

## Maine Off-Shore Wind Marshalling Port Alternatives Matrix- Relevant Definitions & Regulatory Framework

Purpose & Need		
1	1-Purpose & Need	<ul style="list-style-type: none"> <li>-Draft <u>Purpose Statement</u>: The purpose of the proposed action is to construct a marshalling port facility in Maine to support the commercialization of the offshore wind industry.</li> <li>-Draft <u>Need Statement</u>: The State of Maine does not have a marshalling port facility with sufficient space to support the construction, operation, and maintenance of offshore wind turbines.</li> </ul>
Site Requirements, Logistics, & Constructability		
<p><u>Constructability</u>: The US Army Corps of Engineers (USACE) defines "constructability" as the ease of constructing a specified or designed project according to the government's requirements, including the proposed construction duration, and the ease of understanding and administering the contract documents during their execution.</p>		
2	2- Contiguous Upland Area (Minimum 100 acres)	<ul style="list-style-type: none"> <li>-Does the alternative provide adequate space for the full build-out of a commercial-scale floating offshore wind terminal?</li> <li>-Usable space is contiguous, within a reasonable distance from the water frontage, and has no narrow areas that may restrict movement of large components.</li> <li>-Will the site size (e.g., length, width, contiguous areas) accommodate the proposed project (i.e., accept/store raw materials and component parts, fabricate and assemble wind turbine generator [WTG] components, facilitate in-water assembly and transport)?</li> <li>-Offshore wind (OSW) developers recommend at least 100 acres of uplands in a usable configuration.</li> </ul>
3	Water Frontage	<ul style="list-style-type: none"> <li>-Does the alternative provide adequate waterfront for quay placement?</li> <li>-OSW developers recommend at least 1,500 ft of waterfront is required to: outfit WTG components onto foundations at quayside; transfer fabricated foundations from quay to water; and deliver WTG components or raw materials to the terminal. These activities will be required simultaneously for operation of a commercial-scale facility.</li> </ul>
4	Federally Maintained Navigation Channel Access	<ul style="list-style-type: none"> <li>-How far from a federally maintained channel is the site?</li> <li>-Is the depth of that channel equal to or more than -35 ft mean lower low water (MLLW: the average of the lower low water height of each tidal day observed over the National Tidal Datum Epoch. [NOAA])</li> <li>-Are there vertical or horizontal navigational restrictions?</li> </ul>
5	No Air Draft & Direct Access to Open Water	Once WTG components are fully assembled, the height of the WTG can be approximately 700 to 800 ft above the waterline. WTGs are towed to the installation site in this finished configuration. Port sites require unlimited air draft with direct access to open water; no bridges or overhead electrical wires can restrict the route between the port and the installation site.
6	Wharf Accessibility High Tide & Flood	<ul style="list-style-type: none"> <li>-What are the tidal, current, and wave conditions at the site?</li> <li>-What is the weather (e.g., wind, precipitation) like? Weather and flooding conditions affect the top of the quay elevation and the forces on waterfront structures.</li> <li>-Are there flooding risks?</li> <li>-Tidal conditions may affect operations of the port, as the wharf (quay) needs to be accessible at all stages of the tidal cycle.</li> </ul>
7	Impacts to Navigation	<ul style="list-style-type: none"> <li>-Can vessels be easily and safely berthed at the quay?</li> <li>-Would increased vessel traffic resulting from OSW Port operations affect existing maritime operations and/or existing vessel traffic?</li> </ul>
8	Dredging & Disposal	<u>Dredging</u> : The quantity of dredged materials required to construct an alternative. Dredging may be required along the water frontage to accommodate port activities and/or to establish required depth for access from quay to a federally maintained navigation channel. If the channel is far from the anticipated quayside, more dredging may be required. Can the dredge be used as fill onsite or does it require amendment? Will there be maintenance dredging required? Dredging will be a major permitting, construction schedule, and construction cost driver.
9	Upland Site Preparation	<p><u>Soil Removal</u>: The opposite of fill, this measure quantifies the removal of materials (i.e., soil, rock) from an alternative site to accommodate construction.</p> <p><u>Fill</u>: The opposite of soil removal, this measure quantifies the addition of fill materials to an alternative site location to accommodate construction.</p>
10	Currently Available	<u>Available</u> : The USACE Clean Water Act (CWA) Section 404(b)(1) Guidelines state that if it is otherwise a practicable alternative, an area not presently owned by the applicant that could reasonably be obtained, used, expanded, or managed to fulfill the overall purpose of the proposed activity can still be considered a practicable alternative.
