

Attachment A

Pre-Application Alternatives Analysis Matrix

Attachment A: Table A. Summary of Maine OSWP Alternative Sites that Meet Minimum Design Criteria and are Dismissed from Further Consideration

Alternative (Town)		Availability of Land	Logistics		Additional Cost Drivers
			Constructability	Operational Functionality	
Cousins Island (Yarmouth)		<p>Not reasonably available</p> <ul style="list-style-type: none">Owned/operated by NextEra Energy as a power plant.Requires decommissioning and demolition of Wyman Station and transmission lines.Incompatible with Town of Yarmouth 2024 Comprehensive Plan.	<p><u>Roadway access improvement</u></p> <ul style="list-style-type: none">5.5 miles from I-295 (HCP 1) introduces additional logistic challenges.The 2,000-foot Ellis C. Snodgrass Memorial Bridge, built in 1955, is narrow (22 feet wide). <p><u>Demolition of existing assets</u></p> <ul style="list-style-type: none">Would require the demolition and remediation of Wyman Station and associated infrastructure (e.g., transmission lines, five liquid storage tanks, etc.). <p><u>Material import/export unknown</u></p> <p><u>Ocean fill requirements unknown</u></p> <ul style="list-style-type: none">Some ocean fill would be required. <p><u>Dredging requirements unknown</u></p> <ul style="list-style-type: none">About 0.25-mile from the federal navigation channel; some dredging would be required (NOAA 2024).	<p><u>Not identified in Maine's three port strategy</u></p> <p><u>Port configuration was not evaluated</u></p> <p><u>Site control/conflict of uses</u></p> <ul style="list-style-type: none">Site not owned by State.Site adjoins residential properties. <p><u>Navigation safety was not evaluated</u></p>	<p>Purchase cost of private property</p> <p>Potential improvements along roadway access route, including improvements to Ellis C. Snodgrass Memorial Bridge</p> <p>Demolition of existing assets</p> <p>Remediation associated with the Wyman Station site</p>
Mitchell Field (Harpswell)	Option A	<p>Not reasonably available</p> <ul style="list-style-type: none">Town of Harpswell (owner) told MaineDOT an OSWP is incompatible with their Mitchell Field Master Plan (2019).	<p><u>Roadway access improvement</u></p> <ul style="list-style-type: none">12 miles from U.S. 1 (HCP 1) introduces additional logistic challenges. <p><u>Demolition of existing assets</u></p> <ul style="list-style-type: none">Would require the demolition of four structures, two of which are currently occupied by Merrymeeting Shellfish Company, and the existing pier. <p><u>Material import/export</u></p> <ul style="list-style-type: none">About 2.7M CY of excavated upland materials would need to be exported. This would take about 2.5 years to complete. <p><u>Ocean fill</u></p> <ul style="list-style-type: none">28 acres required. <p><u>Dredging is not required</u></p>	<p><u>Not identified in Maine's three port strategy</u></p> <p><u>Port configuration meets minimum design criteria</u></p>	<p>Purchase cost of private property</p> <p>Potential improvements along roadway access route</p> <p>Demolition of existing assets</p> <p>Potential remediation associated with areas of concern</p> <p>Upland material export would cost approx. \$95M-\$135M</p>
	Option B	<ul style="list-style-type: none">Current public recreational use. Potential for Section 4(f) of the U.S. DOT Act implications.Areas of concern for petroleum, contaminated soils, lead contamination, and potential UST identified by Summit (2006).	<p><u>Roadway access improvement</u></p> <ul style="list-style-type: none">12 miles from U.S. 1 (HCP 1) introduces additional logistic challenges. <p><u>Demolition of existing assets</u></p> <ul style="list-style-type: none">Would require the demolition of four structures, two of which are currently occupied by Merrymeeting Shellfish Company, and the existing pier. <p><u>Material import/export</u></p> <ul style="list-style-type: none">About 5.4M CY of excavated upland material would need to be exported. This would take about 5 years to complete. <p><u>Ocean fill</u></p> <ul style="list-style-type: none">5 acres required. <p><u>Dredging</u></p> <ul style="list-style-type: none">About 700,000-800,000 CY of dredging would be required to reach navigation channel.	<p><u>Site control/conflict of uses</u></p> <ul style="list-style-type: none">Site not owned by State.Site adjoins residential properties. <p><u>Navigation safety was not evaluated</u></p>	<p>Purchase cost of private property</p> <p>Potential improvements along roadway access route</p> <p>Demolition of existing assets</p> <p>Potential remediation associated with areas of concern</p> <p>Upland material export would cost approx. \$189M-\$270M</p> <p>Dredge material management would cost approx. \$126M-\$144M</p>

