

Oregon Territorial Sea Plan Part Five: Resource Inventory Checklist and Effects Evaluation Checklist

For proposed ocean renewable energy projects¹ in Oregon's Territorial Sea.

Territorial Sea means that portion of the Pacific Ocean between mean lower low water seaward to three nautical miles.

Ocean Renewable Energy means electricity that is generated through:

- (a) The conversion of energy contained in the natural properties of the ocean, including but not limited to energy contained in waves and swells, the tides and currents, ocean temperature and salinity gradients; and
- (b) Ocean offshore wind power.

Prior to making any decision to approve an application for an ocean renewable energy project that will occur in and affect resources or uses of Oregon's territorial sea, the Department of State Lands (DSL), in fulfillment of ORS 196.485, requires that the applicant prepare a resource inventory and effects evaluation. The following checklist is offered as a guide to help applicants prepare a resource inventory and effects evaluation, consistent with the requirements contained in the [Oregon Territorial Sea Plan Part 5](#). The resource inventory and effects evaluation, and must be provided as a stand-alone attachment to DSL's combined application.

The applicability of required information and level of detail will depend on the magnitude of the proposed project, likelihood that the proposed project will affect the inventoried resource, and the significance of potentially affected resources and uses. Preparers are encouraged to consult <http://oregonocean.info/>, and <http://nvs.nanoos.org/> when collecting this information and may contact DSL staff if there are any questions regarding the information requirements. DSL and the Joint Agency Review Team (JART) may provide guidance on completing the Resource Inventory Checklist and Effects Evaluation through the pre-application process.

A person applying to attain a temporary use authorization to test at the Northwest National Marine Renewable Energy Center Mobile Test Berth Site (NNMREC) is exempt from the required Resource Inventory Checklist and Effects Evaluation.

For more information on the Territorial Sea Plan, please contact:

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¹ Part 2 of the Territorial Sea Plan provides a similar, yet separate, governance structure for other resource decisions in the territorial sea. Part Four governs telecommunications cables, pipelines, and other utilities.

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Testing at NNMREC? ☐ Yes ☐ No
 Demonstration Project²? ☐ Yes ☐ No

Resource Inventory Checklist:		
Please include the following information in the resource inventory. If N/A is checked, explain why not applicable in the inventory.		
1.) Description of proposed action:	Included in the inventory:	N/A
(a) Location (using maps, charts, descriptions, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
(b) Numbers and sizes of equipment, structures	<input type="checkbox"/>	<input type="checkbox"/>
(c) Methods, techniques, activities to be used	<input type="checkbox"/>	<input type="checkbox"/>
(d) Transportation and transmission modes needed to serve/support the proposed project	<input type="checkbox"/>	<input type="checkbox"/>
(e) Materials to be disposed of; method of disposal	<input type="checkbox"/>	<input type="checkbox"/>
(f) Physical and chemical properties of hazardous materials to be used or produced, if any	<input type="checkbox"/>	<input type="checkbox"/>
(g) Navigation aids	<input type="checkbox"/>	<input type="checkbox"/>
(h) Proposed time schedule	<input type="checkbox"/>	<input type="checkbox"/>
2.) If not included above, location and description of all affected areas, including areas for onshore support facilities	<input type="checkbox"/>	<input type="checkbox"/>
(a) Site of the ocean renewable energy facility	<input type="checkbox"/>	<input type="checkbox"/>
(b) Adjacent areas that may be affected by physical changes in currents and waves caused by the facility	<input type="checkbox"/>	<input type="checkbox"/>
(c) Utility corridor transiting territorial sea and ocean shore	<input type="checkbox"/>	<input type="checkbox"/>
(d) Shoreland facilities	<input type="checkbox"/>	<input type="checkbox"/>
3.) Description of relevant physical and chemical conditions:		
(a) Water depth:	<input type="checkbox"/>	<input type="checkbox"/>
(b) Wave regime	<input type="checkbox"/>	<input type="checkbox"/>
(c) Current velocities	<input type="checkbox"/>	<input type="checkbox"/>
(d) Dispersal, horizontal transport, and vertical mixing characteristics of the area	<input type="checkbox"/>	<input type="checkbox"/>
(e) Meteorological (weather) conditions	<input type="checkbox"/>	<input type="checkbox"/>
(f) Water quality (pH, temp, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
4.) Description of Bathymetry (bottom topography) and Shoreline Topography (LIDAR (Light Detection and Ranging))	<input type="checkbox"/>	<input type="checkbox"/>
5.) Description of Geological structures and hazards	<input type="checkbox"/>	<input type="checkbox"/>
(a) Geologic hazards, such as faults or landslides of both marine and shoreline facility areas	<input type="checkbox"/>	<input type="checkbox"/>
(b) Mineral (precious metals) Deposits	<input type="checkbox"/>	<input type="checkbox"/>
(c) Seafloor substrate type (rocky, sandy, etc.)	<input type="checkbox"/>	<input type="checkbox"/>
(d) Hydrocarbon (oil, coal, gas, etc.) resources	<input type="checkbox"/>	<input type="checkbox"/>
6.) Description of Biological features, including:		
(a) Critical marine habitats ³	<input type="checkbox"/>	<input type="checkbox"/>