Cost		
11	Cost	<ul style="list-style-type: none"> <li>-In USACE considerations, <u>cost</u> is calculated for the overall project including all associated costs (i.e., planning, permitting, construction and post-construction mitigation and monitoring).</li> <li>-Cost estimates do not consider an individual applicant's financial standing.</li> <li>-The data used for cost must be current at the time of the alternatives analysis.</li> <li>- Note that because one alternative costs more than another does not mean the more expensive alternative is impracticable.</li> <li>-Economic considerations (e.g., job loss/creation, local tax base effects, etc.) are not part of this cost estimate.</li> </ul>

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<p align="center"><b>Impacts to Waters of the U.S. (WOTUS), Wetlands &amp; Waterbodies from Dredge, Excavation, Fill, Conversion</b>  <u>WOTUS</u>: Surface waters regulated by the CWA and defined at 40 CFR 240.40-45</p>		
	<b>Federal</b>	<b>State</b>
<p><b>12 Wetlands &amp; Vernal Pools</b></p> <p><u>Vernal pools</u>: shallow depressions that usually contain water for only part of the year. They are often associated with forested wetlands and serve as breeding habitat for certain species of wildlife, including salamanders and frogs (amphibians).</p>	<p><a href="#">Clean Water Act (33 U.S.C. 1251-1387 o Section 404, 33 U.S.C. 1344 o Section 401, 33 U.S.C. 1341)</a>                      Section 401 of the Clean Water Act (CWA) prohibits federal permitting or licensing agencies from issuing authorizations for construction activities having discharges into navigable waters, until the appropriate water quality certifying agency has issued a water quality certification (WQC) or waiver procedures have been satisfied.</p> <p>Section 404 of the CWA establishes a program to regulate the discharge of dredged or <u>fill</u> material into waters of the United States, including wetlands.</p> <p><a href="#">E.O. 11990, Protection of Wetlands</a>                      Executive Order 11990 states that no federally approved project will occur in wetlands unless there is no practical alternative to constructing in the wetlands. Projects must ensure that the project design includes all practicable measures to avoid, minimize and mitigate wetland impacts.</p>	<p><a href="#">Natural Resources Protection Act (NRPA)</a> A permit is required for dredging, excavating, dewatering, filling, or permanent structures in, on, over, and adjacent to protected natural resources.</p> <p><i>Protected natural resources</i> are coastal sand dune systems, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, great ponds and rivers, streams or brooks.</p> <p><a href="#">Chapter 310, Wetland &amp; Waterbodies Protection Rules</a> apply to stream and wetland alternations.</p> <p><a href="https://www.maine.gov/sos/cec/rules/06/096/096c335.doc">https://www.maine.gov/sos/cec/rules/06/096/096c335.doc</a></p> <p><a href="#">Chapter 335 Significant Wildlife Habitat Rules</a> apply to alteration of Significant Vernal Pools and their adjacent habitat.</p>
<p><b>13 Streams</b></p>	<p>Clean Water Act Section 401 &amp; 404 and Rivers &amp; Harbors Act</p>	<p><a href="#">Natural Resources Protection Act (NRPA)</a></p> <p><a href="#">Chapter 310, Wetland &amp; Waterbodies Protection Rules</a></p>
<p><b>14 Navigable Waters</b></p> <p><u>Navigable Waters</u>: WOTUS that are subject to the ebb and flow of the tide shoreward to the mean high water mark, and/or are presently used, or have been used in the past, or may be susceptible to use in transport for interstate or foreign commerce.</p>	<p><a href="#">Rivers and Harbors Act (33 U.S.C. 401-406)</a>                      Section 10 of the Rivers and Harbors Act of 1899 requires authorization from the Secretary of the Army, acting through the Corps of Engineers, for the construction of any structure in or over any navigable water of the United States. Structures or work outside the limits defined for navigable waters of the United States require a Section 10 permit if the structure or work affects the course, location, or condition of the water body. The law applies to any dredging or disposal of dredged materials, excavation, filling, structures, etc.</p> <p>Any project that would alter an existing USACE Navigation Project requires a permit from the <a href="#">USACE Section 408 Program</a>.</p>	<p>Lands below the mean low water mark are publicly owned by the State of Maine. Leases and easements are required for piers and other structures to occupy <a href="#">Public Submerged Lands</a>.</p>
<p><b>15 Coastal Wetlands</b></p>	<p>Clean Water Act and Rivers &amp; Harbors Act (see above)</p> <p><a href="#">Ocean disposal of dredged material</a> is regulated by the EPA and USACE.</p>	<p><a href="#">Natural Resources Protection Act</a>  <a href="#">Chapter 310, Wetland &amp; Waterbodies Protection Rules</a></p> <p>Dredge Spoils are regulated by the Maine Department of Environmental Protection as Special Waste. Upland disposal is subject to <a href="#">DEP Solid Waste Management Rules Chapter 418</a>.</p>