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Alternative (Town)		Availability of Land	Logistics		Additional Cost Drivers
			Constructability	Operational Functionality	
Estes Head Terminal (Eastport)	Option A	Owned by Eastport Port Authority and in maritime/industrial use.	<u>Roadway access improvement</u> <ul style="list-style-type: none">1 mile from SR 190 (HCP 1). <u>Demolition of existing assets</u> <ul style="list-style-type: none">Would require the demolition of eight structures and the existing pier. <u>Material import/export</u> <ul style="list-style-type: none">About 7.1M CY of soil/bedrock would be excavated and/or blasted from site. About 1.7M CY could be used as material for 5-acre ocean fill leaving 5.4M CY of excavated upland material for export. This would take about 5 years to complete. <u>Ocean fill</u> <ul style="list-style-type: none">12 acres required. <u>Dredging not required</u>	<u>Consistent with Maine's three port strategy</u> <u>Port configuration meets minimum design criteria</u> <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site not owned by State.Site adjoins residential properties. <u>Navigation safety was not evaluated</u> <u>FEMA Flood Elevation/Tidal Range</u> <ul style="list-style-type: none">The flood elevation for Eastport is +22 feet NAVD88, which would be the recommended deck height for the proposed OSWP.Coupled with a large tidal range and MLLW elevation -9.93 feet NAVD88, vessels and/or a semisubmersible barge would be subject to a maximum 32-foot height difference between the vessel and the port deck.A gap of this size would affect terminal efficiency due to limiting the time for WTG component delivery and for floating foundation loadout from deck. Potential conflict with Eastport Municipal Airport airspace (runway is about 1 mile to the northwest of site), would require further analysis.	Required land lease agreement with Eastport Port Authority Potential improvements along roadway access route Demolition of existing assets Upland material export would cost approx. \$189M-\$270M, not including rock blasting
	Option B		<u>Roadway access improvement</u> <ul style="list-style-type: none">1 mile from SR 190 (HCP 1). <u>Demolition of existing assets</u> <ul style="list-style-type: none">Would require the demolition eight structures and the existing pier. <u>Material import/export unknown</u> <u>Ocean fill</u> <ul style="list-style-type: none">This option results in the largest ocean fill area of the alternatives evaluated, at 54 acres.About 3.9M CY of soil/bedrock would need to be excavated and/or blasted. This removed material could be used for 54-acre ocean fill area leaving no rock to be exported or disposed of from the site. <u>Dredging not required</u>		Required land lease agreement with Eastport Port Authority Potential improvements along roadway access route Demolition of existing assets
Mack Point/Sears Island Hybrid (Searsport)		Sears Island owned by MaineDOT; Mack Point owned by Sprague. CPKC holds ROW in critical location. Sprague identified 65 acres of uplands area for OSWP. Mack Point Terminal in current maritime/industrial use.	Two separate sites make berth sharing not possible resulting in 2,200 feet for the total length of wharf (i.e., 700 feet more than the minimum requirement) and requires eight acres of pile supported, heavy-lift wharf structure. <u>Roadway access improvement</u> <ul style="list-style-type: none">About 0.5-mile from U.S. 1 (HCP 1) (Mack Point).About 2 miles from U.S. 1 (HCP 1) (Sears Island).Approx. 0.8-mile new alignment heavy haul road on Sears Island. <u>Demolition of existing assets</u> <ul style="list-style-type: none">Would require the demolition and remediation of five existing liquid petroleum storage tanks and two warehouses.Would require acquisition and relocation of about 2,000 feet of CPKC Railway for a practicable OSWP. <u>Material import/export</u> <ul style="list-style-type: none">About 555,000 CY of excavated upland materials would need to be exported, including 192,000 CY from Mack Point and 363,000 CY from Sears Island.About 355,000 CY of imported material would be required to complete ocean fill and surcharge (see	<u>Consistent with Maine's three port strategy</u> <u>Port configuration</u> <ul style="list-style-type: none">Two port configuration is not optimal requiring coordination and movement of components between ports for integration.To meet functional requirements of (1) foundation fabrication and launch and (2) staging and integration an 1,100-foot heavy-lift wharf is required at each location to handle inbound and outbound items simultaneously. <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site not completely owned by State.CPKC operates rail spur in critical location (Mack Point).Adjacent conservation easement on Sears Island.Informal recreational uses currently occurring on the Transportation Parcel (Sears Island). <u>Navigation safety</u> <ul style="list-style-type: none">East/west wharf orientation at Mack Point introduces risk due to prevailing southerly winds and waves that would affect port operations in 20-25 knot wind conditions.	Required land lease agreement with Sprague Potential improvements along two roadway access routes Proposed heavy haul road Preparation, construction, and maintenance of two sites Demolition and remediation of five existing liquid petroleum storage tanks and two warehouses Acquisition and relocation of CPKC rail spur Upland material export would cost approx. \$19M-\$28M. Material import would cost approx. \$7M-\$12M Dredge material management would cost approx. \$36M-\$54M

