'42.86", OREGON NORTH STATE PLANE COORDINATES (ORGN) N:699869.47-FT, E:7332366.97-FT;

THENCE, S.81°59'56"W. FOR A DISTANCE OF 5141.32-FT, LAT:N45°32'01.20", LON:W123°54'53.90", ORGN N:699153.84-FT, E:7327275.70-FT, MARKED BY A 5/8-IN X 30-IN REBAR WITH YELLOW PLASTIC CAP STAMPED "S.W.L.S. INC. 503-665-7777" (W/YPC), AND **THE POINT OF BEGINNING**;

THENCE, N.49°44'43"W. FOR A DISTANCE OF 3352.29-FT, LAT:N45°32'21.50", LON:W123°55'31.10", ORGN N:701320.04-FT, E:7324717.30-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

THENCE, S.85°06'43"E. FOR A DISTANCE OF 2593.11-FT, LAT;N45°32'20.40", LON:W123°54'54.70", ORGN N:701099.09-FT, E:7327300.98-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

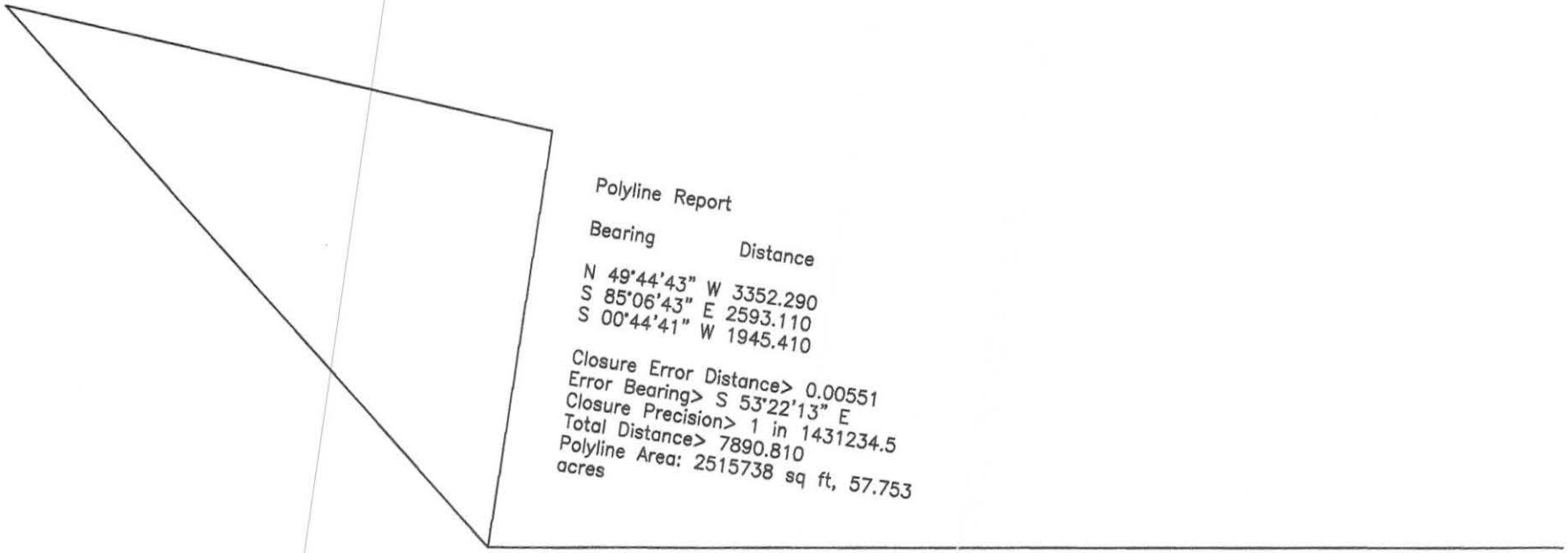
THENCE, S.00°44'41"W. FOR A DISTANCE OF 1945.41-FT; TO **THE POINT OF BEGINNING**, DESCRIBED LANDS CONTAINING 57.75 ACRES, MORE OR LESS, OF TIDELANDS WITHIN TILLAMOOK BAY.

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Gregory D. Spurlock

OREGON
JULY 29, 1988
GREGORY D. SPURLOCK
2370

EXPIRES: 06/30/22



Polyline Report

Bearing	Distance
N 49°44'43" W	3352.290
S 85°06'43" E	2593.110
S 00°44'41" W	1945.410

Closure Error Distance> 0.00551
Error Bearing> S 53°22'13" E
Closure Precision> 1 in 1431234.5
Total Distance> 7890.810
Polyline Area: 2515738 sq ft, 57.753 acres

DAMON MILLER OYSTER LEASE

LEASE DESCRIPTION

A TRACT OF LAND SITUATED IN THE SOUTH ONE-HALF OF SECTION 28 AND THE NORTH ONE-HALF OF SECTION 33, ALL IN TOWNSHIP 1 NORTH, RANGE 10 WEST, OF THE WILLAMETTE MERIDIAN, COUNTY OF TILLAMOOK, STATE OF OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT:

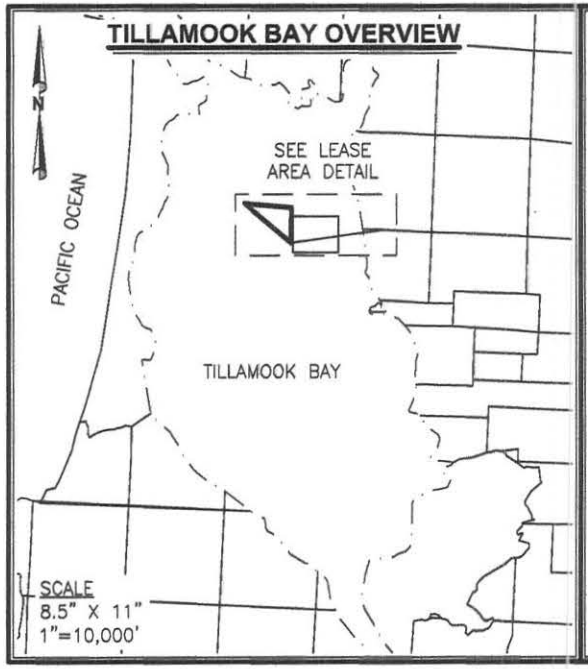
COMMENCING AT THE SOUTH ONE QUARTER SECTION CORNER OF SECTIONS 27 AND 34, MARKED WITH A 3-IN TILLAMOOK COUNTY SURVEYOR BRASS CAP STAMPED "1/4 27/34, RS287, 1968" LATITUDE (LAT): N45°32'10.38", LONGITUDE (LON): W123°53'42.86", OREGON NORTH STATE PLANE COORDINATES (ORGN) N:699869.47-FT, E:7332366.97-FT;

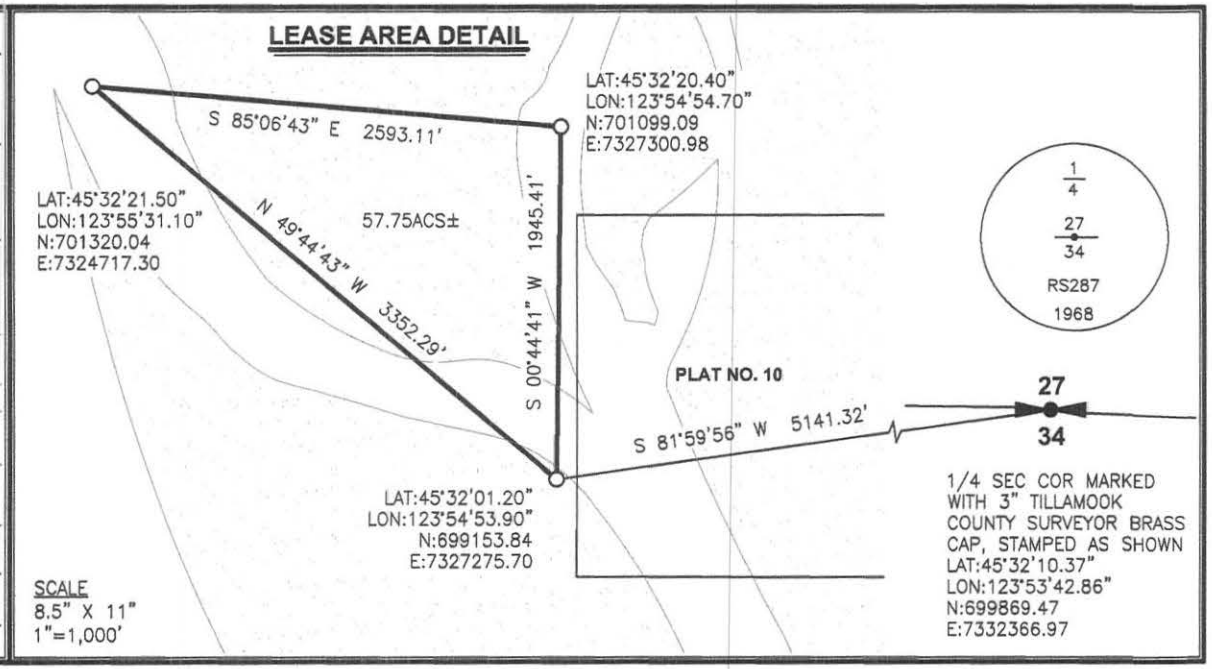
THENCE, S.81°59'56"W. FOR A DISTANCE OF 5141.32-FT, LAT:N45°32'01.20", LON:W123°54'53.90", ORGN N:699153.84-FT, E:7327275.70-FT, MARKED BY A 5/8-IN X 30-IN REBAR WITH YELLOW PLASTIC CAP STAMPED "S.W.L.S. INC. 503-665-7777" (W/YPC), AND **THE POINT OF BEGINNING;**

THENCE, N.49°44'43"W. FOR A DISTANCE OF 3352.29-FT, LAT:N45°32'21.50", LON:W123°55'31.10", ORGN N:701320.04-FT, E:7324717.30-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

THENCE, S.85°06'43"E. FOR A DISTANCE OF 2593.11-FT, LAT;N45°32'20.40", LON:W123°54'54.70", ORGN N:701099.09-FT, E:7327300.98-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

THENCE, S.00°44'41"W. FOR A DISTANCE OF 1945.41-FT; TO **THE POINT OF BEGINNING,** DESCRIBED LANDS CONTAINING 57.75 ACRES, MORE OR LESS, OF TIDELANDS WITHIN TILLAMOOK BAY.





LEGEND

- = QUARTER CORNER FOUND AS NOTED
- O = SET 5/8" X 30" IRON ROD W/YPC IN 1-1/2" PVC PIPE TOPPED WITH RED REFLECTIVE TAPE
- LEASE AREA BOUNDARY
- TAX LOTS, TILLAMOOK COUNTY GIS
- EDGE OF TILLAMOOK BAY, PER AERIAL IMAGERY
- LOW TIDE SAND BARS

NOTES

1. MONUMENTS SET PER LATITUDE AND LONGITUDE PROVIDED BY CLIENT.
2. DRAWING IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83/2011) OREGON NORTH STATE PLANE COORDINATE SYSTEM.

REGISTERED PROFESSIONAL LAND SURVEYOR

Gregory D. Spurlock

OREGON
JULY 29, 1988
GREGORY D. SPURLOCK
2370

EXPIRES: 06/30/22

DRAWN A.A.O.	DATE 05/11/21	SWLS
APPROVED G.D.S.	DATE 05/11/21	
SCALE 1"=1,000'	SHEET 1 OF 1	PROJECT NO. 2021-121

Sarah Absher

From: Sarah Absher
Sent: Friday, September 24, 2021 4:42 PM
To: Sarah Absher
Subject: Notice of Application
Attachments: 821-21-000212-PLNG Miller Oyster Farm.PDF

Importance: High

Greetings;

The Department is reviewing a proposal for aquaculture activities (oyster farm) in Tillamook Bay. Attached is the notice of application under review. Application materials will be posted on the Department website shortly. Staff have been working with the applicant and Kinsey Friesen, USACE, for review of the project in conjunction with those applicable sections of the Tillamook Bay Environmental Impact Report to satisfy the environmental impact analysis required for development activity in EC-1 and EN Zones.

If you have any questions, please email me directly.

Sincerely,

Sarah Absher, CFM, Director
TILLAMOOK COUNTY | Community Development
1510-B Third Street
Tillamook, OR 97141
Phone (503) 842-3408 x3317
sabsher@co.tillamook.or.us

Joint Permit Application

This is a joint application, and must be sent to all agencies (Corps, DSL, and DEQ). Alternative forms of permit applications may be acceptable; contact the Corps and DSL for more information.

MAY 8 2021

U.S. Army Corps of Engineers Portland District	Oregon Department of State Lands	Oregon Department of Environmental Quality
Action ID Number NWP-2021-240	Number	

(1) TYPE OF PERMIT(S) IF KNOWN (check all that apply)

Corps: ☐ Individual ☐ Nationwide No.: _____ ☐ Regional General Permit _____ ☐ Other (specify): _____

DSL: ☐ Individual ☐ GP Trans ☐ GP Min Wet ☐ GP Maint Dredge ☐ GP Ocean Energy ☐ No Permit ☐ Waiver

(2) APPLICANT AND LANDOWNER CONTACT INFORMATION

	Applicant	Property Owner (if different)	Authorized Agent (if applicable) ☐ Consultant ☐ Contractor
Name (Required)	DAMON MILLER		
Business Name	ALAVA OCEAN CO. LLC		
Mailing Address 1	PO BOX 19301		
Mailing Address 2			
City, State, Zip	PORTLAND, OR 97280		
Business Phone	503.888.3458		
Cell Phone			
Fax			
Email	ALAVAOCEAN@GMAIL.COM		

(3) PROJECT INFORMATION

A. Provide the project location.

Project Name	Latitude & Longitude*
COMMERCIAL OYSTER CULTIVATION	45.538948 -123.918272

Project Address / Location	City (nearest)	County
	TILLAMOOK	TILLAMOOK

Township	Range	Section	Quarter / Quarter	Tax Lot

Brief Directions to the Site: SOUTH OF GARIBALDI MARINA, WEST OF LARSON COVE, BETWEEN SOUTH AND MAIN CHANNEL

B. What types of waterbodies or wetlands are present in your project area? (Check all that apply.)

☐ River / Stream ☐ Non-Tidal Wetland ☐ Lake / Reservoir / Pond

☐ Estuary or Tidal Wetland ☐ Other ☑ Pacific Ocean

Waterbody or Wetland Name**	River Mile	6th Field HUC Name	6th Field HUC (12 digits)
TILLAMOOK BAY			

* In decimal format (e.g., 44.9399, -123.0283)

** If there is no official name for the wetland or waterbody, create a unique name (such as "Wetland 1" or "Tributary A").

C. Indicate the project category. (Check all that apply.)		
☐ Commercial Development	☐ Industrial Development	☐ Residential Development
☐ Institutional Development	☒ Agricultural	☐ Recreational
☐ Transportation	☐ Restoration	☐ Bridge
☐ Dredging	☐ Utility lines	☐ Survey or Sampling
☐ In- or Over-Water Structure	☐ Maintenance	☐ Other:

(4) PROJECT DESCRIPTION

A. Summarize the overall project including work in areas both in and outside of waters or wetlands.

BOTTOM CULTURE OR BIODEGRADEABLE BAG OYSTER CULTIVATION.

B. Describe work within waters and wetlands.

BOTTOM CULTURE OR BIODEGRADEABLE OYSTER CULTIVATION.

C. Construction Methods. Describe how the removal and/or fill activities will be accomplished to minimize impacts to waters and wetlands.

NO PLANS FOR REMOVAL OR FILL ACTIVITIES.

H. Fill Volumes and Dimensions (if more than 7 impact sites, include a summary table as an attachment)

Wetland / Waterbody Name*	Fill Dimensions					Time Fill is to remain**	Material***
	Length (ft.)	Width (ft.)	Depth (ft.)	Area (sq. ft. or ac.)	Volume (c.y.)		
NO PLANS FOR REMOVAL OR FILL ACTIVITY.							

Total Fill Below Mean High Water Tidal Elevation

*If there is no official name for the wetland or waterbody, create a unique name (such as "Wetland 1" or "Tributary A").
**Indicate whether the proposed area of removal or fill is permanent or, if you are proposing temporary impacts, specify the days, months or years the fill or removal is to remain.
*** Example: soil, gravel, wood, concrete, pilings, rock etc.

(5) PROJECT PURPOSE AND NEED

Provide a statement of the purpose and need for the overall project.

TO GROW OYSTERS TO HELP FILTER THE WATERS OF THE BAY, FEED THE COMMUNITY, AND MAKE A PROFIT.

(6) DESCRIPTION OF RESOURCES IN PROJECT AREA

A. Describe the existing physical, chemical, and biological characteristics of each wetland or waterbody. Reference the wetland and waters delineation report if one is available. Include the list of items provided in the instructions.

INTERTIDAL ZONE

SPARSE POPULATION OF EEL GRASS, GHOST SHRIMP AND CLAMS. SEE ASSOCIATED DOCUMENTATION FOR DENSITY OF SPECIES IDENTIFIED. SEE INCLUDED ODF&W DATA PROVIDED 9/21/20. AREAS CROSSED OUT IS THE ORIGINALLY PROPOSED PLAT. AREA IN ORANGE IS FINAL ODA APPROVED AREA.

B. Describe the existing navigation, fishing and recreational use of the waterbody or wetland.

OCCASSIONAL COMMERCIAL AND RECREATIONAL CLAMMING. SEE INCLUDED ODF&W DATA PROVIDED ON 9/21/20. AREA CROSSED OUT IS THE ORIGINALLY PROPOSED PLAT. AREA IN ORANGE IS FINAL ODA APPROVED AREA.

(7) PROJECT SPECIFIC CRITERIA AND ALTERNATIVES ANALYSIS

Describe project-specific criteria necessary to achieve the project purpose. Describe alternative sites and project designs that were considered to avoid or minimize impacts to the waterbody or wetland.[1]

PRIOR ANALYSIS AND CONSIDERATION OF YAQUINA BAY AND NETARTS BAY.

PROJECT REQUIRES INTERTIDAL ZONE, COLD SALT WATER AND NATIVE HABITAT FOR PACIFIC OYSTERS.

(8) ADDITIONAL INFORMATION

Are there state or federally listed species on the project site?	☒ Yes	☐ No	☐ Unknown
Is the project site within designated or proposed critical habitat?	☐ Yes	☒ No	☐ Unknown
Is the project site within a national Wild and Scenic River ?	☐ Yes	☒ No	☐ Unknown
Is the project site within a State Scenic Waterway?	☐ Yes	☒ No	☐ Unknown
Is the project site within the 100-year floodplain?	☐ Yes	☐ No	☒ Unknown

If yes to any above, explain in Block 6 and describe measures to minimize adverse effects to those resources in Block 7.

Is the project site within the Territorial Sea Plan (TSP) Area?	☐ Yes	☒ No	☐ Unknown

If yes, attach TSP review as a separate document for DSL.

Is the project site within a designated Marine Reserve?	☐ Yes	☒ No	☐ Unknown

If yes, certain additional DSL restrictions will apply.

Will the overall project involve ground disturbance of one acre or more?	☐ Yes	☒ No	☐ Unknown

If yes, you may need a 1200-C permit from the Oregon Department of Environmental Quality (DEQ).

Is the fill or dredged material a carrier of contaminants from on-site or off-site spills?	☐ Yes	☒ No	☐ Unknown
Has the fill or dredged material been physically and/or chemically tested?	☐ Yes	☒ No	☐ Unknown

If yes, explain in Block 6 and provide references to any physical/chemical testing report(s).

Has a cultural resource (archaeological and/or built environment) survey been performed on the project area?	☐ Yes	☐ No	☒ Unknown
Do you have any additional archaeological or built environment documentation, or correspondence from tribes or the State Historic Preservation Office?	☐ Yes	☒ No	☐ Unknown

If yes, provide a copy of the survey and/or documentation of correspondence with this application to the Corps only. Do not describe any resources in this document. Do not provide the survey or documentation to DSL.

Is the project part of a DEQ Cleanup Site? No ☒ Yes ☐ Permit number _____ DEQ contact. _____

Will the project result in new impervious surfaces or the redevelopment of existing surfaces? Yes ☐ No ☒

[1] Not required by the Corps for a complete application, but is necessary for individual permits before a permit decision can be rendered.

If yes, the applicant must submit a post-construction stormwater management plan as part of this application to DEQ's 401 WQC program for review and approval, see https://www.oregon.gov/deq/FilterDocs/401wqcertPostCon.pdf

Identify any other federal agency that is funding, authorizing or implementing the project.

Agency Name	Contact Name	Phone Number	Most Recent Date of Contact

List other certificates or approvals/denials required or received from other federal, state or local agencies for work described in this application.

Agency	Certificate / approval / denial description	Date Applied
ODA	APPROVAL	11/10/20

Other DSL and/or Corps Actions Associated with this Site (Check all that apply.)

☐ Work proposed on or over lands owned by or leased from the Corps (may require authorization pursuant to 33 USC 408). These could include the federal navigation channel, structures, levees, real estate, dikes, dams, and other Corps projects.

☐ State owned waterway — DSL Waterway Lease #:

☐ Other Corps or DSL Permits — Corps # DSL #

☐ Violation for Unauthorized Activity — Corps # DSL #

☐ Wetland and Waters Delineation — Corps # DSL #

Submit the entire delineation report to the Corps; submit only the concurrence letter (if complete) and approved maps to DSL. If not previously submitted to DSL, send under a separate cover letter

(9) IMPACTS, RESTORATION/REHABILITATION, AND COMPENSATORY MITIGATION

A. Describe unavoidable environmental impacts that are likely to result from the proposed project. Include permanent, temporary, direct, and indirect impacts.

NO ENVIRONMENTAL IMPACTS IDENTIFIED TO DATE.

B. For temporary removal or fill or disturbance of vegetation in waterbodies, wetlands or riparian (i.e., streamside) areas, discuss how the site will be restored after construction to include the timeline for restoration.

NO REMOVAL OR FILL OR DISTURBANCE OF VEGETATION PLANNED.

Compensatory Mitigation

C. Proposed mitigation approach. Check all that apply:

NO REMOVAL OR FILL OR DISTURBANCE OF VEGETATION PLANNED.

D. Provide a brief description of proposed mitigation approach and the rationale for choosing that approach. If you believe mitigation should not be required, explain why.

NO REMOVAL OR FILL OR DISTURBANCE OF VEGETATION PLANNED.

Mitigation Bank / In-Lieu Fee Information:
Name of mitigation bank or in-lieu fee project:
Type and amount of credits to be purchased:

If you are proposing permittee-responsible mitigation, have you prepared a compensatory mitigation plan?
☐ Yes. Submit the plan with this application and complete the remainder of this section.
☐ No. A mitigation plan will need to be submitted (for DSL, this plan is required for a complete

Mitigation Location Information (Fill out only if permittee-responsible mitigation is proposed)

Mitigation Site Name/Legal Description	Mitigation Site Address	Tax Lot #
County	City	Latitude & Longitude (in DD.DDDD format)

Township	Range	Section	Quarter/Quarter

(10) ADJACENT PROPERTY OWNERS FOR PROJECT AND MITIGATION SITE

☐ Pre-printed mailing labels of adjacent property owners attached separately.	**Project Site Adjacent Property Owners**	**Mitigation Site Adjacent Property Owners**

Contact Name
Address 1
Address 2
City, ST ZIP Code

Contact Name
Address 1
Address 2
City, ST ZIP Code

Contact Name
Address 1
Address 2
City, ST ZIP Code

(11) CITY/COUNTY PLANNING DEPARTMENT LAND USE AFFIDAVIT (TO BE COMPLETED BY LOCAL PLANNING OFFICIAL)

I have reviewed the project described in this application and have determined that:

- ☐ This project is not regulated by the comprehensive plan and land use regulations
- ☐ This project is consistent with the comprehensive plan and land use regulations
- ☑ This project is consistent with the comprehensive plan and land use regulations with the following:
  - ☐ Conditional Use Approval
  - ☑ Development Permit
  - ☐ Other Permit (explain in comment section below)
- ☐ This project is not currently consistent with the comprehensive plan and land use regulations. To be consistent requires:
  - ☐ Plan Amendment
  - ☐ Zone Change
  - ☐ Other Approval or Review (explain in comment section below)

An application or variance request has ☑ has not ☐ been filed for the approvals required above.

Local planning official name (print)	Title	City / County
SARAH ABSHER	DIRECTOR	TILLAMOOK
Signature	**Date**	
Sarah Absher	February 9, 2022	
Comments: Application received. Notice of Decision rendered in near future. Department findings support approval of D. Permit.		

(12) COASTAL ZONE CERTIFICATION

If the proposed activity described in your permit application is within the Oregon Coastal Zone, the following certification is required before your application can be processed. The signed statement will be forwarded to the Oregon Department of Land Conservation and Development (DLCD) for its concurrence or objection. For additional information on the Oregon Coastal Zone Management Program and consistency reviews of federally permitted projects, contact DLCD at 635 Capitol Street NE, Suite 150, Salem, Oregon 97301 or call 503-373-0050 or click here.

CERTIFICATION STATEMENT

I certify that, to the best of my knowledge and belief, the proposed activity described in this application complies with the approved Oregon Coastal Zone Management Program and will be completed in a manner consistent with the program.

Print /Type Applicant Name	Title
Applicant Signature	**Date**

(13) SIGNATURES

Application is hereby made for the activities described herein. I certify that I am familiar with the information contained in the application, and, to the best of my knowledge and belief, this information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activities. By signing this application I consent to allow Corps or DSL staff to enter into the above-described property to inspect the project location and to determine compliance with an authorization, if granted. I hereby authorize the person identified in the authorized agent block below to act in my behalf as my agent in the processing of this application and to furnish supplemental information in support of this permit application. I understand that the granting of other permits by local, county, state or federal agencies does not release me from the requirement of obtaining the permits requested before commencing the project. I understand that payment of the required state processing fee does not guarantee permit issuance.

To be considered complete, the fee must accompany the application to DSL. The fee is not required for submittal of an application to the Corps.

Fee Amount Enclosed	$

Applicant Signature (required) must match the name in Block 2	
Print Name DAMON Miller	Title
Signature [signature]	Date 4.28.21
Authorized Agent Signature	
Print Name	Title
Signature	Date

Landowner Signature(s)[2]	
Landowner of the Project Site (if different from applicant)	
Print Name	Title
Signature	Date
Landowner of the Mitigation Site (if different from applicant)	
Print Name	Title
Signature	Date
Department of State Lands, Property Manager (to be completed by DSL)	
If the project is located on state-owned submerged and submersible lands, DSL staff will obtain a signature from the Land Management Division of DSL. A signature by DSL for activities proposed on state-owned submerged/submersible lands only grants the applicant consent to apply for a removal-fill permit. A signature for activities on state-owned submerged and submersible lands grants no other authority, express or implied and a separate proprietary authorization may be required.	
Print Name	Title
Signature	Date

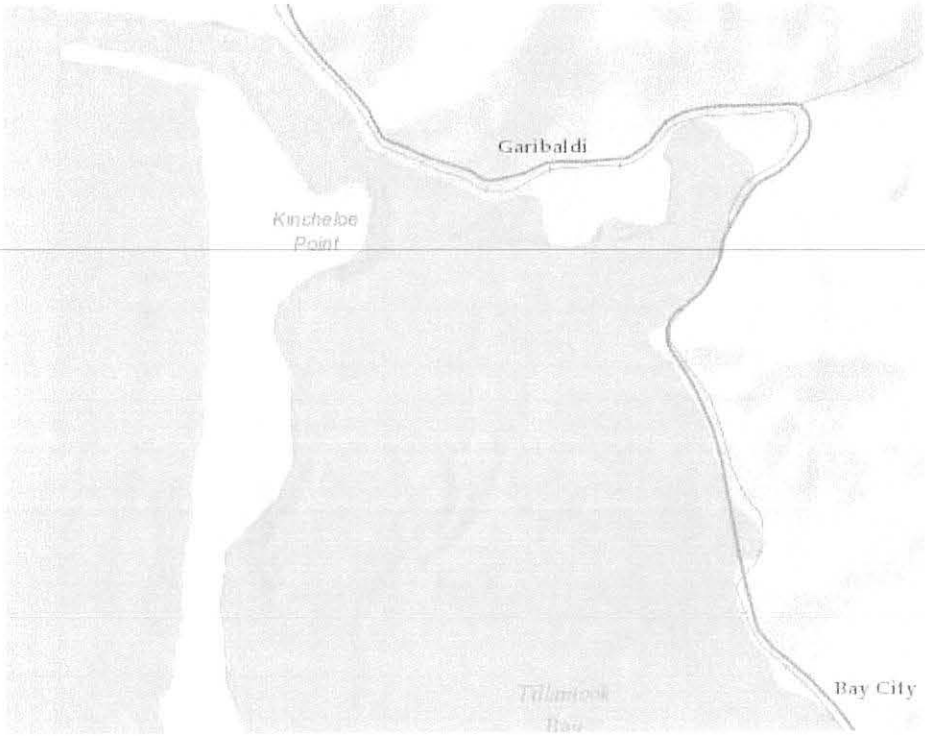
[2] Not required by the Corps.

(14) ATTACHMENTS

- ☐ Drawings
  - ☒ Location map with roads identified
  - ☐ U.S.G.S topographic map
  - ☐ Tax lot map
  - ☐ Site plan(s)
  - ☐ Plan view and cross section drawing(s)
  - ☒ Recent aerial photo
  - ☐ Project photos
  - ☐ Erosion and Pollution Control Plan(s), if applicable
  - ☐ DSL / Corps Wetland Concurrence letter and map, if approved and applicable
- ☐ Pre-printed labels for adjacent property owners (Required if more than 5)
- ☐ Incumbency Certificate if applicant is a partnership or corporation
- ☐ Restoration plan or rehabilitation plan for temporary impacts
- ☐ Mitigation plan
- ☐ Wetland functional assessments, if applicable
  - ☐ Cover Page
  - ☐ Score Sheets
  - ☐ ORWAP OR, F, T, & S forms
  - ☐ ORWAP Reports
  - ☐ Assessment Maps
  - ☐ ORWAP Reports: Soils, Topo, Assessment area, Contributing area
- ☐ Stream Functional Assessments, if applicable
  - ☐ Cover Page
  - ☐ Score Sheets
  - ☐ SFAM PA, PAA, & EAA forms
  - ☐ SFAM Report
  - ☐ Assessment Maps
    - ☐ Aerial Photo Site Map and Topo Site Map (Both maps should document the PA, PAA, & EAA)
- ☐ Compensatory Mitigation (CM) Eligibility & Accounting Worksheet
  - ☐ Matching Quickguide sheet(s)
  - ☐ CM Eligibility & Accounting sheet
- ☐ Alternatives analysis
- ☐ Biological assessment (if requested by the Corps project manager during pre-application coordination)
- ☐ Stormwater management plan (may be required by the Corps or DEQ)
- ☐ Other
  - ☐ Please describe:

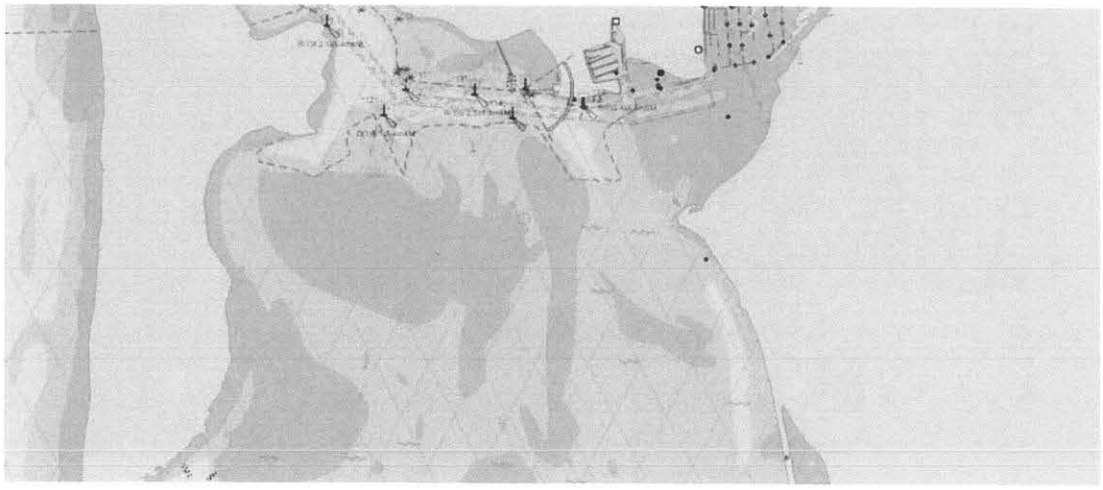
Vicinity Map:

Topographical Map:



Flow Direction:

Shallow Water Pattern:



Land Survey Completed By Statewide:

DAMON MILLER OYSTER LEASE

LEASE DESCRIPTION

A TRACT OF LAND SITUATED IN THE SOUTH ONE-HALF OF SECTION 28 AND THE NORTH ONE-HALF OF SECTION 33, ALL IN TOWNSHIP 1 NORTH, RANGE 10 WEST, OF THE WILLAMETTE MERIDIAN, COUNTY OF TILLAMOOK, STATE OF OREGON, MORE PARTICULARLY DESCRIBED AS FOLLOWS, TO WIT:

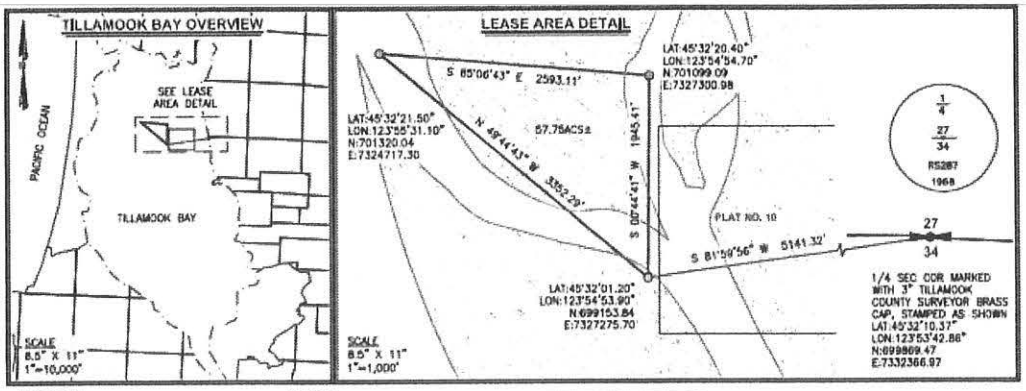
COMMENCING AT THE SOUTH ONE QUARTER SECTION CORNER OF SECTIONS 27 AND 34, MARKED WITH A 3-IN TILLAMOOK COUNTY SURVEYOR BRASS CAP STAMPED "1/4 27/34, RS287, 1968" LATITUDE (LAT): N45°32'10.36", LONGITUDE (LON): W123°53'42.86", OREGON NORTH STATE PLANE COORDINATES (ORGN) N:699869.47-FT, E:7332366.97-FT;

THENCE, S.81°59'56"W. FOR A DISTANCE OF 5141.32-FT, LAT:N45°32'01.20", LON:W123°54'53.90", ORGN N:699153.84-FT, E:7327275.70-FT, MARKED BY A 5/8-IN X 30-IN REBAR WITH YELLOW PLASTIC CAP STAMPED "S.W.L.S. INC 503-665-7777 (W/YPC), AND THE POINT OF BEGINNING;

THENCE, N.49°44'43"W. FOR A DISTANCE OF 3352.29-FT, LAT:N45°32'21.50", LON:W123°55'31.10", ORGN N:701320.04-FT, E:7324717.30-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

THENCE, S.85°06'43"E. FOR A DISTANCE OF 2593.11-FT, LAT:N45°32'20.40", LON:W123°54'54.70", ORGN N:701099.09-FT, E:7327300.98-FT, MARKED BY A 5/8-IN X 30-IN REBAR W/YPC.

THENCE, S.00°44'41"W. FOR A DISTANCE OF 1945.41-FT; TO THE POINT OF BEGINNING, DESCRIBED LANDS CONTAINING 57.75 ACRES, MORE OR LESS, OF TIDELANDS WITHIN TILLAMOOK BAY.