² "Demonstration Project" is a limited duration, non-commercial activity authorized under a temporary use authorization granted by the Department to a person for the construction, installation, operation, or removal of an ocean energy facility on, in or over state-owned submerged and submersible land in the Territorial Sea to test the economic and/or technological viability of establishing a commercial operation. A demonstration project may be temporarily connected to the regional power grid for testing purposes without being a commercial operation. Demonstration Project has the same meaning as "Pilot Project" in Part 5 of the Territorial Sea Plan. Inventory content may be waived for a demonstration project in consultation with the JART.

³ critical marine habitat: means one or more of the following land and water areas:

a.) areas designated as "critical habitat" in accordance with federal laws governing threatened and endangered species; OR b.) areas designated in the Territorial Sea Plan as either:

(b) Other habitats important to the marine ecology, such as:	<input type="checkbox"/>	<input type="checkbox"/>
<ul style="list-style-type: none"> • kelp and other algae beds, • exposed seafloor gravel beds, • seagrass beds, • rocky reef areas, • marine mammal rookeries and haul-out areas, • seabird rookeries, and • areas where fish and shellfish congregate in large numbers 		
(c) Fish and shellfish stocks and other biologically important species	<input type="checkbox"/>	<input type="checkbox"/>
(d) Recreationally or commercially important finfish or shellfish species	<input type="checkbox"/>	<input type="checkbox"/>
(e) Planktonic and benthic flora and fauna	<input type="checkbox"/>	<input type="checkbox"/>
(f) Other elements important to the primary productivity and the food chain	<input type="checkbox"/>	<input type="checkbox"/>
(g) Marine species migration routes	<input type="checkbox"/>	<input type="checkbox"/>
7.) Description of Cultural, economic, and social uses (present and projected) associated with the affected resources, such as:		
(a) Commercial and sport fishing	<input type="checkbox"/>	<input type="checkbox"/>
(b) State or Federally protected areas	<input type="checkbox"/>	<input type="checkbox"/>
(c) Scientific research	<input type="checkbox"/>	<input type="checkbox"/>
(d) Ports, navigation, and dredge disposal sites	<input type="checkbox"/>	<input type="checkbox"/>
(e) Recreation	<input type="checkbox"/>	<input type="checkbox"/>
(f) Coastal communities economy	<input type="checkbox"/>	<input type="checkbox"/>
(g) Aquaculture	<input type="checkbox"/>	<input type="checkbox"/>
(h) Wastewater or other discharge	<input type="checkbox"/>	<input type="checkbox"/>
(i) Utility or pipeline corridors and transmission lines	<input type="checkbox"/>	<input type="checkbox"/>
(h) Military uses	<input type="checkbox"/>	<input type="checkbox"/>
(k) Aesthetic (viewshed, seascape, etc.) Resources	<input type="checkbox"/>	<input type="checkbox"/>
8.) Description of Significant historical or archeological sites	<input type="checkbox"/>	<input type="checkbox"/>
9.) Other data as determined to be necessary	<input type="checkbox"/>	<input type="checkbox"/>