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Alternative (Town)	Availability of Land	Logistics		Additional Cost Drivers
		Constructability	Operational Functionality	
		table note), including 123,000 CY at Mack Point and 232,000 CY at Sears Island. <u>Ocean fill</u> <ul style="list-style-type: none">38 acres required. <u>Dredging</u> <ul style="list-style-type: none">About 200,000-300,000 CY of dredging would be required at Mack Point to reach navigation channel.		
Sprague (Searsport)	Owned by Sprague. CPKC holds ROW in critical location. Sprague identified 65 acres of uplands area for OSWP. Mack Point Terminal in current maritime/industrial use.	<u>Roadway access improvement</u> <ul style="list-style-type: none">About 0.5-mile from U.S. 1 (HCP 1). <u>Demolition/relocation of existing assets</u> <ul style="list-style-type: none">Would require the demolition and remediation of three existing liquid petroleum storage tanks and two warehouses.Sprague proposes to co-locate the existing liquid bulk dock with the existing dry bulk dock and add the OSWP delivery berth to this new pier. The pier in its existing configuration would not be able to handle WTG components due to its shape, loading capacity, and orientation, and would have to be redesigned and reconstructed as part of this project.Would require acquisition and relocation of about 2,000 feet of CPKC Railway for a practicable OSWP. <u>Material import/export</u> <ul style="list-style-type: none">About 1.2M CY of excavated upland materials would need to be exported. This would take about 1 year to complete. <u>Ocean fill</u> <ul style="list-style-type: none">35 acres required. <u>Dredging</u> <ul style="list-style-type: none">About 150,000-250,000 CY of dredging would be required to reach navigation channel.	<u>Consistent with Maine's three port strategy</u> <u>Port configuration does not meet minimum criteria</u> <ul style="list-style-type: none">Uplands area is long and narrow, including a 500-foot-wide "pinch point".Delivery berth is neither adjacent nor parallel to the uplands area.Wharf is not straight, thus reducing versatility.Simultaneously launching a floating foundation and integrating a foundation with WTG components would not be feasible at wharf, significantly reducing efficiency of the port. <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site not owned by State.Competing uses at replacement dock for Sprague's liquid and dry bulk operations and WTG components.CPKC operates rail spur in critical location. <u>Navigation safety</u> <ul style="list-style-type: none">East/west wharf orientation at Mack Point introduces risk due to prevailing southerly winds and waves that would affect port operations in 20-25 knot wind conditions.	Required land lease agreement with Sprague Potential improvements along roadway access route Demolition and remediation of three existing liquid petroleum storage tanks and two warehouses Demolition of existing liquid dock and dry bulk dock and construction of a replacement dock to support Sprague's liquid and dry bulk operations and WTG component delivery Acquisition and relocation of about 2,000 feet of CPKC rail spur Upland material export would cost approx. \$42M-\$60M Construction and maintenance of approx. 84,000 SF retaining wall or armored slope to preserve existing Sprague assets along eastern boundary of port Dredge material management would cost approx. \$27M-\$45M Any future expansion would require additional land, demolition, and remediation costs

See table notes on page 6.