LEGEND

- = QUARTER CORNER FOUND AS NOTED
- O = SET 5/8" X 30" IRON ROD W/YPC IN 1-1/2" PVC PIPE TOPPED WITH RED REFLECTIVE TAPE
- LEASE AREA BOUNDARY
- TAX LOTS, TILLAMOOK COUNTY GIS
- EDGE OF TILLAMOOK BAY, PER AERIAL IMAGERY
- LOW TIDE SAND BARS

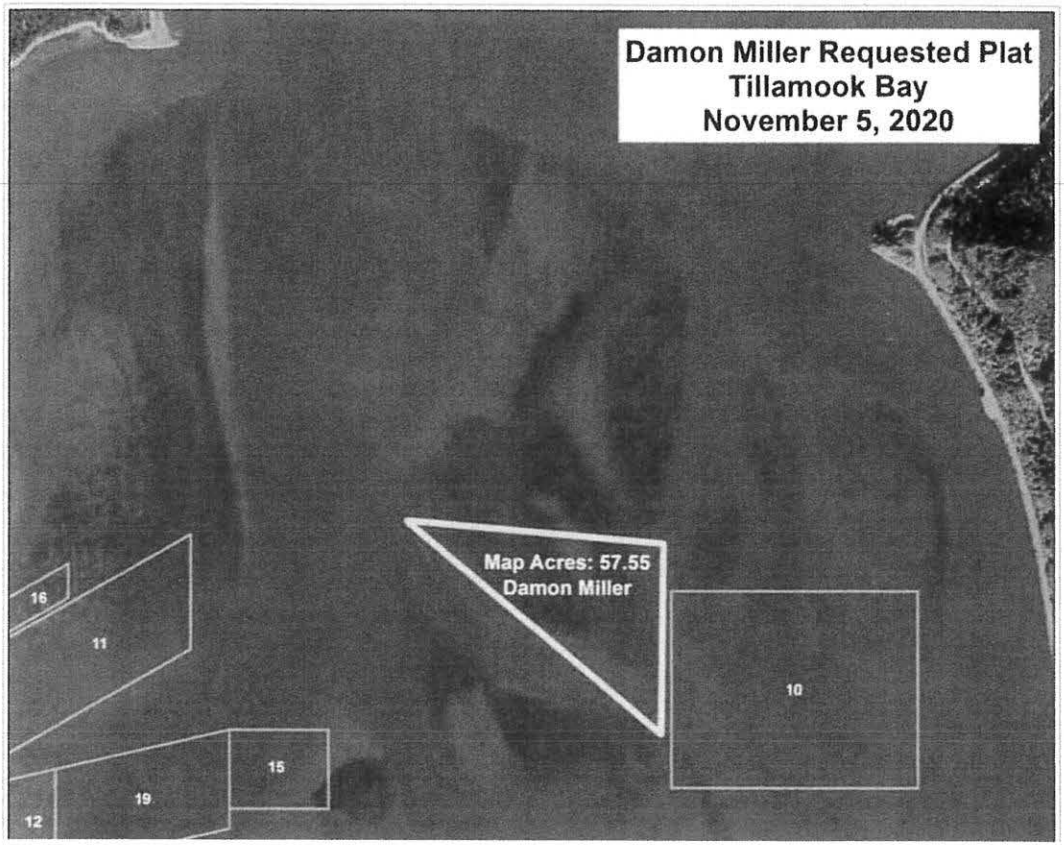
NOTES

1. MONUMENTS SET PER LATITUDE AND LONGITUDE PROVIDED BY CLIENT.
2. DRAWING IS REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (NAD83/2011) OREGON NORTH STATE PLANE COORDINATE SYSTEM.

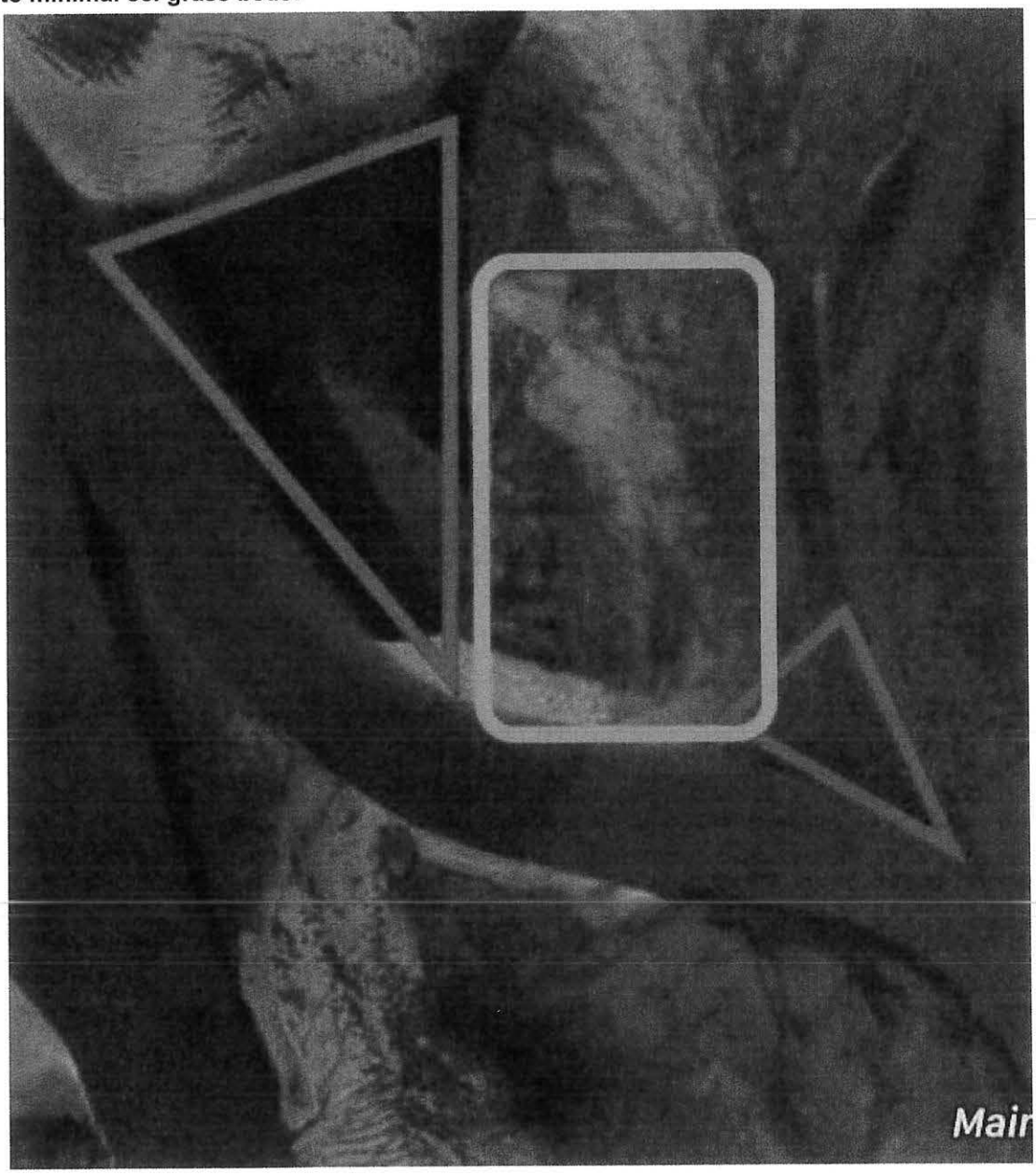
REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JULY 29, 1988
GREGORY D. SPURLOCK
2370
EXPIRES: 06/30/22

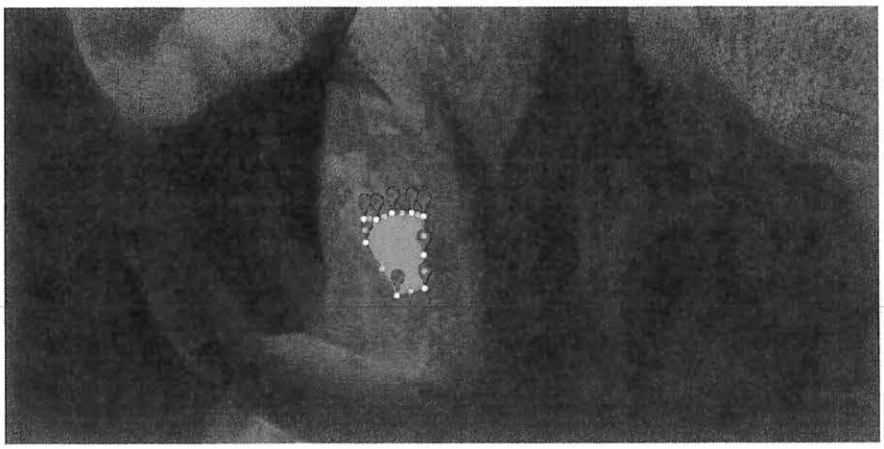
DRAWN A.A.O.	DATE 05/11/21	SWLS
APPROVED G.D.S.	DATE 05/11/21	
SCALE 1"=1,000'	SHEET 1 OF 1	PROJECT NO. 2021-121

Plat area provided by ODA:



Satellite Image of plat area. Red areas represent eelgrass beds. Green area represents no to minimal eel grass beds:



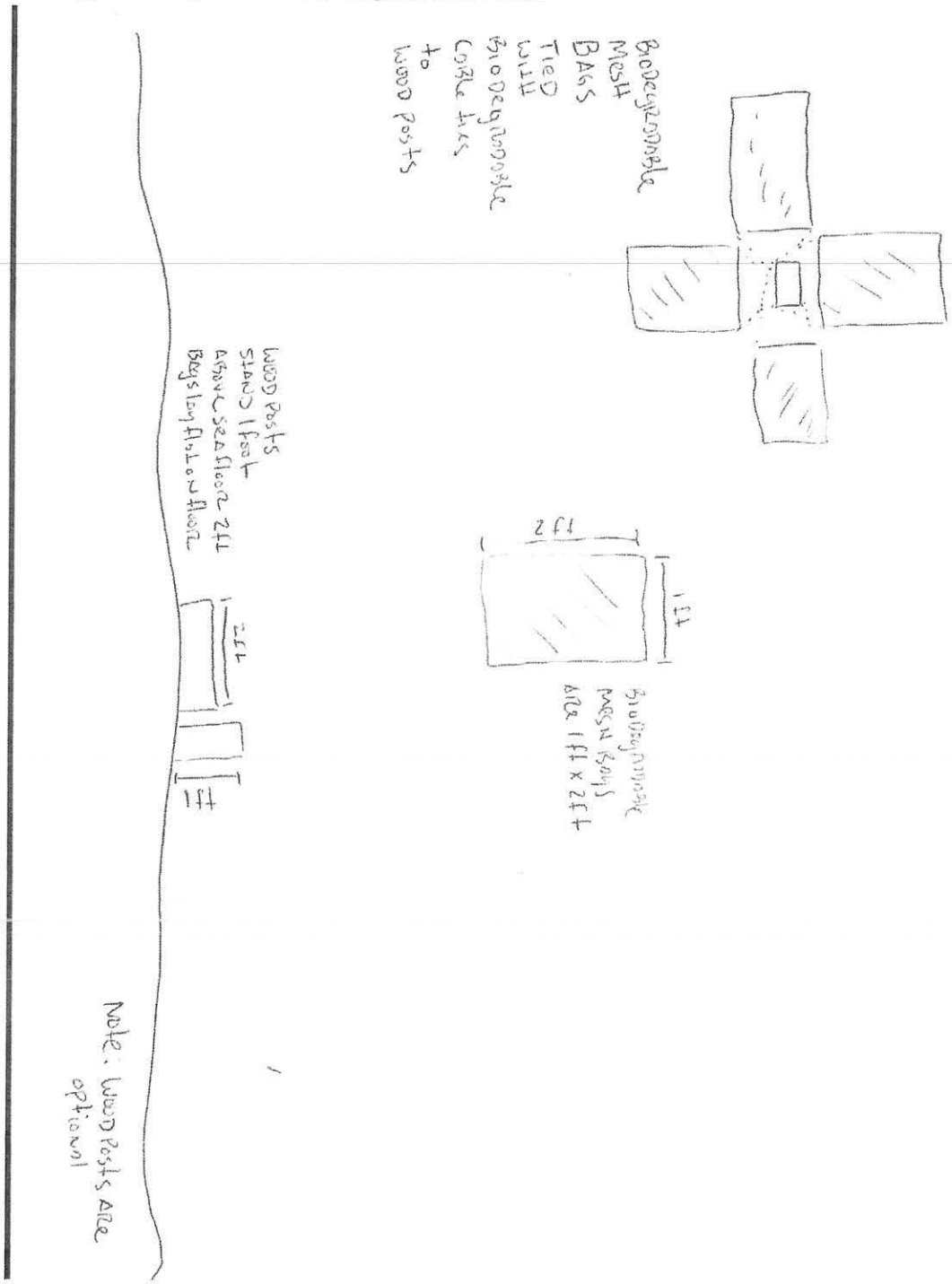


Output : Current Area

Current Perimeter

The corner coordinates for the cultivation area are (1) 45.539128948, -123.919548272, (2) 45.53911, -123.91922, (3) 45.53922, -123.91878, (4) 45.53922, -123.91824, (5) 45.539160, -123.917930, (6) 45.53916, -123.917793, (7) 45.53845, -123.91792, (8) 45.53783, -123.91790, (9) 45.53770, -123.91865, and (10) 45.53869, -123.91949.

Drawing of Biodegradable Mesh Bags on Sea Floor:



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
P.O. BOX 2946
PORTLAND, OR 97208-2946

January 31, 2022

Regulatory Branch
Corps No. NWP-2021-202

Damon Miller
Alava Ocean Company LLC
P.O. Box 19301
Portland, Oregon 97280
alavaocean@gmail.com

Dear Damon Miller:

The U.S. Army Corps of Engineers (Corps) has received your request for a Department of the Army (DA) permit to lay biodegradable commercial pacific seeded oyster bags within a contiguous 5 acres of Tillamook Bay for bag-on-bottom culture and manual harvest on foot and by boat. The project is proposed in Tillamook Bay located south of the Garibaldi Marina, west of Larson Cove between the south and main channel of the Bay, in Tillamook, Tillamook County, Oregon. The corner coordinates for the cultivation area are at Latitude/Longitude: (1)45.53912, -123.91954, (2) 45.53911, -123.91922, (3) 45.53922, -123.91878, (4) 45.53922, -123.91824, (5) 45.539160, -123.917930, (6) 45.53916, -123.917793, (7) 45.53845, -123.91792, (8) 45.53783, -123.91790, (9) 45.53770, -123.91865, and (10) 45.53869, -123.91949.. Your project has been assigned Corps No. NWP-2021-202. Please refer to this number in all future correspondence.

This letter is a provisional notification that your proposed project may qualify for authorization by Nationwide Permit (NWP) No. 48, Commercial Shellfish Mariculture Activities (*Federal Register, January 13, 2021, Vol. 86, No. 8*) provided you obtain a Coastal Zone Management Act (CZMA) consistency decision from the Oregon Department of Land Conservation and Development (DLCD). You are not authorized to begin work in waters of the U.S. until: (1) you obtain and submit to our office a CZMA consistency concurrence or the CZMA consistency becomes presumed and (2) you receive written verification from our office that the project is authorized by NWP 48.

Your project requires an individual CZMA consistency concurrence from DLCD or a presumption of concurrence must occur. Please contact the DLCD regarding this requirement at: Coastal State-Federal Relations Coordinator, Oregon Department of Land Conservation and Development, 635 Capitol Street NE, Suite 150, Salem, Oregon, 97301-2540, by telephone at (503) 373-0050, or visit DLCD's website (http://www.oregon.gov/LCD/pages/index.aspx). DLCD will have a six-month review period to provide a determination on your proposed project. The six-month review

period will begin when DLCD receives your signed consistency certification statement and the data and information required for review.

After obtaining a CZMA concurrence, you must submit a copy of the CZMA concurrence to our office. If DLCD has not provided you with a CZMA decision within six months from the begin of the review period, the concurrence for this project is presumed.

The proposed work cannot be authorized by NWP if DLCD determines the work is not consistent with the requirements of the CZMA. Please contact me if DLCD notifies you it will not provide CZMA concurrence for the project.

In order for your project to be authorized by NWP, you will be required to comply with all of the NWP 48 Terms and Conditions, the NWP Regional Conditions, and CZMA consistency concurrence, and any special conditions we add to the NWP verification. The full text of NWP 48 and all conditions are available on our website for the 2021 NWPs (https://www.nwp.usace.army.mil/Missions/Regulatory/Nationwide.aspx). For your information, Enclosure 1 lists the special conditions we are proposing to add to the NWP verification.

If you propose to modify the proposed project as a result of coordination with DLCD, you must submit a revised project description and revised project drawings for our review. Substantial changes may require additional evaluation of your permit application.

We recommend that you do not award construction contracts until you receive a written verification from our office that the project is authorized. Since a DA permit is necessary for this work, do not commence construction before obtaining our NWP verification letter. If you have any questions regarding the process described above or the proposed permit conditions, please contact me by telephone at (503) 808-4378 or by email at kinsey.m.friesen@usace.army.mil.

Sincerely,

Kinsey M. Friesen
Project Manager, Regulatory Branch

Enclosure

cc:
Oregon Department of Agriculture (Alexis Manderson, Alexis.Manderson@oda.oregon.gov)
Tillamook County (Sarah Absher, sabsher@co.tillamook.or.us)
Oregon Department of State Lands (Dan Cary, dan.cary@dsl.oregon.gov)
Oregon Department of Land Conservation and Development (Patty Snow, patty.snow@dlcd.oregon.gov; Deanna Caracciolo, deanna.caracciolo@dlcd.oregon.gov)

Corps No. NWP-2021-202

Proposed Nationwide Permit verification special conditions. Any enclosure numbers referenced below would pertain to the Nationwide Permit verification letter, as applicable.

a. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters. The permittee will be required, upon due notice from the U.S Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

b. Upon starting the activities authorized by this permit, Permittee shall notify the U.S. Army Corps of Engineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: NWP-2021-202, Tillamook County.

c. This Corps permit does not authorize you to take an endangered species, in particular Oregon Coast Coho Salmon (Oncorhynchus kisutch), Southern Green Sturgeon (Acipenser medirostris) or Pacific Eulachon (Thaleichthys pacificus). In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a biological opinion under ESA Section 7 with "incidental take" provisions with which you must comply). On September 23, 2014, the National Marine Fisheries Service (NMFS) (Reference # WCR-2014-825) issued an ESA programmatic concurrence letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for commercial shellfish aquaculture and native shellfish restoration activities authorized by the Corps. Your authorization under this Corps permit is conditional upon your compliance with all Project Design Criteria in Enclosure 4. Failure to implement the project as proposed may constitute noncompliance with the ESA and your Corps permit. The NMFS is the appropriate authority to determine compliance with the ESA.

d. Permittee shall take the necessary precautions to prevent any petroleum products, chemicals, or deleterious or toxic materials from entering waterways during construction.

e. All practicable erosion control devices shall be installed and maintained on the boat in good working order work to prevent the unauthorized discharge of material and to minimize increases in turbidity resulting from the work. The devices shall be installed in a manner to maximize their effectiveness, e.g., sediment fences, boat lining, shall

generally be buried or similarly secured. These controls shall be maintained until permanent erosion controls are in-place or are no longer necessary.

f. Permittee shall install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG) District Thirteen, through regulations or otherwise, on your authorized facilities. The USCG may be reached at the following email address: D13-SMB-D13-PATON@uscg.mil or telephone number: (206) 220-7285.

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
1201 NE Lloyd Boulevard, Suite 1100
Portland, OR 97232

Refer to NMFS No.:
WCR-2014-825

September 23, 2014

Shawn H. Zinszer
Chief, Regulatory Branch
U.S. Army Corps of Engineers, Portland District
P.O. Box 2946
Portland, Oregon 97208-2946

Re: Endangered Species Act Section 7(a)(2) Programmatic Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for Commercial Shellfish Aquaculture and Native Shellfish Restoration Authorized by the U.S. Army Corps of Engineers in Oregon

Dear Mr. Zinszer:

Thank you for your letter of May 2, 2014, requesting initiation of consultation with the National Oceanic and Atmospheric Administration's (NOAA's) National Marine Fisheries Service (NMFS) pursuant to section 7 of the Endangered Species Act (ESA) of 1973 (ESA) (16 U.S.C. 1531 et seq.) for Commercial Shellfish Aquaculture and Native Shellfish Restoration Programmatic activities authorized by the U.S. Army Corps of Engineers (Corps) in Oregon. This action is in accordance with the Corps' regulatory and civil works authorities under section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act of 1972. This response to your request was prepared by NMFS pursuant to section 7(a)(2) of the ESA, implementing regulations at 50 CFR 402, and agency guidance for preparation of letters of concurrence.

During this consultation, we concurred with your determination that the proposed action is not likely to adversely affect Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*), or their designated critical habitat, or southern distinct population segment (SDPS) green sturgeon (*Acipenser medirostris*) or their designated critical habitat. Although you requested formal consultation for southern distinct population segment (SDPS) Pacific eulachon (*Thaleichthys pacificus*) (hereafter referred to as 'eulachon') and their designated critical habitat, we gathered additional information regarding pump usage by commercial shellfish growers and determined that formal consultation was not warranted. Therefore, we determined the proposed action is also not likely to adversely affect SDPS eulachon or their critical habitat.

We also reviewed the proposed action for potential effects on essential fish habitat (EFH) designated under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), including conservation measures and any determination you made regarding the potential effects of the action. This review was pursuant to section 305(b) of the MSA, implementing regulations at 50 CFR 600.920, and agency guidance for use of the ESA consultation process to complete EFH consultation.

This letter underwent pre-dissemination review using standards for utility, integrity, and objectivity in compliance with applicable guidelines issued under the Data Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001, Public Law 106-554). A complete record of this consultation is on file at Roseburg, Oregon.

Proposed Action and Action Area

"Action" means all activities or programs of any kind authorized, funded, or carried out, in whole or in part, by Federal agencies (50 CFR 402.02). "Interrelated actions" are those that are part of a larger action and depend on the larger action for their justification. "Interdependent actions" are those that have no independent utility apart from the action under consideration (50 CFR 402.02). The NMFS did not identify any interrelated or interdependent actions.

For this consultation, the proposed action is a set of design criteria that the Corps will use to guide the permitting of existing and new or expanded commercial shellfish aquaculture operations and native shellfish restoration in Oregon as regulated under section 10 of the Rivers and Harbors Act of 1899 and section 404 of the Clean Water Act. The Corps is only proposing to use the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration programmatic consultation to authorize activities in the following seven estuaries: (1) Tillamook Bay; (2) Netarts Bay; (3) Yaquina River; (4) Siuslaw River; (5) Winchester Bay (Umpqua River); (6) Coos Bay including South Slough; and (7) Alsea Bay.

The Corps is proposing to use the proposed design criteria when authorizing four categories of actions, specifically:

Existing farm. Ongoing aquaculture activities at a commercial shellfish farm that has been granted a permit, license, or lease from a state or local agency specifically authorizing commercial shellfish aquaculture activities and which has undertaken such activities prior to February 21, 2012. The farm area consists of the area covered by the state or local aquaculture permit, license, or lease, and may include portions of previously leased areas (i.e., prior to February 21, 2012) in which there has been no previous aquaculture activity (see newly positioned below) and/or areas that are periodically allowed to lie fallow as part of normal operations. Existing commercial shellfish aquaculture farms occur in 6 areas in Oregon: (1) Tillamook Bay; (2) Netarts Bay; (3) Yaquina River; (4) Siuslaw River; (5) Winchester Bay (Umpqua River); and (6) Coos Bay including South Slough (Table 1; Appendix A - Maps).

Newly positioned. New shellfish aquaculture operations placed within an existing farm where operations are not currently located and where aquaculture has not previously occurred.

New/expanded farm. New shellfish aquaculture operations placed in an area that is not an existing farm and where aquaculture has not previously occurred. New/expanded farms authorized by the Corps using the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration programmatic consultation will only occur in the six estuaries with existing farms plus Alsea Bay. The overall amount of new/expanded commercial shellfish aquaculture operations will be limited to the estimated acreages provided (Table 2).

Native shellfish restoration. To restore or re-introduce populations of native molluscan shellfish into bays, estuaries, or the marine environment by (a) enhancement of settling substrate, (b) placement of juveniles or adults into the marine/estuarine environment, and (c) planting native submerged aquatic vegetation as part of a shellfish restoration action.

Table 1. Location, acreage, species harvested, culture methods, and harvest methods for existing Oregon commercial shellfish aquaculture areas.

Name of Waterbody	County	Location of Shellfish Culture	Total Acreage* (Number of Growers)	Species Harvested	Culture and Harvest Methods
Tillamook Bay[Y]	Tillamook	Throughout bay	2,606 (5)	Pacific and Kumamoto oysters (includes 9.47 acres of littleneck clams with bottom/bag culture and hand harvest only)	Bottom culture and variety of off bottom techniques including bag, rack-and-bag, rack-and-tray, long-line, and culture Hand and mechanical harvest
Netarts Bay	Tillamook	Mid and upper bay	531 (13)	Pacific and Kumamoto oysters	Bottom and off bottom culture (*e.g.* rack-and-bag) Hand harvest
Yaquina River[Y]	Lincoln	Mid-bay	519 (3)	Oysters	Suspended raft culture** and bottom culture Hand harvest Mechanical harvest[+]
Siuslaw River	Lane	RM 4-5	9 (1)	Oysters	Off bottom rack-and-tray culture Hand harvest
Winchester Bay (Umpqua River)	Douglas	RM 0 (mouth); RM 2-5	120 (2)[†]	Oysters	Off bottom rack-and-tray culture, off bottom rack culture, and long-line[†] culture Hand harvest
Coos Bay	Coos	South Slough Upper bay (RM 10-12)	240 (4) 1,062 (3)[†]	Pacific and Kumamoto oysters	Bottom culture; bag culture, stake culture,[†] and long-line culture Hand and mechanical harvest; harrowing[†]
TOTAL			**5,087 (31)**		

*Total acreage represents a summation of all ODA acreages provided in the ODA 'Oyster Growers and Plats Table' and acreages provided to the Corps (Environ 2009). There may be some variation from the true acreage since minor discrepancies were noted between the ODA grower table, ODA plat boundary shapefile, and information collected by the Corps.
[Y]NMFS estimates that approximately 250 lease acres, as reported by the Corps, in Tillamook Bay are classified as 'prohibited' by ODA. There is also an area of overlap (acres unknown) between leases and prohibited area in Yaquina River upstream of Flesher Slough.
[†]Updated to include additional growers and culture method provided in notifications received by Corps in 2010.
[+]Updated based on ODFW observations in Yaquina River and NMFS site visit[1].
**The Corps is not proposing to authorize suspended raft culture operations through this programmatic consultation. These can be submitted by the Corps to NMFS for individual, site-specific ESA and EFH consultation.

[1] Personal communication and site visit by Bridgette Lohrman, NMFS, with Dan Avery, ODFW, on June 24, 2010.

Table 2. Acreage estimates by estuary for new/expanded farm areas (i.e., areas which require an additional state or local aquaculture lease or permit) that are likely to occur over the next five years. RM = River Mile.

Estuarine Areas	Estimated Acreage for Expansion/New Areas
Alsea Bay	5 acres
Tillamook Bay	100 acres Estimates may be reduced pending completion of Oregon Department of Agriculture (ODA) GIS updating of existing plat locations.
Netarts Bay	20 acres Estimates may be reduced pending completion of ODA's GIS updating of existing plat locations.
Coos Bay Coos Estuary South Slough/Joe Ney Slough	 50 acres 0 acres (No expansion currently anticipated.)
Siuslaw River (RM 4 to 5)	15 acres
Umpqua River (RM 2 to 5)	0 acres (No information available.)
Yaquina Bay	0 acres (No expansion anticipated.)

The Corps, based on an assessment provided by the Pacific Coast Shellfish Grower's Association (PCSGA) regarding the potential for new/expanded operations, has estimated new and expanded acreages and areas for new commercial shellfish aquaculture operations (Table 2). With one exception, Alsea Bay, these estimates overlap bays/estuaries where existing commercial shellfish aquaculture occurs. Growing and harvesting methods as well as the species cultivated will remain as identified under existing operations and as documented in Environ (2009), over the course of the next five years. The ODA has not developed a management plan for Alsea Bay. Any growers proposing expansion into Alsea Bay will provide documentation that they are proposing commercial aquaculture of species that have been previously cultivated in Alsea Bay or are indigenous to the area.

For existing commercial shellfish aquaculture farms, the Corps used three primary sources of information to determine the number of existing growers/operations, location of activities, acreages, and culture methods: (1) Oregon Department of Agriculture's (ODA) lease database for grower's cultivating on state-owned lands; (2) information contained in ODA's food safety license database; and (3) information collected from growers. Although derived from best available information, the acreages in Table 1 are estimates only, but are the best estimate of existing operations in Oregon. This information was documented in Environ (2009) and supplemented by the Corps and Oregon Department of Fish and Wildlife (ODFW). Although an area may be leased, it may not be in active production. Some of these areas may be fallow, but it may be desirable for a grower to keep the lease for future use. Other lease areas may contain areas that may be unusable (i.e., too deep, too shallow, too soft, too muddy, or otherwise unsuited for production).[2] "Acres leased" is likely to be an overestimate of acres actively being

[2] E-mail from Alex Manderson, ODA, to Michelle McMullin, NMFS (November 5, 2010) (discussing ODA Food Safety management of Tillamook Bay, Netarts Bay, Yaquina Bay, Siuslaw River, Winchester Bay (Umpqua River), and Coos Bay including South Slough in Oregon).

used for existing commercial shellfish aquaculture in Oregon, but likely represents the maximum footprint of existing and ongoing operations.

With the exception of the Siuslaw River, all of the estuaries with existing commercial shellfish aquaculture have management plans for commercial shellfish harvesting (ODA 1996, 2003, 2008a, 2008b, 2009, 2010). Only certain areas of the estuaries are classified by ODA in the management plan as approved or conditionally approved, and the remaining areas are prohibited for commercial shellfish harvest for human consumption.

A general description of activities and methods used by commercial shellfish aquaculture growers in Oregon can be found in Environ (2009), and are briefly summarized below.

Hatchery and nursery operations (algal production, larval rearing, nursery seeding, and broodstock maintenance) are performed in facilities located onshore. Algal production involves culturing a variety of phytoplankton for use as feed for larvae, seed, and broodstock. Larval culture involves the rearing of free-swimming bivalve larvae. Nursery seed production is the rearing of larvae from the time they near the settle-out or setting phase, to the time they are ready for planting. Broodstock maintenance consists of the care and feeding of adult bivalves used for propagating future generations of various shellfish species. These operations are conducted in separate tanks and require the use of water that is pumped from the sea. The pumps may be attached to existing dock structures or simply placed in the water at the time of need and then removed. Pumps are screened in accordance with NMFS and ODFW criteria.[3]

Bottom culture is the most common method of oyster and clam aquaculture in Oregon. Typical seeding density is approximately 200 to 250 bushels/bags per acre although density may vary depending on site productivity. Rumrill (2013) noted that commercial oyster aquaculture operations in Pacific Northwest bays and estuaries frequently have an initial seeding density of approximately 150-250 bushels/bags per acre. Oyster density increases throughout the growout period as the young oysters mature and increase in size (Wagner *et al.* 2012). The primary source of shellfish seed stock used in Oregon is the Whiskey Creek Shellfish Hatchery in Netarts. Shellfish imports in Oregon are prohibited by the state except by permit.

Oyster cultch[4] is generally prepared by bundling washed and aged Pacific oyster shells ("mother shells") in large plastic mesh bags at facilities on land. Hundreds to thousands of cultch bags may be required to sustain farm inventories. For natural set on cultch, the cultch bags are placed on stakes or other substrate, and placed in the intertidal zone prior to spawning season. Once the oysters have set on the cultch, they are kept until a suitable size for planting. Alternatively, remote setting may occur at an upland site. Based on our best available information at this time, we believe that approximately 6 growers in Oregon remote set oyster larvae on cultch.[5] In this case, cultch bags (typically stacked on pallets) are placed in large tanks containing well-mixed,

---

[3] NMFS criteria are designed for the safe, timely, and efficient upstream and downstream passage of anadromous salmonids at impediments created by artificial structures, natural barriers, or altered instream hydraulic conditions. Screen criteria in NMFS (2011a) are provided for the smallest fry-sized juvenile salmonids. Available at: http://www.westcoast.fisheries.noaa.gov/publications/hydropower/fish_passage_design_criteria.pdf

[4] Cultch provides points of attachment for oyster larvae.

[5] Personal communication with Peter Mohr, representing Pacific Coast Shellfish Growers Association (July 18, 2014).

temperature-controlled seawater. Ready-to-set larvae are added to the seawater, sometimes with a small quantity of algal "paste." The larvae then rapidly set onto the cultch and metamorphose into tiny juvenile oysters or "spat." The set cultch bags are then placed on the beach, either loose or on pallets, until the seed is large enough or "hard" enough (firmly cemented onto the mother shell and able to resist predation and desiccation) to withstand being moved onto the culture beds. Remote setting occurs when larvae are available but typically occurs from April through September.[5] Small pumps, ≤ 5 horsepower, are used to fill the tanks with seawater and only one pump per operation is necessary. The intake diameter of the pump is ≤ 2.5 inches. Tank size varies as do the number of tanks per grower, but on average each grower would use approximately 500 gallons to initially fill their tank(s). Once the tanks are initially filled with seawater and oyster larvae are added, the pumps are only used to feed the oyster larvae in the tanks by adding fresh seawater. There is no set pattern to feeding as it is dependent on oyster larvae condition. Seawater may be pumped for as short of a time as 15 minutes or as long as 4 hours for each feeding. Feeding may be needed every day, every other day, or even less frequently. We do not know how long oyster larvae are fed before being set out in the estuary in Oregon or how many batches a grower will remote set per year. In general, and dependent on water temperature, each batch may be held in tanks for up to a month in early spring, or as little as a week in summer (Helm and Bourne 2004). Remote setting only occurs in Coos Bay, Tillamook Bay, and in the Yaquina River.[5]

Harvest occurs by hand or by a mechanical oyster dredge. Hand harvest occurs in all estuaries while mechanical oyster dredge harvest occurs in Tillamook Bay (553 acres), Yaquina River (512 acres), and Coos Bay/South Slough (1,062 acres). A typical oyster dredge consists of a steel frame, approximately 1– 6.5 feet wide with a toothed blade (Shumway 2011). The oyster bag and a tow chain/wire are attached to either side of the frame. Tow speed is < 3.3 feet per second (fps). The oyster bag is composed of large metal mesh links that collect oysters while allowing other smaller material to pass through the links. A diving plate attached to the frame holds the device on top of the substrate and creates a suction that lifts oysters up off the substrate and into the dredge bag.

Commercial shellfish aquaculture activities are generally performed within intertidal areas where the tides are low enough to expose the culture bed so that operations can be performed by workers on foot. Such low tides occur for a period of several days each lunar month or approximately 29 days per year. These tides occur near midnight in December, near noon in June, and at corresponding intermediate times in other months. During these low tides, workers could be on the beds for 3 to 6 hours, depending on tidal elevations.

In Oregon, harrowing does occur (i.e., in Coos Bay), but it is not a common practice. Harrowing is necessary in areas where the substrate is too soft and the oysters may sink into the mud. Unlike clams that live in the substrate, oysters must stay on the substrate surface to survive. When oysters sink below the substrate surface, they are periodically harrowed to remove them from the mud. The harrow is a skidder with many tines, towed along the substrate by a boat. The harrow penetrates the substrate by a few inches and returns the oysters to the surface. Harrowing may also occur in Tillamook Bay and the Yaquina River because mechanical oyster dredge harvest also occurs in these estuaries.

Commercial shellfish aquaculture requires the use of vessels (i.e., boats) to access the beds for intertidal culture. The principal vessels used consist of small open craft powered by 2-stroke or 4-stroke outboard motors. These vessels are used to transport crews and material to and from the culture beds. Larger vessels and barges may be used to transport mechanical equipment such as harvesters, and to transport harvested shellfish. When used for culture or harvest activities, vessels serving shellfish beds are generally grounded on mudflats or vacant culture beds to avoid or minimize damage to shellfish beds and reduce turbidity, which can be harmful to shellfish beds. Vessel operations avoid eelgrass areas to the extent practicable. When eelgrass is present within shellfish beds, effort is taken to prevent vessel grounding in eelgrass. Large vessels are maintained and fueled at designated shore facilities, although small vessels used by small-scale growers may be maintained and fueled at the growers' own docks.

Crews must be able to access the culture beds, and areas immediately adjacent, from land to perform many shellfish culture activities, including bed preparation, inspection and maintenance during grow-out, and harvest. At some farms, the beach is accessed directly from land, which may also require the crew to move equipment and personnel through the foreshore upper and middle intertidal zones. This is generally conducted along a pre-existing access route and effort is taken to minimize disturbances to the upper and middle intertidal zones. This access is typically conducted by foot or by an all-terrain vehicle (ATV).

Following harvest, the shellfish are transported to a processing facility. Transportation may involve use of boats, ATVs, and/or trucks. Once received, the shell stock may be processed directly, rinsed before processing or placed in cold, dry storage or wet storage until it can be processed (Environ 2009). Wet storage does not occur in Oregon and most estuaries have a prohibited zone along the shoreline which would prevent growers from rinsing shellfish with water withdrawn from estuaries near processing plants in order to avoid violating ODA's food safety regulations.[6]

Shells and shell fragments are another by-product generated during shellfish processing. Whole oyster shell may be reclaimed for use as cultch for future culture activities. Shell may also be crushed for other uses.

The Corps is proposing to apply the proposed design criteria when authorizing the following shellfish activities in Oregon for all existing farms, all new/expanded farms, and native shellfish restoration. Under this programmatic consultation, the Corps is only proposing to include those shellfish activities most commonly and frequently conducted in Oregon and thus is not proposing to cover every possible shellfish activity that could be authorized. The following are the only activities to be authorized by the Corps under this programmatic consultation.

- bed preparation and seeding
- oyster long-line culture
- oyster rack-and-bag culture
- oyster stake culture
- oyster bottom culture
- oyster suspended culture

[6] E-mail from Alex Manderson, ODA, to Michelle McMullin, NMFS (July 9, 2014) (discussing ODA shellfish regulations).