Effects Evaluation Checklist The preparer will use the inventory information, listed above, to write an evaluation of all reasonably foreseeable adverse effects ⁴ of the proposed action. Where relevant, the evaluation must describe the potential effects listed below. As with the inventory content, the preparer may use any existing information to support the evaluation.		
(a) Evaluation of the potential short-term and long-term effects on resources and uses of the continental shelf, the Oregon nearshore ocean, and onshore areas based on the following considerations:	Included in the evaluation	N/A
1.) Biological and ecological effects on marine habitats and the species those habitats support. <ul style="list-style-type: none"> • The time frames/periods over which the effects and recovery will occur; 	<input type="checkbox"/>	<input type="checkbox"/>

1.) as needed for the survival of animal or plant species listed by state or federal laws as "threatened", "endangered", or "sensitive". Such areas might include special areas used for feeding, mating, breeding/spawning, nurseries, parental foraging, overwintering, or haul out or resting. This is not intended to limit the application of federal law regarding threatened and endangered species; OR

2.) "unique" (i.e. one of a kind in Oregon) habitat for scientific research or education within the Oregon territorial sea.

⁴ The evaluation need not discuss highly speculative consequences. However, the evaluation shall discuss catastrophic environmental effects of low probability.

<ul style="list-style-type: none"> • The maintenance of ecosystem structure, biological productivity, biological diversity, and representative species assemblages; • Maintaining populations of threatened, endangered, or sensitive species; and • Vulnerability of the species, population, community, or the habitat to the adverse effects of pollution, noise, habitat alteration, and human trespass 		
(a) The timeframes/periods over which the effects will occur	<input type="checkbox"/>	<input type="checkbox"/>
(b) The maintenance of ecosystem structure, biological productivity, biological diversity, and representative species assemblages	<input type="checkbox"/>	<input type="checkbox"/>
(c) Maintaining populations of threatened, endangered, or sensitive species	<input type="checkbox"/>	<input type="checkbox"/>
(d) Vulnerability of the species, population, community, or the habitat to the proposed actions	<input type="checkbox"/>	<input type="checkbox"/>
(e) The probability of exposure of biological communities and habitats to adverse effects from operating procedures or accidents;	<input type="checkbox"/>	<input type="checkbox"/>
2.) Current Uses; evaluate the effects of the project on current uses and the continuation of a current use of ocean resources such as fishing, recreation, navigation, and port activities.	<input type="checkbox"/>	<input type="checkbox"/>
(a) Local and regional economies	<input type="checkbox"/>	<input type="checkbox"/>
(b) Archeological and historical resources	<input type="checkbox"/>	<input type="checkbox"/>
(c) Transportation safety and navigation	<input type="checkbox"/>	<input type="checkbox"/>
3.) Natural and Other Hazards; consider both the severity of the hazard and the level of exposure it poses to the renewable marine resources and coastal communities.		
(a) Scouring action of currents on the foundations and anchoring structures	<input type="checkbox"/>	<input type="checkbox"/>
(b) Slope failures and subsurface landslides	<input type="checkbox"/>	<input type="checkbox"/>
(c) Faulting, and tsunamis	<input type="checkbox"/>	<input type="checkbox"/>
(d) Variable or irregular bottom topography, weather related or due to human cause	<input type="checkbox"/>	<input type="checkbox"/>
4.) Cumulative Effects; the evaluation should analyze the biological, ecological, physical, and socioeconomic effects of the renewable energy facility development and of other renewable energy facility projects along the Oregon coast, while also taking into account the effects of existing and future human activities and the regional effects of global climate change.		
(a) Is the resource especially vulnerable to incremental effects?	<input type="checkbox"/>	<input type="checkbox"/>
(b) Is the proposed project one of several similar projects in the same geographical area?	<input type="checkbox"/>	<input type="checkbox"/>
(c) Do other developments in the area have similar effects on the resource?	<input type="checkbox"/>	<input type="checkbox"/>
(d) Have these effects been historically significant for the resource?	<input type="checkbox"/>	<input type="checkbox"/>
(e) Have other analysis in the area identified cumulative effects concerns?	<input type="checkbox"/>	<input type="checkbox"/>

Preparer's name (if different than applicant)

Contact telephone & e-mail (if different than applicant)