Attachment A: Table B. Summary of Maine OSWP Alternative Sites that Meet Minimum Design Criteria and will be Carried Forward for Detailed Study (NEPA)

Alternative (Town)		Availability of Land	Logistics		Additional Cost Drivers
			Constructability	Operational Functionality	
Mack Point (Searsport)	Option A	Owned by Maine Port Authority, leased to Irving Oil and in industrial use. CPKC holds ROW in critical location.	<u>Roadway access improvement</u> <ul style="list-style-type: none">About 0.5-mile from U.S. 1 (HCP 1). <u>Demolition/displacement of existing assets</u> <ul style="list-style-type: none">Would require the demolition and remediation of eleven existing liquid petroleum storage tanks.Would require acquisition and relocation of about 2,500 feet of CPKC Railway for a practicable OSWP. <u>Material import/export unknown</u> <u>Ocean fill</u> <ul style="list-style-type: none">32 acres required. <u>Dredging</u> <ul style="list-style-type: none">Estimated to be 2M-2.2M CY to reach the navigation channel.	<u>Consistent with Maine's three port strategy</u> <u>Port configuration meets minimum design criteria</u> <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site not owned by State.CPKC operates rail spur in critical location. <u>Navigation safety was not evaluated for this location</u> <u>Future expansion</u> <ul style="list-style-type: none">Practicability and future planning of port development for the FOSW industry is constrained at site.	Required to buy out the Irving Oil lease. Potential improvements along roadway access route. Demolition and remediation of eleven existing liquid petroleum storage tanks. Acquisition and relocation of about 2,500 feet CPKC rail spur Dredge material management would add approx. \$360M-\$396M to construction costs.
	Option B.1	Owned by Sprague. CPKC holds ROW in critical location. Sprague identified 65 acres of uplands area for OSWP. Mack Point Terminal in current maritime/industrial use.	<u>Roadway access improvement</u> <ul style="list-style-type: none">About 0.5-mile from U.S. 1 (HCP 1). <u>Demolition/displacement of existing assets</u> <ul style="list-style-type: none">Would require the demolition and remediation of five existing liquid petroleum storage tanks and demolition of two warehouses.Would require acquisition and relocation of about 2,000 feet of CPKC Railway for a practicable OSWP. <u>Material import/export</u> <ul style="list-style-type: none">About 640,000 CY of materials would need to be exported.About 1.3M CY of imported material would be required to complete ocean fill and surcharge (see table note). <u>Ocean fill</u> <ul style="list-style-type: none">38 acres required. <u>Dredging</u> <ul style="list-style-type: none">About 900,000-1,000,000 CY of dredging would be required to reach navigation channel.	<u>Consistent with Maine's three port strategy</u> <u>Port configuration meets minimum design criteria</u> <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site not owned by State.CPKC operates rail spur in critical location. <u>Navigation safety</u> <ul style="list-style-type: none">East/west wharf orientation at Mack Point introduces risk due to prevailing southerly winds and waves that would affect port operations in 20-25 knot wind conditions. <u>Future expansion</u> <ul style="list-style-type: none">Practicability and future planning of port development for the FOSW industry is constrained at site.	Required land lease agreement with Sprague Potential improvements along roadway access route Demolition and remediation of five existing liquid petroleum storage tanks and two warehouses Acquisition and relocation of about 2,000 feet CPKC rail spur Upland material export would cost approx. \$22M-\$32M. Material import would cost approx. \$13M-\$23M Dredge material management would cost approx. \$162M-\$180M
	Option B.2		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 0.5-mile from U.S. 1 (HCP 1). <u>Demolition/displacement of existing assets</u> <ul style="list-style-type: none">Would require the demolition and remediation of five existing liquid petroleum storage tanks and demolition of two warehouses.Would require acquisition and relocation of about 2,000 feet of CPKC Railway for a practicable OSWP. <u>Material export</u> <ul style="list-style-type: none">About 640,000 CY of excavated upland materials would need to be exported.Import of 1.3M CY of material would be required to complete ocean fill and surcharge (see table note). <u>Ocean fill</u> <ul style="list-style-type: none">39 acres required. <u>Dredging</u> <ul style="list-style-type: none">About 200,000-300,000 CY of dredging would be required to reach navigation channel.		Required land lease agreement with Sprague Potential improvements along roadway access route Demolition and remediation of five existing liquid petroleum storage tanks and two warehouses Acquisition and relocation of about 2,000 feet of CPKC rail spur Upland material export would cost approx. \$22M-\$32M. Material import would cost approx. \$13M-\$23M Dredge material management would cost approx. \$36M-\$54M See Table F for construction cost detail