<p><b>16 Eelgrass</b></p>	<p>Considered Special Aquatic Site by USACE.</p>	<p>Eelgrass: Maine's eelgrass meadows form an important marine and estuarine coastal aquatic habitat. Along with other plants, eelgrass forms the base of food production in the sea. Eelgrass provides shelter for juvenile fish, and invertebrates, is a site for primary settlement of the larvae of some bivalve mollusks and invertebrates, and in certain locations helps to stabilize unconsolidated sediments and shorelines. The Department of Marine Resources (DMR) monitors and protects eelgrass.</p>

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Fisheries		
	Federal	State
<b>17</b>	<b>Endangered Atlantic salmon and Sturgeon</b>	
	<p><a href="#">Section 7 of the Endangered Species Act (16 U.S.C. 1531-1544)</a>                      Section 7 of the Endangered Species Act requires each federal agency to ensure that any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of designated critical habitat.</p>	<p><a href="#">Maine Department of Marine Resources (DMR)</a></p>
<b>18</b>	<b>State and Federally Managed Fish Species</b>	
	<p><a href="#">Anadromous Fish Conservation Act (16 U.S.C. 757a-757f)</a>                      The Anadromous Fish Conservation Act was adopted to conserve, develop, and enhance the anadromous fish resources of the U.S. that are subject to depletion from water resources development and other causes.</p> <p><a href="#">Fish and Wildlife Coordination Act (16 U.S.C. 661-667d)</a>                      The Fish and Wildlife Coordination Act provides the basic authority for the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) involvement in evaluating impacts to fish and wildlife from proposed water resource development projects. It requires that fish and wildlife resources receive equal consideration to other project features. It also requires federal agencies that construct, license or permit water resource development projects to first consult with the Service and the state fish and wildlife agency regarding the impacts on fish and wildlife resources.</p> <p><a href="#">Magnuson-Stevens Fishery Conservation and Management Act (16 U.S.C. 1801-1891d), with Essential Fish Habitat requirements at 1855(b)(2)</a>                      The Magnuson Stevens Fishery Conservation and Management Act requires federal agencies which fund, permit, or carry out activities that may adversely impact Essential Fish Habitats (EFH) to consult with the National Marine Fisheries Service (NMFS) regarding potential adverse effects of actions on EFH.</p>	<p>Sea Run Fisheries: The sea-run fish species of most management concern in Maine are: alewife, American eel, American shad, Atlantic salmon, Atlantic sturgeon, blueback herring, rainbow smelt, sea lamprey, sea-run brook trout, shortnose sturgeon, and striped bass. <a href="#">Maine Department of Marine Resources (DMR)</a> protects, conserves, restores, manages and enhances diadromous fish populations and their habitat. <a href="#">Maine Inland Fisheries &amp; Wildlife</a> Inland Fisheries and Wildlife manages wild brook trout and other inland <a href="#">fish</a>.</p> <p><a href="#">Maine Department of Marine Resources (DMR)</a> is also responsible for shellfish sanitation and management.</p> <p>Mussel Seed Conservation Areas: Locations where collection of mussel seed is regulated in accordance with Section 12.06 (Maine Department of Marine Resources (DMR)Chapter 12). Scallop Zones: Locations where collection of scallops is regulated in accordance with Chapter 12 (Maine Department of Marine Resources).</p>



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Natural Features		
	Federal	State
22	<p><b>Groundwater &amp; Aquifers</b></p> <p><a href="#">Safe Drinking Water Act (42 U.S.C. 300f – 300j-26)</a>                      The Safe Drinking Water Act protects public health by regulating the nation’s public drinking water supply. The law requires actions to protect drinking water and its sources—rivers, lakes, reservoirs, springs, and ground water wells.</p>	<p><a href="#">Site Location of Development Act</a></p>
23	<p><b>Floodplains &amp; Coastal Features</b></p> <p><u>Coastal features:</u> sand dunes, coastal bluffs, beaches.</p> <p><a href="#">E.O. 11988, Floodplain Management</a>                      Executive Order 11988 requires federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of flood plains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative.</p> <p><a href="#">Coastal Zone Management Act (16 U.S.C. 1451-1466)</a>                      The Coastal Zone Management Act (CZM) requires all projects located within the designated coastal zone of a state to be consistent with the state’s federally approved CZM plan.</p> <p><a href="#">Coastal Barrier Resources Act (16 U.S.C. 3501-3510)</a>                      The Coastal Barrier Resources Act (CBRA) established the Coastal Barrier Resources System (CBRS) and was enacted to minimize the loss of human life, wasteful expenditure of federal revenues, and the damage to fish, wildlife and other natural resources associated with the coastal barriers along the Gulf Coast. Projects within the CBRS may not receive federal funding unless they are in compliance and meet an exception to the CBRA.</p>	<p><a href="#">Site Location of Development Act</a></p>