- littleneck clam ground culture
- littleneck clam bag culture
- mechanical harvest (oysters only)
- hand harvest
- harrowing
- support activities – vessel operations, work on beach, and onshore facilities
- placement and installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures necessary for the operation of the commercial shellfish aquaculture activity
- pumps and related pipelines used in the withdrawal of water for rinsing shellfish prior to processing, wet storage, and activities associated with hatchery and nursery operations (i.e., remote setting)
- native shellfish restoration activities, including the placement of shellfish seed (i.e., immature individual shellfish or spat on shell), adults, and/or shells/shell fragments to increase natural shellfish production

The proposed action also includes authorization of activities to restore native shellfish beds in Oregon. For 2005 to present, no more than 2 restoration activities occurred per year in the action area (described below).[7] We believe this is a reasonable expectation for future frequency of restoration activity occurrence. Using the Olympia oyster, restoration methods are similar to activities the Corps proposes to authorize for commercial shellfish aquaculture, but in some cases may also include substrate enhancement with gravel or shell to establish natural reefs at a restoration location. Substrate enhancement is not authorized over eelgrass beds[8] or kelp.[9] Commercial shellfish growers may also grow the Olympia oyster for harvest and transplant to a native restoration location.

The Corps is <u>not</u> proposing to include the following commercial shellfish aquaculture activities in Oregon under this programmatic consultation because these actions have less predictable effects or are infrequently practiced or not of widespread use in Oregon (as noted), making them unsuitable for a programmatic consultation in Oregon. Site-specific, individual consultation is available for the following actions as needed for commercial shellfish aquaculture operations. Future inclusion in a programmatic revision may be considered for the less common or less prevalent activities, if their frequency of use increases, as NMFS and the Corps gain a complete

---

[7] Personal communication from Megan Callahan-Grant, Program Coordinator with NMFS Habitat Restoration Center (July 3, 2014).

[8] For the purpose of this programmatic consultation, an eelgrass bed and edge are defined per the Washington State Department of Natural Resources Technical Memorandum, Operational Definition for Determining Edge of Eelgrass Presence (Donoghue 2012). From review of the scientific literature considering minimum eelgrass presence criteria for delineating a vegetated edge that demonstrate ecological function, and examination of available field data (from Puget Sound sites), the following criteria will be used as an operational definition. Persistent bed interior: ≥3 shoots per 0.25 square meter. Persistent bed edge: begin at a point within the interior of the bed (where ≥3 shoots per 0.25 square meter within 1 meter of adjacent shoots) and move along any radial transect. Find the last shoot that is within 1 meter of an adjacent shoot along that transect. Continue 0.5 meter beyond this shoot, this is the bed edge. Both exterior and interior edges of bed can exist. Eelgrass is defined as native eelgrass (*Zostera marina*). These definitions are for use with this consultation only and do not set precedent for other consultations by NOAA's NMFS.

[9] Kelp are defined as non-mobile native kelp species that are attached to benthic substrate.

understanding of the frequency of use and the extent, predictability, and repeatability of their effects.

- raft culture[10]
- use of pesticide-treated wood or other materials containing toxic compounds including creosote, wood preservatives, paints, etc. that come into contact with the marine environment
- cultivation of new species (i.e., species not indigenous to the area or species not previously cultivated in the waterbody)
- attendant features such as docks, piers, boat ramps, stockpiles, staging areas, or the deposition of shell material back into waters of the United States as waste
- mechanical harvest of clams[11]
- use of predator netting[12]
- hydraulic harvest[13]
- use of chemicals to remove pests[14]
- use of gravel to modify the substrate[15] (except as needed for native shellfish restoration)
- on-water Floating Upwelling Systems or similar nursery rafts[16]

Proposed Design Criteria (PDC)

The Corps proposes to apply the following design criteria, in relevant part, to every action authorized under this programmatic consultation. Measures described under "Administration" apply to the Corps as it manages the actions proposed for the Oregon commercial shellfish aquaculture and native shellfish restoration programmatic consultation. Measures described under "General" apply, in relevant part, to each action that involves a commercial shellfish aquaculture or a native shellfish restoration activity. The Corps will ensure that all PDC apply to each party that is given authorization for, or carries out, an action under the Oregon commercial shellfish aquaculture and native shellfish restoration programmatic letter of concurrence.

Program Administration

1. **Initial rollout.** The Corps will cooperate with NMFS to provide an initial rollout of this programmatic consultation for Corps staff to ensure that these conditions are considered at the onset of each action, incorporated into all phases of design, and that any constraints are resolved early on and not under-designed as add-on features.

---

[10] The singularity of raft culture in Oregon makes it better suited for individual consultation tailored to serve an individual grower and the site-specifics of an individual location.

[11] Mechanical harvest of clams on commercial aquaculture beds is not practiced in Oregon (Environ 2009).

[12] Use of netting is associated with clams and is not a typical practice in Oregon, E-mail from Bill Abadie, Corps, to Bridgette Lohrman, NMFS (June 9, 2010) (responding to technical questions about shellfish aquaculture operations).

[13] Use of hydraulic harvest for commercial shellfish aquaculture is not known to occur in Oregon.

[14] Oregon aquaculture operations remove pests (e.g., oyster drills, etc.) by hand; burrowing shrimp are also not generally considered a problem for shellfish aquaculture operations in Oregon (Environ 2009).

[15] Aquaculture operation in Oregon does not require altering the substrate (Environ 2009).

[16] The use of these systems for commercial shellfish aquaculture is not known to occur in Oregon.

2. **Failure to report may trigger reinitiation.** The NMFS may recommend reinitiation of this consultation if the Corps fails to provide full reports or attend the annual coordination meeting.

3. **Electronic action notification.** The Corps will initiate NMFS review by submitting a completed Action Notification Form (Appendix B) to NMFS for each action to be completed under this programmatic consultation at least 30 days prior to authorization by the Corps, with sufficient detail for NMFS to ensure that the proposed action is consistent with all provisions of this consultation. All action notifications are to be submitted electronically to NMFS at shellfish.oregon@noaa.gov.

4. **Review and approval.**
   a. The Corps will review each action to be covered under this programmatic consultation to ensure that:
      i. The action is within the present or historic range of an OC coho salmon, SDPS green sturgeon, SDPS eulachon, or designated critical habitat for these species.
      ii. The action effects are likely to be within the range of effects considered in this programmatic consultation.
      iii. Any practitioner[17] receiving Corps authorization will comply with all of the following conditions, including obtaining NMFS review and approval, as appropriate (see b below).
      iv. Any action authorized under the Oregon commercial shellfish aquaculture and native shellfish restoration programmatic consultation will not cultivate a new species (i.e., species not indigenous to the area or species not previously cultivated in the waterbody).
   b. The Corps will also ensure that NMFS reviews and approves any action with any of the following elements for consistency with this programmatic consultation before the action is authorized (see i-iii). For any actions with these elements (i.e., new farm, requirement of an access plan, or requirement of fueling and staging plan), the Corps will provide a notification and any additional plan or other required information (described below) to NMFS at least 30 days prior to Corps authorization. Within 30 days of the receipt of the notification and additional plan or information, NMFS will notify, via e-mail, the Corps as to whether the notification included sufficient detail for NMFS to ensure that the proposed action is consistent with all provisions of this consultation and, if the notification is sufficient, whether the project is approved for coverage or is not eligible for coverage under this consultation. Additionally, at least 30 days prior to implementation of any modifications to an access plan or a fueling and staging plan, as described below, the practitioner must notify the Corps and the Corps must notify NMFS of the modifications. Within 30 days of receiving these modification notifications NMFS will inform the Corps by e-mail of whether the action is still eligible for coverage under this consultation.
      i. New farm
         1. Action notifications will be submitted for review and approval at least 30 days prior to Corps authorization.

[17] For the purpose of this programmatic consultation, a practitioner is defined as a shellfish grower, or restoration practitioner, and all individuals associated with the shellfish activity. Practitioner is used interchangeably with grower.

2. If eelgrass is present within a new farm area, eelgrass bed locations must be documented on a map or sketch which must be submitted by the Corps to NMFS with the action notification. The following information must be included to scale: plat boundaries, eelgrass bed locations and boundaries, and shellfish seeding/planting locations. Surveys to determine presence and location of eelgrass beds should be done during times of peak above-ground biomass: June-August.
3. For expansion into Alsea Bay: Documentation will be provided (by the Corps or the shellfish grower) that the proposed species has previously been cultivated in Alsea Bay or is indigenous to the area.

ii. *Use of motorized vehicles (i.e., ATVs, tractors) in eelgrass beds, grounding or anchoring of watercraft in eelgrass beds, and walking paths through eelgrass beds to access commercial shellfish aquaculture or restoration site may be approved by NMFS for individual actions under the following conditions.*

1. Action notifications must be submitted for review and approval at least 30 days prior to Corps authorization and must include an access plan as described below.
2. If a plat or restoration site cannot be accessed without use of vehicles in eelgrass beds or without grounding/anchoring watercraft in eelgrass beds or without walking through eelgrass beds, then the practitioner must provide an access plan to the Corps describing specific measures and/or best management practices used to minimize negative effects to eelgrass from activities and must implement the plan. The access plan must include the following components: (a) frequency of access at each location, (b) use of only the minimum number of boats and/or crew members needed to conduct the work and a description of the minimum number of boats and crewmembers needed at each visit, and (c) consistency in anchoring/grounding in the same location and/or walking on the same path to restrict eelgrass disturbance to a very small footprint.

iii. *Fueling, storing, daily leak inspection, maintenance, and repair of vehicles < 150 feet away from any stream, waterbody, or wetland may be approved by NMFS for individual actions under the following conditions.*

1. Action notifications must be submitted for review and approval at least 30 days prior to Corps authorization and must document the site constraints that prevent compliance with the PDC and include a fueling and staging plan. The fueling and staging plan must include a spill prevention plan describing specific measures and/or best management practices used to maintain and protect vehicles, contain fuel and other vehicle fluids, and prevent leaks and spills from entering the water. The plan must include the following components: (a) description of a items in a spill prevention kit and how the kit will be kept readily available, (b) description of employee training in use of the spill prevention kit, (c) use of 5 gallon (or smaller) EPA-compliant portable fuel containers, (d) use of funnels or spill-proof spouts and polypropylene pads or similar materials during fueling, (e) daily inspection routines for leaks or improper functioning prior to

vehicle/boat use, (f) dockside fueling containment measures, and (g) description and location of vehicle/boat maintenance and repair site, including distance away from a waterbody and how chemical contaminants will be prevented from leaving the site.

5. **Permit conditions.** The Corps will include each of the relevant project design criteria (see below 9-16) as an enforceable condition of every action authorized under this programmatic consultation. Failure to comply with all applicable conditions for a specific project may lead NMFS to a different conclusion regarding the effects of that project.
6. **Site access.** The Corps will retain the right of reasonable access to each action site to monitor the use and effectiveness of these conditions.
7. **Annual program report.** The Portland District Corps' Regulatory Branch will submit an annual monitoring report to NMFS by February 15 each year that describes the Corps' efforts to carry out this program. The annual report will include an assessment of overall program activity; the number of authorizations issued; name of the practitioner(s)/permittee(s), location, type of culture, and type of harvest method for each authorized commercial shellfish aquaculture operation; name of the practitioner(s)/permittee(s) and location for each authorized restoration operation; a map showing the location of each action authorized; the total acreage of leases authorized that overlap with the areal extent of eelgrass beds; and any notification of completed forage fish spawn surveys. The Corps will submit annual reports to NMFS by email at this address: shellfish.oregon@noaa.gov.
8. **Annual coordination meeting.** The Portland District Corps' Regulatory Branch will attend an annual coordination meeting with NMFS by March 31 each year to discuss the annual report and any actions that can improve conservation under this programmatic consultation, or make the program more efficient or accountable.

Project Design Criteria – General

9. Equipment storage and pump requirements.
    a. Practitioners will not use intertidal areas as storage areas for bags, marker stakes, rebar, nets, empty pallets, etc.
    b. Practitioners will move all aquaculture materials that are not immediately needed to an off-site storage area.
    c. Practitioners will remove all aquaculture debris from the leasehold at least once every three months. This design criterion is not meant to apply to the wet storage of harvested shellfish.
    d. Any natural debris (i.e. large wood) encountered during shellfish bed preparation shall not be removed from the aquatic environment but rather shall be relocated within the intertidal portion of the leasehold.
    e. All pump intakes (for washing down gear, vehicles, etc.) that pump water from bays, estuaries, streams, or other waterbody shall be screened in accordance with NMFS criteria[3] and ODFW criteria. Note: This does not apply to work boat motor intakes (jet pumps).
10. Toxic compounds, chemicals, and other contaminants.
    a. Practitioners will prevent direct or indirect contact of toxic compounds including creosote, wood preservatives, paints, etc., with the marine environment.

b. Vehicles and power equipment shall be stored, fueled, and maintained in a vehicle staging area placed 150 feet or more from any stream, waterbody, or wetland.
   i. *Where this is not possible*,
      1. Practitioners must provide documentation to the Corps as to why not.
      2. The practitioner shall transfer fuels in Environmental Protection Agency-compliant portable fuel containers 5 gallons or smaller at a time during refilling. A polypropylene pad or other appropriate spill protection and a funnel or spill-proof spout will be used when refueling to prevent possible contamination of surface waters.
      3. The practitioner must submit and implement a fueling and staging plan (See 4(b)(iii)(2)), including a spill prevention plan, as described above in 4(b)(iii).
      4. Vehicle/equipment operators shall have with them the spill prevention plan and maintain a spill prevention kit, which shall be readily available and used in case of accidental spills.
      5. In the event a spill occurs, practitioners will contain, remove, and mitigate such spills immediately. All waste oil or other clean up materials contaminated with petroleum products will be properly disposed of off-site.

c. When washing land vehicles (e.g. all-terrain vehicles, trucks) used in aquaculture or native shellfish restoration practices, washing shall take place on uplands such that wash water is not allowed to enter any stream, waterbody, or wetland. Disposal of wash water from land vehicles shall occur upland in a location where all water is infiltrated into the ground (*i.e.*, no overland flow into a waterbody or wetland).

d. All vehicles operated within 150 feet of any stream, waterbody, or wetland will be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected will be repaired in the vehicle staging area before the vehicle resumes operation and documented in a record that is available for review on request by the Corps and NMFS.

e. All synthetic flotation material used for floats shall be permanently encapsulated to prevent breakup into small pieces and dispersal into water.

11. Native shellfish bed restoration.

a. Gravel or shell shall only be applied in minimal amounts (less than 1 inch depth of applied material) and may not be directly dumped from a hopper barge. If gravel is to be used in substrate enhancement, gravel shall be washed prior to placement.

b. If shell is to be used for substrate enhancement, it will be procured from clean sources that do not deplete the existing supply of shell bottom. Shells will be steam cleaned, left on dry land for a minimum of one month, or both, before placement in the aquatic environment. Shells from the local area will be used whenever possible.

c. No substrate enhancement shall occur over eelgrass beds or kelp.

d. Molluscan shellfish and any co-planted submerged aquatic vegetation used for restoration will be species native to the project area.

12. Eelgrass[8] avoidance.

a. No motorized vehicles (i.e. ATVs, tractors) shall be used within eelgrass beds unless there is no other alternative for site access. If there is no other access to the site, an access plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass from vehicle operation (See 4(b)(ii)), and the plan shall be implemented.

b. No grounding or anchoring of watercraft within eelgrass beds will occur unless there is no other alternative for site access. If there is no other access to the site, a plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass (See 4(b)(ii)) and the plan shall be implemented.

c. No walking paths through eelgrass shall be established unless there is no other alternative for site access. If there is no other access to the site, a plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass (See 4(b)(ii)), and the plan shall be implemented.

13. Newly positioned equipment and operations within existing farms.

a. Newly positioned aquaculture racks, stakes, flip bags, or on-bottom aquaculture operations will not be placed within a buffer distance of 16.5 feet (five meters) from existing native eelgrass beds.[8]

b. Only newly positioned shellfish long-lines spaced five feet apart can be located above existing native eelgrass beds or within a buffer distance of 16.5 feet (five meters) of existing native eelgrass beds. Alternate spacing e.g. two to four lines spaced at one foot to 2.5 feet and an open row of 10 feet, and then repeated, may also be considered above existing native eelgrass beds or within a buffer distance of 16.5 feet (five meters) of existing native eelgrass beds.[18] Documentation must be provided to the Corps describing the location of newly-positioned long-lines within existing farms including their proximity to eelgrass and spacing pattern(s).

c. Newly positioned operations will not conduct mechanical harvesting or harrowing in existing eelgrass beds.

d. Before conducting newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground methods) occurring in potential spawning habitat for sand lance, or surf smelt, practitioners or the Corps must conduct a spawn survey. This must occur prior to undertaking bed preparation, net/tube removal, and harvest activities. If eggs are present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.

14. New/expanded farms.

---

[18] Rumrill, S.S. and V.K. Poulton. 2004. Ecological role and potential impacts of molluscan shellfish culture in the estuarine environment of Humboldt Bay, CA. Annual Report to the Western Regional Aquaculture Center, November 2004. 79 pp.

a. If eelgrass is present within a new/expanded farm area, eelgrass bed[8] locations must be documented on a map or sketch which must be submitted by the Corps to NMFS at least 30 days prior to Corps' authorization. The following information must be included to scale: plat boundaries, eelgrass bed locations and boundaries, shellfish seeding/planting locations. Surveys to determine presence and location of eelgrass beds should be done during times of peak above-ground biomass: June-August.
b. Action notifications will be submitted to NMFS for review at least 30 days prior to Corps authorization.
c. New commercial shellfish aquaculture farms will not occur within a buffer distance of 16.5 feet (five meters) from existing eelgrass beds.

15. Forage Fish.

a. Between January 15 and April 15, prior to conducting: (1) mechanical harvesting; (2) raking; (3) harrowing; or (4) tilling or other bed preparation activities, the work area shall be surveyed for the presence of herring spawn. Vegetation, substrate, and aquaculture materials must be inspected. If Pacific herring spawn[19] is present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and herring spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.
b. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground methods) shall not be placed above the tidal elevation of +7 feet Mean Lower Low Water if the area is known surf smelt spawning habitat.
c. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground methods) shall not be placed above the tidal elevation of +5 feet Mean Lower Low Water if the area is known Pacific sand lance spawning habitat.
d. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground methods) occurring in potential spawning habitat for sand lance, or surf smelt must conduct a spawn survey prior to undertaking bed preparation, net/tube removal, and harvest activities. If eggs are present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.

16. The practitioners will adjust the dredge bag to 'skim' the surface during mechanical harvest activities to minimize suspended sediment contributions to the water column.

The NMFS relied on the foregoing description of the proposed action, including all PDCs, to complete this consultation.

---

[19] Herring are an important forage item for OC coho salmon (Healey 1982, Murphy *et al.* 1988, Higgs *et al.* 1995).

For this consultation, the overall program action area consists of the combined areas for each action to be authorized by the Corps in the following sixth-field U.S. Geological Service hydrologic unit code (HUC) sub-watersheds: Tillamook Bay (171002030801), Netarts Bay (171002030901), Lower Yaquina River (171002040303), Lower Siuslaw River (171002060804), Winchester Bay (171003030803), Coos Bay including South Slough (171003040303 and 171003040306), and Alsea Bay (171002050405). All actions authorized by this programmatic consultation will occur within the jurisdiction of the Corps Portland District in Oregon.

Each individual sixth-field sub-watershed is within the range of OC coho salmon, green sturgeon, and eulachon. The action area encompasses all direct and indirect effects, including area affected by minor amounts of substrate disturbance and suspended sediment, minor amounts of unintentional chemical contamination, limited withdrawal of water from the estuaries by pumps, and moderate harvest with mechanical oyster dredges.

Action Agency's Effects Determination

On May 2, 2014, we received a formal consultation request from the Portland District Corps for southern distinct population segment (SDPS) Pacific eulachon (*Thaleichthys pacificus)* (hereafter referred to as 'eulachon') and their designated critical habitat. They determined the proposed action was likely to adversely affect SDPS eulachon and their critical habitat due to entrainment in pumps used for water withdrawal. As part of consultation, we gathered additional information regarding pump usage by growers and accordingly concluded that the proposed action is not likely to adversely affect SDPS eulachon and their designated critical habitat.

The Corps also determined that Oregon Coast (OC) coho salmon (*Oncorhynchus kisutch*) and SPDS North American green sturgeon (*Acipenser medirostris*) (hereafter referred to as 'green sturgeon') and their designated critical habitats may be affected by the proposed action, but the proposed action is not likely to adversely affect these species and critical habitats. NMFS concurs with the Corps' finding that the proposed action is not likely to adversely affect these species and critical habitats.

OC coho salmon. The NMFS issued a final determination to retain the threatened listing for the OC coho salmon on June 20, 2011 (76 FR 35755). The NMFS designated OC coho salmon critical habitat and issued protective regulations on February 11, 2008 (73 FR 7816). The action area is used by adult OC coho salmon for sexual maturation, preparation for freshwater entry, upstream migration, and holding. The action area is used by smolt OC coho salmon for growth, development, and seaward migration. West Coast coho salmon smolts typically leave freshwater in the spring (April to June), moving through the estuary and into the ocean, and when sexually mature reenter freshwater from September to November and spawn from November to December and occasionally into January (Sandercock 1991). In Oregon, juveniles typically are in the action area from February through mid-July and adults from August through February. Additional juvenile life history diversity and estuary use does occur with fry migrants, age-0 parr migrants, and fall/winter migrants; however, individuals displaying these variations typically use the upper estuary in the saltwater/freshwater ecotones (Miller and Sadro 2003, Koski 2009, Bass 2010, Jones *et al.* 2011, Bennett *et al.* 2011, Roni *et al.* 2012, Bennett *et al.* 2014), and are unlikely to occur where commercial shellfish aquaculture is taking place. The entire action area

is designated critical habitat for OC coho salmon. The primary constituent elements (PCEs) of critical habitat within the action area are listed in Table 3.

Table 3. PCEs of critical habitat designated for OC coho salmon and corresponding life history events in the action area.

Primary Constituent Elements		Species Life History Event
Site Type	Site Attribute	
Estuarine areas	Forage Free of artificial obstruction Natural cover Salinity Water quality Water quantity	Adult sexual maturation and "reverse smoltification" Adult upstream migration and holding Fry/parr/smolt growth, development, and seaward migration

SDPS green sturgeon. The NMFS listed green sturgeon as threatened under the ESA on April 7, 2006 (71 FR 17757), designated critical habitat on November 9, 2009 (74 FR 52300), and issued protective regulations on June 2, 2010 (75 FR 30714). The action area is used by adult and sub-adult SDPS green sturgeon from June until October as habitat for growth, feeding, development to adulthood, and migration (Moser and Lindley 2007). In the action area, Yaquina River, Winchester Bay (Umpqua River), and Coos Bay are designated as critical habitat for green sturgeon. The primary constituent elements (PCEs) of critical habitat within the action area are listed in Table 4.

Table 4. PCEs of critical habitats designated for SDPS green sturgeon and corresponding species life history events in the action area.

Primary Constituent Elements		Species Life History Event
Site Type	Site Attribute	
Estuarine areas	Food resources Migratory corridor Sediment quality Water depth Water flow Water quality	Juvenile growth, development, seaward migration Sub-adult growth, development, seasonal holding and movement between estuarine and marine areas Adult growth, development, seasonal holding, movements between estuarine and marine areas, upstream spawning movement, and seaward post-spawning movement

SDPS eulachon. The NMFS listed eulachon as threatened under the ESA on March 18, 2010 (75 FR 13012). We have not issued protective regulations for eulachon, but we did designate critical habitat for eulachon on October 20, 2011 (76 FR 65324). Eulachon larvae and adults use the action area for migration and feeding. Adult SDPS eulachon are likely only present in the action area from mid-December through May and larvae are likely only present from February through June. Attempts to evaluate the status of eulachon have been difficult challenging due to the lack of reliable long-term data. Interpretations of available abundance data for eulachon are confounded by intermittent reporting, fishery-dependent data, and the lack of directed sampling (USDC 2013). However, for estuaries in the action area, the status of SDPS eulachon is either (1)

not found (Tillamook Bay, Netarts Bay, Yaquina River, Alsea Bay; Gustafson *et al.* 2010), (2) observed but on an infrequent basis and in small numbers (Siuslaw River, Coos Bay; Monaco *et al.* 1990, Emmett *et al.* 1991, Gustafson *et al.* 2010), or (3) common but depressed and not yet rebounded to previous abundance (Umpqua River; Monaco *et al.* 1990). Until recently, most fish biologists have not specifically targeted SDPS eulachon during surveys and were unlikely to be sampling with the appropriate gear or at the appropriate times. SDPS eulachon runs also vary annually, thus making directed sampling even more necessary. Based on this information, we cannot conclude that SDPS eulachon are not present in estuaries in the action area, but their likely presence and abundance are sporadic and low. In the action area, Winchester Bay (Umpqua River) is designated as critical habitat for eulachon. The physical and biological features of critical habitat within the action area are listed in Table 5.

Table 5. Physical or biological features of critical habitats designated for SDPS eulachon and corresponding species life history events.

Physical or biological features		Species Life History Event
Site Type	Site Attribute	
Freshwater and estuarine migration	Flow Water quality Water temperature Food Migratory corridor	Adult and larval mobility Larval feeding

Also, the Corps determined that the proposed action "would adversely affect" areas designated by the Pacific Fisheries Management Council as EFH for Pacific salmon (PFMC 1999), groundfish (PFMC 2005), and coastal pelagic species (PFMC 1998), including estuarine areas and submerged aquatic vegetation designated as Habitat Areas of Particular Concern (HAPC).

Consultation History

In 2006, the U.S. Army Corps of Engineers (Corps) proposed to issue a new nationwide permit (NWP) for existing commercial shellfish aquaculture activities (known at the time as NWP D). At the same time, the Corps proposed to modify NWP 4 by removing the provision authorizing shellfish seeding. The Corps also proposed modifying NWP 27 (aquatic habitat restoration, establishment, and enhancement activities) to authorize the construction of oyster habitat over unvegetated bottom in tidal waters, and shellfish seeding. The Corps announced these proposals and requested public comment on NWP D on September 26, 2006 (71 FR 56258). In December 2006, NMFS provided comments to the Corps on NWP D at a national level. These comments documented that submerged aquatic vegetation (e.g., eelgrass) habitat provides valuable ecological functions and is sensitive to disturbance. NMFS also recommended that the Corps modify the pre-construction notification requirements to add protection of submerged aquatic vegetation.

The proposed NWP D was issued with modifications as NWP 48 in 2007 to authorize ongoing shellfish aquaculture activities (72 FR 11092). Existing shellfish aquaculture operations previously authorized by another NWP or another form of a Corps permit, such as a regional

general permit or an individual permit, are covered by those permits until the expiration of the original permit. Nationwide permits automatically expire and become null and void if they are not modified or reissued within 5 years of their effective date.

In August 2008, we began pre-consultation activities in Oregon for the 2007 NWP 48. We received a biological assessment (Environ 2009) and formal consultation was initiated in March 2010. However, consultation was never completed and on March 19, 2012, the Corps reissued NWP 48 which also included new and expanded operations in addition to existing shellfish aquaculture operations. The 2012 NWP 48 superseded the 2007 version. On April 11, 2012, the Corps withdrew their consultation request for NWP 48 in Oregon.

We continued to coordinate and collaborate with the Corps, at both the Portland District level and at the Regional level. We met with the Portland District Corps on June 5, 2012, for clarification of commercial shellfish aquaculture activities in Oregon and Corps regional permit conditions. In 2012 the Corps suspended regional consultation efforts while working with NMFS at a national level on NWPs.

At a regional level (previously the Northwest Region and now the Oregon Washington Coastal Area Office of the West Coast Region), NMFS worked internally to develop a set of recommendations for commercial shellfish aquaculture and native shellfish restoration with the goal of internal agency consistency and for sharing with the Corps Districts for coastal Oregon and Washington. On April 30, 2013, we met with the Portland District Corps and discussed a programmatic consultation strategy similar to the standard local operating procedure programmatic consultations (i.e., SLOPES) between NMFS and the Corps, which have been very successful. Both agencies agreed to pursue the SLOPES-style consultation framework for shellfish activities in Oregon including shellfish restoration. The SLOPES-style consultation framework would include activities for which the Corps could issue individual permits, NWPs for shellfish activities other than aquaculture (i.e., restoration), or NWP 48. However, there are some activities authorized under NWP 48 that are not included in the proposed action for the SLOPES-style Oregon Commercial Shellfish Aquaculture and Native Restoration programmatic consultation because those activities are not used by growers in Oregon or because they have less predictable effects and are not suitable for a programmatic consultation.

In October 2013, we asked the Portland District Corps for feedback on preliminary recommendations, which they provided in November 2013. In January 2014, we provided a complete set of recommendations for review by the Portland District Corps and a general description of activities the agencies were considering for programmatic consultation. We collaborated with the Portland District Corps for the next 3 months to discuss and revise this information.

Consultation for the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration was initiated on May 2, 2014 when the Portland District Corps formally submitted a request for consultation with proposed design criteria.

Actions that do not fall within the parameters of the current programmatic consultation procedures, or are not found to be within the range of effects, are not covered by this

programmatic letter of concurrence but the Corps can request consultation with NMFS for individual actions.

ENDANGERED SPECIES ACT

Effects of the Action

Under the ESA, "effects of the action" means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is not likely to adversely affect listed species or critical habitat is that all of the effects of the action are expected to be discountable, insignificant, or completely beneficial. Beneficial effects are contemporaneous positive effects without any adverse effects to the species or critical habitat. Insignificant effects relate to the size of the impact and should never reach the scale where take occurs. Discountable effects are those extremely unlikely to occur.

Under the administrative portion of this action, the Corps will evaluate each individual action to ensure that the following conditions are complied with: (a) The PDC are applied where ESA-listed OC coho salmon, SDPS green sturgeon, or SDPS eulachon, or their designated critical habitat, or some combination, are present; (b) the anticipated range of effects is within the range considered in this letter of concurrence; (c) the action is carried out consistent with the PDC; and (d) action and program level monitoring and reporting requirements are met. These procedures are a central part of the program and function to ensure that individual actions remain within the scope of effects considered here, and to ensure that the aggregate or program-level effects of those individual actions are also accounted for. Activities that fall within the Oregon Commercial Shellfish and Native Shellfish Restoration proposed action, and otherwise comply with this letter of concurrence, do not require further consultation. Activities that do not meet these criteria, including those that are expressly identified as exclusions, are not covered by this letter of concurrence, but can be the subject of future individual consultations.

The direct physical and chemical effects of each action on the environment will vary depending on the type of action being performed and location, but this discussion identifies a common set of effects related to shellfish aquaculture and restoration. The Corps proposes to authorize both existing operations and new or expanded operations. Basic shellfish aquaculture activities are the same for each type of operation. Effects from on-going, continued operation of existing farms are analyzed in this consultation as are new or expanded farm operations. The Corps proposes to apply similar PDC to both new, or expanded, farms and to newly positioned operations within existing farms.

An important component of the proposed action is the PDC, including program administration. The Corps will provide PDC for likely users of this consultation to ensure the PDC are incorporated into all phases of design for each authorized action, and that any unique action or site constraint related to site suitability is resolved early on. Then, the Corps will review each proposed action to ensure that each action includes the appropriate PDCs and is otherwise consistent with this consultation. The Corps will also obtain additional approval from NMFS for: (1) new/expanded farms; (2) access that cannot avoid eelgrass; and (3) vehicle storage, fueling,

and inspections that occur closer than 150 feet to a waterbody. These activities require NMFS' expertise to determine whether the proposal is consistent with the letter of concurrence. The Corps will also retain the right of reasonable access to each project site so that the use and effectiveness of these PDC can be monitored if necessary. Furthermore, the Corps will notify NMFS before permitting/authorizing each action. As an additional program-level check on the continuing effects of the action, the Corps and NMFS will meet at least annually to review implementation of this consultation and opportunities to improve conservation, or make the program overall more effective or efficient.

Existing commercial shellfish aquaculture activities have been ongoing in the action area for many years, with the exception of Alsea Bay. The existence of commercial shellfish aquaculture, in addition to other factors in managed areas, has influenced prevailing conditions (as described above for each estuary) in the action area. The spatial extent of existing commercial shellfish aquaculture plats ranges from less than 1% and up to 28% of the estuary for the individual estuaries in the action area (Table 6). Nearly all intertidal commercial shellfish aquaculture activities in Oregon occur on low-gradient mud and sandflats, which are habitats that naturally have little habitat structure except where eelgrass occurs.

Table 6. Estuary acreages with extent existing commercial shellfish aquaculture.

Estuary	Total estuary size (acres)‡	Total existing commercial shellfish aquaculture (acres)*	Estimated portion of estuary with existing commercial shellfish aquaculture
Tillamook Bay	9,216	2,606	28%
Netarts Bay	2,743	531	19%
Yaquina River	4,329	519	12%
Siuslaw River	3,060	9	<1%
Umpqua River	6,544	120	2%
Coos Bay		1,062	
South Slough		240	
Combined	13,348	1,302	10%
TOTAL	39,240	5,087	

‡ Estuary size from Oregon Coastal Atlas[20]
* Estimates taken from Table 1.

[20] Available at: http://coastalatlas.net/index.php/learn/places/6-estuaries. Last Accessed June 2014.

Effects on Listed Species

The effects of the proposed action are reasonably likely to include minor amounts of substrate disturbance and suspended sediment, minor amounts of unintentional chemical contamination, limited withdrawal of water from the estuaries by pumps, and moderate harvest with mechanical oyster dredges. However, the effects of the proposed action on listed species will be discountable or insignificant. For this programmatic consultation, we anticipate that every individual action will share some of the effects on the environment described here in proportion to the project's complexity, footprint, and proximity to species and critical habitat, but that neither any individual action nor all the actions covered by this opinion taken together will have effects that are greater than the full range of effects described here, because every action is based on the same set of underlying shellfish aquaculture seeding, maintenance, harvest, access, bed preparation, and water withdrawal activities or elements, and each element is limited by the same PDC. We present our rationale below.

Substrate disturbance and suspended sediment. None of the estuaries in the action area are water-quality-limited for suspended sediment (ODEQ 2010).[21] However, many shellfish aquaculture activities will have direct physical effects on the environment and the potential to result in increased suspended sediment. These activities commonly begin with placing pre-set cultch bags, or clean cultch on intertidal areas, and site preparation. Pre-set cultch bags are commonly placed on pallets. Clean cultch for natural recruitment of shellfish larvae are placed in bags or individually on stakes, lines, racks, pallets, etc. Both types of cultch remain in place until the larvae are large enough and have firmly attached to the cultch. Site preparation includes clearing natural debris. It also includes placement of buoys, floats, racks, trays, lines, or other equipment necessary for commercial shellfish aquaculture operations. These activities all disturb the substrate to some extent. However, these activities occur during low tides that expose the beds so operations can be performed by workers on foot. These activities will only occur for several days during each lunar month based on the availability of low tides. Substrate disturbed by these activities will be moved by the incoming tide and distributed through the water column resulting in suspended sediment.

Additionally, seeding bottom culture beds with mature cultch typically occurs by hand seeding from a boat at high tide or by shoveling or flushing the mature cultch from the deck of the boat. Mature cultch landing on the substrate will also disturb the substrate and suspend disturbed sediment, but hand seeding is likely to cause less of a disturbance than mechanical methods that drop cultch in bulk to the substrate. Although shellfish remove suspended particles from the water column via filter feeding, most studies focus on mature or larger shellfish, such that we are unable to quantify the amount of suspended sediment seeded larvae will remove from the water column. Oysters in advanced stages of maturity will be present locally and will contribute to removal of suspended sediment.

Harrowing and harvest will also disturb the substrate. Hand harvest typically occurs during low tide and the effects are similar to cultch placement and site preparation. Hand harvest of clams is likely to create more substrate disturbance than hand harvest of oysters as clams live in the substrate while oysters are on top of the substrate. Oyster harrowing and mechanical oyster dredge harvest occur during high tide and interact with the substrate by using a boat to drag a

[21] Oregon Department of Environmental Quality (ODEQ) uses turbidity in their water quality standards.

harrow, similar to a plow, through the top layer of substrate to lift oysters to the top of the substrate or to drag an oyster dredge along the surface of the substrate. Both activities are likely to disturb a larger amount of substrate across the shellfish bed, as compared to hand harvest. However, growers typically conduct dredge harvesting at high tide and on beds with a sandy bottom, thus producing less suspended sediment compared to beds with finer substrates that are more typically hand-picked during low tides (Dumbauld 2008 as cited in NMFS 2009). Dumbauld also related that when dredge harvesting, operators attempt to keep the dredge from engaging deeply into the substrates, preferring to operate as efficiently as possible by just skimming the surface and harvesting the oyster crop (NMFS 2009). Furthermore, the Corps requires growers to adjust the oyster dredge bag to skim the surface during mechanical harvest to minimize suspended sediment contributions to the water column. Harrowing is typically done only during winter, which is a season when there are elevated levels of suspended sediment in the estuaries due to storms, thus the contribution of suspended sediment from harrowing is likely to be minor. Furthermore, assuming harrowing occurs on all bottom-cultured shellfish areas in Coos Bay, Yaquina Bay, and Tillamook Bay, the extent of harrowing likely only occurs over 10-28% of any individual estuary (Table 6). Harrowing on new/expanded farm areas is unlikely to substantially increase the proportion of estuary affected given the small extent proposed in Table 2. Due to the winter timing, only eulachon, adult OC coho salmon, and OC coho smolts are likely to be present in the action area when harrowing occurs. Eulachon are of very low abundance in Coos Bay, Yaquina Bay, and Tillamook Bay and it is extremely unlikely that they would be exposed to minor increased elevations of suspended sediment from harrowing, which would only occur over approximately one quarter of the estuary or less, during a time when suspended sediment levels are elevated. Adult and outmigrating OC coho salmon, although more abundant in the action area, are likely to avoid exposure by moving to other areas of the estuary.

