



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

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Catherine Gockel
Office of Water and Watersheds
6th Avenue, Suite 900
Seattle, WA 98101-3140
Email: gockel.catherine@epa.gov

Project: National Pollutant Discharge Elimination System (NPDES) General Permit, Offshore Seafood Processors #WAG520000
Agency: US Environmental Protection Agency (EPA)
Location: Off the coasts of Oregon and Washington
Decision: **Concurrence with Conditions**

Dear Ms. Gockel:

The Oregon Coastal Management Program within the Department of Land Conservation and Development (OCMP) has reviewed the draft National Pollutant Discharge Elimination System (NPDES) General Permit for Offshore Seafood Processors in Federal Waters off the coasts of Washington and Oregon (General Permit # WAG520000) for consistency with the state's Coastal Management Program (Program). The EPA supplied a consistency determination with enforceable policy analysis and discussion of known or potential coastal effects on June 19, 2017. The OCMP has reviewed the proposed general permit, supporting documentation, and consistency determination pursuant to Section 307(c)(1) of the Coastal Zone Management Act (CZMA) and attendant regulations of 15 CFR Part 930. Comments received during the 30-day public comment period that ended July 30, 2017, were also reviewed and considered.

After reviewing potential coastal effects and applying the enforceable policies of the Program to the action, the OCMP has concurred with the consistency determination for this federal action provided the conditions listed within this decision are applied.

State/Federal Coordination

The OCMP appreciates the coordination that the EPA has undertaken in order to demonstrate consistency with the Program's enforceable policies and reduce coastal effects. Formal and informal coordination has taken place and has been documented through letter submittals, draft consistency determination review, email correspondence, and several phone calls to better understand requirements of federal consistency review and what it means to be 'consistent' under the CZMA. The EPA has also taken initiative to reach out to Oregon's technical agencies, including the Oregon Department of Fish and Wildlife (ODFW) and the Oregon Department of Environmental Quality (ODEQ), as well as researchers with expertise in ocean acidification and hypoxia (OAH), to better understand the state's concerns. The OCMP believes that because of this coordination and hard work, the consistency determination was thorough and more accurate overall.

Draft Permit and Conditions Proposed by the EPA

The proposed NPDES General Permit authorizes offshore seafood processors to discharge seafood processing waste into federal waters within the Exclusive Economic Zone (generally nautical miles 3-200) to be in compliance with the Clean Water Act. Currently, there are 16 known seafood processing facilities (comprised primarily of the Pacific whiting fleet) that have applied for this NPDES permit. Processor vessels discharging effluent into waters of the U.S. consist of motherships (large factory ships that receive fish from other vessels) and catcher/processors with more limited processing abilities. The following types of discharge would be authorized:

1. Seafood process wastewater and wastes, including the waste fluids, heads, organs, flesh, fins, bones, skin, chitinous shells, and stickwater produced by the conversion of fish parts from a raw form into fishmeal.
2. Wash-down water, including process disinfectants added to wash-down water used to control microbial contamination of seafood processing equipment and containers, and to sanitize seafood processing areas.
3. Sanitary and domestic wastes and gray wastewater associated with the kitchen, shower, sink, and toilet effluents.
4. Other wastewaters generated in the seafood processing operation, including, seafood catch transfer water, live tank water, refrigerated seawater, cooking water, boiler water, gray water, cooling water, refrigeration condensate, freshwater pressure relief water, clean-up water, and scrubber water.

Although all of these waste streams are regulated for shore-based processors, they have been unregulated for offshore processors to date. In addition, current volumes for the permit are unknown. This NPDES permit authorizes *estimated* volumes:

“Discharge volumes from individual processing vessels vary significantly. Because this is a new permit, the current extent of seafood processing, in the proposed area, is not completely known (Ocean Discharge Criteria Evaluation (ODCE, pg. 5).”

The EPA estimates that the General Permit will cover 120-188 million pounds of discharge waste. Pacific whiting industry representatives report current estimates of daily processing ranging from 700,000 to 1,600,000 lb/day (350 to 800 mt/day). Between 47% and 73.4% of the mass processed is discharged back into the ocean as waste (ODCE, pg 11-12).

The EPA has placed several conditions on the draft permit that apply to both types of processing vessels. Per the EPA’s draft proposed permit, Consistency Determination, and other materials, the proposed permit conditions include the following:

- A requirement to grind solids to 0.5 inch or smaller prior to discharge.
- Monitoring and reporting as well as best management/waste minimization requirements,
- Provisions to reduce impacts to seabirds
- Movement while discharging, unless doing so would impact the safety of the vessel.
- Prohibition of discharge of seafood processing waste in waters shallower than 100 meters in depth during April 14 – October 15, and year-round over the Heceta/Stonewall Banks complex.

No conditions aim to reduce current volume of waste discharged. No conditions aim to increase treatment of the four waste streams. Industry activities adhere to current National Marine Fisheries Service (NMFS)-imposed harvest requirements and by-catch rules. This General Permit will bring the permittees into compliance with the Clean Water Act for the first time since its enactment in 1972.

DLCD Federal Consistency Review and the Effects Test

The CZMA requires federal agency activities affecting any coastal use or resource within or outside of a state's coastal zone to be consistent to the maximum extent practicable with the enforceable policies of the state's federally approved coastal management program. 16 USC § 1456(c)(1)(A).

Seasonally occurring high-volume inputs of nutrient-rich, oxygen-demanding waste discharged into federal waters are likely to have reasonably foreseeable direct and indirect effects on coastal uses and resources of the state in federal waters and in state waters. Continual seasonal discharge in federal waters may also initiate an event or series of events where coastal effects are reasonably foreseeable (§ 930.11(g)).

Reasonably foreseeable and/or recorded **direct** effects (result from activity and occur at same time/place) include:

- Impacts from waste to commercial gear and resources harvested and associated economic impacts; reasonably foreseeable and recorded:
 - Anecdotal comments from some fishermen noted that processing discharges fouled fishing gear and grounds.
- Impacts to marine organisms from discharge settling on rocky reef habitat (*i.e.* smothering and displacement from micro-habitats like burrows); reasonably foreseeable.
- Impacts to fish eggs from discharge settling and smothering; reasonably foreseeable (Breitburg, et al 2002).

Reasonably foreseeable and/or recorded **indirect** effects (cumulative, secondary, or result from activity and occur further away in time/distance) include:

- Increased anoxia/hypoxia occurrences due to increased nutrient inputs combined with ocean conditions; reasonably foreseeable and recorded:
 - Recorded: Inner shelf (<70m) hypoxia in 2002 (Grantham et al 2004).
 - Recorded: Persistent year-round hypoxia at Heceta Banks.
 - Recorded: Shelf break to inner shelf (<50m) central coast anoxia/hypoxia event covering a minimum 3000 km occupying up to 80 percent of the water column from June-October 2006 (Chan et al 2008).
 - Recorded: Areas of the inner shelf experience near-annual recurrence of seasonal hypoxia since 2002.
- Prolonged anoxia/hypoxia occurrences from settled nutrient input on the sea floor until circulation patterns are strong enough to flush away (Siedlecki et al 2015); reasonably foreseeable.
- Impacts to marine organisms (*i.e.* physiologic stress, mortality, acute decrease (compression) in habitat suitability, spatial displacement) from anoxia/hypoxia created or exacerbated by nutrient input; reasonably foreseeable and recorded:
 - Mass die-offs of fish and invertebrates including Dungeness crab. Recorded during 2002 event (mortality of crab >75% in commercial crab pots compared to normal 0%) (Grantham et al 2004).
 - Absence of fish from rocky reefs due to escaping anoxic/hypoxic waters. Recorded in August 2006 (Chan et al 2008)
 - Mortality of macroscopic benthic invertebrates (*i.e.* Dungeness crab) due to inability to escape low/no oxygen waters. Recorded in 2006 (Chan et al 2008)
- Increased ocean acidification and hypoxia are closely coupled and have additive and synergistic effects. Increased CO₂ levels lower pH (Chan et al 2016); reasonably foreseeable and recorded:
 - Mortality of Pacific oyster larvae. Recorded in 2007.