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Cultural Resources		
	Federal	State
24	<p><b>Archaeological</b></p> <p><a href="#">Archeological Resources Protection Act (16 U.S.C. 470aa-470mm)</a> The Archeological Resources Protection Act does not allow any excavation, removal, damage, or alteration of any archaeological resource located on public lands or Indian lands unless such activity is pursuant to a permit or the exemption contained in section 470cc(g)(1) of this title.</p> <p><a href="#">Preservation of Historical and Archeological Data (54 U.S.C. 312501- 312508)</a> The Preservation of Historical and Archeological Data requires when any federal agency finds, or is notified, in writing, by an appropriate historical or archeological authority, that its activities in connection with any federal construction project or federally licensed project, activity, or program may cause irreparable loss or destruction of significant scientific, prehistorical, historical, or archeological data, the agency shall notify the Secretary, in writing, and shall provide the Secretary with appropriate information concerning the project, program, or activity.</p>	<p><a href="#">Maine Historic Preservation Commission</a> works closely with state and federal agencies to administer Section 106 The office administers the programs of the National Historic Preservation Act of 1966 in Maine, which includes the identification, evaluation, and protection of the state’s significant cultural resources. It’s director serves as the State Historic Preservation Officer (SHPO).</p> <p><a href="#">Site Location of Development Act</a></p>
25	<p><b>Historic Architectural</b></p> <p><a href="#">Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. 306101 et seq.)</a> Section 106 of the National Historic Preservation Act requires that federal agencies take into account the effects of their undertaking on historic properties that are included on the National Register of Historic Places or that meet the criteria for the National Register.</p>	<p><a href="#">Maine Historic Preservation Commission</a></p> <p><a href="#">Site Location of Development Act</a></p>
26	<p><b>Tribal Interests</b></p> <p><a href="#">American Indian Religious Freedom Act (42 U.S.C. 1996)</a> The American Indian Religious Freedom Act protects the rights of Native Americans to exercise their traditional religions by ensuring access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional sites. Because such sites may be eligible for inclusion in the National Register, any effects that may occur, as a result of providing access to them, may trigger Section 106 review under the National Historic Preservation Act. This law applies to traditional cultural sites located on federal Land.</p> <p><a href="#">Native American Grave Protection and Repatriation Act (25 U.S.C. 3001-3013; 18 U.S.C. 1170)</a> One of the major purposes of the Native American Grave Protection and Repatriation Act (NAGPRA) is to provide greater protection for Native American burial sites and more careful control over the removal of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony on federal and tribal lands. NAGPRA requires that Indian tribes or Native Hawaiian organizations be consulted whenever archeological investigations encounter, or are expected to encounter, Native American cultural items or when such items are unexpectedly discovered on federal or tribal lands. Excavation or removal of any such items also must be done under procedures required by the Archeological Resources Protection Act.</p>	<p><a href="#">Maine Historic Preservation Commission</a></p> <p>Maine has five federally recognized Tribes:                      - <a href="#">Houlton Band of Maliseets</a>                      - <a href="#">Aroostook Band of Micmacs</a>                      - <a href="#">Passamaquoddy Tribe at Indian Township</a>                      - <a href="#">Passamaquoddy at Pleasant Point</a>                      - <a href="#">Penobscot Indian Nation</a></p>

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Property Impacts/Existing Uses			
		Federal	State