Oyster harrowing and mechanical oyster dredge harvest requires the use of boats, just as, in some circumstances, does access to beds. Growers accessing the beds by means of boats may generate propwash and ground out the boats, which would also cause sediment particles to be suspended into the water column. If boats operate in less than 7.2 feet of water, sediment resuspension is substantial (Klein 2007). Asplund (2000) evaluated the literature on boating effects to the aquatic environment and found that impacts were few in waters greater than 10 feet. However, these studies were conducted in small tidal creeks $\leq$ 8 feet deep and lakes or rivers, which are different environmental settings than the estuaries of the action area. Given that the action area is an unconstrained estuarine environment where tidal flushing is occurring regularly, and background suspended sediment concentrations are generally high, the overall effects of any increases in suspended sediment from boat propwash in shallow areas or grounding out will be localized and minimal, and of short-duration (minutes to hours).

Growers may also temporarily place pumps into the estuaries to withdraw water as needed for hatchery and nursery operations or shellfish processing or storage. Pumps may be attached to existing dock structures or temporarily placed on the substrate, resulting in minimal substrate disturbance and sediment suspension.

Long-lines, racks, bags, stakes, and pallets used in commercial shellfish aquaculture are frictional, structural elements that slow the water, allowing suspended sediment to drop from the water column and accumulate on the substrate. Accumulated sediments are generally resuspended and redistributed by storm events.

Native shellfish restoration methods are similar to activities proposed by the Corps for commercial shellfish aquaculture. In some cases native shellfish restoration may include substrate enhancement with gravel or shell to establish natural reefs at a restoration location. Typically in Oregon, native shellfish restoration activities are conducted by hand placement of native oysters, or bags of oysters, on the substrate. Hand placement of shell as authorized by the Corps will minimize the overall amount of substrate disturbance and sediment suspension. PDC also restrict the amount of washed gravel that can be placed for restoration and prevents dumping by hopper barge which will also minimize the overall amount of substrate disturbance and sediment suspension associated with this activity.

In summary, all of the culture and restoration activities mentioned above are likely to produce short-term resuspension of some fine sediments in the water column. The frequency and intensity of disturbance activities on a bed will vary, depending on the area being cultivated, crew size, equipment used, and crop rotations. However, given that these activities will occur in an unconstrained estuarine environment where tidal flushing is occurring regularly, and background suspended sediment concentrations are generally high, the overall effects of any increases in suspended sediment will be localized and minimal, and of short-duration (minutes to hours). Application of the PDC will also limit the exposure of OC coho salmon, SDPS green sturgeon, and SDPS eulachon to these effects. The overall duration of exposure and intensity of effects are likely to be low such that there will be no measurable effects on individual OC coho salmon smolts or adults, on SDPS green sturgeon adults or sub-adults, or on SDPS eulachon larvae or adults. Furthermore, these activities only occur in certain portions of the estuaries, ranging in extent from <1% and up to 28% of the total estuary, such that species with very low abundance (i.e., eulachon) are unlikely to be exposed and other species present are likely to avoid exposure by moving to other undisturbed areas of the estuary. Therefore, there will only be insignificant effects on these species from substrate disturbance and suspended sediment generated by the proposed action.

Unintentional chemical contamination. Some growers, but not all, frequently access their shellfish beds at low tides by using boats, all-terrain vehicles, or trucks. Oyster harrowing, mechanical oyster dredge harvest, and seeding also requires the use of boats. Boats or barges, all-terrain vehicles, and trucks all require fuel, oil, and other chemical fluids. Larger boats or barges, such as ones used for oyster harrowing, for mechanical oyster dredge harvesting or for transporting harvested shellfish, contain greater volumes of these hazardous fluids, but only a few growers in Oregon likely use larger boats for dredge harvest and harrowing. Boating can result in discharges of many pollutants from boats and related facilities (USEPA 1993, Carrasquero 2001). Boats, and vehicles operated along the shore line, inherently bring fuel, oil, hydraulic fluids, and lubricants in closer contact with and increases the potential for unintentional chemical contamination into the action area from exhaust, fuel spills, or release of petroleum lubricants (Mosisch and Arthington 1998, Warrington 1999, Asplund 2000). As described in the proposed action section, crews are only able to access shellfish beds for approximately 29 days per year, and those dates are spread throughout the year, as crews are dependent on low tide cycles. Harrowing, mechanical oyster dredge harvest, and seeding likely do not occur as frequently.

Petroleum-based contaminants (such as fuel, oil, and some hydraulic fluids) contain polycyclic aromatic hydrocarbons (PAHs), which are acutely toxic to listed fish species and other aquatic

organisms at high levels of exposure and cause sublethal adverse effects on aquatic organisms at lower concentrations (Heintz *et al.* 1999, Heintz *et al.* 2000, Incardona *et al.* 2004, Incardona *et al.* 2005, Incardona *et al.* 2006). To minimize the probability of contamination from accidental spills that result from leaks and ruptured hydraulic hoses, equipment, and vehicles, the Corps will require use of staging areas at least 150 feet from surface waters, and regular inspection and cleaning before operation to ensure that vehicles remain free of external oil, grease, and other visible contaminants. Where use of staging areas at least 150 feet from surface waters is not possible, the Corps will require additional information describing site constraints and a spill prevention plan including best management practices to: (1) Maintain and protect vehicles; (2) contain fuel and other vehicle fluids; and (3) prevent leaks and spills from entering the water; and approval from NMFS. For all gas-powered vehicles or power equipment that cannot be refueled in a staging area at least 150 feet away from a stream or waterbody (i.e., boats), the Corps will require the grower to: (1) transfer fuels in EPA-compliant portable fuel containers ≤ 5 gallons during refilling; (2) use a polypropylene pad or other appropriate spill protection; and (3) use a funnel or spill-proof spout when refueling to prevent possible contamination of surface waters. The Corps will also require the grower to keep a spill kit available in case of accidental spills, and, in the event a spill occurs, require growers to contain and remove such spills immediately. Plans that include the mandatory components (see PDC 4(b)(iii) will ensure that practitioners will reduce the probability and frequency of accidental spills and also minimize the magnitude of contamination from accidental spills. Overall, PDC will minimize the probability and magnitude of unintentional chemical contamination and limit the overall volume of pollutants entering the water. Furthermore, the estuaries in the action area are well-flushed systems, because of tidal, wave, wind, and freshwater inputs, which will rapidly reduce and disperse the small amounts of contaminants from unintentional releases to unmeasurable concentrations, even if multiple small spills occur in the same estuary.

Although SDPS eulachon larvae are likely to be susceptible to effects from PAHs, they are not present in the action area in large numbers. Therefore, given the size of the estuaries, the limited amount of activities occurring associated with unintentional chemical contamination, and the quick dispersion of introduced contaminants, it is extremely unlikely that any individual SDPS eulachon larvae will be exposed to levels of unintentional chemical contaminations that would result in measurable effects on these individual larvae.

Furthermore, SDPS eulachon adults, OC coho salmon adults and smolts, and SDPS green sturgeon adults and sub-adults are not nearly as susceptible to injury by exposure to cardiotoxic PAHs as embryos and larvae. Therefore, considering the accidental release of toxic compounds will likely be small in magnitude and disperse rapidly from tidal exchange, exposure will only be to concentrations low enough to be insignificant on individual OC coho salmon smolts or adults, on individual SDPS green sturgeon adults or sub-adults, or on adult SDPS eulachon. Therefore, due to the small magnitude and rapid dispersal of chemical contaminants, the effects from unintentional contamination from the proposed activities will be insignificant on OC coho salmon, SDPS green sturgeon, and adult SDPS eulachon.

Pumps. The Corps is proposing to authorize the use of pumps to withdraw water from the estuaries for rinsing shellfish prior to processing, for wet storage, or for activities associated with hatchery and nursery operations. In Oregon, water withdrawal only occurs for remote setting. Only small pumps are used and intake diameter is also small. Pumps are operated in the estuary

when SDPS eulachon larvae are being transported through to the ocean, including the months of April, May, and June. OC coho smolts and sub-adult and adult green sturgeon will also be present in the action area when pumps are operated; we do not expect that adult eulachon will be present in the action area when pumps are operated (April - September).

Although the PDC require that all pumps be screened in accordance with NMFS criteria, NMFS criteria are based on salmon fry swimming performance. Eulachon larvae are transparent, very small (0.16-0.31 inch), and are passively transported by the tidal currents, waves, and wind in and through the estuary (Parente and Snyder 1970, Hay and McCarter 2000). Salmon fry have far greater swimming performance and are larger than SDPS eulachon larvae (at least 3 times as large) so NMFS criteria are not sufficient to protect SDPS eulachon larvae from being entrained by pumps. However, no more than 6 pumps will be operated at any one time by existing operations and the maximum number of pumps likely to be used within an estuary by existing operations is 3 (in Coos Bay). New/expanded farms have the potential to add additional pump use. Given the small amount of new/expanded farms proposed, it is unlikely that they will use as many pumps as currently used by existing operations, however, as a conservative estimate, we will assume this is the case, such that pump use will double and up to 12 pumps will be operated at any one time within the action area by existing farms and new/expanded farms. We do not know how long each batch of oyster larvae remain in tanks or how many batches growers grow each year in Oregon. There are 90 days per year (April through June) when SDPS eulachon larvae are exposed to pump operation and risk entrainment. However, pumps are not operated 24 hours a day and maybe not even every day. Seawater may be pumped for as short of a time as 15 minutes or as long as 4 hours when they are used. Considering that adult presence and abundance are likely to be sporadic and low in the estuaries, it is unlikely that SDPS eulachon larvae are present in the action area in large numbers, and when also considering the overall large estuary sizes and that a small number of pumps are used, are not run continuously, their small size, and that pumps are not placed in the middle of the estuary, it is extremely unlikely that any individua SDPS eulachon larvae will be exposed to pumps during their operation.

We do not anticipate very young juvenile coho salmon to be present in the areas where pumps will be used, only outmigrating smolts or adult coho salmon. Only adult or sub-adult SDPS green sturgeon will be present in the action area. Both OC coho salmon and SDPS green sturgeon are much stronger swimmers or are larger in size than the eulachon larvae or adults. Yearling coho salmon/coho smolts are approximately 5 inches in length when they move through the estuaries to the ocean and their burst swimming speed is estimated at 4 to 5 fps (Bell 1990). Niggemeyer and Duster (2003) estimated cruising speed, a sustained swimming speed, for green sturgeon at one body length per second. Burst speeds would likely be higher than this, possibly twice as fast. Adult green sturgeon captured in various research studies range from 3.9 to 7.4 feet in length (Erickson and Webb 2007, Moser and Lindley 2007). Juvenile green sturgeon may enter the ocean environment when they are 2- to 3-years old and possibly 2 feet long (Adams *et al.* 2002). Based on the body lengths, burst speed for adult green sturgeon of this reported size would be 8 to 15 fps (2 body lengths per second) and 4 fps for small sub-adults. Overall, it is extremely unlikely that either species will be entrained or otherwise injured by properly-screened pumps used in the estuaries.

Mechanical oyster dredge harvest. Adult and juvenile SDPS eulachon are incidentally captured in several west coast fisheries, including the pink shrimp trawl fishery, limited entry bottom

trawl fishery, and Pacific hake/whiting off-shore fisheries (Emmett *et al.* 2001, Bellman *et al.* 2008, NWFSC 2008). However, fishing methods and equipment are very different in these commercial fisheries as compared to harvest methods used in the shellfish aquaculture industry. In the shellfish aquaculture industry, as proposed, oyster bags are used in oyster mechanical dredge harvest. It is unlikely that adult SDPS eulachon would be captured by a mechanical oyster dredge. Langer *et al.* (1977) estimated that burst swimming speed of eulachon (30 second duration) was 4.9 fps and ranged from 6.6 fps for large eulachon to 3.3 fps for smaller eulachon. Therefore, adult eulachon burst swimming speeds exceed the tow speed of the mechanical oyster dredge (<3.3 fps), thus their size and mobility allows them to avoid the oyster dredge. Additionally, the burst swimming speeds of yearling OC coho salmon/coho smolts, adult OC coho salmon, and adult and sub-adult SDPS green sturgeon all exceed the tow speed of the mechanical oyster dredge and therefore it is extremely unlikely that either species will be entrained or otherwise injured by an oyster dredge, or that any individuals will experience behavioral disturbance that will result in a measurable change in survival, breeding, feeding, or sheltering.

However, eulachon larvae are extremely weak swimmers. They are also captured deep in the water column in the lower Columbia River (Howell *et al.* 2001). In spite of the low tow speed, some SDPS eulachon larvae are likely to be swept up by the oyster dredge. However, the large size of the mesh, compared to small larvae size, would allow larvae to pass through the dredge bag. Therefore, it is extremely unlikely that eulachon larvae will be entrained or otherwise injured by the oyster dredge.

Effects on Critical Habitat

The action area includes designated critical habitat for OC coho salmon, SDPS green sturgeon, and SDPS eulachon; the PCEs and biological and physical features of their critical habitat are described above in Tables 3-5. We analyzed the potential impacts of the proposed action on critical habitat and determined that the proposed action will only affect the water quality and the migratory corridor/free of artificial obstruction features of critical habitat. However, as described above, these effects to critical habitat from the proposed action will be discountable or insignificant.

1. Water quality. Instances of increased suspended sediment and unintentional chemical contamination will be localized and minor due to PDC and undetectable due to the limited magnitude and unconstrained estuarine environment where tidal flushing is occurring regularly. Therefore, effects on the water quality feature of critical habitat from the proposed action will be insignificant due to their localized and temporary nature.
2. Migratory corridor/free of artificial obstruction. Pumps and mechanical oyster dredge harvest have the potential to interfere with the migratory corridor or create artificial obstructions to migration. These would be temporary effects as pumps are only operated during April through September and mechanical oyster dredge harvest will only occur for a moderate number of hours per day as needed. Critical habitat for SDPS eulachon is most susceptible, but pumps are not used in the Umpqua estuary, which is the only critical habitat designated for SDPS eulachon in the action area. The migratory corridor/free of artificial obstruction feature of critical habitat for outmigrating OC coho smolts, adult OC coho salmon, and adult or sub-adult SDPS green sturgeon is extremely unlikely to be affected because of their larger size and greater swimming speeds and

because of the scarcity and small size of pumps in the action area. In terms of mechanical oyster dredge harvest, the activity is insufficient to interfere with this feature of critical habitat because burst swimming speeds of adult SDPS eulachon, yearling OC coho salmon/coho smolts, adult OC coho salmon, and adult and sub-adult SDPS green sturgeon all exceed the tow speed of the mechanical oyster dredge. For SDPS eulachon larvae, the large size of the mesh, compared to small larvae size, would allow larvae to pass through the dredge bag, such that the migratory corridor feature of critical habitat for SDPS eulachon larvae is also extremely unlikely to be affected. Overall, effects on the migratory corridor/free of artificial obstruction feature of critical habitat will be discountable or insignificant.

Conclusion

Based on this analysis, NMFS concurs with the Corps that the proposed action is not likely to adversely affect OC coho salmon and SDPS green sturgeon and designated critical habitats. We also concluded that the proposed action is not likely to adversely affect SDPS eulachon and their designated critical habitat.

Reinitiation of Consultation

Reinitiation of consultation is required and shall be requested by the Corps or by NMFS, where discretionary Federal involvement or control over the action has been retained or is authorized by law and (1) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (2) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter; or if (3) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16). This concludes the ESA portion of this consultation.

MAGNUSON-STEVENS FISHERY CONSERVATION AND MANAGEMENT ACT ESSENTIAL FISH HABITAT CONSULTATION

Under the MSA, this consultation is intended to promote the protection, conservation and enhancement of EFH as necessary to support sustainable fisheries and the managed species' contribution to a healthy ecosystem. For the purposes of the MSA, EFH means "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity", and includes the associated physical, chemical, and biological properties that are used by fish (50 CFR 600.10), and "adverse effect" means any impact which reduces either the quality or quantity of EFH (50 CFR 600.910(a)). Adverse effects may include direct, indirect, site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

The action area is designated as EFH for Pacific salmon (PFMC 1999), five coastal pelagic species (PFMC 1998), and 22 groundfish species (PFMC 2005; Table 7).

Table 7. Species with designated EFH in the action area.

Species		Lifestage	Activity*	Prey
Groundfish[22]				
Arrowtooth Flounder	Atheresthes stomias	larvae		
		eggs		
Black rockfish	Sebastes melanops	juveniles	feeding	amphipods, barnacle cypriots, copepods, crustacean zoea, fish larvae, mysids, polychaetes
Blue rockfish	Sebastes mystinus	larvae		
Bocaccio	Sebastes paucispinis	larvae		
Brown rockfish	Sebastes auriculatus	larvae	feeding	
California skate	Raja inornata	adults	all	
		eggs		
Copper rockfish	Sebastes caurinus	larvae	feeding	
English sole	Parophrys vetulus	juveniles	feeding	amphipods, copepods, cumaceans, molluscs, mysids, polychaetes
		adults	all	amphipods,crustaceans, cumaceans, molluscs, ophiuroids, polychaetes
		eggs		
		larvae	feeding	
Kelp greenling	Hexagrammos decagrammus	larvae		
Lingcod	Ophiodon elongates	eggs		
Longnose skate	Raja rhina	eggs		
Pacific cod	Gadus macrocephalus	eggs		
Pacific rattail		eggs		
		larvae		
Pacific sanddab	Citharichthys sordidus	larvae	feeding	
Sablefish	Anoplopoma fimbria	eggs		
Sand sole	Psettichthys melanostictus	larvae		
		eggs		
Soupfin shark	Galeorhinus galeus	adults	all	fish, invertebrates
		juveniles	growth to maturity	fish, invertebrates
Spiny dogfish	Squalus acanthias	adults	all	
		juveniles	feeding	

[22] Groundfish species list created using the following materials used to support the EFH designations (amendment 19) within the 2005 groundfish fishery management plan: 1) habitat use database; 2) habitat suitability probability maps; and 3) groundfish life history descriptions (PFMC 2005).

Species		Lifestage	Activity*	Prey
Splitnose rockfish		larvae		
Starry flounder	Platichthys stellatus	adults	all	crabs, fish juveniles, molluscs, polychaetes
		juveniles	feeding	amphipods, copepods, polychaetes
		eggs		
		larvae		
Whiting (Pacific hake)	Merluccius productus	adult		

*Activities include: breeding, feeding, growth to maturity, spawning, unknown

Pacific Salmon	
Chinook salmon	Oncorhynchus tshawytscha
Coho salmon	Oncorhynchus kisutch
Coastal Pelagics	
Northern anchovy	Engraulis mordax
Jack mackerel	Trachurus symmetricus
Pacific sardine	Sardinops sagax
Pacific (chub) mackerel	Scomber japonicas
Market squid	Loligo opalescens

Estuaries and submerged aquatic vegetation are two types of habitat designated by the Pacific Fishery Management Council (PFMC) as Habitat Areas of Particular Concern (HAPC) for groundfish species because estuaries are nutrient-rich and biologically-productive, providing critical nursery ground for many groundfish species managed by the PFMC. Eelgrass is a vital component to the life history cycle of fish, particularly young fish, as it is a rich source of benthic invertebrate production and provides cover from predators.

Eelgrass is an ecosystem engineer that provides estuarine functions including structural complexity for predator refugia, detritus for the basis of the food web (Zieman and Wetzel 1980, Emmett *et al.* 1991, Hoss and Thayer 1993, Herke and Rogers 1993), nutrient regeneration (Klug 1980, Twilley *et al.* 1986), sediment stabilization (Fonseca and Fisher 1986), and habitat for many fish and marine invertebrates (Thayer and Phillips 1977, Heck and Orth 1980, Zieman 1982, Heck and Thoman 1984, Phillips 1984, Thayer *et al.* 1984, Hoffman 1986, Wilson *et al.* 1990). In the intertidal estuarine environment, it is a foundational element, supporting the base of the food web. Eelgrass also provides an invertebrate and vertebrate prey base and shelter from predation for smaller individuals in their more susceptible life stages and is a key component of functioning estuarine ecosystems. Eelgrass patches support spawning, feeding, and growth of herring (Blackmon *et al.* 2006, Penttila 2007) as well as harpacticoid copepods. These are both items on which juvenile salmon feed (Simenstad *et al.* 1979, Healey 1982, Murphy *et al.* 1988, Higgs *et al.* 1995) and groundfish also prey on herring.

Chinook salmon and groundfish species have a greater affinity for eelgrass than the ESA-listed species. Adequate cover and marine vegetation in estuarine and nearshore habitats have been identified as important elements in Pacific salmon marine EFH in estuarine habitats. Loss of eelgrass beds is specifically identified as a habitat concern. Eelgrass provides shelter and food for juvenile salmon (Phillips 1984) and the Pacific salmon FMP (PFMC 1999) suggests alterations to eelgrass beds may result in loss of cover from predators, loss of primary

productivity, and loss of prey. Laboratory studies of Chinook salmon smolt behavior indicated that *Zostera marina* may provide a better refuge than other habitat types. Larger juveniles preferred the structure of *Zostera marina* as a refuge over oysters or open sand substrate when exposed to a mock heron predator (Dumbauld 2005). Additionally, Chinook smolts had a strong preference for remaining in *Zostera marina*, while no preference existed for other structured benthic habitats, such as oyster beds, non-native eelgrass (*Zostera japonica*), and non-native smooth cordgrass, in an enclosure study in Willapa Bay (Semmens 2008).

Estuaries are also important rearing habitat for juvenile flatfish, rockfish, and elasmobranchs. Eelgrass is also specifically mentioned in the life history descriptions of cabezon, bocaccio, lingcod, brown rockfish, grass rockfish, quillback rockfish, black rockfish, copper rockfish, and English sole within the groundfish FMP (PFMC 2005). Additional literature also supports the use of eelgrass by some groundfish species (Love *et al.* 1991, Murphy *et al.* 2000, Nightingale and Simenstad 2001, Johnson *et al.* 2003). English sole, copper rockfish, and rockfish larvae/juveniles are considered "resident" users of eelgrass beds; black rockfish, quillback rockfish, lingcod, and cabezon are considered "transient" users, as described in Phillips' (1984) description of eelgrass meadows in the Pacific Northwest. Many rockfish juveniles settle into shallow, vegetated (e.g., kelp and eelgrass) habitats to meet critical juvenile rearing needs. These habitats provide both predation refuge and increased access to prey resources.

Eelgrass distribution overlaps directly with the estuarine area where most shellfish aquaculture occurs (Committee 2010). Groundfish species and Chinook salmon will be exposed to a reduction in *Zostera marina* density and spatial cover resulting from proposed activities disturbing eelgrass. For this reason, NMFS has determined that the proposed action would adversely affect EFH designated for groundfish species and Pacific salmon as follows.

1. Natural Cover/Forage/Seagrass HAPC. Managed shellfish beds cyclically reduce and disturb the density and development of eelgrass that provides habitat functions for Pacific salmon and groundfish species and their forage species. Where sufficient rhizome nodes remain intact following disturbance, eelgrass can recover (Cabaco *et al.* 2005), although recovery may take an extended period of time and eelgrass density may be initially lower. Eelgrass may also recover via a seed source. Eelgrass respond to the addition of oysters by reducing the density of shoots and by decreasing the size (length) of shoots (Wagner *et al.* 2012). Eelgrass regrowth can occur on a shellfish bed following aquaculture activities that have reduced existing eelgrass, but cyclical management activities limit the density and functional condition of eelgrass on commercial shellfish aquaculture plats.

   Typical seeding density for bottom culture beds in in Pacific Northwest bays and estuaries is approximately 200 to 250 bushels/bags per acre although density may vary depending on site productivity (Rumrill 2013). At this seeding density, NMFS expects there to be an approximate 60-75% decline in *Zostera marina* density if seeding occurs on eelgrass beds (Rumrill 2013). Although *Zostera marina* can recover following disturbance (i.e., during grow-out prior to harvest), the proposed action will likely maintain conditions limiting *Zostera marina* beds in the action area. The Corps will require all new/expanded farms and all newly positioned equipment (i.e., racks, stakes, flip bags, or on-bottom culture) and operations within existing farms to avoid existing *Zostera marina* beds. For newly positioned shellfish long-lines, the Corps will only allow

a spacing that has been demonstrated to minimize impacts to eelgrass (Rumrill and Poulton 2004). Therefore, only existing shellfish aquaculture beds and equipment are likely to continue to maintain disturbances to *Zostera marina* density.

Mechanical oyster dredge harvest occurs in Tillamook Bay (553 acres), Yaquina River (512 acres), and Coos Bay/South Slough (1,062 acres). Available research supports the conclusion that dredge harvesting of oysters reduces the spatial extent and density of eelgrass beds by physically damaging the plants. Tallis *et al.* (2009) conducted a large-scale simulated mechanical harvest experiment in Willapa Bay, Washington. The authors found 70% fewer eelgrass plants in dredged beds as compared to uncultivated areas. Eelgrass loss was attributed to removal of and physical damage to plants, as reflected in these statements: "The direct effect of dredging reduces the density of eelgrass via breakage of shoots and rhizomes. The dredge implement and steel mesh bag physically overturn the sediment, cut eelgrass blades or rhizomes or entangle, whole plants, removing blades and rhizomes with oysters" (Waddell (1964) and personal observation by Brett Dumbauld, as cited in Tallis *et al.* (2009)). Another study conducted a few years earlier in Willapa Bay, Washington, also found that the density of adult eelgrass shoots was significantly lower in areas that had been dredge harvested (Wisehart *et al.* 2007). Harrowing likely causes similar negative effects to eelgrass and, to our best knowledge, occurs in the same estuaries in which mechanical oyster dredge harvest occurs. However, the Corps requires growers to avoid *Zostera marina* when establishing new/expanded farms and for all newly positioned bottom culture. Therefore, only mechanical oyster dredge harvest and harrowing of existing shellfish aquaculture beds are likely to continue to maintain disturbances to *Zostera marina* density.

Accessing shellfish bed by boats, all-terrain vehicles, trucks, or by foot, also disturbs eelgrass. However, the Corps requires growers to avoid using motorized vehicles in eelgrass beds, avoid grounding or anchoring boats in eelgrass beds, and avoid establishing walking paths through eelgrass beds. Where this is not possible, the Corps will require the grower to submit an access plan describing site constraints, specific measures and best management practices to minimize eelgrass disturbance from access. Approval from NMFS will be required prior to authorization. Access plans that include the mandatory components (see PDC 4(b)(ii)) will ensure that practitioners will only disturb eelgrass for access when necessary and minimize eelgrass disturbance from vehicle use, grounding/anchoring boats, and walking paths.

Overall, the proposed action would adversely affect EFH designated for Pacific salmon and groundfish by reducing eelgrass density and spatial cover, thus reducing the quality and quantity of natural cover and forage. The proposed action would also adversely affect the seagrass HAPC.

Essential Fish Habitat Conservation Recommendations

NMFS determined that the following conservation recommendation is necessary to avoid, mitigate, or offset the impact of the proposed action on EFH.

1. Minimize adverse effects due to authorizing shellfish activities by ensuring that all actions use the design criteria described in the proposed action, as appropriate. Fully

implementing this EFH conservation recommendation would protect, by avoiding or minimizing the adverse effects, approximately 5,277 acres of designated EFH for Pacific coast groundfish, coastal pelagic species, and Pacific salmon, including seagrass and estuarine HAPCs.

Within 30 days after receiving this recommendation, you must provide NMFS with a detailed written response (50 CFR 600.920(k)(1)). The number of conservation recommendations accepted should be clearly identified in that response. If your response is inconsistent with the EFH conservation recommendations, you must explain why the recommendations will not be followed, including the scientific justification for any disagreements over the anticipated effects of the action and the measures needed to avoid, minimize, mitigate, or offset such effects.

The Corps must reinitiate EFH consultation with NMFS if the proposed action is substantially revised in a way that may adversely affect EFH, or if new information becomes available that affects the basis for NMFS' EFH conservation recommendations (50 CFR 600. 920(l)). This concludes the MSA portion of this consultation.

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. The Corps also has the same responsibilities, and informal consultation offers action agencies an opportunity to address their conservation responsibilities under section 7(a)(1).

Please direct questions regarding this letter to Michelle McMullin, fisheries biologist, in the Oregon Coast Branch of the Oregon Washington Coastal Area Office, at 541.957.3378 and Michelle.McMullin@noaa.gov.

Sincerely,

William W. Stelle, Jr.
Regional Administrator

Enclosure: Appendices

cc: John Byers, ODA
Judy Linton, Corps
Steve Rumrill, ODFW

REFERENCES

Adams, P.B., C.B. Grimes, S.T. Lindley, and M.L. Moser. 2002. Status review for North American green sturgeon, *Acipenser medirostris*. NOAA, National Marine Fisheries Service, Southwest Fisheries Science Center, Santa Cruz, California. 50 p.

Asplund, T.R. 2000. The effects of motorized watercraft on aquatic ecosystems. Wisconsin Department of Integrated Science Services. University of Wisconsin, PUBL-SS-948-00, Madison. 12 p.

Bass, A. 2010. Juvenile coho salmon movement and migration through tide gates. MS thesis in fisheries science, Department of Fisheries and Wildlife, Oregon State University, Corvallis, OR.

Bell, M.C. 1990. Fisheries handbook of engineering requirements and biological criteria. U.S. Army Corps of Engineers. North Pacific Division. Fish Development and Evaluation Program, Portland, Oregon. 322 p.

Bellman, M., E. Heery, and J. Hastie. 2008. Estimated discard and total catch of selected groundfish species in the 2007 U. S. West Coast fisheries. Pacific States Marine Fisheries Commission and Northwest Fisheries Science Center, Fishery Resource Analysis and Monitoring Division, Seattle, WA.

Bennett, T.R., R.C. Wissmar, and P. Roni. 2011. Fall and spring emigration timing of juvenile coho salmon from East Twin River, Washington. Northwest Science 85(4):562-570.

Bennett, T.R., P.R. Roni, K. Denton, M. McHenry, and R. Moses. 2014. Nomads no more: early juvenile coho salmon migrants contribute to the adult return. Ecology of Freshwater Fish. doi: 10.1111/eff.12144

Blackmon, D., T. Wyllie-Echeverria, and D. Shafer. 2006. The role of seagrasses and kelp in marine fish support. Wetlands Regulatory Assistance Program Technical Notes Collection, U. S. Army Engineer Research and Development Center, Vicksburg, MS. ERDC TN-WRAP-06-1. 23 p.

Boule, M.E., and K.F. Bierly. 1987. History of estuarine wetland development and alteration: What have we wrought? Northwest Environmental Journal. Vol. 3(1):43-62.

Cabaco, S., A. Alexandre, and R. Santos. 2005. Population-level effects of clam harvesting on the seagrass *Zostera noltii*. Marine Ecology Progress Series 298:123-129.

Carrasquero, J. 2001. Overwater structures: Freshwater issues. White paper submitted to Washington Department of Fish and Wildlife, Washington Department of Ecology and Washington Department of Transportation. Olympia, Washington.

Committee (Committee on Best Practices for Shellfish Mariculture and the Effects of Commercial Activities in Drakes Estero, Pt. Reyes National Seashore, California). 2010. Ecosystem concepts for sustainable bivalve mariculture. The National Academies Press. Washington, D.C. 146 p.

Donoghue, C. 2012. Operational definition for determining edge of eelgrass (*Zostera marina*) presence. Washington State Department of Natural Resources Technical Memorandum. November. 33p.

Dumbauld, B.R. 2005. The ecological role and potential impacts of molluscan shellfish culture in the estuarine environment. Western Regional Aquaculture Center (WRAC) Termination Report.

Dumbauld, B, 2008. Personal communication. Ecologist, U.S.D.A. Agricultural Research Service, Newport, OR. In: National Marine Fisheries Service. 2009a. Final Programmatic Consultation for Nationwide Permit 48 Activities in Washington State. April 28. 111 p.

Emmett, R.L., S.L. Stone, S.A. Hinton, and M.E. Monaco. 1991. Distribution and abundance of fishes and invertebrates in West Coast estuaries. Volume II: species life history summaries. ELMR Report No. 8. NOAA/NOS Strategic Environmental Assessments Division, Rockville, MD. 329 p.

Emmett, R.L., P.J. Bentley, and G.K. Krutzikowsky. 2001. Ecology of marine predatory and prey fishes off the Columbia River, 1998 and 1999. U.S. Department of Commerce, NOAA Technical Memo. NMFS-NWFSC-51.

Environ (Environ International Corporation). 2009. NWP 48 biological assessment: potential effects of shellfish aquaculture activities on Federally listed and sensitive fish and wildlife species and their habitat in the State of Oregon. Prepared for U.S. Army Corps of Engineers, Portland, Oregon. Project No. 03-20390D. December.

Erickson, D.L., and M.A.H Webb. 2007. Spawning periodicity, spawning migration, and size at maturity of green sturgeon, *Acipenser medirostris*, in the Rogue River, Oregon. Environmental Biology of Fishes 79:255-268.

Fonseca, M.S., and J.S. Fisher. 1986. A comparison of canopy friction and sediment movement between four species of seagrasses with reference to their ecology and restoration. Marine Ecology Progress Series 29:15-22.

Gustafson, R.G., M.J. Ford, D. Teel, and J.S. Drake. 2010. Status review of eulachon (*Thaleichthys pacificus*) in Washington, Oregon, and California. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-105. 360 p.

Hay, D.E., and P.B. McCarter. 2000. Status of the eulachon *Thaleichthys pacificus* in Canada. Department of Fisheries and Oceans Canada, Canadian Stock Assessment Secretariat, Research Document 2000-145. Ottawa, Ontario. Online at: http://www.dfo-mpo.gc.ca/csas/csas/DocREC/2000/PDF/2000_145e.pdf (Last Accessed July 2014).

Healey, M.C. 1982. Juvenile pacific salmon in estuaries: the life support system. Pages 343–364 in Kennedy, V.S. (Ed.), Estuarine Comparisons. Academic Press, New York.

Heck, K.L. Jr., and R.J. Orth. 1980. Seagrass habitats: the roles of habitat complexity, competition and predation in structuring associated fish and motile macroinvertebrate assemblages. Pages 449-464 in V. S. Kennedy (ed). Estuarine perspectives. Academic Press, New York.

Heck, K.L. Jr., and T.A. Thoman. 1984. The nursery role of seagrass meadows in the upper and lower reaches of the Chesapeake Bay. Estuaries 7:70-92.

Heintz, R.A., J.W. Short, and S.D. Rice. 1999. Sensitivity of fish embryos to weathered crude oil: Part II. Increased mortality of pink salmon (*Oncorhynchus gorbuscha*) embryos incubating downstream from weathered Exxon Valdez crude oil. Environmental Toxicology and Chemistry 18:494-503.

Heintz, R.A., S.D. Rice, A.C. Wertheimer, R.F. Bradshaw, F.P. Thrower, J.E. Joyce, and J.W. Short. 2000. Delayed effects on growth and marine survival of pink salmon *Oncorhynchus gorbuscha* after exposure to crude oil during embryonic development. Marine Ecology Progress Series 208:205-216.

Helm, M.M. and N. Bourne. 2004. Hatchery culture of bivalves: A practical manual. Food and Agriculture Organization of the United Nations. Rome. 177 p.

Herke, W.H., and B.D. Rogers. 1993. Maintenances of the estuarine environment. Pages 263-286 in C. C. Kohler and W. A. Hubert (eds). Inland Fisheries Management in North America. American Fisheries Society, Bethesda, MD.

Higgs, D.A., J.S. Macdonald, C.D. Levings, and B.S. Dosanjh. 1995. Nutrition and feeding habits in relation to life history stage. Pages 159-316 in C. Groot, L. Margolis, and W.C. Clarke (eds). Physiological ecology of Pacific salmon. Vancouver, British Columbia.

Hoffman, R.H. 1986. Fishery utilization of eelgrass (*Zostera marina*) beds and non-vegetated shallow water areas in San Diego Bay. NMFS, SWR Admin. Report SWR-86-4.

Hoss, D.E., and G.W. Thayer. 1993. The importance of habitat to the early life history of estuarine dependent fishes. American Fisheries Society Symposium 14:147-158.

Howell, M.D., M.D. Romano, and T.A. Rien. 2001. Outmigration timing and distribution of larval eulachon, *Thaleichthys pacificus*, in the Lower Columbia River, Spring 2011. Draft December 26. 17 p. plus figures and appendices.

Incardona, J.P., T.K. Collier, and N.L. Scholz. 2004. Defects in cardiac function precede morphological abnormalities in fish embryos exposed to polycyclic aromatic hydrocarbons. Toxicology and Applied Pharmacology 196:191-205.

Incardona, J.P., M.G. Carls, H. Teraoka, C.A. Sloan, T.K. Collier, and N.L. Scholz. 2005. Aryl hydrocarbon receptor-independent toxicity of weathered crude oil during fish development. Environmental Health Perspectives 113:1755-1762.

Incardona, J.P., H.L. Day, T.K. Collier, and N.L. Scholz. 2006. Developmental toxicity of 4-ring polycyclic aromatic hydrocarbons in zebrafish is differentially dependent on AH receptor isoforms and hepatic cytochrome P450 1A metabolism. Toxicology and Applied Pharmacology 217:308-321.

Johnson, S.W., M.L. Murphy, D.J. Csepp, P.M. Harris, and J.F. Thedinga. 2003. A survey of fish assemblages in eelgrass and kelp habitats of southeastern Alaska. NOAA Technical Memo. NMFS-AFSC-139. 39 p.

Jones, K.K., T.J. Cornwell, D.L. Bottom, S. Stein, H. Wellard Kelly, and L.A. Campbell. 2011. Recovery of wild coho salmon in Salmon River basin, 2008-10. Monitoring Program Report Number OPSW-ODFW-2011-10, Oregon Department of Fish and Wildlife, Salem, OR.