- Economic distress and fisheries economy collapse (regionally and globally) from anoxia/hypoxia impacts (listed above) created or exacerbated by additional nutrient input; reasonably foreseeable and recorded:
 - Recorded: Reduced catch rates significantly related to bottom oxygen concentration with hypoxic region in 2007 (Keller et al 2010).

When many of the secondary and indirect effects from seafood waste discharge occur, they cover very large areas of the ocean both inside and outside of the coastal zone where uses and resources are affected.

Enforceable Policies Applied to Action

Enforceable policies contain standards of sufficient specificity to guide public and private uses. The Program’s enforceable policies have been approved by the Office for Coastal Management, National Ocean and Atmospheric Administration (OCM-NOAA). 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 OCMP. As such, the enforceable policies of the OCMP include: 1) the statewide planning goals; 2) the applicable acknowledged city or county comprehensive plan and land use regulations; and 3) selected state agency authorities (e.g. those governing removal-fill, proprietary leasing, water quality, and fish & wildlife protections).

The OCMP is afforded 60-days from the date of receipt of the Consistency Determination from the federal agency to make a decision. One 15-day extension is allowed or a length of extension agreeable to the federal agency and the OCMP. The OCMP requested one extension to conclude on September 12th, 2017.

The following enforceable policies apply to this action:

- No local authorities are relevant to this General Permit.
- State agencies with authorities relevant to this General Permit include the ODEQ and the ODFW. They include:

ORS Chapter 196 (Ocean Resources)

ORS 196.420 Policy.

It is the policy of the State of Oregon to:

- (1) Conserve the long-term values, benefits and natural resources of the ocean both within the state and beyond by giving clear priority to the proper management and protection of renewable resources over nonrenewable resources;
- (2) Encourage ocean resources development which is environmentally sound and economically beneficial to adjacent local governments and to the state;
- (3) Assert the interests of this state as a partner with federal agencies in the sound management of the ocean resources within the United States Exclusive Economic Zone and on the continental shelf;
- (4) Encourage research, study and understanding of ocean processes, marine life and other ocean resources;
- (5) Encourage research and development of new, innovative marine technologies to study and utilize ocean resources; and
- (6) Ensure that the Ocean Policy Advisory Council will work closely with coastal local governments to incorporate in its activities coastal local government and resident concerns, coastal economic sustainability and expertise of coastal residents.

ORS Chapter 468B (Water Quality)

(To be considered in the context of pollution discharge or water quality impacts from discharge entering State waters at the Federal/State boundary)

ORS 468B.025 Prohibited activities.

(1) Except as provided in ORS 468B.050 or 468B.053, no person shall:

- (a) Cause pollution of any waters of the state or place or cause to be placed any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.

ORS 468B.048 Rules for standards of quality and purity; factors to be considered; meeting standards.

(1) The Environmental Quality Commission by rule may establish standards of quality and purity for the waters of the state in accordance with the public policy set forth in ORS 468B.015. In establishing such standards, the commission shall consider the following factors:

- (a) The extent, if any, to which floating solids may be permitted in the water;
- (b) The extent, if any, to which suspended solids, settleable solids, colloids or a combination of solids with other substances suspended in water may be permitted;
- (c) The extent, if any, to which organisms of the coliform group, and other bacteriological organisms or virus may be permitted in the waters;
- (d) The extent of the oxygen demand which may be permitted in the receiving waters;
- (e) The minimum dissolved oxygen content of the waters that shall be maintained;
- (f) The limits of other physical, chemical, biological or radiological properties that may be necessary for preserving the quality and purity of the waters of the state;
- (g) The extent to which any substance must be excluded from the waters for the protection and preservation of public health; and
- (h) The value of stability and the public's right to rely upon standards as adopted for a reasonable period of time to permit institutions, municipalities, commerce, industries and others to plan, schedule, finance and operate improvements in an orderly and practical manner.

OAR 340-041-0016 (Implementing OAR of ORS 468B.048 (1)(e))

Dissolved oxygen (DO): No wastes may be discharged and no activities must be conducted that either alone or in combination with other wastes or activities will cause violation of the following standards:

The changes adopted by the Commission on January 11, 1996, become effective July 1, 1996.

Until that time, the requirements of this rule that were in effect on January 10, 1996, apply:

(6) For ocean waters, no measurable reduction in dissolved oxygen concentration may be allowed.

OAR 340-041-0021 (Implementing OAR of ORS 468B.048 (1)(f))

pH: (1) Unless otherwise specified in OAR 340-041-0101 through 340-041-0350, pH values (Hydrogen ion concentrations) may not fall outside the following ranges:

- (a) Marine waters: 7.0-8.5

ORS Chapter 496 (Wildlife Administration)

ORS 496.012 Wildlife policy.

It is the policy of the State of Oregon that wildlife shall be managed to prevent serious depletion of any indigenous species and to provide the optimum recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the State Fish and Wildlife Commission shall represent the public interest of the State of Oregon and implement the following coequal goals of wildlife management:

- (1) To maintain all species of wildlife at optimum levels.
- (2) To develop and manage the lands and waters of this state in a manner that will enhance the production and public enjoyment of wildlife.
- (3) To permit an orderly and equitable utilization of available wildlife.
- (4) To develop and maintain public access to the lands and waters of the state and the wildlife resources thereon.
- (5) To regulate wildlife populations and the public enjoyment of wildlife in a manner that is compatible with primary uses of the lands and waters of the state.
- (6) To provide optimum recreational benefits.
- (7) To make decisions that affect wildlife resources of the state for the benefit of the wildlife resources and to make decisions that allow for the best social, economic and recreational utilization of wildlife resources by all user groups.

ORS Chapter 506 (Commercial Fisheries and Fisheries)

ORS 506.109 Food fish management policy.

It is the policy of the State of Oregon that food fish shall be managed to provide the optimum economic, commercial, recreational and aesthetic benefits for present and future generations of the citizens of this state. In furtherance of this policy, the goals of food fish management are:

- (1) To maintain all species of food fish at optimum levels in all suitable waters of the state and prevent the extinction of any indigenous species.
- (2) To develop and manage the lands and waters of this state in a manner that will optimize the production, utilization and public enjoyment of food fish.
- (3) To permit an optimum and equitable utilization of available food fish.
- (4) To develop and maintain access to the lands and waters of the state and the food fish resources thereon.
- (5) To regulate food fish populations and the utilization and public enjoyment of food fish in a manner that is compatible with other uses of the lands and waters of the state and provides optimum commercial and public recreational benefits.
- (6) To preserve the economic contribution of the sports and commercial fishing industries in a manner consistent with sound food fish management practices.
- (7) To develop and implement a program for optimizing the return of Oregon food fish for Oregon's recreational and commercial fisheries.