Attachment A: Table B. Summary of Maine OSWP Alternative Sites that Meet Minimum Design Criteria and will be Carried Forward for Detailed Study (NEPA)

Alternative (Town)		Availability of Land	Logistics		Additional Cost Drivers
			Constructability	Operational Functionality	
Sears Island (Searsport)	Option A	Owned by MaineDOT. Transportation parcel identified for marine transportation use.	<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.5-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 4.2M CY of excavated upland materials would need to be exported. This would take about 4 years to complete. <u>Ocean fill</u> <ul style="list-style-type: none">5 acres required. <u>Dredging</u> <ul style="list-style-type: none">About 900,000-1,000,000 CY of dredging would be required to reach navigation channel.	<u>Consistent with Maine's three port strategy</u> <u>Port configuration</u> <ul style="list-style-type: none">Purpose built facility offering highest efficiency for OSW developer. <u>Site control/conflict of uses</u> <ul style="list-style-type: none">Site owned by State.Adjacent conservation easement.Informal recreational uses currently occurring on the Transportation Parcel. <u>Navigation safety</u> <ul style="list-style-type: none">North/south wharf orientation is parallel and adjacent to the existing federal navigation channel with no adjacent structures and near open water to the south offering nearly unrestricted turning area. These factors contribute to a higher safety margin and lowers the threshold for operational limitations due to high wind conditions compared to Mack Point. <u>Future expansion is possible</u>	Potential improvements along roadway access route Proposed heavy haul road Upland material export would cost approx. \$147M-\$210M Dredge material management would cost approx. \$162M-\$180M
	Option B		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.7-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 4M CY of excavated upland materials would need to be exported. This would take about 4 years to complete. <u>Ocean fill</u> <ul style="list-style-type: none">34 acres required. <u>Dredging not required</u>		Potential improvements along roadway access route Upland material export would cost approx. \$140M-\$200M
	Option C		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.7-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 1.7M CY of excavated upland materials would need to be exported. This would take about 2 years to complete. <u>Ocean fill</u> <ul style="list-style-type: none">34 acres required. <u>Dredging not required</u>		Potential improvements along roadway access route Upland material export would cost approx. \$60M-\$85M
	Option D		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.8-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 2.4M CY of excavated upland materials would need to be exported. This would take about 2.5 years to complete. <u>Ocean fill</u> <ul style="list-style-type: none">35 acres required. <u>Dredging not required</u>		Potential improvements along roadway access route Upland material export would cost approx. \$84M-\$120M

Attachment A: Table B. Summary of Maine OSWP Alternative Sites that Meet Minimum Design Criteria and will be Carried Forward for Detailed Study (NEPA)

Alternative (Town)		Availability of Land	Logistics		Additional Cost Drivers
			Constructability	Operational Functionality	
	Option E		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.6-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 826,000 CY of excavated upland materials would need to be exported. This would take about 1 year to complete. <u>Ocean fill</u> <ul style="list-style-type: none">34 acres required. <u>Dredging not required</u>		Potential improvements along roadway access route Proposed heavy haul road Upland material export would cost approx. \$29M-\$41M
	Preferred		<u>Roadway access improvement</u> <ul style="list-style-type: none">About 2 miles from U.S. 1 (HCP 1).Approx. 0.5-mile new alignment heavy haul road on Sears Island. <u>Material export</u> <ul style="list-style-type: none">About 440,000 CY of excavated upland materials would need to be exported. This would take about 0.5 year to complete. <u>Ocean fill</u> <ul style="list-style-type: none">34 acres required. <u>Dredging not required</u>		Potential improvements along roadway access route Proposed heavy haul road Upland material export would cost approx. \$15M-\$22M See Table F for construction cost detail

Notes for Tables A and B: OSWP=offshore wind port; WTG=wind turbine generator; FOSW=floating offshore wind; HCP=highway corridor priority; SR=state route; CY=cubic yard; M=million; SF=square foot.