Klein, R. 2007. The effects of marinas and boating activity upon tidal waterways. Community and Environmental Defense Services. Owings Mills, Maryland. 23 p.

Klug, M.J. 1980. Detritus-decomposition relationships. Pages 225-245 in R. C. Phillips and C. P. McRoy (eds). Handbook of seagrass biology: an ecosystem perspective. Garland STPM Press, New York.

Koski, K.V. 2009. The fate of coho salmon nomads: the story of an estuarine-rearing strategy promoting resilience. Ecology and Society 14(1):4-19. Available at: http://www.ecologyandsociety.org/vol14/iss1/art4/ (Last Accessed July 2014).

Langer. O.E., B.G. Shepherd and P.R. Vroom.1977. Biology of the Nass River eulachon (*Thaleichthys pacificus*). Technical report; Canada Fisheries and Marine Service, Pacific Region, no. PAC/T-77-10. 56 p.

Love, M.S., M.H. Carr, and L.J. Haldorson. 1991. The ecology of substrate-associated juveniles of genus Sebastes. Environmental Biology Fishes 30:225-243.

Miller, B.A., and S. Sadro. 2003. Residence time and seasonal movement of juvenile coho salmon in the ecotone and lower estuary of Winchester Creek, South Slough, Oregon. Transactions of the American Fisheries Society 132:546–559.

Monaco, M.E., R.L. Emmett, S.A. Hinton, and D.M. Nelson. 1990. Distribution and abundance of fishes and invertebrates in West Coast estuaries. Volume I: Data summaries. ELMR Rep. 4. U.S. Dept. Commerce, NOAA, National Ocean Service, Strategic Assessment Branch, Silver Spring, MD.

Moser, M., and S. Lindley. 2007. Use of Washington estuaries by subadult and adult green sturgeon. Environmental Biology of Fishes 79:243-253.

Mosisch, T.D. and A.H. Arthington. 1998. The impacts of power boating and water skiing on lakes and reservoirs. Lakes & Reservoirs: Research Management 3:1-17.

Murphy, M.L., J.F. Thedinga, and K.V. Koski. 1988. Size and diet of juvenile pacific salmon during seaward migration through a small estuary in southeastern Alaska. Fishery Bulletin 86(2):213-222.

Murphy, M.L., S.W. Johnson, and D.J. Csepp. 2000. A comparison of fish assemblages in eelgrass and adjacent subtidal habitats near Craig, Alaska. Alaska Fishery Research Bulletin 7:11–21.

Niggemeyer, A., and T. Duster. 2003. Final assessment of potential sturgeon passage impediments SP-F3.2 Task 3A. Oroville Facilities Relicensing FERC Project No. 2100. Surface Water Resources, Inc. Sacramento, California. 27 p.

Nightingale, B., and C. Simenstad. 2001. Overwater structures: Marine issues. White paper, Research Project T1803, Task 35. Prepared for Washington State Transportation Commission. University of Washington. Seattle, Washington. 133 p. and 2 appendices.

NMFS (National Marine Fisheries Service). 2009. Final Programmatic Consultation for Nationwide Permit 48 Activities in Washington State. April 28. 111 p.

NWFSC (Northwest Fisheries Science Center). 2008. Data report and summary analyses of the California and Oregon pink shrimp fisheries, December 2008. NWFSC, Fishery Resource Analysis and Monitoring Division, West Coast Groundfish Observer Program, Seattle, WA.

ODA (Oregon Department of Agriculture). 1996. Yaquina Bay management plan for commercial shellfish harvesting. September. 5p. plus figures.

ODA (Oregon Department of Agriculture). 2003. Netarts Bay management plan for commercial shellfish harvesting. February. 4p. plus figures.

ODA (Oregon Department of Agriculture). 2008a. South Slough management plan for commercial shellfish harvesting. July 6p. plus figures.

ODA (Oregon Department of Agriculture). 2008b. Upper and Lower Coos Bay commercial shellfish harvesting management plan. October. 7p. plus figures.

ODA (Oregon Department of Agriculture). 2009. Tillamook management plan for commercial shellfish harvesting. December. 6p. plus figures.

ODA (Oregon Department of Agriculture). 2010. Umpqua estuary management plan for commercial shellfish harvesting. August. 5p. plus figures.

ODEQ (Oregon Department of Environmental Quality). 2010. Water Quality Assessment Database, Oregon's 2010 Integrated Report. Oregon DEQ: Water Quality - Water Quality Assessment - Oregon's2010 Integrated Report Database.

Parente, W.D. and G.R. Snyder. 1970. A pictorial record of the hatching and early development of the eulachon (*Thaleichthys pacificus*). Northwest Science 44(1):50-57.

Penttila, D. 2007. Marine forage fishes in Puget Sound. Puget Sound Nearshore Partnership Report No. 2007-03. Published by Seattle District, U.S. Army Corps of Engineers, Seattle, Washington.

PFMC (Pacific Fishery Management Council). 1998. The Coastal Pelagic Species Fishery Management Plan: Amendment 8. Pacific Fishery Management Council, Portland, Oregon. December.

PFMC (Pacific Fishery Management Council). 1999. Amendment 14 to the Pacific Coast Salmon Plan. Appendix A: Description and identification of essential fish habitat, adverse impacts and recommended conservation measures for salmon. Pacific Fishery Management Council, Portland, Oregon. March.

PFMC (Pacific Fishery Management Council). 2005. Amendment 19 to the Pacific Coast Groundfish Fishery Management Plan. Pacific Fishery Management Council, Portland, Oregon. November.

Phillips, R.C. 1984. The ecology of eelgrass meadows in the Pacific Northwest: a community profile. U.S. Fish and Wildlife Service. FWS/OBS-84/24. 85 p.

Roni, P., T.R. Bennett, R. Holland, G.R. Pess, K.M. Hanson, R. Moses, M. McHenry, W. Ehinger, and J. Walter. 2012. Factors effecting migration timing, growth, and survival of juvenile coho salmon in two coastal Washington watersheds. Transactions of the American Fisheries Society 141:890-906.

Rumrill, S. 2013. Seeding densities for Pacific oysters during bottom culture. Memo to Laura Hoberecht, NMFS and Michelle McMullin, NMFS (April 10, 2013)(potential ecological effects of different seeding densities for commercial cultivation of Pacific oysters (*Crassostrea gigas*) on eelgrass communities (*Zostera marina*) in Pacific northwest estuaries). 7p.

Rumrill, S.S., and V.K. Poulton. 2004. Ecological Role and Potential Impacts of Molluscan Shellfish Culture in the Estuarine Environment of Humboldt Bay, California. Oregon Department of State Lands, Final Annual Report to the Western Regional Aquaculture Center.

Sandercock, F.K. 1991. Life history of coho salmon (*Oncorhynchus kisutch*). Pages 395-445 in Groot, C. and L. Margolis, eds., Pacific salmon life histories. Vancouver, BC, Canada: University of British Columbia Press.

Semmens, B.X. 2008. Acoustically derived fine-scale behaviors of juvenile Chinook salmon (*Oncorhynchus tshawytscha*) associated with intertidal benthic habitats in an estuary. Canadian Journal of Fisheries and Aquatic Sciences 65:2053-2062.

Shumway, S. 2011. Shellfish Aquaculture and the Environment. Wiley-Blackwell.

Simenstad, C.A., B.S. Miller, C.F. Nyblade, F. Thornburgh, and L.J. Bledsoe. 1979. Food web relationships of northern Puget Sound and the Strait of Juan de Fuca: A synthesis of available knowledge. Final Report. FRI-UW-7914. Seattle, Washington. September. 343 p.

Tallis, H.M., J.L. Ruesink, B. Dumbauld, S. Hacker, and L.M. Wisehart. 2009. Oysters and aquaculture practices affect eelgrass density and productivity in a Pacific Northwest estuary. Journal of Shellfish Research 28(2):251-261.

Thayer, G.W., and R.C. Phillips. 1977. Importance of eelgrass beds in Puget Sound. Marine Fisheries Review 39:18-22.

Thayer, G.W, W.J. Kenworthy, and M.S. Fonseca. 1984. The ecology of eelgrass meadows of the Atlantic coast: a community profile. US Fish Wildlife Service FWS/OBS-84/02.

Twilley R., G. Ejdung, P. Romare, and W.M. Kemp. 1986. A comparative study of decomposition, oxygen consumption and nutrient release for selected aquatic plants occurring in an estuarine environment. Oikos 47:190-198.

USDC (U.S. Department of Commerce). 2013. Federal recovery outline: Pacific eulachon southern distinct population segment. National Marine Fisheries Service, Northwest Region. June 21. 24 p.

USEPA (U.S. Environmental Protection Agency). 1993. Guidance specifying management measures for sources of nonpoint pollution in coastal waters. 840-B-92-002. EPA, Office of Water, Washington, D.C.

Waddell, J.E. 1964. The effect of oyster culture on eelgrass, *Zostera marina L.*, growth. M.S. thesis, Humboldt State College, Arcata, CA. 48 p.

Wagner, E., B.R. Dumbauld, S.D. Hacker, A.C. Trimble, L.M. Wisehart, and J.L. Reusink. 2012. Density-dependent effects of an introduced oyster, *Crassostrea gigas*, on a native intertidal seagrass, *Zostera marina*. Marine Ecology Progress Series 468: 149-160.

Warrington, P.D. 1999. Impacts of outboard motors on the aquatic environment. Lake Stewardship Society, British Columbia. Available at: http://35.8.125.11/rmrc/research/Environmental%20Impact/Environmental%20Impact%20Articles/Impacts%20Outboard%20Motors%20on%20the%20aquatic%20environment.htm (Last Accessed July 2014).

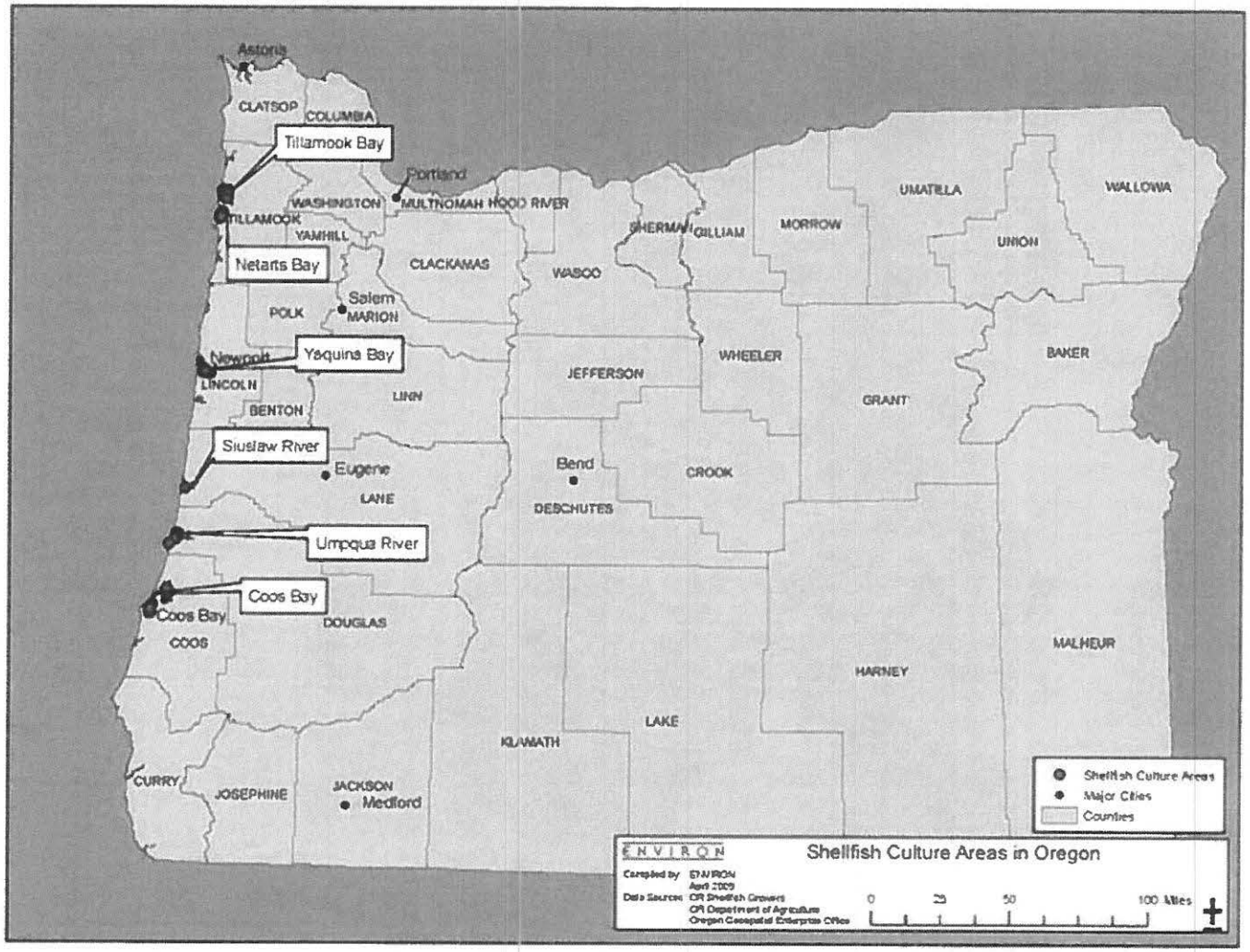
Wilson, K.A., K.W. Able, and K.L. Heck Jr. 1990. Predation rates on juvenile blue crabs in estuarine nursery habitats: evidence for the importance of macroalgae (*Ulva lactuca*). Marine Ecology Progress Series 58:243-251.

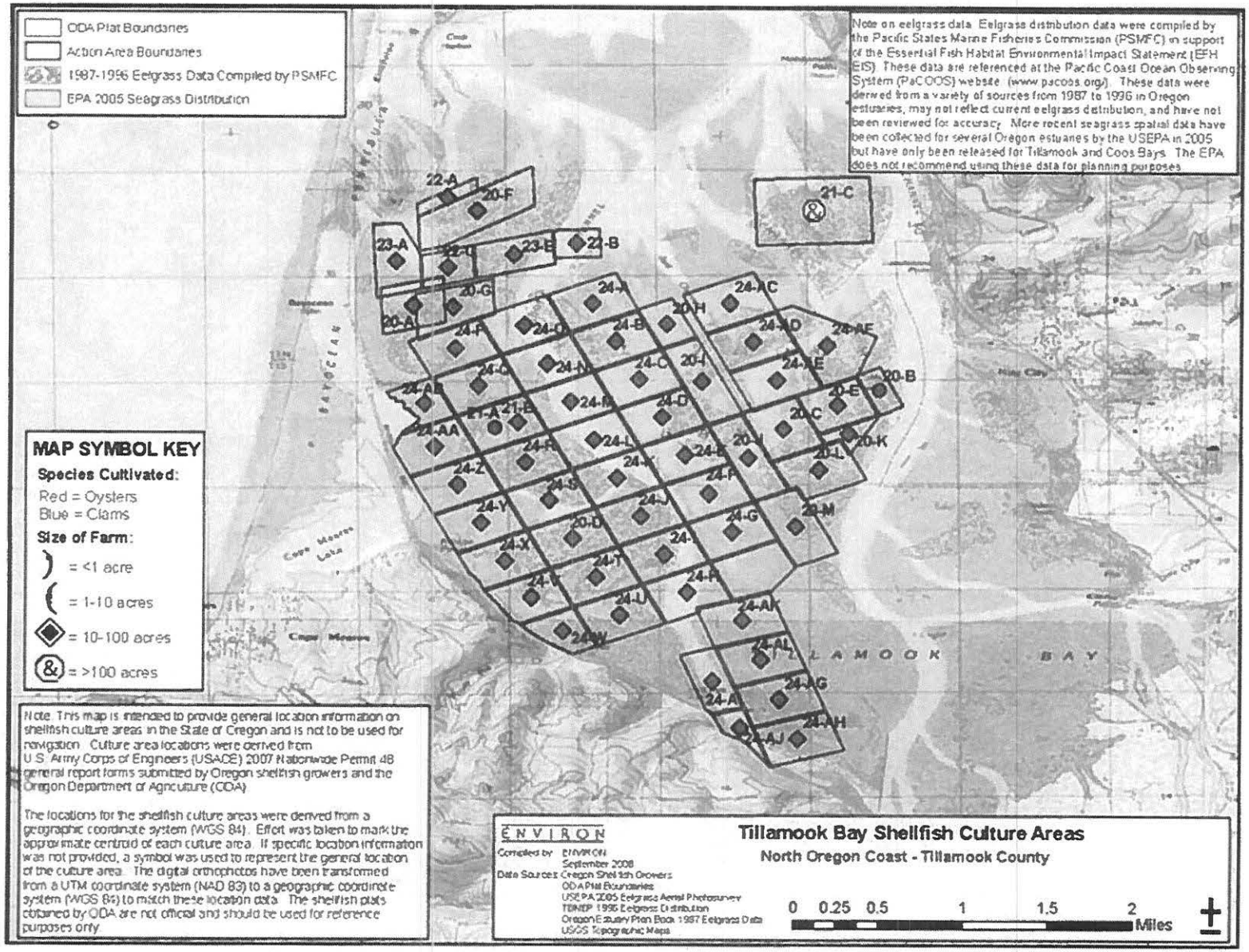
Wisehart, L.M., J.L. Ruesink, S.D. Hacker, and B.R. Dumbauld. 2007. Importance of eelgrass early life history stages in response to oyster aquaculture disturbance. Marine Ecology Progress Series 344:71-80.

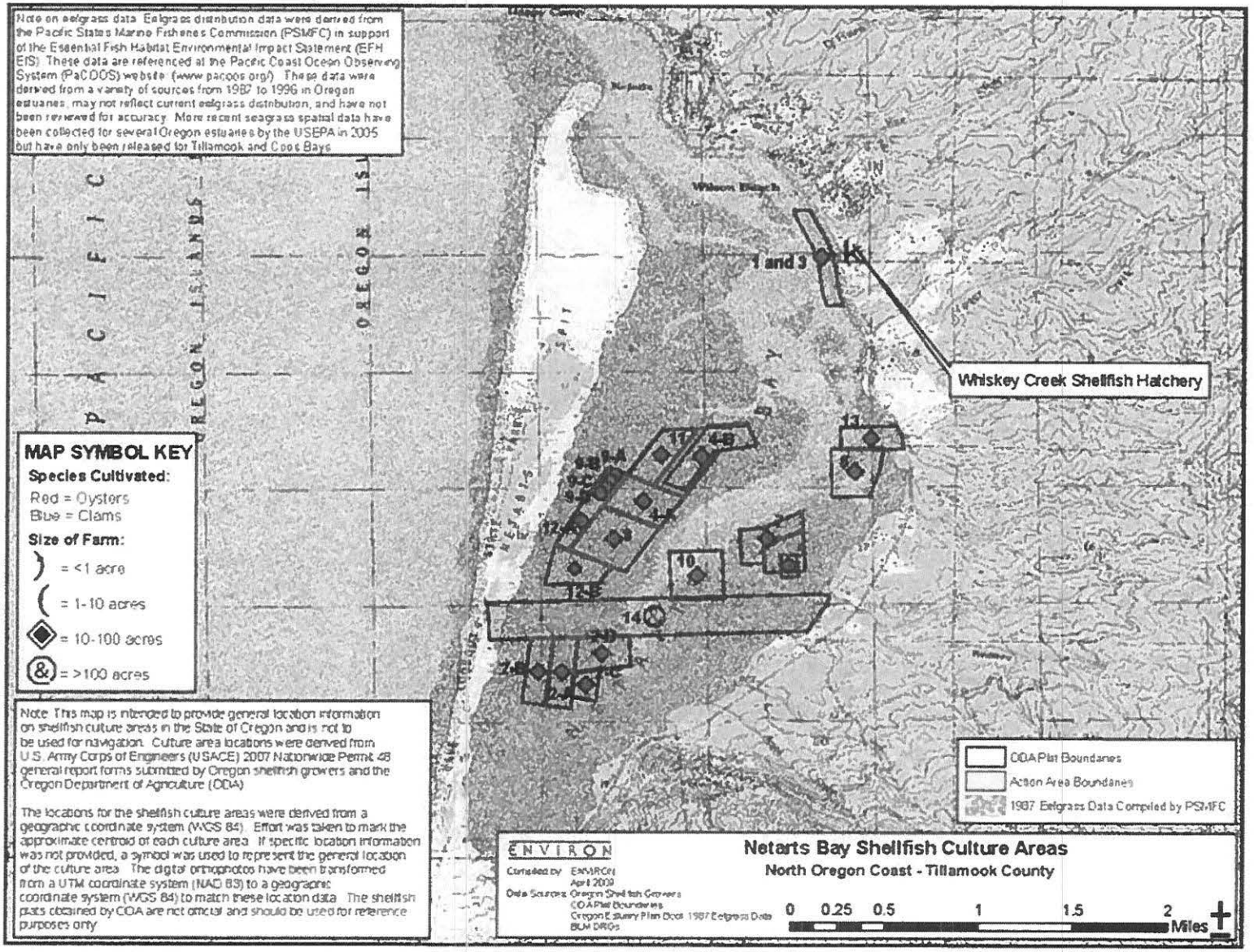
Zieman, J.C. 1982. The ecology of the seagrasses of south Florida: a community profile. FWS/OBS-82/25. US Fish and Wildlife Service, Office of Biological Services, Washington, DC.

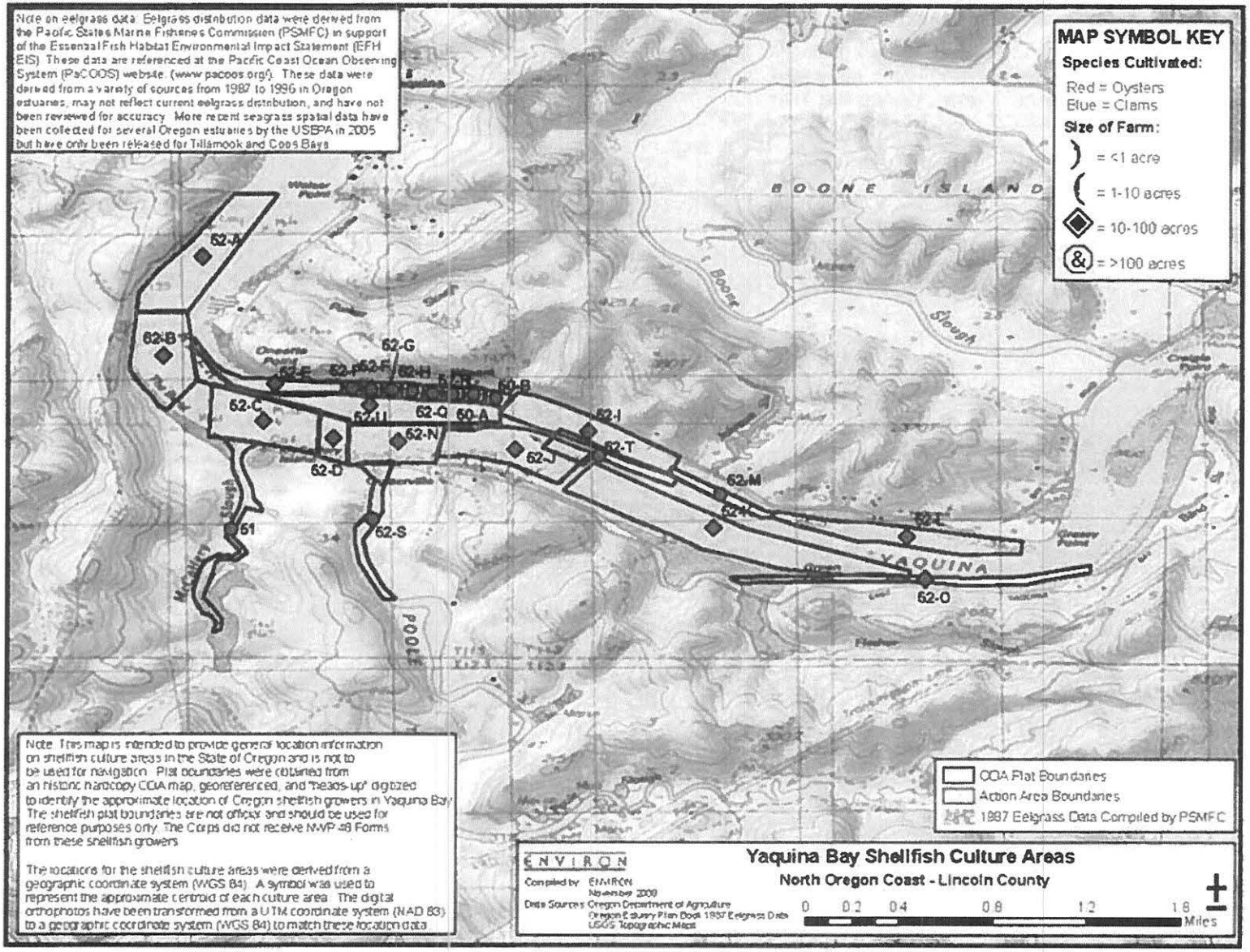
Zieman, J.C., and K.G. Wetzel. 1980. Productivity in seagrasses: methods and rates. Pages 87-116 in Phillips R.C. and C.P. McRoy (Eds). Handbook of seagrass biology: an ecosystem perspective. Garland STPM Press. New York.

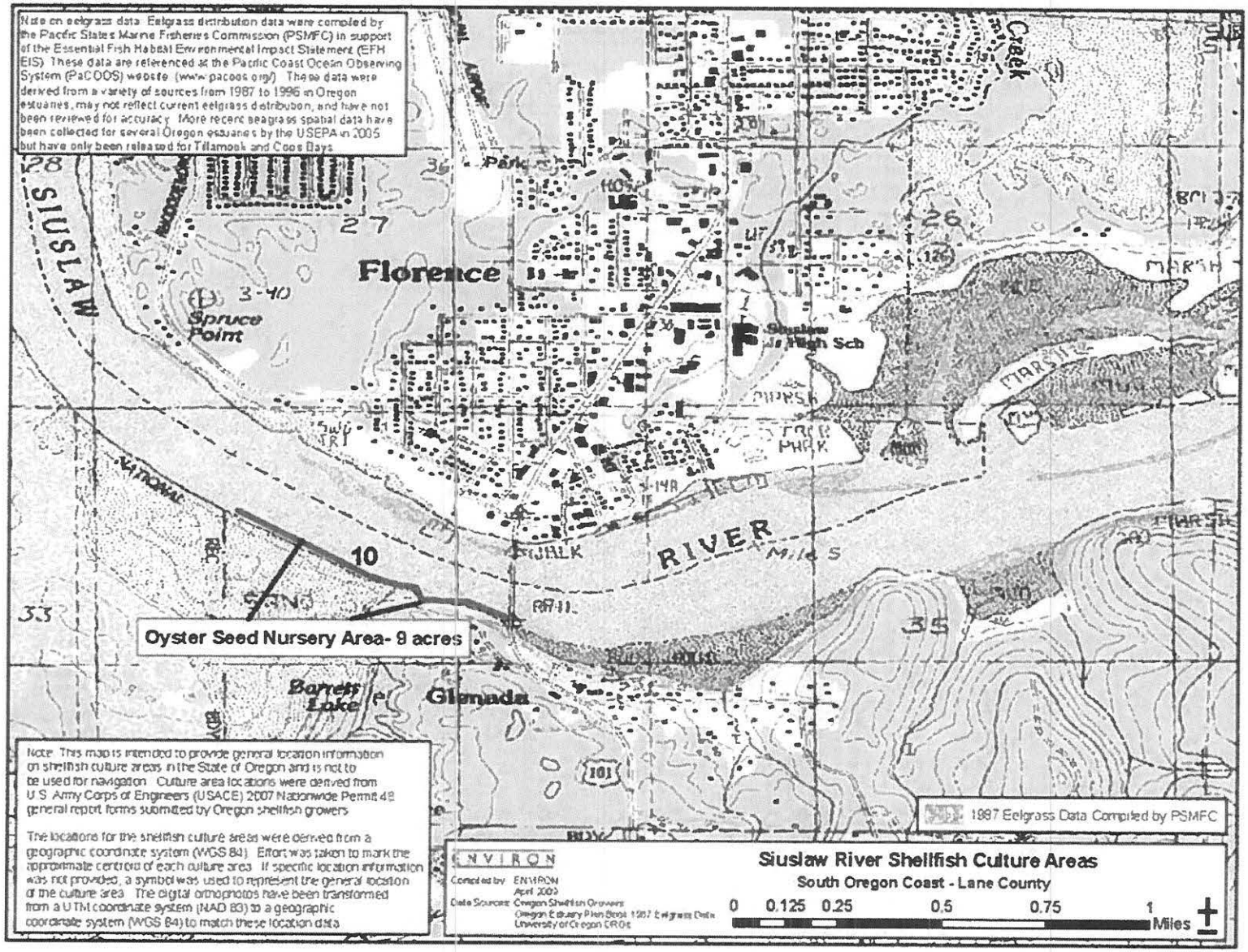
APPENDIX A: Maps

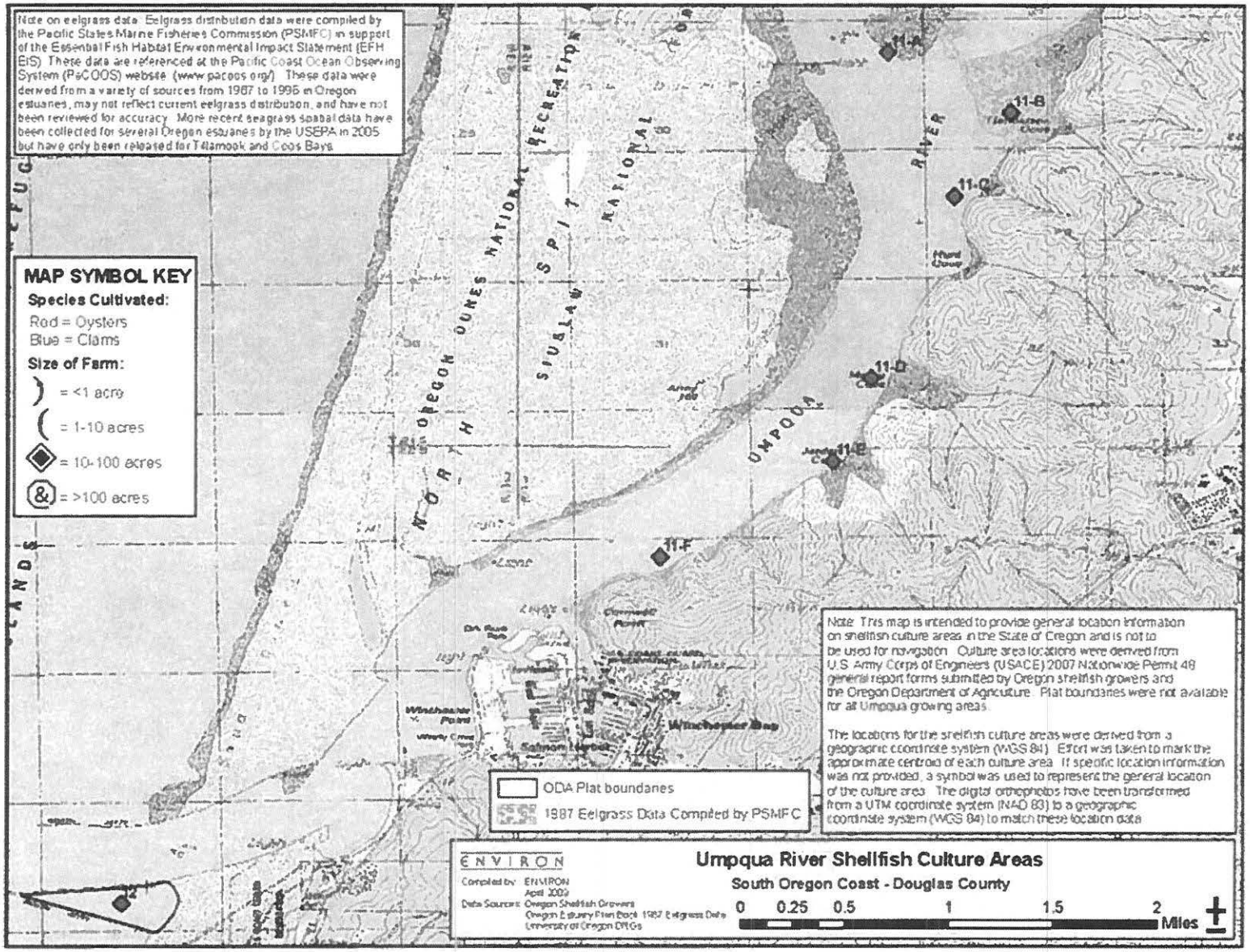


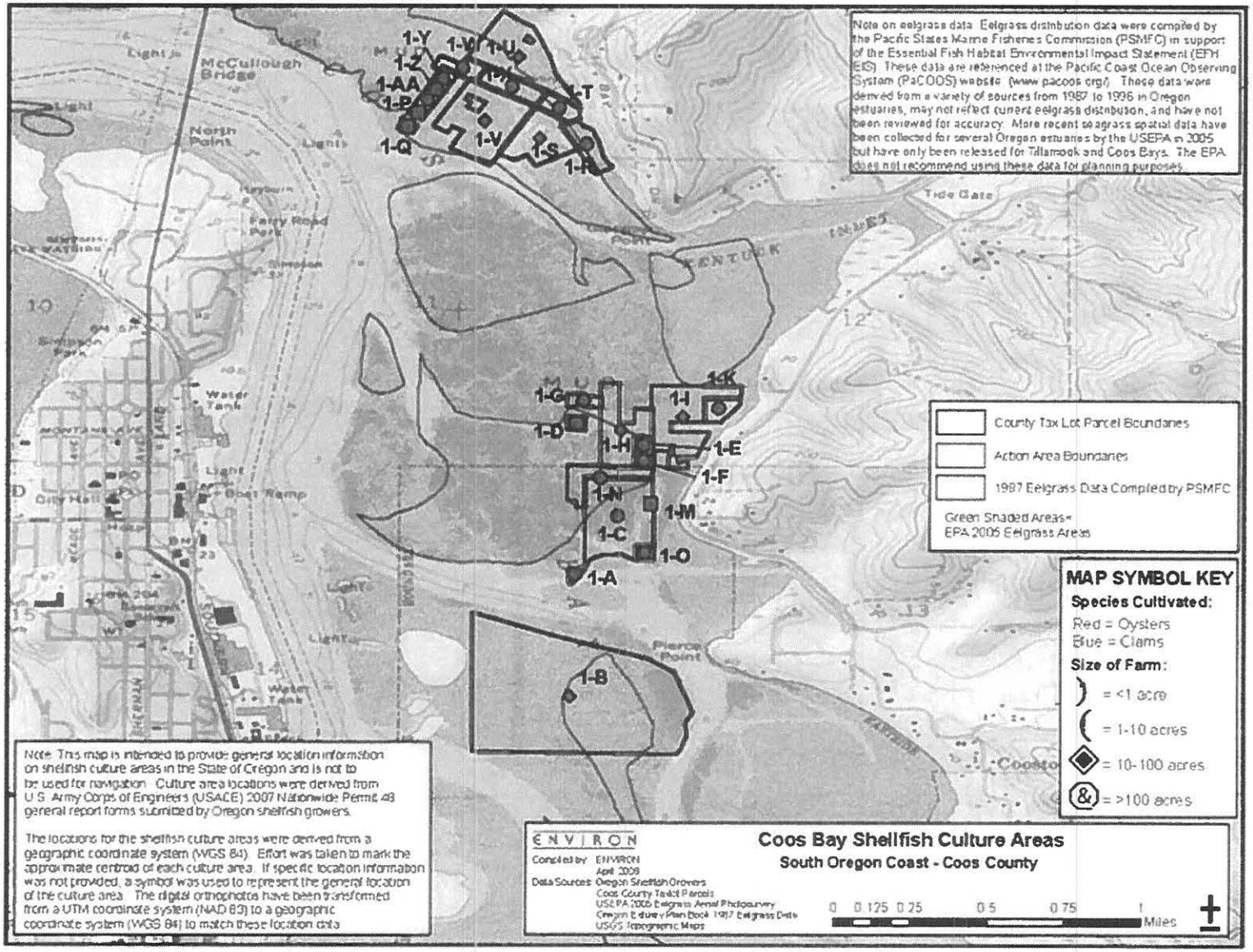

ODA Plat Boundaries
Action Area Boundaries
1987-1996 Eelgrass Data Compiled by PSMFC
EPA 2005 Seagrass Distribution
Note on eelgrass data: Eelgrass distribution data were compiled by the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays. The EPA does not recommend using these data for planning purposes.
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
= <1 acre
= 1-10 acres
= 10-100 acres
= >100 acres
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Culture area locations were derived from U.S. Army Corps of Engineers (USACE) 2007 Nationwide Permit 48 general report forms submitted by Oregon shellfish growers and the Oregon Department of Agriculture (ODA).
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). Effort was taken to mark the approximate centroid of each culture area. If specific location information was not provided, a symbol was used to represent the general location of the culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data. The shellfish plats obtained by ODA are not official and should be used for reference purposes only.
ENVIRON
Compiled by: ENVIRON
September 2008
Data Sources: Oregon Shellfish Growers
ODA Plat Boundaries
USEPA 2005 Eelgrass Aerial Photosurvey
TBNEP 1996 Eelgrass Distribution
Oregon Estuary Plan Book 1987 Eelgrass Data
USGS Topographic Maps
Tillamook Bay Shellfish Culture Areas
North Oregon Coast - Tillamook County
0 0.25 0.5 1 1.5 2 Miles
22-A
20-F
23-A
22-D
23-B
21-B
21-C
20-G
20-A
24-A
24-AC
24-F
24-G
24-B
20-H
24-AD
24-AE
24-E
20-B
24-C
20-I
20-E
20-C
24-D
21-A
21-E
24-M
21-AA
20-K
20-L
24-Z
24-L
24-K
24-Y
24-S
24-J
24-X
20-D
24-T
24-G
24-M
24-R
24-U
24-W
24-AK
24-AL
24-AG
24-AH
24-AJ
LAMOOK
BAY