ORS Chapter 509 (Additional Fishery Requirements)

ORS 509.505 Placing in water matter injurious to shellfish.

It is unlawful for any person, municipal corporation, political subdivision or governmental agency to deposit or allow to escape into, or cause or permit to be deposited or escape into any public waters of this state, any substance of any kind which will or shall in any manner injuriously affect the life, growth or flavor of shellfish in or under such waters.

- Statewide Planning Goal 19: Ocean Resources and its implementing document the Territorial Sea Plan are relevant to this General Permit:

Statewide Planning Goal 19: Ocean Resources

Implementation Requirements 1: Uses of Ocean Resources

State and federal agencies shall carry out actions that are reasonably likely to affect ocean resources and uses of the Oregon territorial sea in such a manner as to:

- a. maintain and, where appropriate, restore the long-term benefits derive from renewable marine resources;
- b. protect:
 1. renewable marine resources—*i.e.*, living marine organisms—from adverse effects of development of nonrenewable resources, uses of the ocean floor, or other actions;
 2. the biological diversity of marine life and the functional integrity of the marine ecosystem;
 3. important marine habitat, including estuarine habitat, which are areas and associated biologic communities that are:
 - a) important to the biological viability of commercially or recreationally caught species or that support important food or prey species for commercially or recreationally caught species; or
 - b) needed to assure the survival of threatened or endangered species; or
 - c) ecologically significant to maintaining ecosystem structure, biological productivity, and biological diversity; or
 - d) essential to the life-history or behaviors of marine organisms; or
 - e) especially vulnerable because of size, composition, or location in relation to chemical or other pollutants, noise, physical disturbance, alteration, or harvest; or
 - f) unique or of limited range within the state; and
 4. areas important to fisheries, which are:
 - a) areas of high catch (*e.g.*, high total pounds landed and high value of landed catch); or
 - b) areas where highly valued fish are caught even if in low abundance or by few fishers; or
 - c) areas that are important on a seasonal basis; or
 - d) areas important to commercial or recreational fishing activities, including those of individual ports or particular fleets; or
 - e) habitat areas that support food or prey species important to commercially and recreationally caught fish and shellfish species.

Territorial Sea Plan Part 2

Section A: Resources Inventory and Effects Evaluation

Demonstration of Consistency with Enforceable Policies and Mitigation of Coastal Effects

The EPA recognized potential coastal effects from the listed actions and adjusted the original draft General Permit (August 2015) to reduce coastal effects and increase consistency with applicable enforceable policies. The OCMP used the EPA’s Consistency Determination and supporting documents to analyze the action for consistency with the Program’s enforceable policies.

The OCMP did not use the EPA's ODCE that was developed for the 2015 draft permit and not updated for the re-proposed permit in 2016. The ODCE inappropriately relies on the evaluation completed for Alaska and asserts that ocean dynamics and conditions off Oregon and Washington are similar to those off Alaska. In fact, they are quite different. The coastal system off Oregon and Washington is characterized by strong upwelling. Alaska's coastal system is dominated by downwelling, and thus, has a markedly different pattern of nutrient and oxygen transport. Alaska offshore waters are characterized as hydro-dynamically energetic waters. Perhaps some areas of Oregon's waters could be characterized as such, however other areas experience sluggish currents. Typically, "energetic waters" is a term referencing ocean conditions off Alaska, not the West coast.

The information throughout the ODCE clearly demonstrates that regional data was not used.

"This document relies on information provided in the ODCE drafted in 2008 for offshore seafood processors discharging off the coast of Alaska (ADEC, 2008), the existing Alaska NPDES general permit, the NPDES fact sheet [2015] for the offshore seafood processor discharging off the coasts of Washington and Oregon, and a literature review. The Draft Permit is fairly similar to the Alaska offshore seafood processors general permit. For more detailed information concerning certain topics, where appropriate, this document refers the reader to some of these publications." (ODCE, pg 2)

The OCMP does not agree that the draft permit is 'fairly similar.' This draft permit changed greatly from the original draft published in 2015 because of the large OAH problem that occurs off the coasts of Washington and Oregon that does not occur off the coast of Alaska. The disconnect becomes especially transparent in Section 5 during the discussion of nutrient inputs, biochemical oxygen demand (BOD), and dissolved oxygen.

The OCMP understands that the Clean Water Act requires that NPDES General Permits for ocean discharges be in compliance with the EPA's Ocean Discharge Criteria. If the ODCE finds that the discharge would cause unreasonable degradation of the marine environment, the permit will not be issued. As described above, the ODCE does not reflect Oregon ocean conditions, however the EPA did present adequate and thorough research on regional ocean issues in the Consistency Determination and the Revised Fact Sheet (2017) including acknowledgement that "there is insufficient information to determine, prior to permit issuance, that there will be 'no unreasonable degradation of the marine environment' pursuant to 40 CFR § 125.22 (Ocean Discharge Guidelines)." As such, the OCMP focused on the remaining documents in order to complete our review. Table 1 summarizes the EPA's Consistency Determination.

Table 1. EPA's Demonstration of Consistency with Enforceable Policies

Federal Action: NPDES Permit to Discharge Seafood Processing Waste in the EEZ off of Oregon Coast			
OCMP Enforceable Policy	Action to Reduce Coastal Effects and/or meet Enforceable Policy if Necessary	Conclusion by EPA	Evaluation by OCMP*
ORS 196.420 Ocean Resources Policy	Asserts does not apply.	Consistent	Disagree
ORS 468B.025 Prohibited Activities	Not directly addressed within Determination	Not stated	Disagree
ORS 468B.048 Rules for standards of quality	Actions taken to be consistent with OARs.	Consistent	Disagree
<i>OAR 340-041-0016 (Dissolved Oxygen)</i>	1) Heceta/Stonewall Banks complex year-round discharge prohibition and seasonal (April 14-Oct 15) discharge prohibition in waters shallower than 100m depth	Consistent	Disagree
<i>OAR 340-041-0021 (pH)</i>	None Taken. Note: Drivers of hypoxia and ocean acidification are the same, thus actions taken to protect dissolved oxygen are beneficial for pH impacts.	Consistent	Disagree
ORS 496.012 Wildlife policy	Asserts does not apply.	Consistent	Disagree
ORS 506.109 Food fish mgmt policy	Asserts does not apply.	Consistent	Disagree
ORS 509.505 Placing in water matter injurious to shellfish	Asserts does not apply.	Consistent	Disagree
Statewide Planning Goal 19: Subsection 1.a	Not directly addressed within Determination	Not stated	Disagree
Statewide Planning Goal 19: Subsection 1.b #1	1) Heceta/Stonewall Banks complex year-round discharge prohibition and seasonal (April 14-Oct 15) discharge prohibition in waters shallower than 100m depth 2) Vessel movement requirement while discharging	Consistent	Disagree
Statewide Planning Goal 19: Subsection 1.b #2	1) Heceta/Stonewall Banks complex year-round discharge prohibition and seasonal (April 14-Oct 15) discharge prohibition in waters shallower than 100m depth	Consistent	Disagree
Statewide Planning Goal 19: Subsection 1.b #3	1) Heceta/Stonewall Banks complex year-round discharge prohibition and seasonal (April 14-Oct 15) discharge prohibition in waters shallower than 100m depth	Consistent	Disagree
Statewide Planning Goal 19: Subsection 1.b #4	1) Heceta/Stonewall Banks complex year-round discharge prohibition and seasonal (April 14-Oct 15) discharge prohibition in waters shallower than 100m depth	Consistent	Disagree
Territorial Sea Plan: Part 2, Section A, Inventory	Completed inventory.	Consistent	Agree
*Summary only. For full evaluation, see the body of the letter.			