Highway Corridor Priority: HCP 1 is the highest priority roadway corridor in the state. These roads include the Maine Turnpike, the interstate system and key principal arterials designated as the National Highway System (NHS) like State Route 9 Brewer-Calais, US Route 2 Newport-Gilead and US Route 1 Houlton-Madawaska. The 1,873 miles of Priority 1 highway represent only 8 percent of the miles but carry fully 40 percent of all vehicle miles traveled in Maine. (MaineDOT 2024)

Surcharge: Surcharging consists of applying load on the ground surface more than that associated with the long-term development conditions to accelerate consolidation. This can take the form of temporary fill embankments, constructed to a height that exceeds the design finished surface level, which are cut back to the design level following an appropriate period of consolidation settlement. (CMW 2023)

Heavy Haul Road: See Table E and Figure 2 for more information.

Material Import/Export Assumptions (Moffat & Nichol)

- Time: Approximately 1 million CY would be removed by truck to a landfill per year.
 - One dump truck carries 15 CY.
 - 30-minute roundtrip from suitable waste site to/from OSWP.
 - 200 truck trips would remove 3,000 CY per day.
- Export Cost: \$35/CY-\$50/CY
 - This range of direct cost estimates (i.e., no overhead, profit, etc.) was produced in association with the preliminary, detailed cost estimates prepared for Mack Point Option B.2 and Sears Island Preferred Option and accounts for material excavation and trucking to suitable disposal sites in Maine.
- Import Cost: \$20/CY-\$35/CY
 - This range of direct cost estimates (i.e., no overhead, profit, etc.) was produced in association with the preliminary, detailed cost estimates prepared for Mack Point Option B.2 and Sears Island Preferred Option and accounts for trucking of suitable infill and surcharge material from available sites in Maine.

Dredge Assumptions (Haley Aldrich, Moffat & Nichol)

- Time:
 - Average production rate of 1,000 CY/day.
 - Anticipate work-in-water restrictions Nov. 8 to April 9.
- Cost: \$180/CY
 - This unit cost is the average of a cost range (\$167/CY-\$192/CY) developed for a dredge material management strategy that includes dredging and a hybrid disposal plan using an uplands landfill, a CAD cell, and open ocean disposal for the Mack Point Alternative (Haley Aldrich 2024). MaineDOT considers this dredge material management strategy a reasonable and feasible disposal alternative.

The State will apply for USACE and Maine DEP permits for the Preferred Sears Island Option. The State will carry the Preferred Sears Island Option and the Mack Point Option B.2 forward for detailed study through the NEPA process.

Attachment A: Table C. Potential Impacts to Surface Waters, Maine OSWP Alternatives

Alternative (Town)		Freshwater Wetlands (acres)	Wetlands of Special Significance ⁵ (WOSS) (acres)	Coastal Wetlands (acres)			Vernal Pools (No.)	Streams (No. feet)	Manmade Ditches (feet)
				Ocean Fill ⁶	Dredge Area ^{7, 8}	TOTAL			
Cousins Island (Yarmouth) ¹		Unknown							
Mitchell Field (Harpswell) ²	Option A	15	Unknown	23	5	28	6	4 3,100	Unknown
	Option B	16	Unknown	5	20	25	6	4 4,000	Unknown
Estes Head Terminal (Eastport) ¹	Option A	3	Unknown	12	0	12	Unknown	2 1,200	Unknown
	Option B	Unknown	Unknown	54	0	54	Unknown	Unknown	Unknown
Mack Point/Sears Island Hybrid (Searsport) ³		18	1	38	13	51	1	4 700	Unknown
Sprague (Searsport) ³		7	<1	35	15	50	0	1 50	Unknown
Mack Point (Searsport) ³	Option A	Unknown	Unknown	32	90	122	Unknown	Unknown	Unknown
	Option B.1	10	<1	38	90	128	1	2 400	0
	Option B.2	10	<1	39	22	61	0	2 400	0
Sears Island (Searsport) ^{3, 4}	Option A	41	29	5	22	27	7	6 2,300	1,000
	Option B	21	15	34	0	34	4	1 200	2,700
	Option C	31	17	34	0	34	3	3 700	500
	Option D	26	12	35	0	35	4	4 1,100	1,600
	Option E	31	22	34	0	34	3	4 1,900	100
	Preferred	30	24	34	0	34	3	5 1,500	230

All impacts are preliminary, rounded, and subject to change based on the development of detailed designs. Shaded alternatives will be carried forward for detailed design and environmental evaluation (NEPA) (also see Table D). ¹Wetland and streams data sourced from the U.S. Fish and Wildlife National Wetland Inventory (NWI). ²Wetland and streams data sourced from Stantec (2017) evaluation of Mitchell Field site. ³Wetland and streams data field collected in the 2023 and 2024 seasons for MaineDOT’s OSWP Project. (VHB 2024). ⁴The potential impacts for the heavy haul road are not included in this table. ⁵WOSS are a subset of freshwater wetlands, not in additional to. ⁶The ocean fill area would result in a complete loss of coastal wetlands. ⁷The dredge area is associated with temporary subtidal disturbance activities. ⁸Dredge area estimates do not include dredge impacts that would be associated for CAD cell disposal.