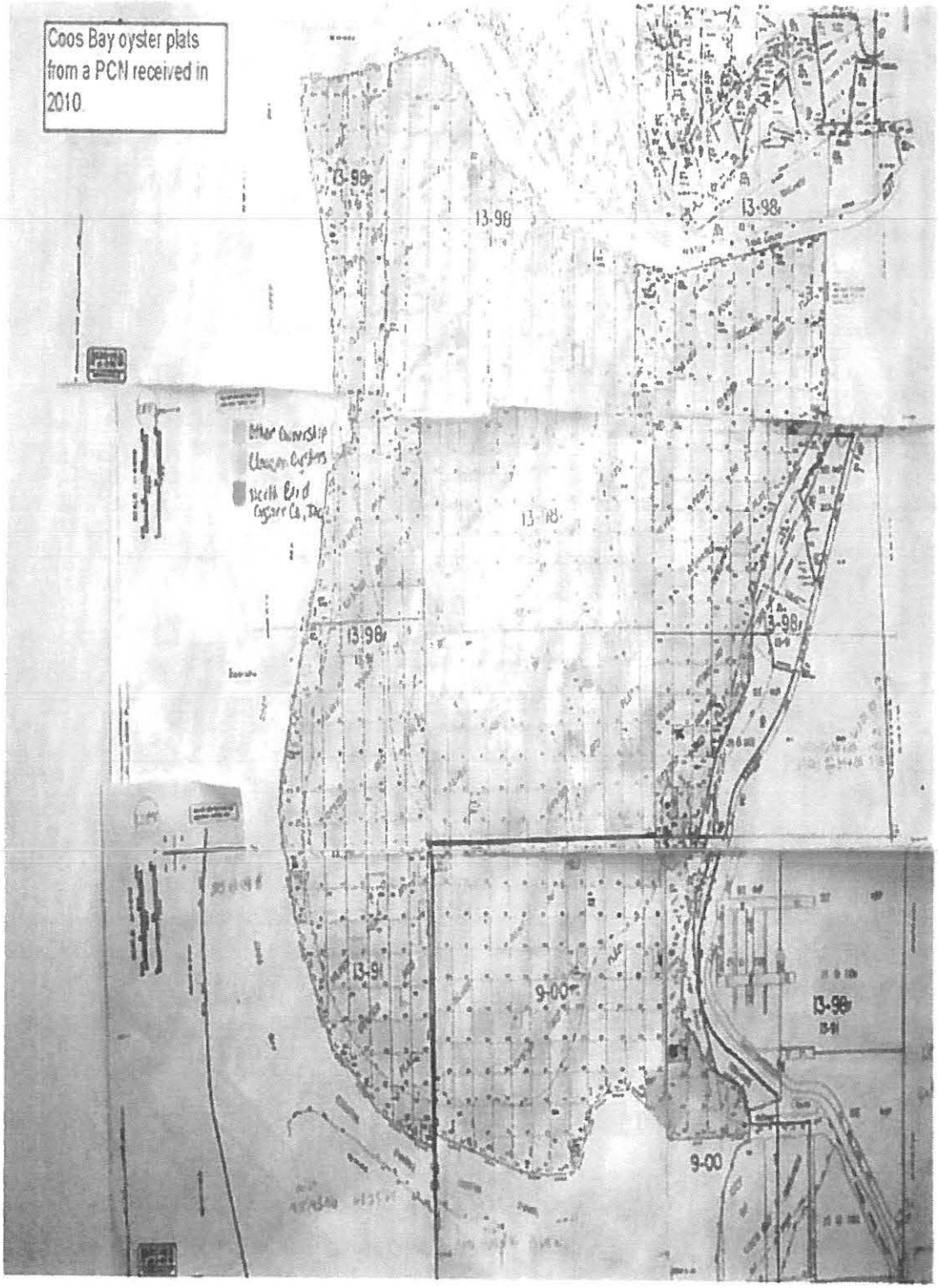

Note on eelgrass data: Eelgrass distribution data were derived from the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays.
PACIFIC
OREGON ISLANDS
SPIT
BAY
1 and 3
Whiskey Creek Shellfish Hatchery
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
= <1 acre
= 1-10 acres
= 10-100 acres
= >100 acres
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Culture area locations were derived from U.S. Army Corps of Engineers (USACE) 2007 Nationwide Permit 48 general report forms submitted by Oregon shellfish growers and the Oregon Department of Agriculture (ODA).
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). Effort was taken to mark the approximate centroid of each culture area. If specific location information was not provided, a symbol was used to represent the general location of the culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data. The shellfish plots obtained by ODA are not official and should be used for reference purposes only.
ODA Plot Boundaries
Action Area Boundaries
1987 Eelgrass Data Compiled by PSMFC
ENVIRON
Compiled by: ENVIRON
April 2009
Data Sources: Oregon Shellfish Growers
ODA Plot Boundaries
Oregon Estuary Plan Book 1987 Eelgrass Data
BLM DRGs
Netarts Bay Shellfish Culture Areas
North Oregon Coast - Tillamook County
0 0.25 0.5 1 1.5 2
Miles

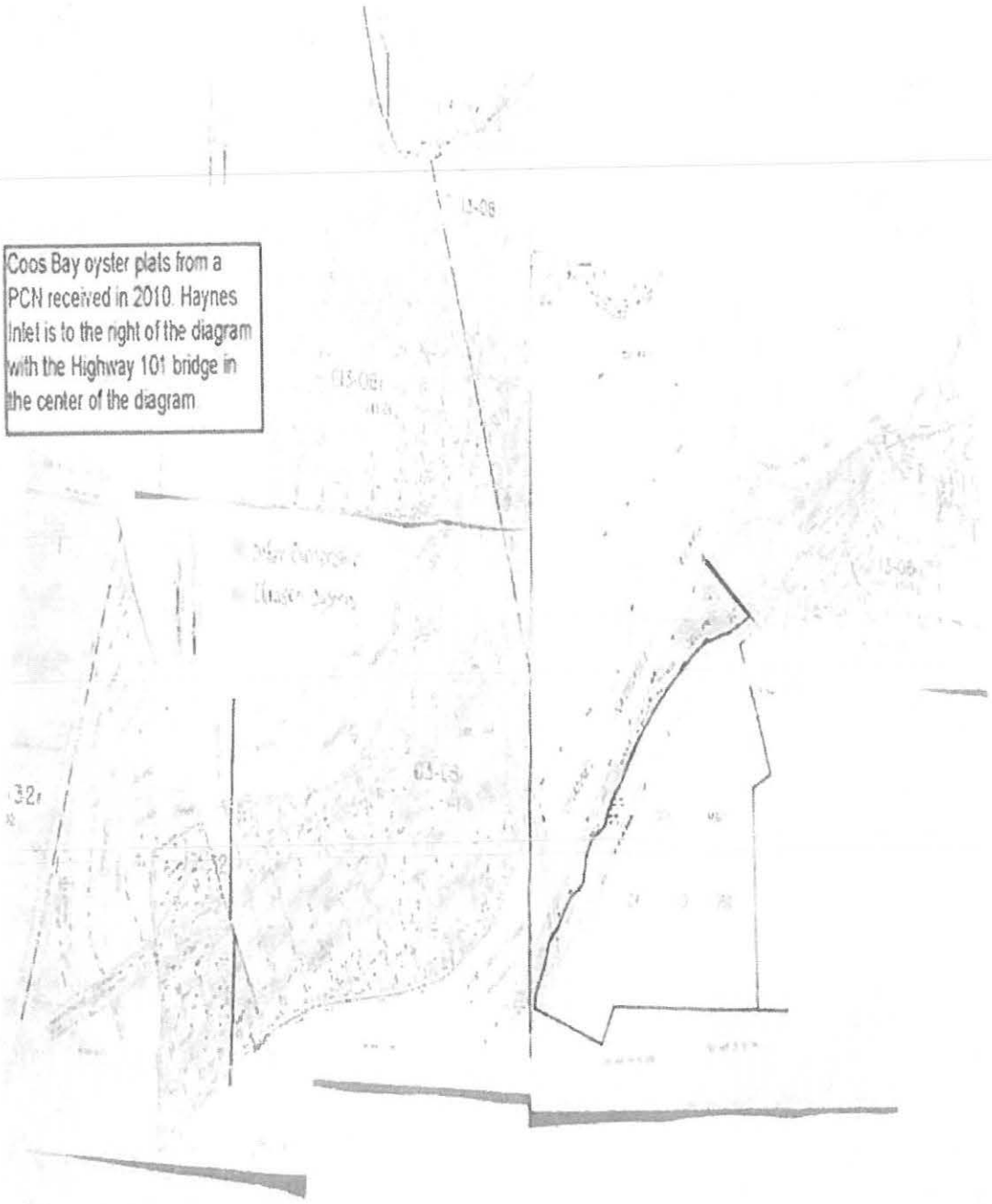

Note on eelgrass data: Eelgrass distribution data were derived from the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website. (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
= <1 acre
= 1-10 acres
= 10-100 acres
= >100 acres
BOONE ISLAND
Boone Slough
YAQUINA
52-A
52-B
52-C
52-D
52-E
52-F
52-G
52-H
52-I
52-J
52-K
52-L
52-M
52-N
52-O
52-P
52-Q
52-R
52-S
52-T
60-A
60-B
51
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Plat boundaries were obtained from an historic hardcopy ODA map, georeferenced, and "heads-up" digitized to identify the approximate location of Oregon shellfish growers in Yaquina Bay. The shellfish plat boundaries are not official and should be used for reference purposes only. The Corps did not receive NWP 48 Forms from these shellfish growers.
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). A symbol was used to represent the approximate centroid of each culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data.
ODA Plat Boundaries
Action Area Boundaries
1987 Eelgrass Data Compiled by PSMFC
ENVIRON
Compiled by: ENVIRON
November 2008
Data Sources: Oregon Department of Agriculture
Oregon Estuary Plan Book 1987 Eelgrass Data
USGS Topographic Maps
Yaquina Bay Shellfish Culture Areas
North Oregon Coast - Lincoln County
0 0.2 0.4 0.8 1.2 1.6
Miles

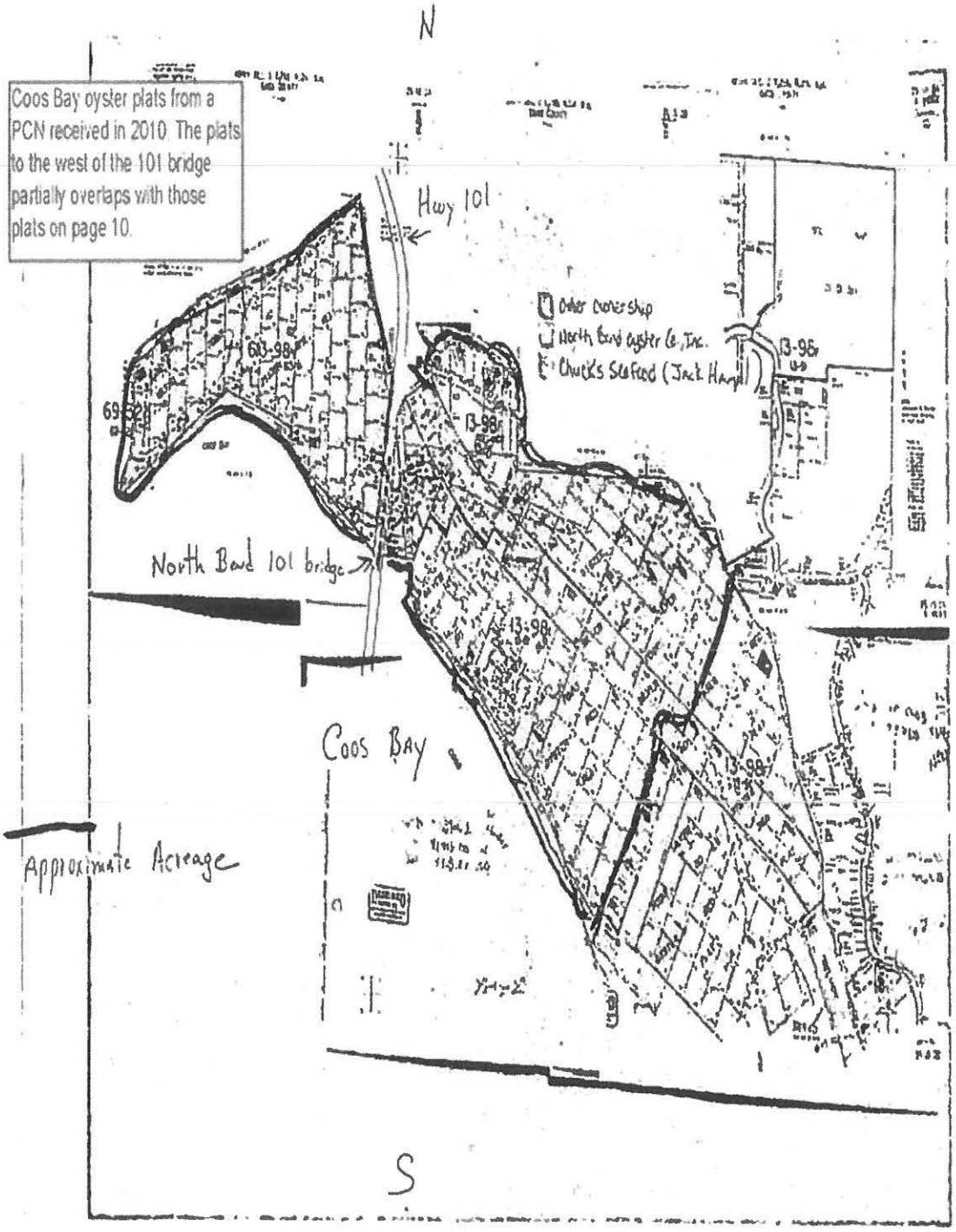

Note on eelgrass data: Eelgrass distribution data were compiled by the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays.
Florence
Spruce Point
SIUSLAW
RIVER
Oyster Seed Nursery Area- 9 acres
Barrett Lake
Glenada
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Culture area locations were derived from U.S. Army Corps of Engineers (USACE) 2007 Nationwide Permit 48 general report forms submitted by Oregon shellfish growers.
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). Effort was taken to mark the approximate centroid of each culture area. If specific location information was not provided, a symbol was used to represent the general location of the culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data.
1987 Eelgrass Data Compiled by PSMFC
ENVIRON
Compiled by: ENVIRON
April 2009
Data Sources: Oregon Shellfish Growers
Oregon Estuary Plan Book 1987 Eelgrass Data
University of Oregon CRGIS
Siuslaw River Shellfish Culture Areas
South Oregon Coast - Lane County
0 0.125 0.25 0.5 0.75 1
Miles

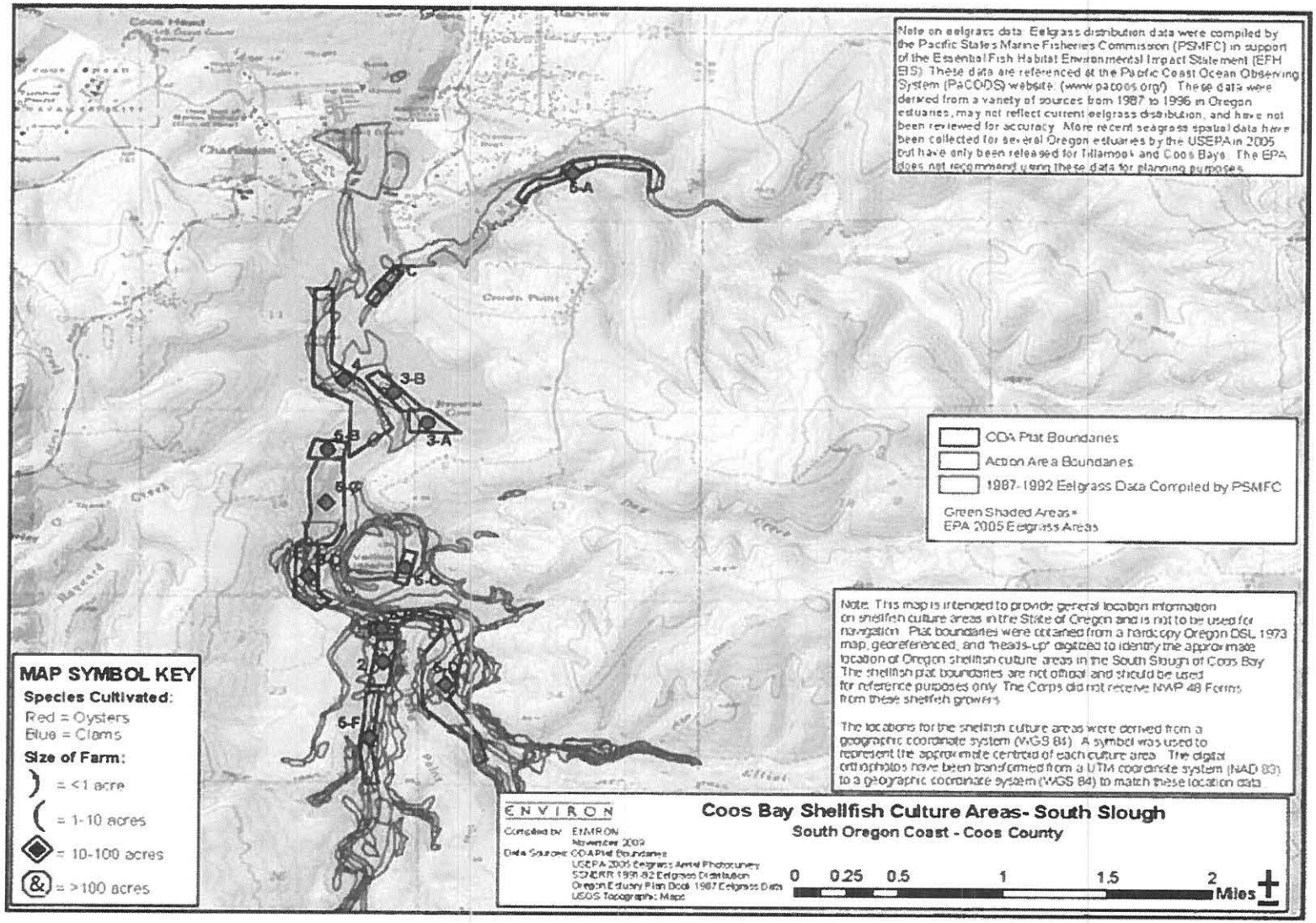

Note on eelgrass data: Eelgrass distribution data were compiled by the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website (www.pacoos.org/). These data were derived from a variety of sources from 1987 to 1995 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays.
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
) = <1 acre
(= 1-10 acres
◆ = 10-100 acres
& = >100 acres
11-A
11-B
11-C
11-D
11-E
11-F
NORTH OREGON DUNES NATIONAL RECREATION AREA
SIUSLAW SPIT
UMPQUA RIVER
Winchester Bay
Salmon Harbor
ODA Plat boundaries
1987 Eelgrass Data Compiled by PSMFC
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Culture area locations were derived from U.S. Army Corps of Engineers (USACE) 2007 Nationwide Permit 48 general report forms submitted by Oregon shellfish growers and the Oregon Department of Agriculture. Plat boundaries were not available for all Umpqua growing areas.
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). Effort was taken to mark the approximate centroid of each culture area. If specific location information was not provided, a symbol was used to represent the general location of the culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data.
ENVIRON
Compiled by: ENVIRON
April 2009
Data Sources: Oregon Shellfish Growers
Oregon Estuary Plan Book 1987 Eelgrass Data
University of Oregon DEGs
Umpqua River Shellfish Culture Areas
South Oregon Coast - Douglas County
0 0.25 0.5 1 1.5 2 Miles


Note on eelgrass data: Eelgrass distribution data were compiled by the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays. The EPA does not recommend using these data for planning purposes.
County Tax Lot Parcel Boundaries
Action Area Boundaries
1987 Eelgrass Data Compiled by PSMFC
Green Shaded Areas= EPA 2005 Eelgrass Areas
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
= <1 acre
= 1-10 acres
= 10-100 acres
= >100 acres
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Culture area locations were derived from U.S. Army Corps of Engineers (USACE) 2007 Nationwide Permit 48 general report forms submitted by Oregon shellfish growers.
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). Effort was taken to mark the approximate centroid of each culture area. If specific location information was not provided, a symbol was used to represent the general location of the culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data.
ENVIRON
Compiled by: ENVIRON
April 2008
Data Sources: Oregon Shellfish Growers
Coos County Tax lot Parcels
USEPA 2005 Eelgrass Aerial Photosurvey
Oregon Estuary Plan Book 1987 Eelgrass Data
USGS Topographic Maps
Coos Bay Shellfish Culture Areas
South Oregon Coast - Coos County
0 0.125 0.25 0.5 0.75 1 Miles
1-A
1-B
1-C
1-D
1-E
1-F
1-G
1-H
1-I
1-J
1-K
1-L
1-M
1-N
1-O
1-P
1-Q
1-R
1-S
1-T
1-U
1-V
1-W
1-X
1-Y
1-Z
1-AA
McCullough Bridge
North Point
Ferry Road Park
Water Tank
Boat Ramp
City Hall
Pierce Point
Tide Gate
Coos


Coos Bay oyster plats from a PCN received in 2010
13-98
13-98
13-98
13-98
13-98
13-91
9-00
13-98
9-00


Coos Bay oyster plats from a PCN received in 2010. Haynes Inlet is to the right of the diagram with the Highway 101 bridge in the center of the diagram.


N
Coos Bay oyster plats from a PCN received in 2010. The plats to the west of the 101 bridge partially overlaps with those plats on page 10.
Hwy 101
Other ownership
North Bend Oyster Co., Inc.
Chuck's Seafood (Jack Ha
69-98
13-98
13-98
13-98
13-98
13-98
North Bend 101 bridge
Coos Bay
Approximate Acreage
S


Note on eelgrass data: Eelgrass distribution data were compiled by the Pacific States Marine Fisheries Commission (PSMFC) in support of the Essential Fish Habitat Environmental Impact Statement (EFH EIS). These data are referenced at the Pacific Coast Ocean Observing System (PaCOOS) website: (www.pacoos.org). These data were derived from a variety of sources from 1987 to 1996 in Oregon estuaries, may not reflect current eelgrass distribution, and have not been reviewed for accuracy. More recent seagrass spatial data have been collected for several Oregon estuaries by the USEPA in 2005 but have only been released for Tillamook and Coos Bays. The EPA does not recommend using these data for planning purposes.
COA Plat Boundaries
Action Area Boundaries
1987-1992 Eelgrass Data Compiled by PSMFC
Green Shaded Areas = EPA 2005 Eelgrass Areas
Note: This map is intended to provide general location information on shellfish culture areas in the State of Oregon and is not to be used for navigation. Plat boundaries were obtained from a hardcopy Oregon DSL 1973 map, georeferenced, and 'heads-up' digitized to identify the approximate location of Oregon shellfish culture areas in the South Slough of Coos Bay. The shellfish plat boundaries are not official and should be used for reference purposes only. The Corps did not receive NWP 48 Forms from these shellfish growers.
The locations for the shellfish culture areas were derived from a geographic coordinate system (WGS 84). A symbol was used to represent the approximate centroid of each culture area. The digital orthophotos have been transformed from a UTM coordinate system (NAD 83) to a geographic coordinate system (WGS 84) to match these location data.
MAP SYMBOL KEY
Species Cultivated:
Red = Oysters
Blue = Clams
Size of Farm:
= <1 acre
= 1-10 acres
= 10-100 acres
= >100 acres
ENVIRON
Compiled by: ENVIRON
November 2009
Data Sources: COA Plat Boundaries
USEPA 2005 Eelgrass Aerial Photosurvey
SOAERR 1998-92 Eelgrass Distribution
Oregon Estuary Plan Book 1987 Eelgrass Data
USGS Topographic Maps
Coos Bay Shellfish Culture Areas- South Slough
South Oregon Coast - Coos County
0 0.25 0.5 1 1.5 2 Miles
5-A
5-C
3-B
3-A
5-B
5-E
5-D
5-F

APPENDIX B: Guidelines and Forms

E-mail Directions and Action Notification Form for Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration Programmatic Consultation.

The **Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration** programmatic e-mail box (*shellfish.oregon@noaa.gov*) is to be used for actions submitted to the National Marine Fisheries Service (NMFS) by the Portland District Army Corps of Engineers (Corps) for consultation.

The Corps must ensure the final project is being submitted to avoid multiple submittals and withdrawals. In rare occurrences, a withdrawal may be necessary and unavoidable. In this situation, please specify in the e-mail subject line that the project is being withdrawn. There is no form for a withdrawal, simply state the reason for the withdrawal and submit to the e-mail box, following the email titling conventions. If a previously withdrawn notification is resubmitted later, this resubmittal will be regarded as a new action notification.

An automatic reply will be sent upon receipt, but no other communication will be sent from the programmatic e-mail box; this box is used for **Incoming Only**. All other pre-decisional communication should be conducted **outside** the use of the *shellfish.oregon@noaa.gov* e-mail.

The Corps will send only **one** project per e-mail submittal, and will attach all related documents. These documents will include the following:

1. Action Notification Form.
2. New Farm Map(s) (if applicable).

E-mail "Subject Line" Titling Conventions
In the subject line of the email (see below for requirements), clearly identify the information as stated in numbers 1-7 below. Use caution when entering the necessary information in the subject line. **If these titling conventions are not used, the e-mail will not be accepted.**

Ensure that you clearly identify the following in the subject line of the e-mail:

1. Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration Programmatic;
2. The specific submittal category (30-day approval, no approval, or withdrawal);
3. Corps Permit number;
4. Plat number;
5. Practitioner Name (you may use last name only, or **commonly used** abbreviations);
6. County; and
7. Estuary or Waterway.

Example of E-mail "Subject Line" Titling Requirements:

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration_Specific Submittal Category, Corps Permit #, Plat #, Practitioner Name, County, Estuary/Waterway.

Example of E-mail "Subject Line" Titling with Submittal Categories. Below are examples of the two different types of Submittal Categories using the e-mail "Subject Line" format:

Action Approval – e-mail subject line examples

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration_No Approval, NWP-XXXX-XXXX, Plat 52, Crenshaw, Tillamook, Netarts Bay

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration_30-day Approval, NWP-XXXX-XXXX, Plat 52, Crenshaw, Tillamook, Netarts Bay

Withdrawal – e-mail subject line example

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration_Withdrawal, NWP-XXXX-XXXX, Plat 52, Crenshaw, Tillamook, Netarts Bay

Project Description:

Please provide enough information for NMFS to be able to determine the effects of the action and whether the project meets the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration criteria. Attach additional sheets if necessary. The project description should include information such as (but not limited to):

- Type of activity: Native shellfish restoration, existing commercial shellfish aquaculture, or new/expanded commercial shellfish aquaculture
- # acres
- Eelgrass presence
- Species cultivated
- Documentation species that has been previously cultivated in that bay or is indigent to the area (Alsea expansion only).
- Type of culture
- Seeding density (for bottom culture only)
- Harvest method
- Use of harrowing
- Long-line spacing
- access method (foot, ATV, or boat or other watercraft)
- additional support activities
- additional details such as the frequency of each activity and the total number of acres of each activity, if known
- the total number of acres aquaculture overlaps with eelgrass
- Forage fish presence
- Water withdrawal activities including pipes and pump locations, general timing, approximate amount withdrawn, and screens designed to meet NMFS and ODFW criteria
- Total hours of pump operation from April through June annually
- Total days of boat and vehicle operation from February through June, annually

- Description of native shellfish bed restoration, including species and amount placed, proximity to eelgrass, need for and depth of substrate enhancement, and type of material used (i.e., gravel or shell)

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration Programmatic

Action Notification Form

NMFS Review and Approval. The Corps project manager shall submit this form with the Action Notification portion completed to NMFS at *shellfish.oregon@noaa.gov* for notification or approval at least 30 days prior to Corps authorization.

Approval from NMFS. Any action that involves a **new or expanded farm or a required access plan or a required fueling and staging plan** must be individually reviewed and approved by NMFS as consistent with the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration programmatic before that action is authorized by the Corps. NMFS will notify the Corps within 30 calendar days if the action is approved or disqualified.

Additionally, at least 30 days prior to implementation of any modifications to an access plan or a fueling and staging plan, as described below, the practitioner must notify the Corps and the Corps must notify NMFS of the modifications. Within 30 days of receiving these modification notifications NMFS will inform the Corps by e-mail of whether the action is still eligible for coverage under this consultation.

Attach the following supplemental information to e-mail message as required for NMFS approval:

- If eelgrass is present *within a new farm area*, growers must document eelgrass bed locations on a map or sketch which must be submitted to NMFS at least 30 days prior to authorization. The following information must be included to scale: plat boundaries, eelgrass bed locations and boundaries, shellfish seeding/planting locations. Surveys to determine presence and location of eelgrass beds should be done during times of peak above-ground biomass: June-August.
- *For expansion into Alsea Bay*: Documentation must be provided that the proposed species has previously been cultivated in Alsea Bay or is indigent to the area.
- *Use of motorized vehicles (i.e., ATVs, tractors) in eelgrass beds, grounding or anchoring of watercraft in eelgrass beds, and walking paths through eelgrass beds to access commercial shellfish aquaculture or restoration site* also **Requires Approval from NMFS**. If a plat or restoration site cannot be accessed without use of vehicles in eelgrass beds or without grounding/anchoring watercraft in eelgrass beds or without walking through eelgrass beds, the action must be individually reviewed and approved by NMFS as consistent with the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration programmatic before that action is authorized. The practitioner must provide an access plan to the Corps describing specific measures and/or best management practices used to minimize negative effects to eelgrass from activities and must implement the plan. The access plan must include the following components: (a) frequency of access at each location, (b) use of only the minimum number of boats and/or crew members needed to conduct the work and a description of the minimum number of boats and crewmembers needed at each visit, and (c) consistency in anchoring/grounding in the same location and/or walking on the same path to restrict eelgrass disturbance to a very small footprint.

- *Fueling, storing, daily leak inspection, maintenance, and repair of vehicles < 150 feet away from any stream, waterbody, or wetland* also **Requires Approval from NMFS**. If a practitioner is unable to fuel, store, inspect, maintain, or repair vehicles in a location greater than ≥ 150 feet from any stream, waterbody, or wetland, the action must be individually reviewed and approved by NMFS as consistent with the Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration programmatic before that action is authorized. The practitioner must provide documentation describing the site constraints that prevent compliance with the PDC and include a fueling and staging plan. The fueling and staging plan must include a spill prevention plan describing specific measures and/or best management practices used to maintain and protect vehicles, contain fuel and other vehicle fluids, and prevent leaks and spills from entering the water. The plan must include the following components: (a) description of a items in a spill prevention kit and how the kit will be kept readily available, (b) description of employee training in use of the spill prevention kit, (c) use of 5 gallon (or smaller) EPA-compliant portable fuel containers, (d) use of funnels or spill-proof spouts and polypropylene pads or similar materials during fueling, (e) daily inspection routines for leaks or improper functioning prior to vehicle/boat use, (f) dockside fueling containment measures, and (g) description and location of vehicle/boat maintenance and repair site, including distance away from a waterbody and how chemical contaminants will be prevented from leaving the site and entering the water.

Oregon Commercial Shellfish Aquaculture and Native Shellfish Restoration Programmatic
Action Notification Form

Date of Request:		NMFS Tracking #: WCR-2014-825	
Type of Request:	☐ Action Notification (No Approval) ☐ Action Notification (Approval required)		
Statutory Authority:	☐ ESA only ☐ EFH only ☐ ESA & EFH COMBINED		
Lead Action Agency:	Corps of Engineers		
Action Agency Contact:		Corps Action ID #:	
Practitioner Name:		Individual DSL Permit #:	
Project Name:			
Plat Number(s) and Acres (include map numbers if applicable):		Is this a NEW or EXPANDED area?	
6th Field HUC & Name:			
Latitude & Longitude (including degrees, minutes, and seconds)			
Proposed Aquaculture Duration:			
Species cultivated:			
Culture method(s):			
Long-line spacing (if using long-line culture methods):			
Harvest method(s):			
Access method(s):			
Is harrowing conducted?			
Water withdrawal activities – be sure to include total hours operated April through June annually:			
Total days of boat and vehicle operation from February through June annually			
Is eelgrass present?		Amount of overlap between eelgrass and aquaculture (acres):	
Proposed Native Shellfish Restoration Duration:		Species and Amount Placed:	

Project Description:

refer to e-mail instruction for relevant information to include

Actions Requiring **Approval** from NMFS:
Identify if any of these actions are proposed:

- ☐ New/Expanded Commercial Shellfish Aquaculture Area*
- ☐ Use of motorized vehicles (i.e., ATVs, tractors) in eelgrass beds, grounding or anchoring of watercraft in eelgrass beds, and walking paths through eelgrass beds to access commercial shellfish aquaculture or restoration site
- ☐ Fueling, storing, daily leak inspection, maintenance, and repair of vehicles < 150 feet away from any stream, waterbody, or wetland

**For expansion into Alsea Bay*: Documentation must be provided that the proposed species has previously been cultivated in Alsea Bay or is indigent to the area.

NMFS Species/Critical Habitat Present in Action Area:
Identify the species found in the action area:

ESA Species:	**ESA Critical Habitat**	**EFH Species**
☐ Oregon Coast coho salmon	☐ Oregon Coast coho salmon	☐ Pacific salmon
☐ SDPS green sturgeon	☐ SDPS green sturgeon	☐ Groundfish
☐ SDPS eulachon	☐ SDPS eulachon	☐ Coastal Pelagics

Design Criteria:
Check the Design Criteria that will be included as conditions on the permit issued for this proposed action. Please attach the appropriate plan(s) for this proposed action.

Administrative:	**Action:**
☐ Electronic notification (3) ☐ Site access (6)	☐ Native shellfish restoration ☐ Existing commercial shellfish aquaculture **Activities Needing NMFS Approval** *(supplemental information required)* ☐ New/Expanded commercial shellfish aquaculture (4bi) ☐ Use of motorized vehicles (i.e., ATVs, tractors) in eelgrass beds, grounding or anchoring of watercraft in eelgrass beds, and walking paths through eelgrass beds to access commercial shellfish aquaculture or restoration site (4bii) ☐ Fueling, storing, daily leak inspection, maintenance, and repair of vehicles <150 feet away from any stream, waterbody, or wetland (4biii)

General:

- ☐ Equipment storage and pump requirements (9a-d)
- ☐ Toxic compounds, chemicals, and other contaminants (10a-f)
- ☐ Native shellfish bed restoration (11a-d)
- ☐ Eelgrass avoidance (12a-d)
- ☐ Newly positioned equipment/operations within existing farms (13a-e)
- ☐ New/expanded area (14a-c)
- ☐ Forage fish (15a-d)
- ☐ Dredge bag adjustment (16)
- ☐ Includes total hours of pump operation April through June, annually

bcc: F/NWR4 - File copy, K. Phippen, M. McMullin (electronic — Word and pdf copies)

K:\Document Read File (Signed)\Programmatic Consultations\2014\COE_WCR-2014-825_Oregon Commercial Shellfish Aquaculture Programmatic\2014_9-23_final_Oregon Shellfish_WCR-2014-825.docx

NMFS No.: WCR-2014-825

Addressee email:

Shawn H. Zinszer
Shawn.H.Zinszer@usace.army.mil

cc(s) emails:

John Byers
jbyers@oda.state.or.us

Judy Linton
Judy.L.Linton@usace.army.mil

Steve Rumrill
Steven.S.Rumrill@state.or.us

EXHIBIT C

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, PORTLAND DISTRICT
P.O. BOX 2946
PORTLAND, OR 97208-2946

March 2, 2022

Regulatory Branch
Corps No. NWP-2021-202

Damon Miller
Alava Ocean Company LLC
P.O. Box 19301
Portland, Oregon 97280
alavaocean@gmail.com

Dear Damon Miller:

The U.S. Army Corps of Engineers (Corps) received your request for Department of the Army authorization to lay biodegradable commercial pacific seeded oyster bags within approximately 5 contiguous acres of Tillamook Bay for bottom culture and harvest on foot and by boat. The project is proposed in Tillamook Bay located south of the Garibaldi Marina, west of Larson Cove between the south and main channel of the Bay, in Tillamook, Tillamook County, Oregon at Latitude/Longitude: 45.538948°, -123.918272°. This letter verifies your project as depicted on the enclosed drawings (Enclosure 1) is authorized by Nationwide Permit (NWP) No. 48, Commercial Shellfish Mariculture Activities (Federal Register, January 13, 2021, Vol. 86, No. 8).

The project lies within a proposed Oregon Department of Agriculture (ODA) plat lease totaling approximately 57.55 acres of land below the mean high water (MHW) within Tillamook Bay. Up to 5 contiguous acres within the plat will be used for new commercial pacific oyster mariculture production. Eelgrass is located within the plat area; however, seed and harvest activities in the plat area will not occur near eelgrass. Seed will be procured from Whiskey Creek Shellfish Hatchery.