Public Notice and Summary of Comments

The OCMP received comments in response to the public notice issued June 30, 2017.

One commenter stated that this action is not subject to federal consistency review.

Response: Federal agency activities, including general permits, are subject to federal consistency review if the activity will have reasonably foreseeable effects on the uses or resources of a state's coastal zone, regardless of the location of the activity. 16 USC § 1456(c)(1)(A) and 15 CFR § 930.33.

One commenter stated that the discharge is not greater than the amount of natural marine organism death that occurs in the oceans each year.

Response: Federal consistency review does not regulate actions taken by the natural world, only human actions implemented by federal agencies. The OCMP assumes, and in many cases the field of ecology has demonstrated, that natural nutrient processes are complex and have evolved inherent checks and balances to maintain ecosystem function. Human actions exert outside forces upon ecosystems often resulting in unintended negative consequences, which is what is evaluated in the coastal effects section.

One commenter stated that the OCMP has concurred with groundfish harvest requirements over the years and so must also concur with processing waste discharge permits for said harvest.

Response: The actions are separate, even if related to an overall activity, and regulated by different federal agencies and federal laws. Harvest requirements are consistent with the applicable enforceable policies of the Program. Different enforceable policies apply to the discharge of seafood processing waste than to harvest of fish and thus a different analysis of enforceable policies and coastal effects is necessary. The applicable enforceable policies for this action have been listed in this letter.

One commenter stated that the OCMP should object to the action because vessel discharges will have a readily predictable impact on state waters in violation of the Oregon state water quality criteria for dissolved oxygen (DO) relative to enforceable policy ORS 468B.048. DO impacts would occur from the very high biochemical oxygen demand (BOD) of the discharge, onshore currents (unlike Alaska's currents), and not enough treatment of the wastewater from the process lines and treatment of high concentration stickwater from the fishmeal process. In addition, they stated that no solids should be ground and discharged.

Response: The OCMP agrees that ORS 468B.048 and implementing administrative rules are enforceable policies that apply to this consistency review. The OCMP agrees that the estimated volume of discharge may have effects on coastal resources and uses. The OCMP agrees the ODCE relied on information appropriate for offshore Alaska and not Oregon. The prohibition of solid waste discharge altogether is larger than the scope of this federal consistency review. The OCMP must review the action proposed. The OCMP considers the rest of the comments within this decision letter.

One commenter stated that oxygen-demanding organic matter is a threat to the stability of Oregon's ocean chemistry, namely hypoxia. They stated that the proposed draft permit is inconsistent with ORS 196.420, ORS 496.012, ORS 506.109, 506.142, ORS 506.750 and ORS 506.755, as well as Statewide Planning Goal 19: Ocean Resources.

Response: The OCMP agrees that hypoxia is a reasonably foreseeable effect from increased organic matter inputs in federal waters. The OCMP agrees that Goal 19 and all statutes listed, except for ORS 506.142, 506.750 and 506.755, which are not current enforceable policies of the Program, apply to this consistency review.

One commenter stated that the OCMP should consider conditioning the concurrence in several ways including a depth-based year-round discharge exclusion area and a year-round discharge exclusion area around sensitive rocky reef habitats to be consistent with enforceable policies of the program.

Response: The OCMP considers these recommendations in this decision letter.

Two commenters stated that the OCMP should consider additional monitoring and reporting requirements

Response: The OCMP agrees that the information needed to authorize the activities under the NPDES general permit, more than estimated information from the offshore vessels looking to operate under this permit, is mandatory. The OCMP considers monitoring and reporting requirement recommendations within this decision letter.

Consistency Decision: Concurrence with Conditions

The OCMP concurs with the EPA's determination that the actions proposed under the NPDES General Permit are, to the maximum extent practicable, consistent with the enforceable policies of the Program if the following conditions are applied to the General Permit:

1. *A year-round prohibition of waste discharge in waters shallower than the 200 meter depth contour (Figure 1) and including Daisy and Coquille Banks and maintaining the year-round exclusion zone over Heceta-Stonewall Banks Complex (Figure 4).
[To be consistent with specific enforceable policies: ORS 196.420, ORS 468B.025, ORS 468B.048 as implemented by OAR 340-041-0016 and 340-041-0021, ORS 496.012, ORS 506.109, ORS 509.505, SWPG 19 Implementation Requirements 1: Uses of Ocean Resources]*
2. *Additional Monitoring/Reporting Requirements
[To be consistent with specific enforceable policies: ORS 196.420, ORS 496.012, ORS 506.109, SWPG 19 Subsection 1: Uses of Ocean Resources]*
 - a. *Monitoring data and compliance reporting required by the NPDES permit are submitted to the State as well as the EPA.*
 - b. *Total amount (pounds or metric tons) of each raw product per month*
 - c. *Total amount of each type of finished product and byproduct (e.g., H&G, fillet, surimi, fish oil, fishmeal) per month*
 - d. *Known volume or weight or estimate of each type of waste product (fish solids, ground fish, stickwater, waste water, offal, etc.) separately, per month.*
 - e. *Representative samples, analyzed once per season, of different types of liquid wastes (e.g. wastewater, stickwater, offal) to be able to extrapolate effects from BOD5, TSS, O&G and pH.*
 - f. *To the extent allowed by federal law, Vessel Monitoring System (VMS) vessel position at the required VMS interval [3 pings per hour]
(http://www.nmfs.noaa.gov/ole/about/our_programs/vessel_monitoring.html)*
 - g. *To the extent allowed by federal law, NMFS At-Sea Hake Observer Program (A-SHOP) data for each haul start and stop location for catcher-processors and catcher boats (as proxy for motherships that track very closely to catcher boats.)*
3. *Effective January 1, 2018, any permittee-led study of the relationship between seafood waste discharge and OAH shall be supplied by the permittee to the Oregon Coordinating Council on Ocean Acidification and Hypoxia to contribute to research data and scientific literature on OAH.*

These conditions do not apply to harvest. Harvest will continue to occur where allowed and in compliance with groundfish harvest requirements set forth by the NMFS; a federal action that has been continually granted concurrence by the OCMP.

New information, both by the scientific community and through monitoring and reporting by the holders of the General Permit, will be incorporated and considered at the next federal consistency review during the 5-year NPDES permit renewal process. If the permittees pursue Monitoring Requirement #7 (Optional Study) to demonstrate that discharge will not contribute to hypoxic conditions in the receiving water and sufficiently demonstrates that the action does not contribute to hypoxic conditions, such that the permit is amended by the EPA Director to allow discharge in prohibited areas identified in this decision letter, the EPA should be aware that an amendment that would result in a substantially different effect may be reviewable. 15 CFR § 930.31(e).