27	Recreation & Conserved Land	<p><a href="#">Section 4(f) (23 CFR 774.5 (b)(2))</a> Public notice and an opportunity for public review and comment concerning the de minimis effects on the protected activities, features, or attributes of a public park, recreational area, or wildlife refuge must be provided.</p> <p><a href="#">Land and Water Conservation Fund Act (54 U.S.C. 200302 – 200310)</a> Section 6(f) of the Land and Water Conservation Fund Act (LWCFA) ensures that once an area has been funded with LWCFA assistance, it is continually maintained in public recreation use unless the National Park Service (NPS) approves substitution property of reasonably equivalent usefulness and location and of at least equal fair market value. The Secretary must approve all conversions of property acquired or developed with LWCFA assistance under this section to other than public outdoor recreation uses.</p>	Wildlife Management Areas: The Maine Department of Inland Fisheries and Wildlife (DIFW) manages 69 Wildlife Management Areas (WMAs) across the state. The mission and purpose of the State-owned WMAs is to provide a statewide, ecologically based system of land holdings for the protection and enhancement of important wildlife habitats that also provide opportunities for all types of public recreation, where those forms of recreation do not unduly impact the wildlife resources
28	Residential	<p><a href="#">Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs (42 USC Ch. 61)</a> The Uniform Act interprets the legal meaning of the federal constitutional provisions and defines procedures for establishing just compensation and providing due process to property owners. These just compensation and due process requirements apply to all federally funded MaineDOT activities, including those carried out by local public agencies and some private parties.</p>	
29	Business, Commercial & Institutional	<p><a href="#">Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs (42 USC Ch. 61)</a></p>	
30	Farmland	<p><a href="#">Farmland Protection Policy Act (7 U.S.C. 4201-4209)</a> The Farmland Protection Policy Act requires the consideration of adverse effects of all federally funded transportation projects on farmland preservation and to consider alternative actions that could lessen those impacts.</p>	
31	Aquaculture		
32	Economic Contribution of Existing Uses to Local Economy		

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Community, Economic, & Social Impacts			
		Federal	State
33	Visual/Aesthetics & Lighting	Human impacts to the Environment under NEPA	Natural Resources Protection Act rules <a href="#">Chapter 315, Assessing &amp; Mitigating Impacts to Scenic &amp; Aesthetic Uses</a>  <a href="#">Site Location of Development Act</a>
34	Noise	<a href="#">Noise Control Act (42 U.S.C. 4901-4918)</a> The Noise Control Act requires highway agencies proposing to use federal-aid highway funds for Type I projects perform a noise analysis of sufficient scope to provide information needed to make the determination if abatement is required, reasonable, and feasible.  Quiet Communities Act of 1978, the Noise Control Act 42 U.S.C. §4901 et seq. (1972).	<a href="#">Site Location of Development Act</a> .
35	Hazardous Waste	<a href="#">Resource Conservation and Recovery Act (42 U.S.C. 6901-6992k)</a> The Resources Conservations and Recovery Act (RCRA) requires that a property shown to be contaminated must have the materials removed from the site during construction and must be properly identified and managed. <a href="#">Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. 9601-9675)</a> (CERCLA) requires an environmental site assessment investigation which must address the liability of acquiring portions or the entire property. <a href="#">Superfund Amendments and Reauthorization Act (42 U.S.C. 9671-9675)</a> The Superfund Amendment and Reauthorization Act (SARA) requires an environmental site assessment investigation which must address the liability of acquiring portions or the entire property.	
36	Air Quality	<a href="#">Clean Air Act (42 U.S.C. 7401-7671g)</a> Section 176(c) of the Clean Air Act prevents federal agencies from approving any project or from issuing any permit for actions not conforming to the provisions of an approved Federal Implementation Plan (FIP) or a State Implementation Plan (SIP).	
37	Climate Change & Resiliency	NEPA Analysis may include assessing and mitigating potential impacts and/or benefits caused by the proposed action from greenhouse gas (GHG) emissions and climate resiliency considerations.	<a href="#">Maine Climate Council</a>
38	Host Community Benefits & Impacts		
39	Environmental Justice	<a href="#">E.O. 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations</a> Executive Order 12898 requires all federal agencies to ensure that environmental justice consideration is part of their missions by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations in the United States and its territories and possessions.	
40	Proximity to Labor Markets & Affordable Housing, etc.		
41	Legal or Policy Issues that affect implementation		