The new commercial oyster production will use biodegradable mesh bags made of cellulose to hold oyster seed and secured with wooden stakes to the area if necessary. The bags would be spaced up to 6-12 inch apart to allow for other aquatic species access and movement. The bags will be seeded on the boat and placed on the sea floor. As the seeds grow, and the bags degrade, the oysters will rest unencumbered on the sea floor until adulthood. Monthly trips will be taken to seed more of the plat and tumble the existing oysters. Oysters will be manually tumbled within the mesh bags on the sea floor. Site access will be by boat and on foot from the Garibaldi Harbor to the low tide channels of Tillamook Bay flowing east of the plat area. All-terrain vehicles (ATV) or other motorized equipment will not be used within the project area or anywhere below the MHW of Tillamook Bay during cultivation and harvesting.

In order for this authorization to be valid, you must ensure the work is performed in accordance with the enclosed Nationwide Permit 48 Terms and Conditions (Enclosure 2); the Oregon Department of Land Conservation and Development (DLCD) Coastal Zone Management Conditions (Enclosure 3); and the following special conditions:

a. The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters. The permittee will be required, upon due notice from the U.S Army Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

b. Upon starting the activities authorized by this permit, Permittee shall notify the U.S. Army Corps of Engineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: NWP-2021-202, Tillamook County.

c. This Corps permit does not authorize you to take an endangered species, in particular Oregon Coast Coho Salmon (Oncorhynchus kisutch), Southern Green Sturgeon (Acipenser medirostris) or Pacific Eulachon (Thaleichthys pacificus). In order to legally take a listed species, you must have a separate authorization under the Endangered Species Act (ESA) (e.g., an ESA Section 10 permit, or a biological opinion under ESA Section 7 with "incidental take" provisions with which you must comply). On September 23, 2014, the National Marine Fisheries Service (NMFS) (Reference # WCR-2014-825) issued an ESA programmatic concurrence letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for commercial shellfish aquaculture and native shellfish restoration activities authorized by the Corps. Your authorization under this Corps permit is conditional upon your compliance with all Project Design Criteria in Enclosure 4. Failure to implement the project as proposed may constitute noncompliance with the ESA and your Corps permit. The NMFS is the appropriate authority to determine compliance with the ESA.

d. Permittee shall take the necessary precautions to prevent any petroleum products, chemicals, or deleterious or toxic materials from entering waterways during construction.

e. All practicable erosion control devices shall be installed and maintained on the boat in good working order work to prevent the unauthorized discharge of material and to minimize increases in turbidity resulting from the work. The devices shall be installed in a manner to maximize their effectiveness, e.g., sediment fences, boat lining, shall

generally be buried or similarly secured. These controls shall be maintained until permanent erosion controls are in-place or are no longer necessary.

f. Permittee shall install and maintain, at your expense, any safety lights and signals prescribed by the United States Coast Guard (USCG) District Thirteen, through regulations or otherwise, on your authorized facilities. The USCG may be reached at the following email address: D13-SMB-D13-PATON@uscg.mil or telephone number: (206) 220-7285.

We have reviewed your project pursuant to the requirements of the Endangered Species Act, the Magnuson-Stevens Fishery Conservation and Management Act and the National Historic Preservation Act. The requirements of the Endangered Species Act were met through a programmatic biological opinion as listed in the special condition above. The complete text of the biological opinion is available for your review at https://www.nwp.usace.army.mil/environment/. We have determined the project complies with the requirements of these laws provided you comply with all of the permit general and special conditions.

The authorized work does not require 401 Water Quality Certification from the Oregon Department of Environmental Quality (DEQ). The authorized work appears to comply with the DLCD Coastal Zone Management Act concurrence for this NWP. No further coordination with DEQ or DLCD is required provided the work is performed in accordance with all of the enclosed conditions.

Please note, Portland District NWP Regional General Condition 3, *Cultural Resources and Human Burials-Inadvertent Discovery Plan*, describes procedures should an inadvertent discovery occur. You must ensure that you comply with this condition during the construction of your project.

The Corps did not prepare a jurisdictional determination for this project. The Corps has treated the aquatic resource(s) to be affected by this project as jurisdictional waters of the U.S. If you believe the Corps does not have jurisdiction over some or all of the aquatic resources at the project site, you may request an Approved Jurisdictional Determination (AJD). If one is requested, please be aware that we may require the submittal of additional information to complete the AJD and work authorized in this letter may not occur until the Corps completes the AJD.

NWP General Condition 29, *Transfer of Nationwide Permit Verifications*, requires you to obtain the signatures(s) of the new owner(s) if you sell the property associated with this permit in order to transfer the permit to the new owner. For your convenience, the enclosed *Permit Transfer* form (Enclosure 5) can be prepared and submitted to document the permit transfer.

The verification of this NWP is valid until March 14, 2026, unless the NWP is modified, reissued, or revoked prior to that date. If the authorized work has not been completed by that date and you have commenced or are under contract to commence this activity before March 14, 2026, you will have until March 14, 2027, to complete the activity under the enclosed terms and conditions of this NWP. If the work cannot be completed by March 14, 2027, you will need to obtain a new NWP verification or authorization by another type of Department of the Army permit.

Our verification of this NWP is based on the project description and construction methods provided in your permit application. If you propose changes to the project, you must submit revised plans to this office and receive our approval of the revisions prior to performing the work. Failure to comply with all terms and conditions of this NWP verification invalidates this authorization and could result in a violation of Section 10 of the Rivers and Harbors Act. You must also obtain all local, state, and other federal permits that apply to this project.

Upon completing the authorized work, you must fill out and return the enclosed *Compliance Certification* form (Enclosure 6). We would like to hear about your experience working with the Portland District, Regulatory Branch. Please complete a customer service survey form at the following address: https://regulatory.ops.usace.army.mil/customer-service-survey/.

If you have any questions regarding this NWP verification, please contact Kinsey M. Friesen by telephone at (503) 808-4378 or by email at kinsey.m.friesen@usace.army.mil.

FOR THE COMMANDER, MICHAEL D. HELTON, PMP, COLONEL, CORPS OF ENGINEERS, DISTRICT COMMANDER:

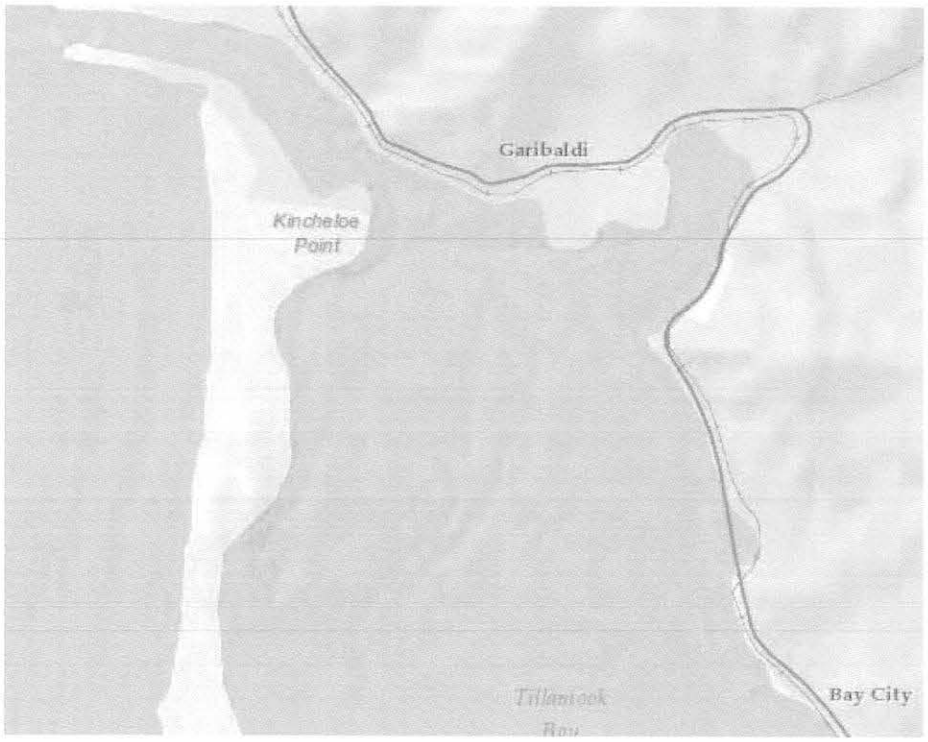
For: William D. Abadie
Chief, Regulatory Branch

Enclosures

cc:
Oregon Department of Agriculture (Alexis Manderson, Alexis.Manderson@oda.oregon.gov)
Tillamook County (Sarah Absher, sabsher@co.tillamook.or.us)
Oregon Department of State Lands (Dan Cary, dan.cary@dsl.oregon.gov)
Oregon Department of Land Conservation and Development (Patty Snow, patty.snow@dlcd.oregon.gov; Deanna Caracciolo, deanna.caracciolo@dlcd.oregon.gov)

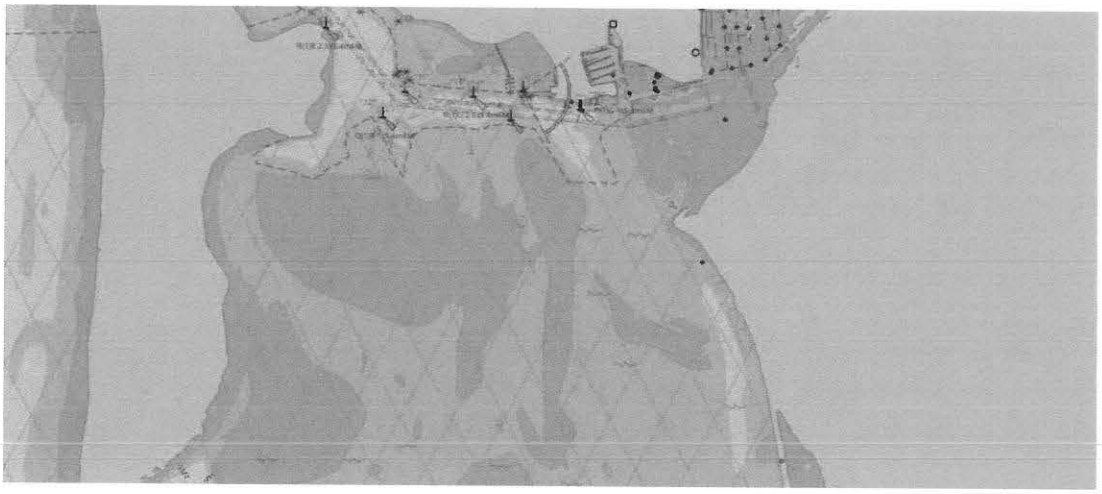
Vicinity Map:

Topographical Map:

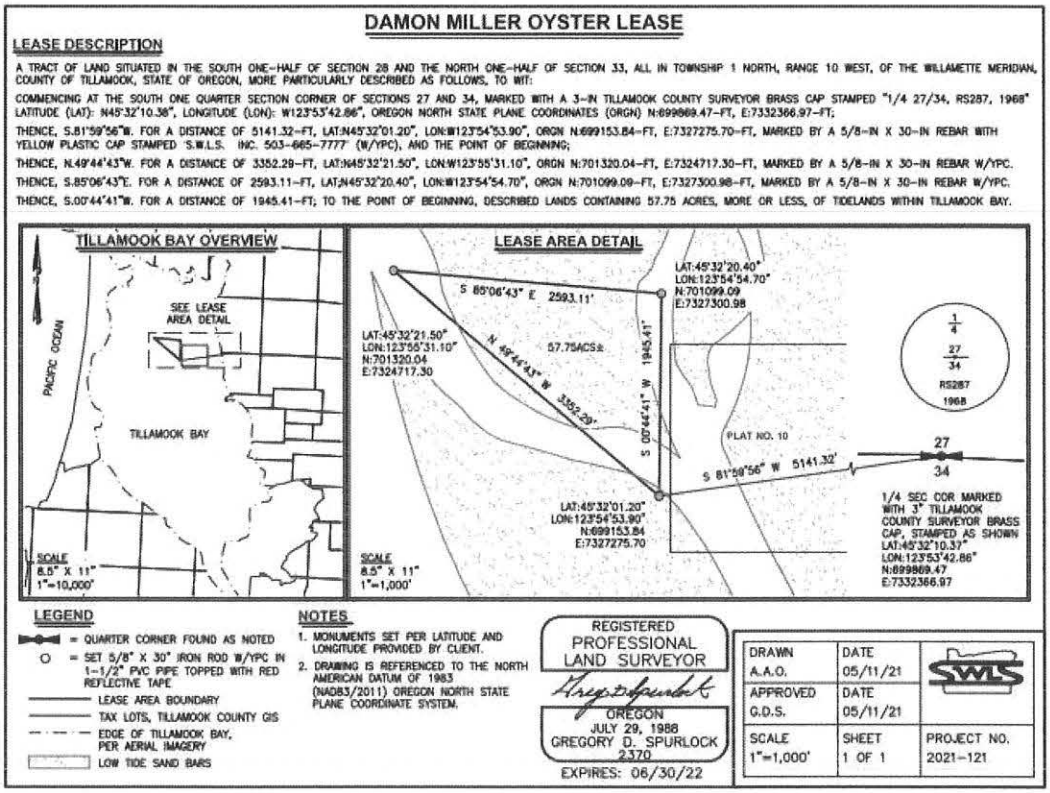


Flow Direction:

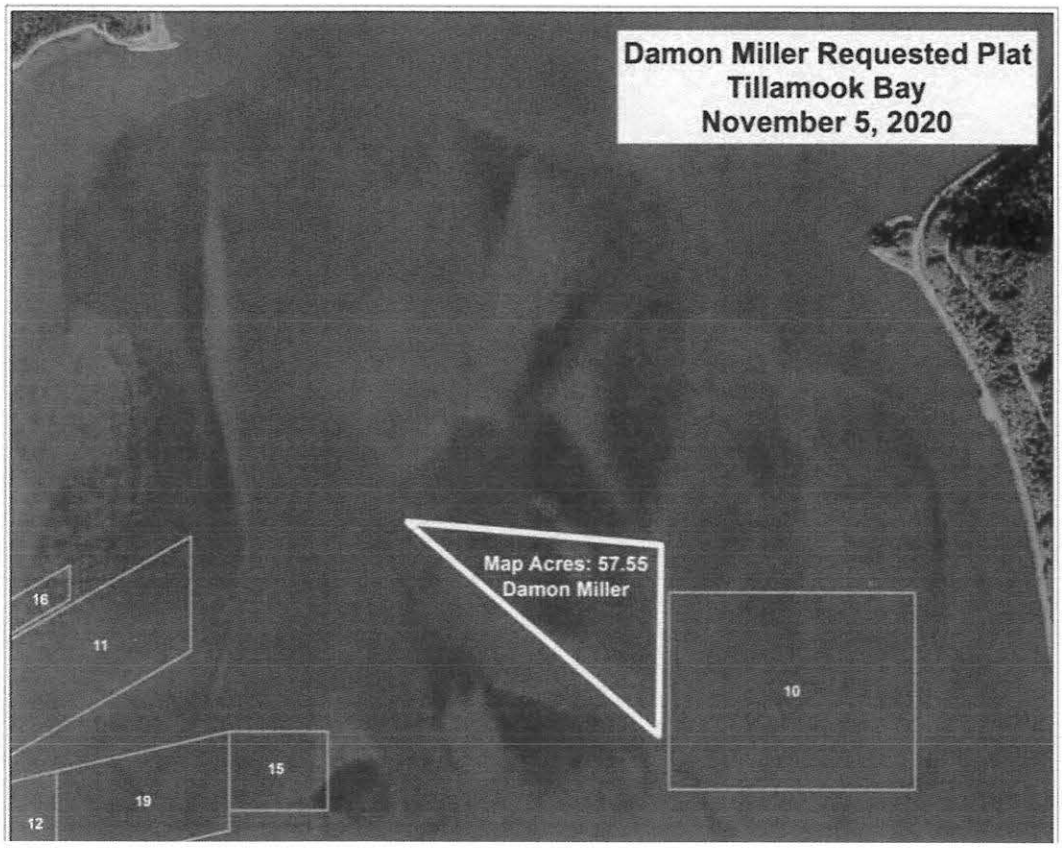
Shallow Water Pattern:



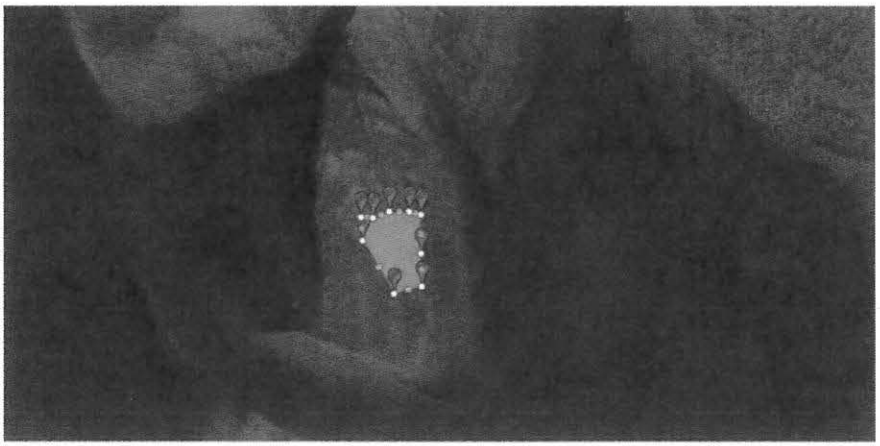
Land Survey Completed By Statewide:



Plat area provided by ODA:



Satellite Image of plat area. Red areas represent eelgrass beds. Green area represents no to minimal eel grass beds:



Output : Current Area

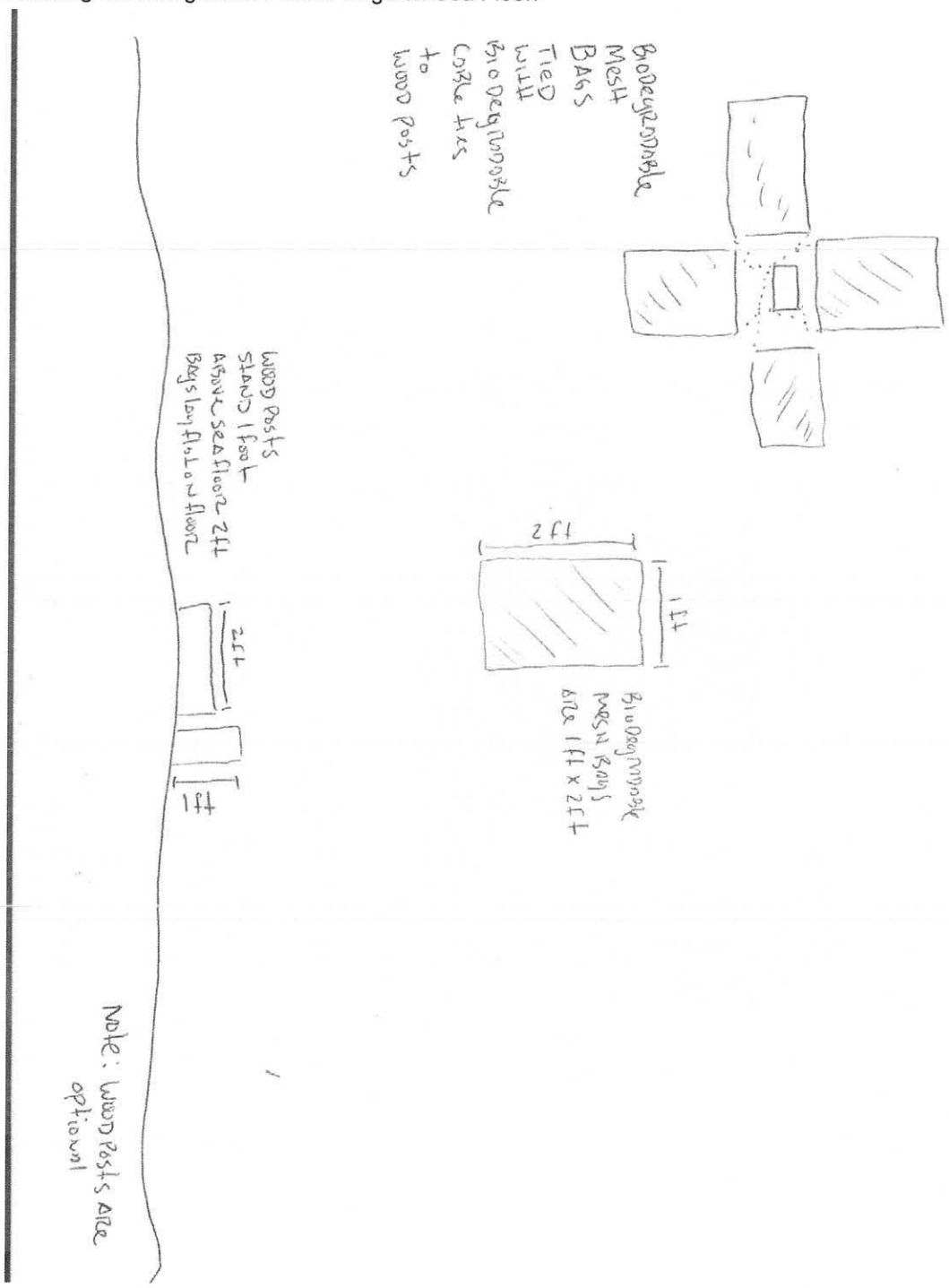
16211.34 m^2 | 0.02 km^2 | 4.01 acres | 1.62 hectares | 174605.01 $feet^2$ | 0.01 square miles | 0.00 square nautical miles

Current Perimeter

511.29m OR 1683.93feet

The corner coordinates for the cultivation area are (1) 45.539128948, -123.919548272, (2) 45.53911, -123.91922, (3) 45.53922, -123.91878, (4) 45.53922, -123.91824, (5) 45.539160, -123.917930, (6) 45.53916, -123.917793, (7) 45.53845, -123.91792, (8) 45.53783, -123.91790, (9) 45.53770, -123.91865, and (10) 45.53869, -123.91949.

Drawing of Biodegradable Mesh Bags on Sea Floor:



US Army Corps of Engineers®
Portland District

Nationwide Permit 48
Terms and Conditions

Effective Date: March 15, 2021

In addition to any special conditions that may be required on a case-by-case basis by the District Engineer, the following terms and conditions must be met, as applicable, for a Nationwide Permit authorization to be valid in Oregon.

A. Description of Activities Authorized by Nationwide Permit (NWP) 48

48. *Commercial Shellfish Mariculture Activities*. Structures or work in navigable waters of the United States and discharges of dredged or fill material into waters of the United States necessary for new and continuing commercial shellfish mariculture operations (i.e., the cultivation of bivalve molluscs such as oysters, mussels, clams, and scallops) in authorized project areas. For the purposes of this NWP, the project area is the area in which the operator is authorized to conduct commercial shellfish mariculture activities, as identified through a lease or permit issued by an appropriate state or local government agency, a treaty, or any easement, lease, deed, contract, or other legally binding agreement that establishes an enforceable property interest for the operator.

This NWP authorizes the installation of buoys, floats, racks, trays, nets, lines, tubes, containers, and other structures into navigable waters of the United States. This NWP also authorizes discharges of dredged or fill material into waters of the United States necessary for shellfish seeding, rearing, cultivating, transplanting, and harvesting activities. Rafts and other floating structures must be securely anchored and clearly marked.

This NWP does not authorize:

(a) The cultivation of a nonindigenous species unless that species has been previously cultivated in the waterbody;

(b) The cultivation of an aquatic nuisance species as defined in the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990; or

(c) Attendant features such as docks, piers, boat ramps, stockpiles, or staging areas, or the deposition of shell material back into waters of the United States as waste.

Notification: The permittee must submit a pre-construction notification to the district engineer if the activity directly affects more than 1/2-acre of submerged aquatic vegetation. If the operator will be conducting commercial shellfish mariculture activities in multiple contiguous project areas, he or she can either submit one PCN for those contiguous project areas or submit a separate PCN for each project area. (See general condition 32.) (Authorities: Sections 10 and 404)

Note 1: The permittee should notify the applicable U.S. Coast Guard office regarding the project.

Note 2: To prevent introduction of aquatic nuisance species, no material that has been taken from a different waterbody may be reused in the current project area, unless it has been treated in accordance with the applicable regional aquatic nuisance species management plan.

Note 3: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 defines "aquatic nuisance species" as "a nonindigenous species that threatens the diversity or abundance of native species or the ecological stability of infested waters, or commercial, agricultural, aquacultural, or recreational activities dependent on such waters."

B. Nationwide Permit General Conditions

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as applicable, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP. Every person who may wish to obtain permit authorization under one or more NWPs, or who is currently relying on an existing or prior permit authorization under one or more NWPs, has been and is on notice that all of the provisions of 33 CFR 330.1 through 330.6 apply to every NWP authorization. Note especially 33 CFR 330.5 relating to the modification, suspension, or revocation of any NWP authorization.

1. *Navigation*. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his or her authorized representative, said structure or work shall cause unreasonable obstruction to the free

navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. *Aquatic Life Movements*. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species. If a bottomless culvert cannot be used, then the crossing should be designed and constructed to minimize adverse effects to aquatic life movements.

3. *Spawning Areas*. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. *Migratory Bird Breeding Areas*. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. *Shellfish Beds*. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. *Suitable Material*. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. *Water Supply Intakes*. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. *Adverse Effects from Impoundments*. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. *Management of Water Flows*. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization, storm water management activities, and temporary and permanent road crossings, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-

construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. *Fills Within 100-Year Floodplains*. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. *Equipment*. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. *Soil Erosion and Sediment Controls*. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow, or during low tides.

13. *Removal of Temporary Structures and Fills*. Temporary structures must be removed, to the maximum extent practicable, after their use has been discontinued. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. *Proper Maintenance*. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. *Single and Complete Project*. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. *Wild and Scenic Rivers*. (a) No NWP activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status.

(b) If a proposed NWP activity will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the permittee must submit a pre-construction notification (see general condition 32). The district engineer will coordinate the PCN with the Federal agency with direct management responsibility for that river. Permittees shall not begin the NWP activity until notified by the district engineer that the Federal agency with direct management responsibility for that river has determined in writing that the proposed NWP activity will not adversely affect the Wild and Scenic River designation or study status.

(c) Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). Information on these rivers is also available at: http://www.rivers.gov/.

17. *Tribal Rights*. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. *Endangered Species*. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify designated critical habitat or critical habitat proposed for such designation. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless ESA Section 7 consultation addressing the consequences of the proposed activity on listed species or critical habitat has been completed. See 50 CFR 402.02 for the definition of "effects of the action" for the purposes of ESA Section 7 consultation, as well as 50 CFR 402.17, which provides further explanation under ESA Section 7 regarding "activities that are reasonably certain to occur" and "consequences caused by the proposed action."

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA (see 33 CFR 330.4(f)(1)). If pre-construction notification is required for the proposed activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation has not been submitted, additional ESA Section 7 consultation may be necessary for the activity and the respective federal agency would be responsible for fulfilling its obligation under Section 7 of the ESA.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat or critical habitat proposed for such designation, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation), the pre-construction notification must include the name(s) of the endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or that utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and

designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. For activities where the non-Federal applicant has identified listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) that might be affected or is in the vicinity of the activity, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification that the proposed activity will have "no effect" on listed species (or species proposed for listing or designated critical habitat (or critical habitat proposed for such designation), or until ESA Section 7 consultation or conference has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation or conference with the FWS or NMFS the district engineer may add species-specific permit conditions to the NWPs.

(e) Authorization of an activity by an NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the FWS or the NMFS, the Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) If the non-federal permittee has a valid ESA Section 10(a)(1)(B) incidental take permit with an approved Habitat Conservation Plan for a project or a group of projects that includes the proposed NWP activity, the non-federal applicant should provide a copy of that ESA Section 10(a)(1)(B) permit with the PCN required by paragraph (c) of this general condition. The district engineer will coordinate with the agency that issued the ESA Section 10(a)(1)(B) permit to determine whether the proposed NWP activity and the associated incidental take were considered in the internal ESA Section 7 consultation conducted for the ESA Section 10(a)(1)(B) permit. If that coordination results in concurrence from the agency that the proposed NWP activity and the associated incidental take were considered in the internal ESA Section 7 consultation for the ESA Section 10(a)(1)(B) permit, the district engineer does not need to conduct a separate ESA Section 7 consultation for the proposed NWP activity. The district engineer will notify the non-federal applicant within 45 days of receipt of a complete pre-construction notification whether the ESA Section 10(a)(1)(B) permit covers the proposed NWP activity or whether additional ESA Section 7 consultation is required.

(g) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the FWS and NMFS or their world

wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.nmfs.noaa.gov/pr/species/esa/ respectively.

19. *Migratory Birds and Bald and Golden Eagles*. The permittee is responsible for ensuring that an action authorized by an NWP complies with the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The permittee is responsible for contacting the appropriate local office of the U.S. Fish and Wildlife Service to determine what measures, if any, are necessary or appropriate to reduce adverse effects to migratory birds or eagles, including whether "incidental take" permits are necessary and available under the Migratory Bird Treaty Act or Bald and Golden Eagle Protection Act for a particular activity.

20. *Historic Properties*. (a) No activity is authorized under any NWP which may have the potential to cause effects to properties listed, or eligible for listing, in the National Register of Historic Places until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)(1)). If pre-construction notification is required for the proposed NWP activity, the Federal permittee must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will verify that the appropriate documentation has been submitted. If the appropriate documentation is not submitted, then additional consultation under Section 106 may be necessary. The respective federal agency is responsible for fulfilling its obligation to comply with Section 106.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the NWP activity might have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties might have the potential to be affected by the proposed NWP activity or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of, or potential for, the presence of historic properties can be sought from the State Historic Preservation Officer, Tribal Historic Preservation Officer, or designated tribal representative, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts commensurate with potential impacts, which may include background research, consultation, oral history interviews, sample field investigation, and/or field survey. Based on the information submitted in the PCN and these identification efforts, the district engineer shall determine whether the proposed NWP activity has the potential to cause effects on the

historic properties. Section 106 consultation is not required when the district engineer determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). Section 106 consultation is required when the district engineer determines that the activity has the potential to cause effects on historic properties. The district engineer will conduct consultation with consulting parties identified under 36 CFR 800.2(c) when he or she makes any of the following effect determinations for the purposes of Section 106 of the NHPA: no historic properties affected, no adverse effect, or adverse effect.

(d) Where the non-Federal applicant has identified historic properties on which the proposed NWP activity might have the potential to cause effects and has so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects to historic properties or that NHPA Section 106 consultation has been completed. For non-federal permittees, the district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. If NHPA Section 106 consultation is required, the district engineer will notify the non-Federal applicant that he or she cannot begin the activity until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that Section 110k of the NHPA (54 U.S.C. 306113) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. *Discovery of Previously Unknown Remains and Artifacts*. Permittees that discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by an NWP, they must immediately notify the district engineer of what they have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal, and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. *Designated Critical Resource Waters*. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, 52, 57 and 58 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, 38, and 54, notification is required in accordance with general condition 32, for any activity proposed by permittees in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after she or he determines that the impacts to the critical resource waters will be no more than minimal.

23. *Mitigation*. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the individual and cumulative adverse environmental effects are no more than minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects.

(d) Compensatory mitigation at a minimum one-for-one ratio will be required for all losses of stream bed that exceed 3/100-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse environmental

effects of the proposed activity are no more than minimal, and provides an activity-specific waiver of this requirement. This compensatory mitigation requirement may be satisfied through the restoration or enhancement of riparian areas next to streams in accordance with paragraph (e) of this general condition. For losses of stream bed of 3/100-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in only minimal adverse environmental effects. Compensatory mitigation for losses of streams should be provided, if practicable, through stream rehabilitation, enhancement, or preservation, since streams are difficult-to-replace resources (see 33 CFR 332.3(e)(3)).

(e) Compensatory mitigation plans for NWP activities in or near streams or other open waters will normally include a requirement for the restoration or enhancement, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, the restoration or maintenance/protection of riparian areas may be the only compensatory mitigation required. If restoring riparian areas involves planting vegetation, only native species should be planted. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to restore or maintain/protect a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or maintaining/protecting a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of minimization or compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(f) Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in no more than minimal adverse environmental effects. For the NWPs, the preferred mechanism for providing compensatory mitigation is mitigation bank credits or in-lieu fee program credits (see 33 CFR 332.3(b)(2) and (3)). However, if an appropriate number and type of mitigation bank or in-lieu credits are not available at the time the PCN is submitted to the district engineer, the district engineer may approve the use of permittee-responsible mitigation.

(2) The amount of compensatory mitigation required by the district engineer must be sufficient to ensure that the authorized activity results in no more than minimal individual

and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). (See also 33 CFR 332.3(f).)

(3) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, aquatic resource restoration should be the first compensatory mitigation option considered for permittee-responsible mitigation.

(4) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) through (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)). If permittee-responsible mitigation is the proposed option, and the proposed compensatory mitigation site is located on land in which another federal agency holds an easement, the district engineer will coordinate with that federal agency to determine if proposed compensatory mitigation project is compatible with the terms of the easement.

(5) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan needs to address only the baseline conditions at the impact site and the number of credits to be provided (see 33 CFR 332.4(c)(1)(ii)).

(6) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan (see 33 CFR 332.4(c)(1)(ii)).

(g) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any NWP activity resulting in the loss of greater than 1/2-acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that an NWP activity already meeting the established acreage limits also satisfies the no more than minimal impact requirement for the NWPs.

(h) Permittees may propose the use of mitigation banks, in-lieu fee programs, or permittee-responsible mitigation. When developing a compensatory mitigation proposal, the permittee must consider appropriate and practicable options consistent with the framework at 33 CFR 332.3(b). For activities resulting in the loss of marine or estuarine resources, permittee-responsible mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine

credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(i) Where certain functions and services of waters of the United States are permanently adversely affected by a regulated activity, such as discharges of dredged or fill material into waters of the United States that will convert a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse environmental effects of the activity to the no more than minimal level.

24. *Safety of Impoundment Structures*. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state or federal, dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. *Water Quality*. (a) Where the certifying authority (state, authorized tribe, or EPA, as appropriate) has not previously certified compliance of an NWP with CWA Section 401, a CWA Section 401 water quality certification for the proposed discharge must be obtained or waived (see 33 CFR 330.4(c)). If the permittee cannot comply with all of the conditions of a water quality certification previously issued by certifying authority for the issuance of the NWP, then the permittee must obtain a water quality certification or waiver for the proposed discharge in order for the activity to be authorized by an NWP.

(b) If the NWP activity requires pre-construction notification and the certifying authority has not previously certified compliance of an NWP with CWA Section 401, the proposed discharge is not authorized by an NWP until water quality certification is obtained or waived. If the certifying authority issues a water quality certification for the proposed discharge, the permittee must submit a copy of the certification to the district engineer. The discharge is not authorized by an NWP until the district engineer has notified the permittee that the water quality certification requirement has been satisfied by the issuance of a water quality certification or a waiver.

(c) The district engineer or certifying authority may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. *Coastal Zone Management*. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). If the permittee cannot comply with all of the conditions of a coastal zone management consistency concurrence previously issued by the state, then the permittee must obtain an individual

coastal zone management consistency concurrence or presumption of concurrence in order for the activity to be authorized by an NWP. The district engineer or a state may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. *Regional and Case-By-Case Conditions*. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its CWA Section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. *Use of Multiple Nationwide Permits*. The use of more than one NWP for a single and complete project is authorized, subject to the following restrictions:

(a) If only one of the NWPs used to authorize the single and complete project has a specified acreage limit, the acreage loss of waters of the United States cannot exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

(b) If one or more of the NWPs used to authorize the single and complete project has specified acreage limits, the acreage loss of waters of the United States authorized by those NWPs cannot exceed their respective specified acreage limits. For example, if a commercial development is constructed under NWP 39, and the single and complete project includes the filling of an upland ditch authorized by NWP 46, the maximum acreage loss of waters of the United States for the commercial development under NWP 39 cannot exceed 1/2-acre, and the total acreage loss of waters of United States due to the NWP 39 and 46 activities cannot exceed 1 acre.

29. *Transfer of Nationwide Permit Verifications*. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____
(Transferee)

_____
(Date)

30. *Compliance Certification.* Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and implementation of any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized activity was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the activity and mitigation.

The completed certification document must be submitted to the district engineer within 30 days of completion of the authorized activity or the implementation of any required compensatory mitigation, whichever occurs later.

31. *Activities Affecting Structures or Works Built by the United States.* If an NWP activity also requires review by, or permission from, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers (USACE) federally authorized Civil Works project (a "USACE project"), the prospective permittee must submit a pre-construction notification. See paragraph (b)(10) of general condition 32. An activity that requires Section 408 permission and/or review is not authorized by an NWP until the appropriate Corps office issues the Section 408 permission or completes its review to alter, occupy, or use the USACE project, and the district engineer issues a written NWP verification.

32. *Pre-Construction Notification*. (a) *Timing*. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or are in the vicinity of the activity, or to notify the Corps pursuant to general condition 20 that the activity might have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation Act (see 33 CFR 330.4(g)) has been completed. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) *Contents of Pre-Construction Notification*: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed activity;

(3) Identify the specific NWP or NWP(s) the prospective permittee wants to use to authorize the proposed activity;

(4) (i) A description of the proposed activity; the activity's purpose; direct and indirect adverse environmental effects the activity would cause, including the anticipated amount of loss of wetlands, other special aquatic sites, and other waters expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; a description of any proposed mitigation measures intended to reduce the adverse environmental effects caused by the proposed activity; and any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity, including other separate and distant crossings for linear projects that require Department of the Army authorization but do not require pre-construction notification. The description of the proposed activity and any proposed mitigation measures should be sufficiently detailed to allow the district engineer to determine that the adverse environmental effects of the activity will be no more than minimal and to determine the need for compensatory mitigation or other mitigation measures.