Explanation of Necessity for Decision Conditions (15 CFR § 930.4)

The conditions within this concurrence decision ensure consistency with specific enforceable policies of the management program.

The specific enforceable policies are listed following each condition above. Full language of each enforceable policy is presented previously in this letter. Below, the OCMP provides an explanation of necessity for the conditions. The OCMP acknowledges that the data to determine coastal effects from processor vessel waste discharge is lacking for two reasons. First, there is very little industry data shared with the regulatory agencies and the public. Second, no studies have occurred to date specifically measuring direct and indirect impacts from processor waste discharge on ocean chemistry and marine organisms off the coast of Oregon. The OCMP understands that the industry, the EPA, and the State are working with imperfect knowledge. Neither the EPA nor the permittees provide evidence that seafood discharges at the volumes estimated do **not** impact coastal resources. Thus, the OCMP is implementing a precautionary approach to this decision as required by Statewide Planning Goal 19: Ocean Resources, Implementation Requirements 2, Part G.

The OCMP asserts that if the general permit is modified pursuant to the conditions listed above, the OCMP believes at this time, with the information at hand, that the NPDES general permit will be consistent to the maximum extent practicable with the Program's enforceable policies. However, OCMP maintains that impacts to the State's coastal resources may still occur. An explanation of necessity, with technical basis and reasoning for each condition, is presented below.

Year-round prohibition of waste discharge in waters shallower than 200 meter depth contour and including Daisy and Coquille Banks.

OAH has impacted Oregon's coastal resources and Oregon is considered an OAH global 'hot spot.' The available research and data make an unequivocal link between nutrient levels and OAH occurrences (Peterson et al 2013, Chan et al 2008, Connelly et al 2010). The EPA's 2017 Fact Sheet synthesizes the current scientific knowledge on the subject well. Hypoxia occurs on the continental shelf when offshore waters naturally low in dissolved oxygen are transported onto the shelf during upwelling from depths between 100-150 meters (Peterson et al 2013); a natural occurrence that is a result of the California Current running along the west coast and that generally occurs from spring through fall. Dissolved oxygen is further reduced from the decomposition of organic matter. Studies have found local respiration of organic matter to be an important driver of local oxygen dynamics. (Hales et al., 2006; Connolly et al., 2010; Adams et al., 2013; Crawford and Pena, 2013) Respiration from decomposing organic matter accounts for 50-60 percent of oxygen use on the continental shelf in Washington and Oregon (Seidlecki et al 2015); increasing that percent is problematic. Additional nutrient inputs can 'tip the scale' and create a hypoxic event or exacerbate already established hypoxic conditions as respiration from decomposing matter continues (Grantham et al 2004). Long-term studies of dissolved oxygen variability over 50 years reveal a significant decline in dissolved oxygen and shoaling of the hypoxic boundary in the eastern subarctic pacific (Whitney et al 2007) and the shelf off Oregon (Pierce et al 2012). Thus, nearshore hypoxia is a growing issue and expected to continue as climate change continues (Chan et al 2016). Ocean acidification is linked with hypoxic events because as CO₂ rises during hypoxic events, pH lowers (Chan et al 2016).

Because this shift in ocean chemistry can occur naturally and can be made worse by additional inputs, the West Coast Ocean Acidification and Hypoxia Science Panel has recommended better controls on nutrients and organic matter pollution (Chan et al 2016). In the case of this federal action, the waste

streams in question have a high biochemical oxygen demand. All waste streams are many times higher in biochemical oxygen demand than raw sewage. Stickwater in particular is hundreds of times higher. Shallow shelf and sluggish current areas are particularly susceptible to the settling of organic particles (such as ground solid fish waste) onto habitats and sessile organisms, and increased respiration from decomposition and increasing oxygen demand will exacerbate already low-oxygen environments.

The estimated volume of discharge annually from the vessels listed as permittees is approximated to be 22,526,596 pounds (Table b in 2017 Fact Sheet). That amount of waste is equal to the raw sewage generated annually by a city of 250,000 to 300,000 people such as Eugene or Salem or one third the load of raw sewage generated by the City of Portland as received at their largest sewage treatment plant (*personal communication*, ODEQ). Raw sewage is held to strict federal treatment standards before it is discharged as effluent which reduces volume of the waste by approximately 85 percent. This discharge will not be treated, nor volume reduced, underscoring the need for a deliberate approach for location of discharge of this kind of waste in federal waters.

The continental shelf contains the highest biodiversity, abundance, and density of fish important to the state of Oregon (*e.g.* Dungeness crab, shrimp, clams, salmon, halibut, albacore, lingcod, rockfishes, flatfishes, etc.). Rocky reefs provide critical habitat structure for marine organisms and other important functions. They occupy ten percent of the shelf area, with most of this resource in water deeper than 100 meters where discharge is proposed to be allowed (Figure 3). Upwelling occurs from approximately 100-150 meters in depth suggesting that allowing discharge at that depth is unwise since the potential for upwelling currents to bring the waste further onto the shelf is high.

Whiting densities are highest over bottom depths of 200-300 meters (Dorn and Methot, 1991, 1992). Fishing density maps supplied by the ODFW confirm that the offshore sector of the whiting fishery operates primarily beyond the continental shelf break, which is located at approximately 200 meter depth (Figure 2). The EPA reports in the Consistency determination that, “Discharges covered under the Draft Permit are for offshore vessels that are constantly moving and discharging in depths usually greater than 210 ft.” (pg. 7)

ODFW supplied logbook and fishing data from the industry for 2008 to 2016. The proposed 200 meter depth year round exclusion area would affect approximately 1 percent of total whiting at-sea sector hauls (Table 2).

Table 2. Whiting at-sea sector hauls within all proposed Exclusion Areas (EA) for the period 2008-2016.

From: http://www.oregon.gov/LCD/OCMP/docs/FINAL_AUGUST_3_2017_ODEQ_ODFW_OCMP_EPA_NPDESdraftpermitWAG520000.pdf. Amended via email to EPA August 8, 2017.

Area Name	Haul Count	% Hauls	Area size (km ²)
200 m EA	259	1.11	13,722
Nehalem Reef	0	0	217.7
Garibaldi Reef	0	0	329
Daisy Bank	68	0.29	167
Heceta-Stonewall	371	1.60	4855
Arago Reef	1	0	336
Coquille Bank	167	0.72	197
Rogue Reef	9	0	92

The OCMP agrees with the EPA’s reasons for proposing discharge exclusion areas to address potential coastal impacts and protect water quality and marine resources. The OCMP also agrees with the EPA’s

assertion that there is not enough information to confidently complete the ODCE that grants the EPA the ability to issue an NPDES general permit for this discharge (Fact Sheet 2017 pg. 18). Based on available science and effects from the activity on coastal resources and uses, the OCMP concludes that a seasonal 100 meter-discharge depth restriction does not reduce coastal effects to the maximum extent practicable consistent with enforceable policies of the Program. The OCMP has conditioned this decision with a 200 meter year-round exclusion area and including Daisy and Coquille Banks based on the following reasoning:

- Marine organisms and fisheries important to Oregon and Oregon economies use both state and federal waters to fulfill life history requirements (*i.e.*, what they need to survive) and must be prioritized per the listed enforceable policies of the state.
- There is little to no information regarding total volume of discharge annually or during the season, location of discharge, duration of discharge, whether discharge occurs in one spot or occurs over a distance, or timing of discharge.
- There is little to no information about whether there has been discharge over and onto sensitive habitat areas including rocky reefs, which contain the highest biodiversity of species on the continental shelf, including important fisheries species and species that are immobile and less-mobile.
- NMFS, during consultation, has stated concern for rocky reefs, as Habitat Areas of Special Concern, and recommended no discharge within 250 feet of rocky reefs that the EPA did not implement in this draft permit.
- Most rocky reef habitat is located between 100 and 200 meter depth and the seasonal discharge prohibition at 100 meters and shallower would not protect the reefs from stickwater 'slime' or settling particulate.
- To reduce the likelihood of waste becoming captured and transported via natural upwelling processes, which brings water at 100-150 meters shoreward, it is important to discharge waste at depths greater than 200 meters.
- Discharging at depths between 100-200 meters during upwelling season may result in more organic particles reaching mid-shelf where susceptibility to hypoxia is higher.
- Most vessels operating under this permit work in water depths greater than 210 meters.
- Whiting densities are highest over bottom depths between 200-300 meters during harvest season and vessels operate in proximity to fish harvested.
- 200 meters depth contour approximately delineates the continental shelf break and is an ecologically meaningful boundary.
- 200 meters depth boundary prohibition provides an adequate buffer, and beyond upwelling currents, to ensure consistency with the enforceable policies of the program including, but not limited to, ORS 468B.025, which prohibits placement or causes placement of any wastes in a location where such wastes are likely to escape or be carried into the waters of the state by any means.
- The OCMP believes this condition will necessitate some adjustments to vessel operations and will not significantly impede opportunity.

Additional Monitoring/Reporting Requirements

Permit monitoring and compliance reporting requirements is the only way to gain the information necessary to apply the Ocean Discharge Criteria Evaluation accurately and meet Ocean Discharge Requirement (40 CFR Part 125.123(d)).

The OCMP understands the industry monitors specific information and it is also monitored by on-board observers to comply with other federal laws. For example, as reported on NOAA's at-sea hake observer

program website, “Whiting processing vessels over 125 feet in length are required by regulation to have full observer coverage for all fishing days. Each vessel carries two observers so that data collection can take place 24 hours a day. Processing vessels 125 feet or less in length are required to have one observer on-board for all fishing days. As 100% observer coverage is required, all trips taken by all vessels participating in the at-sea whiting processing sector are covered.”

(https://www.nwfsc.noaa.gov/research/divisions/fram/observation/data_products/hake_processing.cfm) Using information that is already being collected creates meaningful data and is feasible, cost-effective and an efficient use of resources.

The OCMP has conditioned this decision with additional monitoring and reporting requirements based on the following reasoning:

- The EPA has stated that lack of information has made understanding impacts from discharges under this initial NPDES General Permit difficult, if not impossible.
- The OCMP relies on the EPA’s information to evaluate whether the federal action is consistent to the maximum extent practicable with the enforceable policies of the program.
- Location information of discharges is critical to spatial understanding of impacts to marine resources like rocky reefs and hypoxia-prone areas.
- Compliance with proposed spatial prohibitions relies solely on location information and thus is a necessary element of compliance reporting.
- Accurate volumes/pounds of each waste stream are critical to understand impacts to receiving waters and ability of action to exacerbate OAH occurrences.
- The proposed monitoring requirements will not provide the quantitative information on processing and discharge amounts and discharge locations that are necessary to meet EPA’s stated need or the Ocean Discharge Requirement for assessing impacts.
- This information is needed to modify or remove discharge restrictions in the future.
- Oregon is a global leader in OAH research and the more information provided to experts in the field, the faster the understanding of the contribution of nutrient inputs from man-made actions grows.
- Some enforceable policies of the Program explicitly state the need for partnership, innovation, and research (*e.g.* ORS 196.420 (4) and (5)) and the included monitoring and reporting requirements increase consistency with those policies.

Availability of Mediation

In accordance with federal regulations, the OCMP hereby provides notification that should the EPA object to the attached conditions, the decision shall be treated as an objection pursuant to 15 CFR Part 930, Subpart C. The EPA shall immediately notify the OCMP if the conditions are not acceptable.

In the event the EPA has a serious disagreement with the OCMP’s coastal zone decision, the EPA may request mediation services provided by the Office for Coastal Management or the Secretary of the U.S. Department of Commerce, as provided for in 15 CFR Part 930 Subpart G. The OCMP or the Governor of Oregon may also request such mediation services.

If the EPA and the OCMP are unable to come to agreement and conditions cannot be incorporated into the General Permit that are agreed to by both parties, the EPA may still issue an NPDES General Permit for seafood waste discharge off the coast of Oregon in federal waters, but users of the general permit will not be able to use the general permit until they first provide to OCMP an individual consistency certification under 15 CFR Part 930, Subpart D, and the state concurs with the consistency certification or, if the state objects, the applicant appeals to the Secretary of Commerce and the Secretary overrides the state's objection. See 15 CFR § 930.31(d). Thus, the OCMP believes all parties involved, including the permittees, will benefit from resolution during this federal consistency review rather than potential future review processes.

If you have any questions or comments regarding this coastal zone management consistency finding or the consistency review process, please contact Elizabeth Ruther at (503) 934-0029 or e-mail: elizabeth.j.ruther@state.or.us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Patty Snow', written in a cursive style.

Patty Snow
Oregon Coastal Management Program Manager
Department of Land Conservation and Development

Cc: Elizabeth Ruther, OCMP-DLCD
Steve Shipsey, ODOJ
Kris Wall, OCM-NOAA
Kerry Kehoe, OCM-NOAA

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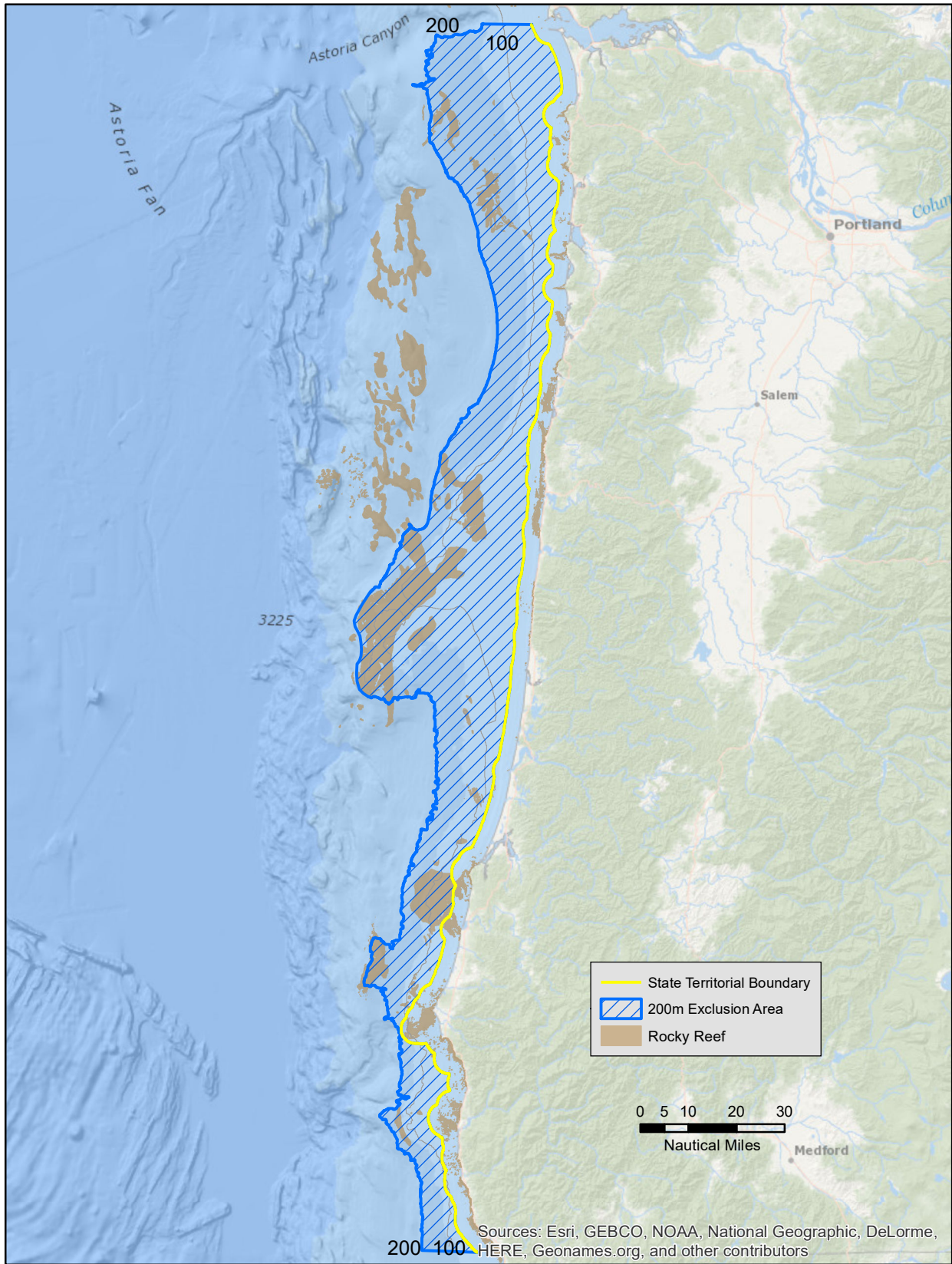


Figure 1. Proposed Year-Round 200-m Exclusion Areas.

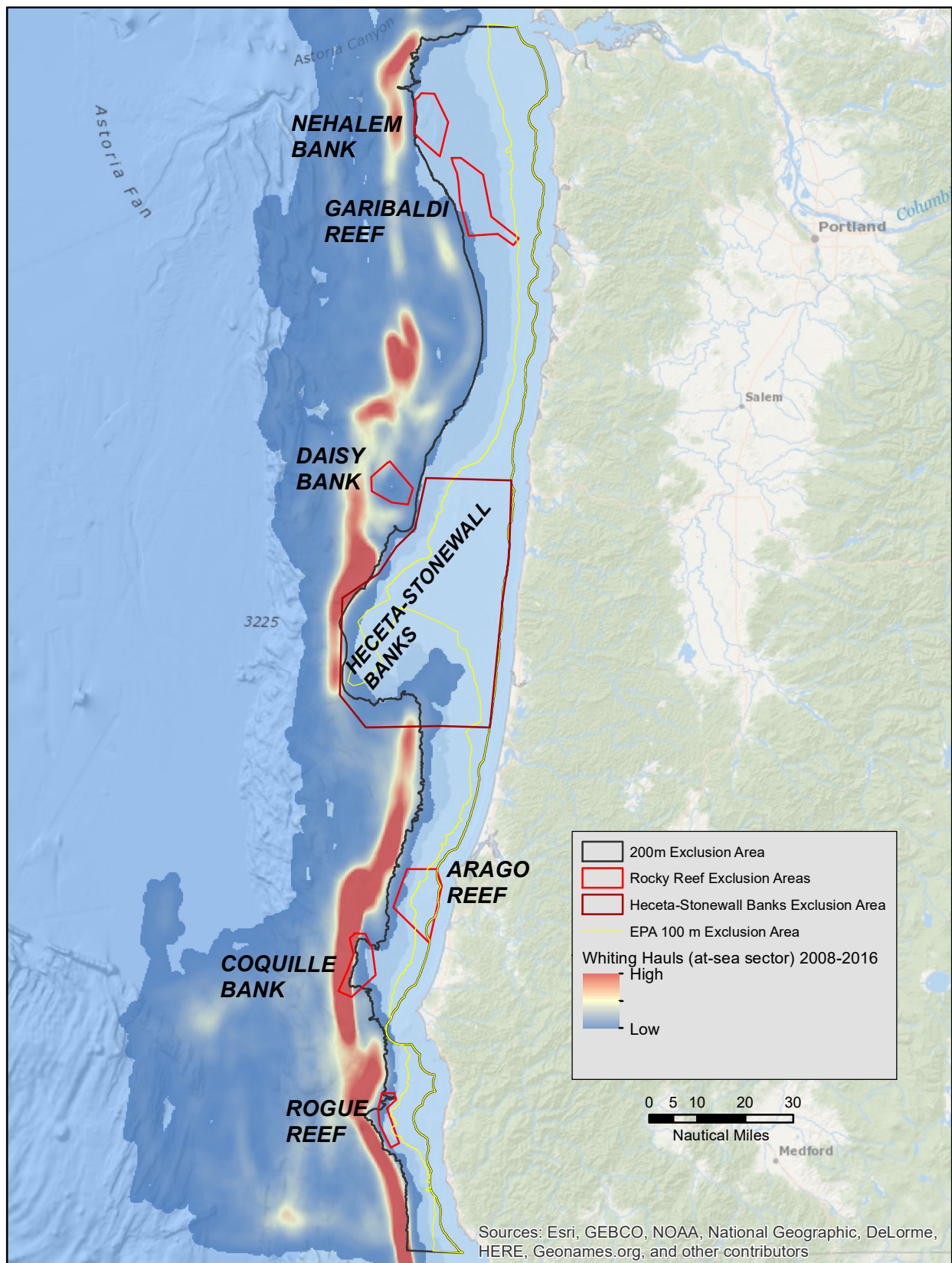


Figure 2. Density of haul locations for at-sea sector of the whiting fishery from 2008-2016 using the line density algorithm method in ArcGIS. This generalized density raster intentionally obscures individual fishing locations to protect proprietary information, as required by law, and therefore is not meant to be an exact replication of fishing locations everywhere. Nevertheless, relative fishing intensity and the fishery's footprint is well represented.