(ii) For linear projects where one or more single and complete crossings require pre-construction notification, the PCN must include the quantity of anticipated losses of wetlands, other special aquatic sites, and other waters for each single and complete crossing of those wetlands, other special aquatic sites, and other waters (including those single and complete crossings authorized by an NWP but do not require PCNs). This information will be used by the district engineer to evaluate the cumulative adverse environmental effects of the proposed linear project, and does not change those non-PCN NWP activities into NWP PCNs.

(iii) Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the activity and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(5) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial and intermittent streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many wetlands, other special aquatic sites, and other waters. Furthermore, the 45-day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(6) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse environmental effects are no more than minimal and why

compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(7) For non-federal permittees, if any listed species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) might be affected or is in the vicinity of the activity, or if the activity is located in designated critical habitat (or critical habitat proposed for such designation), the PCN must include the name(s) of those endangered or threatened species (or species proposed for listing) that might be affected by the proposed activity or utilize the designated critical habitat (or critical habitat proposed for such designation) that might be affected by the proposed activity. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with the Endangered Species Act;

(8) For non-federal permittees, if the NWP activity might have the potential to cause effects to a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, the PCN must state which historic property might have the potential to be affected by the proposed activity or include a vicinity map indicating the location of the historic property. For NWP activities that require pre-construction notification, Federal permittees must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act;

(9) For an activity that will occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, the PCN must identify the Wild and Scenic River or the "study river" (see general condition 16); and

(10) For an NWP activity that requires permission from, or review by, the Corps pursuant to 33 U.S.C. 408 because it will alter or temporarily or permanently occupy or use a U.S. Army Corps of Engineers federally authorized civil works project, the pre-construction notification must include a statement confirming that the project proponent has submitted a written request for Section 408 permission from, or review by, the Corps office having jurisdiction over that USACE project.

(c) *Form of Pre-Construction Notification*: The nationwide permit pre-construction notification form (Form ENG 6082) should be used for NWP PCNs. A letter containing the required information may also be used. Applicants may provide electronic files of PCNs and supporting materials if the district engineer has established tools and procedures for electronic submittals.

(d) *Agency Coordination*: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the activity's adverse environmental effects so that they are no more than minimal.

(2) Agency coordination is required for: (i) all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States; (ii) NWP 13 activities in excess of 500 linear feet, fills greater than one cubic yard per running foot, or involve discharges of dredged or fill material into special aquatic sites; and (iii) NWP 54 activities in excess of 500 linear feet, or that extend into the waterbody more than 30 feet from the mean low water line in tidal waters or the ordinary high water mark in the Great Lakes.

(3) When agency coordination is required, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (FWS, state natural resource or water quality agency, EPA, and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to notify the district engineer via telephone, facsimile transmission, or e-mail that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse environmental effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure that the net adverse environmental effects of the proposed activity are no more than minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(4) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(5) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

C. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If a project proponent requests authorization by a specific NWP, the district engineer should issue the NWP verification for that activity if it meets the terms and conditions of that

NWP, unless he or she determines, after considering mitigation, that the proposed activity will result in more than minimal individual and cumulative adverse effects on the aquatic environment and other aspects of the public interest and exercises discretionary authority to require an individual permit for the proposed activity. For a linear project, this determination will include an evaluation of the single and complete crossings of waters of the United States that require PCNs to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings of waters of the United States authorized by an NWP. If an applicant requests a waiver of an applicable limit, as provided for in NWPs 13, 36, or 54, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in only minimal individual and cumulative adverse environmental effects.

2. When making minimal adverse environmental effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. He or she will also consider the cumulative adverse environmental effects caused by activities authorized by an NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

3. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands or 3/100-acre of stream bed, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for NWP activities with smaller impacts, or for impacts to other types of waters. The district engineer will consider any proposed compensatory mitigation or other mitigation measures the applicant has included in the proposal in determining whether the net adverse environmental effects of the proposed activity are no more than minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse environmental effects are no more than minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer

determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure that the NWP activity results in no more than minimal adverse environmental effects. If the net adverse environmental effects of the NWP activity (after consideration of the mitigation proposal) are determined by the district engineer to be no more than minimal, the district engineer will provide a timely written response to the applicant. The response will state that the NWP activity can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

4. If the district engineer determines that the adverse environmental effects of the proposed activity are more than minimal, then the district engineer will notify the applicant either: (a) that the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the activity is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal; or (c) that the activity is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse environmental effects, the activity will be authorized within the 45-day PCN period (unless additional time is required to comply with general conditions 18, 20, and/or 31), with activity-specific conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation plan or a requirement that the applicant submit a mitigation plan that would reduce the adverse environmental effects so that they are no more than minimal. When compensatory mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

D. Further Information

1. District engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project (see general condition 31).

E. Portland District Regional Conditions

1. *Notification:* For permittees that received written NWP approval, upon starting the authorized activities, you shall notify the U.S. Army Corps ofEngineers, Portland District, Regulatory Branch that the work has started. Notification shall be provided by e-mail to cenwp.notify@usace.army.mil and the email subject line shall include: Corps project number and the project location by county.

2. *Aquatic Resources of Special Concern*: Pre-construction notification to the District Engineer is required for all activities proposed in waters of the U.S. within, or directly affecting, an aquatic resource of special concern. Aquatic resources of special concern are resources that are difficult to replace, unique, and/or have high ecological function. For the purpose of this regional condition, aquatic resources of special concern are native eel grass (Zostera marina) beds, mature forested wetlands, bogs, fens, vernal pools, alkali wetlands, wetlands in dunal systems along the Oregon coast, estuarine wetlands, Willamette Valley wet prairie wetlands, marine gardens, marine reserves, kelp beds, and rocky substrate in tidal waters.

In addition to the content requirements of NWP General Condition (GC) 32, the pre-construction notification must include a statement explaining why the effects of the proposed activity are no more than minimal. Written approval from the District Engineer must be obtained prior to commencing work.

Note: If the District Engineer determines that the adverse effects of the proposed activity are more than minimal, then the District Engineer will notify the applicant that either:

a. the activity does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit;

b. the activity is authorized under the NWP subject to submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or

c. the activity is authorized under the NWP with specific modifications or conditions.

3. *Cultural Resources and Human Burials-Inadvertent Discovery Plan*: In addition to the requirements in NWP GCs 20 and 21, the permittee shall immediately notify the District Engineer if, at any time during the course of the work authorized, human burials, cultural items, or historic properties, as defined by the National Historic Preservation Act and Native American Graves Protection and Repatriation Act, are discovered. The permittee shall implement the following procedures as outlined on the Inadvertent Discovery Plan posted on the Portland District Regulatorywebsite at *https://www.nwp.usace.army.mil/Missions/Regulatory/Nationwide.aspx*

Notify the Portland District Engineer as soon as possible following discovery but in no case later than 24 hours. Notification shall be sent electronically (cenwp.notify@usace.army.mil) and shall identify the Corps project number and clearly

specify the purpose is to report a cultural resource discovery. The permittee shall also notify the Corps representative (by email and telephone) identified in the verification letter.

4. *Essential Fish Habitat:* Activities which may adversely affect essential fish habitat, as defined under the Magnuson-Stevens Fishery Conservation and Management Act (MSA), are not authorized by NWP until essential fish habitat requirements have been met by the applicant and the Corps. Non-federal permittees must submit a pre-construction notification to the District Engineer if essential fish habitat may be affected by, or is in the vicinity of, a proposed activity and shall not begin work until notified by the District Engineer that the requirements of the essential fish habitat provisions of the MSA have been satisfied and the activity is authorized. The notification must identify the type(s) of essential fish habitat (e.g., Pacific coast salmon, Pacific coast groundfish, and/or Coastal-pelagic species) managed by a Fishery Management Plan that may be affected. Information about essential fish habitat is available at NOAA's website: *http://www.westcoast.fisheries.noaa.gov*

5. *Bank Stabilization:* Permittee shall include the use of bioengineering techniques and natural materials in the project design to the maximum extent practicable and shall minimize the use of rock. Bioengineering bank stabilization techniques are those that increase the strength and structure of soils with a combination of biological and mechanical elements (e.g., vegetation, root wads and woody debris, rock structures). Riparian plantings shall be included in all project designs unless the permittee can demonstrate that such plantings are not practicable.

6. *Work Area Isolation and Dewatering:* Appropriate best management practices shall be implemented to prevent erosion and to prevent sediments from entering waters of the U.S.

a. All in-water work shall be isolated from the active channel or conducted during low seasonal stream flows to the maximum extent practicable.

b. Cofferdams shall be constructed of non-erosive material, such as concrete jersey barriers, sand and gravel bag dams, or water bladders. Constructing a cofferdam by pushing material from the streambed or sloughing material from the streambanks is not authorized.

c. Sand and gravel bag dams shall be lined with a plastic liner or geotextile fabric to reduce permeability and prevent sediments and/or construction materials from entering waters of the U.S.

d. Upstream and downstream flows shall be maintained by routing flows around the construction site.

e. When dewatering is necessary for construction, a sediment basin, or other applicable method, shall be used to settle sediments prior to releasing the water back into

the waterbody. Settled water shall be returned to the waterbody in such a manner as to avoid erosion. Sediment basins shall be placed in uplands.

f. Fish and other aquatic species must be salvaged (i.e., safely captured and relocated away from the project or development site) prior to dewatering. Contact ODFW for additional information regarding fish salvage.

7. *Dredging:* For NWP-authorized activities that involve removal of sediment from waters of the U.S., the permittee shall ensure that any necessary sediment characterization regarding size, composition, and potential contaminants is conducted and reviewed prior to dredging. Sediment characterization must be conducted per the Sediment Evaluation Framework for the Pacific Northwest (available at: *http://www.nwp.usace.army.mil/Missions/Environmental-Stewardship/DMM.aspx*).

Note: The return water from a contained disposal area is defined as a discharge of dredged material by 33 CFR part 323.2(d) and requires separate authorization from the District Engineer (*e.g.*, by NWP 16).

8. *Mechanized Equipment:* In addition to the requirements in NWP GC 11, permittee shall implement the following practices to prevent or minimize impacts to the aquatic environment from mechanized equipment:

a. Operate equipment from the top of a streambank and conduct work outside of the active stream channel, unless specifically authorized by the District Engineer.

b. Spill prevention and containment materials shall be maintained and be readily accessible at vehicle staging areas. The amount of spill response materials (such as straw matting/bales, geotextiles, booms, diapers, and other absorbent materials, shovels, brooms, and containment bags) maintained on-site must be appropriate for the size of the authorized activity.

Note: See Regional Condition 10 regarding timeframes for temporary fills.

9. *Erosion Control:* During construction and until the site is stabilized, the permittee shall ensure all practicable measures are implemented and maintained to prevent erosion and runoff. Temporary stockpiles of excavated or dredged material shall be stabilized to prevent erosion. Once soils or slopes have been stabilized, permittee shall completely remove and properly dispose of or re-use all non-biodegradable components of installed control measures.

10. *Temporary Fills and Impacts:* To ensure no more than minimal adverse environmental effects from temporary fills and impacts to waters of the U.S:

a. Temporary fills and/or impacts to waters of the U.S. shall not exceed six months unless otherwise approved by the District Engineer.

b. No more than one-half (½) acre of waters of the U.S. may be temporarily filled or impacted unless otherwise approved by the District Engineer (temporary fills and impacts do not affect specified limits for loss of waters associated with specific nationwide permits).

c. Native soils and/or sediments removed from waters of the U.S. for project construction shall be stockpiled and used for site restoration to the maximum extent practicable.

d. Site restoration of temporarily filled or impacted areas shall include returning the area to pre-project ground surface contours. The permittee shall appropriately revegetate temporarily filled or impacted areas with native, noninvasive herbs, shrubs, and/or tree species sufficient in number, spacing, and diversity to replace affected aquatic functions.

Note: The Corps will determine compensatory mitigation requirements for temporary fills and impacts on a case-by-case basis depending on the duration and nature of the temporary fill or impact and the type of aquatic resource affected.

11. *Contractor Notification of Permit Requirements:* The permittee must provide a copy of the Nationwide Permit verification letter, conditions, and permit drawings to all contractors and any other parties performing the authorized work, prior to the commencement of any work in waters of the U.S.

12. Inspection of the Project Site: The permittee shall allow representatives of the District Engineer to inspect the authorized activity to confirm compliance with nationwide permit terms and conditions. A request for access to the site will normally be made sufficiently in advance to allow a property owner or representative the option to be on site during the inspection.

F. Portland District Nationwide Permit 48 Specific Regional Condition

NWP 48: In addition to the information required by paragraph (b) of general condition 32, the applicant shall provide the following information: (1) a map showing the location and dimensions of the structures(s) and/or fill; (2) the name(s) of the species that will be cultivated during the period this NWP is in effect; (3) general water depths in the project area(s) (a detailed survey is not required), and (4) a map showing areas of submerged aquatic vegetation in the project area. The information should describe all species and culture activities the operator expects to undertake during the effective period of this NWP.

Oregon
Kate Brown, Governor

Oregon Coastal Management Program
Department of Land Conservation and Development
635 Capitol Street, Suite 150
Salem, Oregon 97301-2540
Phone (503) 373-0050
FAX (503) 378-6033
www.oregon.gov/LCD/OCMP

February 28, 2022

Damon Miller
Alava Ocean Co. LLC
PO Box 19301
Portland, OR 97280
Electronic transmittal: Alavaocean@gmail.com

Project:	Alava Commercial Oyster Cultivation
Permit:	U.S. Army Corps of Engineers (Corps), #NWP-2021-202 Nationwide Permit 48 (Commercial Shellfish Aquaculture Activities)
Location:	Tillamook Bay (45.538948, -123.918272)

Description: Commercial oyster cultivation utilizing biodegradable commercial pacific seeded oyster bags within a contiguous 5 acres of Tillamook Bay for bag-on-bottom culture and manual harvest on foot and by boat.

Decision: **Concurrence.** After reviewing potential coastal effects and applying the enforceable policies of the Oregon Coastal Management Program to the action requiring a federal permit, the OCMP has concurred with the consistency certification for this activity seeking a federal permit provided the attached conditions are followed.

Dear Mr. Miller,

The Oregon Coastal Management Program (OCMP-DLCD) has reviewed the U.S. Army Corps of Engineers (USACE) permit application #NWP-2021-202 for consistency with the state's Coastal Management Program (Program). Any federal action in the coastal zone including administering a federal permit or license, like the Section 404/401 permits under the Clean Water Act or Section 10 of the Rivers and Harbors Act, triggers a federal consistency review to comply with the federal Coastal Zone Management Act (CZMA) of 1972. OCMP has reviewed the proposed project and consistency certification pursuant to CZMA Section 307(c)(3) and attendant regulations of 15 CFR part 930.

The CZMA requires an applicant for a federal license or permit affecting any coastal use or resource within a state's coastal zone to comply with the enforceable policies of the State's federally approved coastal management program.

Oregon's federally approved program is a "networked" coastal management program that integrates authorities of local governments and other state agencies as the "enforceable policies" of the Program. To be consistent with the Program, the proposed project must be consistent with:

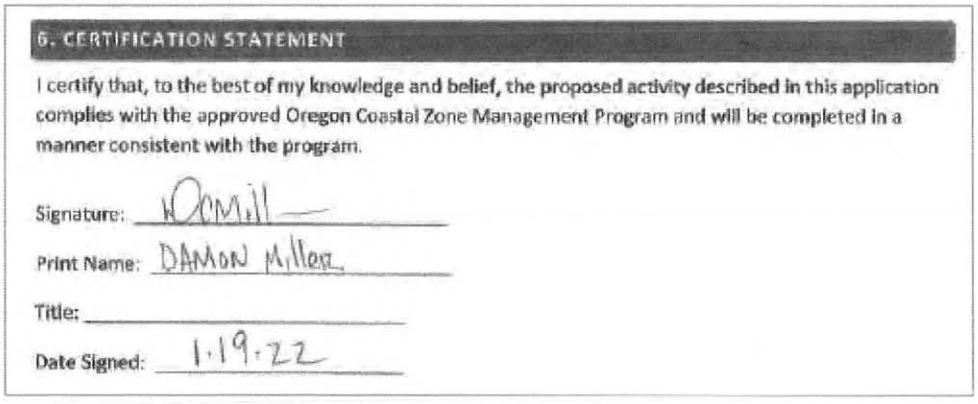
1) Oregon's Statewide Planning Goals;
2) Applicable acknowledged city or county comprehensive plan;
3) Selected state authorities (*e.g.* selected statute sections).

Findings:

OCMP-DLCD independently evaluated the project against Oregon's federally approved enforceable policies and has determined that the project is consistent with the Program. Evidence in support of this includes the issuance of the following permits or authorizations:

- The applicant has certified that to the best of their knowledge and belief, the project complies with the enforceable policies of the Program and will be completed in a manner consistent with the Program. The Coastal Zone Certification was signed by Damon Miller (Applicant) on January 19, 2022 (see signed Block 12 below).
- This project is under consideration for a Nationwide Permit 48 (Commercial Shellfish Aquaculture Activities) by the U.S. Army Corps of Engineers (Corps).
    - The Corps issued a provisional verification for the proposed project on January 31, 2022. This decision fulfills the listed CZMA requirement provided the applicant complies with the attached conditions.
- Oregon Department of Agriculture has issued a Final Lease Order for the proposed project conditioned upon the Federal Consistency Review
- Oregon Department of Fish and Wildlife had no remaining concerns or comment.
- Tillamook County is actively finalizing the review of the necessary Development Permit. Confirmation from Sarah Absher (County Planning Director) indicates findings support approval.
- The 15-day public comment period for this project began on February 10, 2022 and yielded zero public comments.

Certification Statement (JPA, Block 12)



6. CERTIFICATION STATEMENT

I certify that, to the best of my knowledge and belief, the proposed activity described in this application complies with the approved Oregon Coastal Zone Management Program and will be completed in a manner consistent with the program.

Signature: DMill

Print Name: DAMON Miller

Title:

Date Signed: 1.19.22

Consistency Decision Details & Conditions

OCMP-DLCD **concurs with conditions**, to the applicant's certification that the proposal is consistent with the Program. Failure to obtain and abide by all required local, state, or federal permits may constitute a violation of local, state, and/or federal law and subject the applicant to one or more enforcement actions.

Right of Appeal (To Special Conditions)

If the applicant objects to any conditions within this decision, all parties shall treat DLCD's concurrence as an objection. 15 CFR § 930.4(a)(1). Pursuant to 15 CFR § 930.63(e), and within 30 days from receipt of this letter, the applicant may request that the Secretary of Commerce override OCMP-DLCD's conditions/objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the CZMA, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to OCMP-DLCD and the federal permitting or licensing agency. The Secretary may collect fees from the applicant for administering and processing their request. 15 CFR § 930.63.

The appellant shall send the Notice of appeal to the Secretary, Herbert C. Hoover Building, 14th Street and Constitution Avenue, NW., Washington, DC 20230; a copy of the notice of appeal to the OCMP-DLCD; and to the Assistant General Counsel for Ocean Services (GCOS), 1305 East West Highway, Room 6111 SSMC 4, Silver Spring, Maryland 20910.

If you have any questions or comments regarding this coastal zone management consistency finding or the consistency review process, please contact me at 503-956-8163or by e-mail at: deanna.caracciolo@dlcd.oregon.gov.

Sincerely,

Deanna Caracciolo

Deanna Caracciolo
Coastal State-Federal Relations Coordinator

Cc: Kinsey Friesen

Enclosure A
Oregon Coastal Management Program (OCMP)
Standard Coastal Zone Conditions

The federal Coastal Zone Management Act provides that federal actions affecting any use or resource of the coastal zone[1], including projects permitted by the U.S. Army Corps of Engineers (USACE), must be consistent with the enforceable policies of a State's federally approved coastal management program. Oregon's approved program, the Oregon Coastal Management Program (OCMP), is a "networked" program that integrates authorities of local governments and other state agencies. The coastal zone conditions contained in this document reflect the networked nature of the OCMP, and reference the specific applicable enforceable policies.

In addition to all USACE national and regional permit conditions, permitted projects in Oregon's coastal zone must comply with the following coastal zone conditions.

If an applicant chooses not to follow one or more of the coastal zone conditions, DLCD will object to the permit issuance pursuant to 15 CFR § 930.63(e). In that instance, the permittee may appeal the state's objection by requesting that the Secretary of Commerce override the objection pursuant to 15 CFR 930, subpart H, within 30 days of receipt of the letter informing the applicant of the OCMP's objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security, and that either of these findings outweigh the adverse coastal effects of the proposed project. A copy of the request and supporting information must be sent to the OCMP and the USACE. The Secretary may collect fees from the permittee for administering and processing the override request.

CZ Condition 1. Consistency with Local Comprehensive Plans

(1) Permitted projects must be consistent with or not subject to the applicable local comprehensive plan and implementing land use regulations, including the applicable estuary management plan, or the statewide land use planning goals where applicable. Permittee must obtain required permits or other authorizations from the applicable local government before initiating work under any USACE permit. Permittees are encouraged to provide USACE and the OCMP with verification of the local jurisdiction's approval in the form of a completed block ten (10) of the Joint Permit Application. All appeals of the local jurisdiction's decision(s) must be resolved before any regulated work may begin.

(2) All conditions placed on an authorization or permit by the local government are incorporated by reference into the OCMP coastal zone conditions.

[Enforceable Policy: ORS chapter 197, Comprehensive Land Use Planning Coordination]

CZ Condition 2. Consistency with Removal-Fill Law

(1) Permitted projects must be consistent with or not subject to the state requirements governing removal-

[1] *Oregon's coastal zone generally includes the area lying between the Oregon/Washington border on the north, to the Oregon/California border on the south, seaward to the extent of the state's jurisdiction as recognized by federal law, and inland to the crest of the Coast Range Mountains, excepting:

(a) The Umpqua River basin, where the coastal zone extends to Scottsburg;
(b) The Rogue River basin, where the coastal zone extends to Agness; and
(c) The Columbia River basin, where the coastal zone extends to the downstream end of Puget Island.

fill in waters of the state. Permittee must obtain required permits or other authorizations from the Oregon Department of State Lands (DSL) before any regulated work may begin.

(2) Projects requiring a DSL Removal-Fill permit must compensate for reasonably expected adverse impacts by complying to the full extent with DSL's compensatory mitigation requirements.

(3) Where DSL finds a project not subject to the Removal/Fill Law, permittee must submit to DSL any changes in project design or implementation that may reasonably be expected to require application of the Removal/Fill Law.

(4) All conditions placed on a Removal-Fill permit by DSL are incorporated by reference into the OCMP coastal zone conditions.

[Enforceable Policy: ORS chapter 196, Removal of Material; Filling]

CZ Condition 3. Leases of State Lands

(1) Permitted projects must be consistent with or not subject to state requirements governing use of state lands. Permittee must obtain any required lease, license, or other authorization for the use of state lands or waters from the Oregon Department of State Lands (DSL) before any regulated work may begin.

(2) All conditions placed on a lease, license, or authorization by DSL are incorporated by reference into the OCMP coastal zone conditions.

[Enforceable Policy: ORS chapter 274, Submersible and Submerged Lands]

CZ Condition 4. Department of Environmental Quality

(1) Permitted projects must be consistent with or not subject to the state requirements governing water quality. Permittee must obtain certification, if required, from the Oregon Department of Environmental Quality (DEQ) through its 401 Water Quality Certification process before any regulated work may begin.

(2) All conditions placed on a license, permit, or authorization by DEQ are incorporated by reference into the OCMP coastal zone conditions.

[Enforceable Policy: ORS chapter 468B, Water Quality]

CZ Condition 5. Fish and Aquatic Life Passage

(1) Where applicable, all authorized projects shall be in conformance with ODFW standards for fish passage (http://www.dfw.state.or.us/fish/passage/). Decisions to abrogate ODFW fish passage standards shall be accompanied by written approval from ODFW.

(2) No work shall be authorized that does not provide for adequate passage of "aquatic life." Aquatic life shall be interpreted to include amphibians, reptiles, and mammals whose natural habitat includes waters of this state and which are generally present in or around, or pass through the project site.

(3) This condition is effective only where ODFW regulations apply.

[Enforceable Policy: ORS chapter 509, Additional Fishery Requirements]

CZ Condition 6. Ocean Shore

(1) Permitted projects must be consistent with or not subject to state requirements governing use of the ocean shore. Permittee must obtain, if required, an ocean shore permit from the Oregon Parks and Recreation Department (OPRD) before any regulated work may begin.

(2) All conditions placed on an Ocean Shore permit by OPRD are incorporated by reference into the OCMP coastal zone conditions.

[Enforceable Policy: ORS chapter 390, Ocean Shores]

CZ Condition 7. Fish Screening

(1) Where applicable, all authorized projects shall be in conformance with ODFW standards for fish screening and bypass devices. Decisions to abrogate ODFW fish passage standards shall be accompanied by written approval from ODFW.

(2) This condition is effective only where ODFW regulations apply.

[Enforceable Policy: ORS chapter 498, Fish Screening]

Excerpts from the *Endangered Species Act Section (7)(2) Programmatic Concurrence Letter and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response for Commercial Shellfish Aquaculture and Native Shellfish Restoration Authorized by the U.S. Army Corps of Engineers* [NMFS No.: WCR-2014-825] dated September 23, 2014, for Oregon Coast coho salmon (*Oncorhynchus kisutch*), Southern Distinct Population Segment green sturgeon (*Acipenser medirostris*), and Pacific eulachon (*Thaleichthys pacificus*).

Project Design Criteria - General

9. Equipment storage and pump requirements.
    a. Practitioners will not use intertidal areas as storage areas for bags, marker stakes, rebar, nets, empty pallets, etc.
    b. Practitioners will move all aquaculture materials that are not immediately needed to an off-site storage area.
    c. Practitioners will remove all aquaculture debris from the leasehold at least once every three months. This design criterion is not meant to apply to the wet storage of harvested shellfish.
    d. Any natural debris (i.e. large wood) encountered during shellfish bed preparation shall not be removed from the aquatic environment but rather shall be relocated within the intertidal portion of the leasehold.
    e. All pump intakes (for washing down gear, vehicles, etc.) that pump water from bays, estuaries, streams, or other waterbody shall be screened in accordance with NMFS criteria[3] and ODFW criteria. Note: This does not apply to work boat motor intakes (jet pumps).
10. Toxic compounds, chemicals, and other contaminants.
    a. Practitioners will prevent direct or indirect contact of toxic compounds including creosote, wood preservatives, paints, etc., with the marine environment.
    b. Vehicles and power equipment shall be stored, fueled, and maintained in a vehicle staging area placed 150 feet or more from any stream, waterbody, or wetland.
        i. Where this is not possible,
            1. Practitioners must provide documentation to the Corps as to why not.
            2. The practitioner shall transfer fuels in Environmental Protection Agency-compliant portable fuel containers 5 gallons or smaller at a time during refilling. A polypropylene pad or other appropriate spill protection and a funnel or spill-proof spout will be used when

[3] NMFS criteria are designed for the safe, timely, and efficient upstream and downstream passage of anadromous salmonids at impediments created by artificial structures, natural barriers, or altered instream hydraulic conditions. Screen criteria in NMFS (201 1a) are provided for the smallest fry-sized juvenile salmonids. Available at: http://www. westcoast. fisheries.noaa.gov/publications/hydropower/fi sh_passage_desi gn_criteria.pdf

refueling to prevent possible contamination of surface waters.

3. The practitioner must submit and implement a fueling and staging plan (See 4(b) (iii) (2)), including a spill prevention plan, as described above in 4(b) (iii).
4. Vehicle/equipment operators shall have with them the spill prevention plan and maintain a spill prevention kit, which shall be readily available and used in case of accidental spills.
5. In the event a spill occurs, practitioners will contain, remove, and mitigate such spills immediately. All waste oil or other clean up materials contaminated with petroleum products will be properly disposed of off-site.

c. When washing land vehicles (e.g. all-terrain vehicles, trucks) used in aquaculture or native shellfish restoration practices, washing shall take place on uplands such that wash water is not allowed to enter any stream, waterbody, or wetland. Disposal of wash water from land vehicles shall occur upland in a location where all water is infiltrated into the ground *(i.e.,* no overland flow into a waterbody or wetland).

d. All vehicles operated within 150 feet of any stream, waterbody, or wetland will be inspected daily for fluid leaks before leaving the vehicle staging area. Any leaks detected will be repaired in the vehicle staging area before the vehicle resumes operation and documented in a record that is available for review on request by the Corps and NMFS.

e. All synthetic flotation material used for floats shall be permanently encapsulated to prevent breakup into small pieces and dispersal into water.

11. Native shellfish bed restoration.

a. Gravel or shell shall only be applied in minimal amounts (less than 1 inch depth of applied material) and may not be directly dumped from a hopper barge. If gravel is to be used in substrate enhancement, gravel shall be washed prior to placement.

b. If shell is to be used for substrate enhancement, it will be procured from clean sources that do not deplete the existing supply of shell bottom. Shells will be steam cleaned, left on dry land for a minimum of one month, or both, before placement in the aquatic environment. Shells from the local area will be used whenever possible.

c. No substrate enhancement shall occur over eelgrass beds or kelp.

d. Molluscan shellfish and any co-planted submerged aquatic vegetation used for restoration will be species native to the project area.

12. Eelgrass[8] avoidance.
    a. No motorized vehicles (i.e. ATVs, tractors) shall be used within eelgrass beds unless there is no other alternative for site access. If there is no other access to the site, an access plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass from vehicle operation (See 4(b)(ii)), and the plan shall be implemented.
    b. No grounding or anchoring of watercraft within eelgrass beds will occur unless there is no other alternative for site access. If there is no other access to the site, a plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass (See 4(b)(ii)) and the plan shall be implemented.
    c. No walking paths through eelgrass shall be established unless there is no other alternative for site access. If there is no other access to the site, a plan shall be submitted to the Corps/NMFS describing specific measures and/or best management practices that will be undertaken to minimize negative effects to eelgrass (See 4(b)(ii)), and the plan shall be implemented.
13. Newly positioned equipment and operations within existing farms.
    a. Newly positioned aquaculture racks, stakes, flip bags, or on-bottom aquaculture operations will not be placed within a buffer distance of 16.5 feet (five meters) from existing native eelgrass beds.[8] Only newly positioned shellfish long-lines spaced five feet apart can be located above existing native eelgrass beds or within a buffer distance of 16.5 feet (five meters) of existing native eelgrass beds. Alternate spacing e.g. two to four lines spaced at one foot to 2.5 feet and an open row of 10 feet, and then repeated, may also be considered above existing native eelgrass beds or within a buffer distance of 16.5 feet (five meters) of existing native eelgrass beds. [18]Documentation must be provided to the Corps describing the location of newly-positioned long-lines within existing farms including their proximity to eelgrass and spacing pattern(s).
    b. Newly positioned operations will not conduct mechanical harvesting or

---

[8] For the purpose of this programmatic consultation, an eelgrass bed and edge are defined per the Washington State Department of Natural Resources Technical Memorandum, Operational Definition for Determining Edge of Eelgrass Presence (Donoghue 2012). From review of the scientific literature considering minimum eelgrass presence criteria for delineating a vegetated edge that demonstrate ecological function, and examination of available field data (from Puget Sound sites), the following criteria will be used as an operational definition. Persistent bed interior: 3 shoots per 0.25 square meter. Persistent bed edge: begin at a point within the interior of the bed (where 3 shoots per 0.25 square meter within 1 meter of adjacent shoots) and move along any radial transect. Find the last shoot that is within 1 meter of an adjacent shoot along that transect. Continue 0.5 meter beyond this shoot, this is the bed edge. Both exterior and interior edges of bed can exist. Eelgrass is defined as native eelgrass (Zostera marina). These definitions are for use with this consultation only and do not set precedent for other consultations by NOAA's NMFS.

[18] Rumrill, S.S. and V.K. Poulton. 2004. Ecological role and potential impacts of molluscan shellfish culture in the estuarine environment of Humboldt Bay, CA. Annual Report to the Western Regional Aquaculture Center, November 2004. 79 pp.

harrowing in existing eelgrass beds.

c. Before conducting newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long-line, ground methods) occurring in potential spawning habitat for sand lance, or surf smelt, practitioners or the Corps must conduct a spawn survey. This must occur prior to undertaking bed preparation, net/tube removal, and harvest activities. If eggs are present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.

14. New/expanded farms.

a. If eelgrass is present within a new/expanded farm area, eelgrass bed[8] locations must be documented on a map or sketch which must be submitted by the Corps to NMFS at least 30 days prior to Corps' authorization. The following information must be included to scale: plat boundaries, eelgrass bed[8] locations and boundaries, shellfish seeding/planting locations. Surveys to determine presence and location of eelgrass beds should be done during times of peak above-ground biomass: June-August.

b. Action notifications will be submitted to NMFS for review at least 30 days prior to Corps authorization.

c. New commercial shellfish aquaculture farms will not occur within a buffer distance of 16.5 feet (five meters) from existing eelgrass beds.

15. Forage Fish.

a. Between January 15 and April 15, prior to conducting: (1) mechanical harvesting; (2) raking; (3) harrowing; or (4) tilling or other bed preparation activities, the work area shall be surveyed for the presence of herring spawn. Vegetation, substrate, and aquaculture materials must be inspected. If Pacific herring spawn[19] is present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and herring spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.

b. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long- line, ground methods) shall not be placed above the tidal elevation of +7 feet Mean Lower Low Water if the area is

[19] Herring are an important forage item for OC coho salmon (Healey 1982, Murphy et al. 1988, Higgs et al. 1995).

known surf smelt spawning habitat.

c. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long- line, ground methods) shall not be placed above the tidal elevation of +5 feet Mean Lower Low Water if the area is known Pacific sand lance spawning habitat.

d. Newly positioned shellfish culturing (e.g., culturing by rack and bag, raft, long- line, ground methods) occurring in potential spawning habitat for sand lance, or surf smelt must conduct a spawn survey prior to undertaking bed preparation, net/tube removal, and harvest activities. If eggs are present, these activities are prohibited in the areas where spawning has occurred until such time as the eggs have hatched and spawn is no longer present. A record shall be maintained of spawn surveys including the date and time of surveys; the area, materials, and equipment surveyed; results of the survey, etc. The Corps and NMFS shall be notified if spawn is detected during a survey. The record of spawn surveys shall be made available upon request to the Corps and NMFS.

16. The practitioners will adjust the dredge bag to 'skim' the surface during mechanical harvest activities to minimize suspended sediment contributions to the water column.

The NMFS relied on the foregoing description of the proposed action, including all PDCs, to complete this consultation.

US Army Corps of Engineers
Portland District

Permit Transfer

This form may be used to transfer a Department of the Army (DA) Nationwide Permit verification, Regional General Permit verification, or Letter of Permission permit.[1] When the structures or work authorized by a DA permit are still in existence at the time the property is sold or transferred, the permittee may transfer the DA permit to the new owner(s). The DA permit may also be transferred when the permittee does not own the underlying property (e.g., structures on state aquatic lands). For some DA permits the permit must be transferred when the property ownership changes.

When a DA permit is transferred the terms and conditions of the permit, including any special conditions, will continue to be binding on the transferee. To validate the transfer of the DA permit and to accept the liabilities associated with complying with the terms and conditions of the permit, the transferee must sign and date below. This permit transfer form can be submitted by email at cenwp.notify@usace.army.mil or by regular mail at the following address:

U.S. Army Corps of Engineers
CENWP-OD-G
P.O. Box 2946
Portland, OR 97208-2946

To transfer a Nationwide Permit verification a copy of the Nationwide Permit verification letter must be attached as required by Nationwide Permit General Condition 29.

Corps Number: _____

TRANSFEREE:

_____ _____
Signature Date

_____ _____
Name (Please print) Email

_____
Address

_____
City, State, and Zip Code

[1] This form may not be used to validate the transfer of a standard individual Department of the Army permit. The individual permit form includes a section for the transferee's signature.

US Army Corps of Engineers
Portland District

Compliance Certification

1. **Permit Number:** NWP-2021-202
2. **Permittee Name:** Alava Ocean Company
3. **County Location:** Tillamook County

Upon completing the activity authorized by the permit, please complete the sections below, sign and date this certification, and return it to the U.S. Army Corps of Engineers, Portland District, Regulatory Branch. The certification can be submitted by email at cenwp.notify@usace.army.mil or by regular mail at the following address:

U.S. Army Corps of Engineers
CENWP-OD-GL
P.O. Box 2946
Portland, OR 97208-2946

4. **Corps-required Compensatory Mitigation (see permit special conditions):**
   a. Mitigation Bank / In-lieu Fee Credit Transaction Documents:
   ☑ Not Applicable ☐ Submitted ☐ Enclosed

   b. Permittee-responsible mitigation (e.g., construction and plantings) has been constructed (not including future monitoring). As-built report:
   ☑ Not Applicable ☐ Submitted ☐ Enclosed

5. **Endangered Species Act – Standard Local Operating Procedures (SLOPES)** (see permit special conditions):
   a. SLOPES Action Completion Report:
   ☐ Not Applicable ☐ Submitted ☐ Enclosed

   b. SLOPES Fish Salvage Report:
   ☑ Not Applicable ☐ Submitted ☐ Enclosed

   c. SLOPES Site Restoration / Compensatory Mitigation Report:
   ☑ Not Applicable ☐ Submitted ☐ Enclosed

I hereby certify the work authorized by the above-referenced permit has been completed in accordance with all of the permit terms and conditions.

Signature of Permittee **Date**