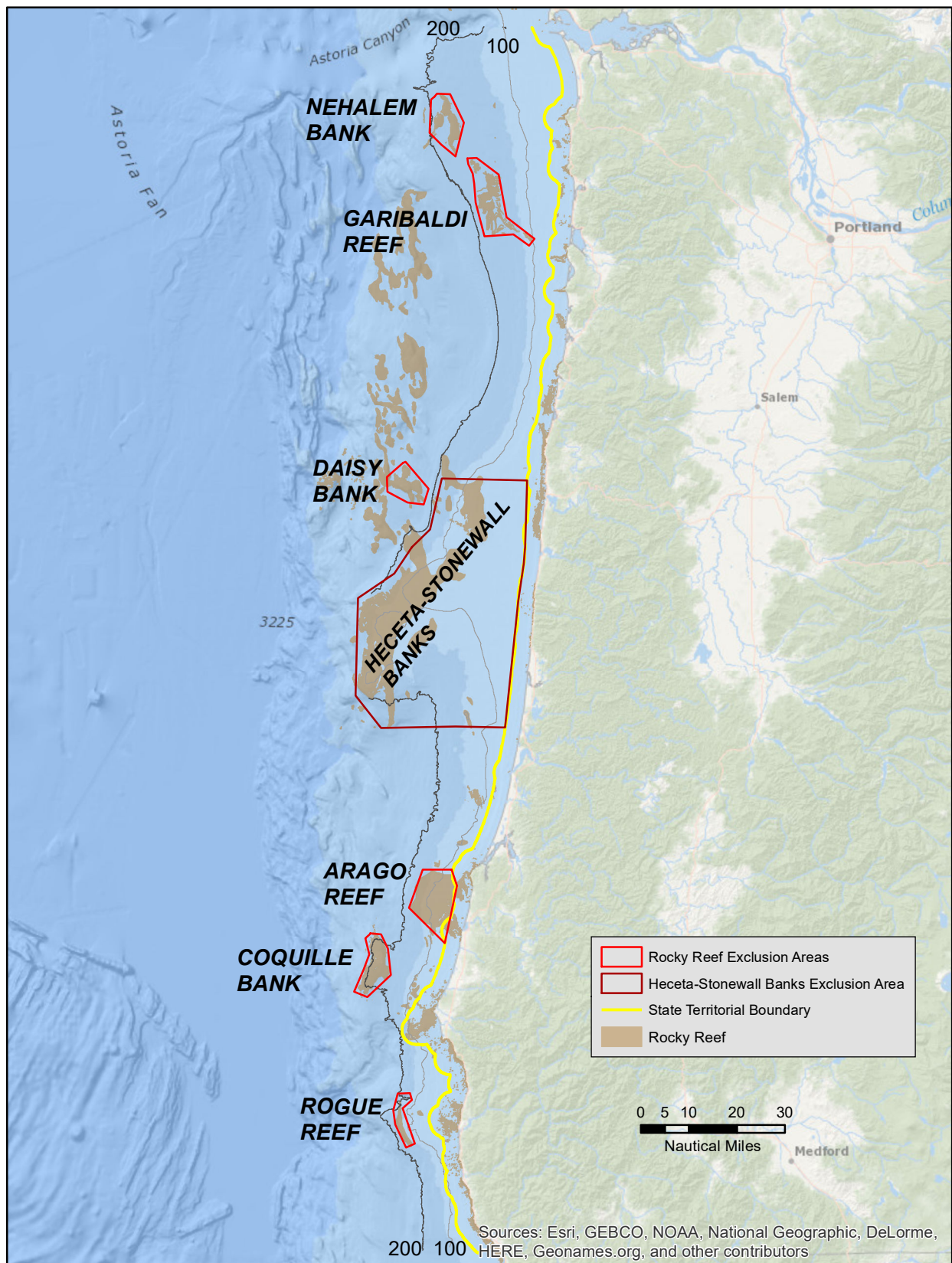


Figure 3. Proposed Year-Round Rocky Reef Exclusion Areas.

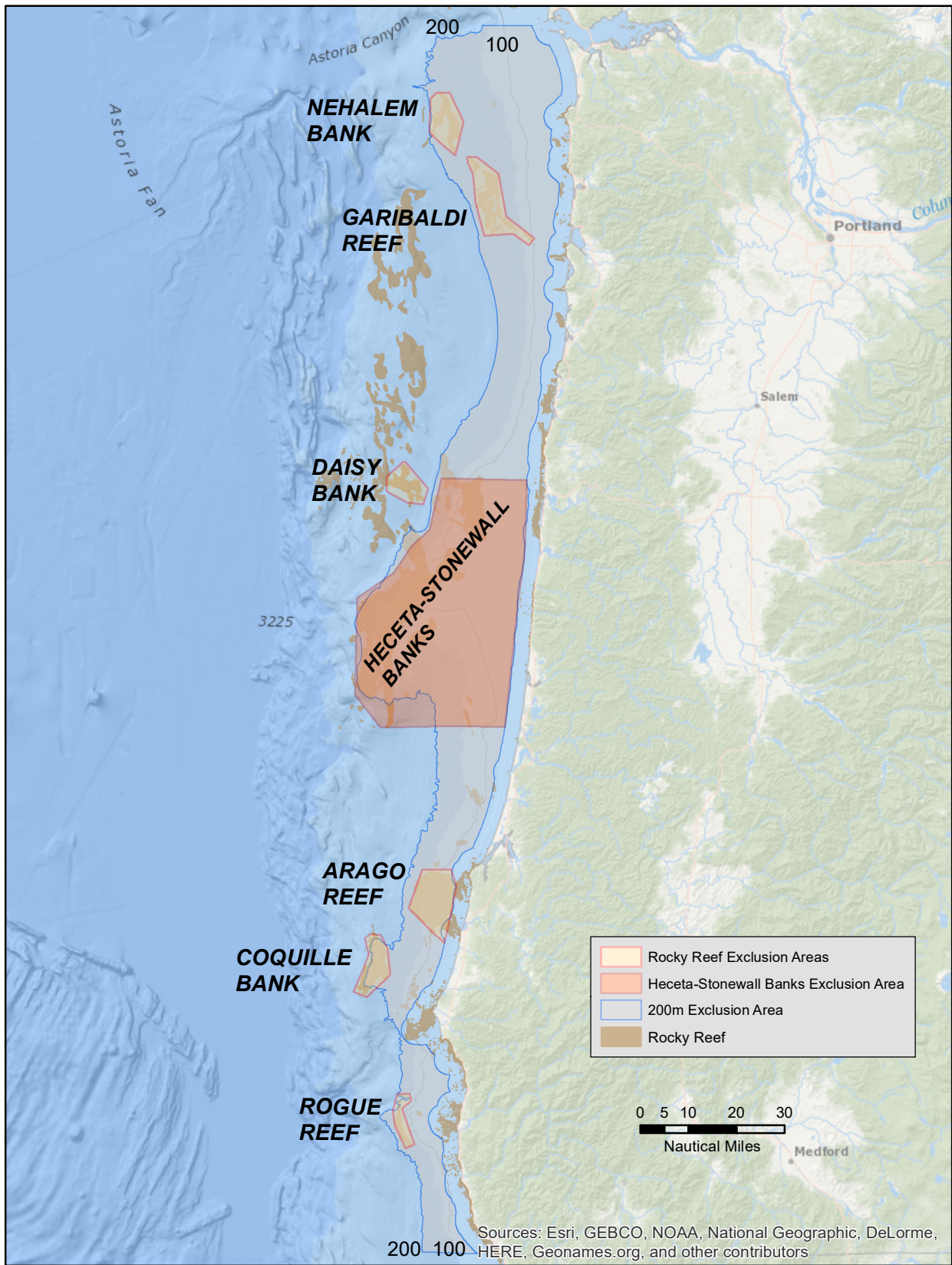


Figure 4. Map of all proposed Exclusion Areas.