Attachment A: Table D. Summary of Potential Impacts to Surface Waters, Material Export for Maine OSWP Alternatives that will be Carried Forward for Detailed Study (NEPA)

Alternative	Wetlands (acres)	WOSS ³ (acres)	Coastal Wetlands (acres)	Vernal Pools (No.)	Streams (No. feet)	Manmade Ditches (feet)	Sand Dune (acre)	Material Export (CY)
Mack Point ¹ (Figure 3)	10	<1	61	1	2 400	0	0	640k
Sears Island ^{1, 2} (Figure 4)	30	24	36	3	5 1,500	230	<1	440k
All impacts are preliminary, rounded, and subject to change based on the development of detailed designs. ¹ Wetland and streams data field collected in the 2023 and 2024 seasons for MaineDOT’s OSWP Project. (VHB 2024). ² The potential impacts for the heavy haul road are not included in this table; refer to Table E. ³ WOSS are a subset of freshwater wetlands, not in additional to.								

Attachment A: Table E. Potential Impacts to Surface Waters by Proposed Heavy Haul Road Options on Sears Island^{1,2}

Roadway Alignment	Wetlands	Vernal Pools	Streams Ditch (feet)
Improve Existing Roadway	1.4	0	358 5,903
New Alignment Roadway – Option 1	1.1	0	463 0
New Alignment Roadway – Option 2 (MaineDOT’s Preferred)	0.8	0	403 0
¹ MaineDOT identified the need for roadway improvements on Sears Island as part of the proposed OSWP project. The roadway is expected to include about 40-44 feet of pavement to accommodate two through lanes and wide shoulders for trucks to be able to pull out of the travel lane into a safe waiting area prior to entering or exiting the port. The three roadway options are based on a centerline alignment (Moffat & Nichol August 2024) plus a 100-foot-buffer (i.e., 200-foot corridor) (Figure 2). Option 1 roadway is designed to be completely on the Transportation Parcel; 100-foot buffer was slightly reduced near Conservation Parcel conflict. MaineDOT considers the 200-foot corridor to be a conservative width to accommodate the roadway width, cut/fill activities, and drainage and utility requirements. ² Potential impacts are calculated from the south end of the causeway to the Preferred Sears Island Option port footprint.			

Attachment A: Table F. Preliminary Detailed Cost Estimates, Mack Point Option B.2 & Sears Island Preferred Option

	Alternative	
	Mack Point (Option B.2)	Sears Island (Preferred)
Land Acquisition ¹	\$295M-\$490M	\$0
Demolition/Relocation ²	TBD	\$0
Site Remediation ²	TBD	\$0
Terminal Access Road	TBD	\$4M ³
Dredging	\$42M	\$0
Environmental Mitigation	\$18M ⁴	\$26M ⁵
Port Construction	\$572M	\$525M
<p>Source: Mack Point and Sears Island Cost Estimates (Moffatt & Nichol 2024).</p> <p>¹Land acquisition (and/or lease costs) are based on preliminary discussions between MaineDOT, MPA, and Sprague resulting in lease costs of between \$90,000-\$150,000 per acre per year, which is consistent with market rates (2023) for comparable properties. The State anticipates a 50-year lease on about 65 acres, resulting in a cost of \$295M-\$490M over the life of the port. No negotiations or agreements have occurred between the State of Maine and Sprague regarding these costs. Costs associated with CPKC ROW acquisition are unknown. Acquisition of rail ROW is a lengthy process requiring approval by the federal Surface Transportation Board (STB). MaineDOT owns Sears Island and there would be no associated land costs. ²Demolition and remediation costs associated with five existing liquid petroleum storage tanks and two warehouses at Mack Point Terminal are not included, nor are any costs associated with acquisition and relocation of existing CPKC rail spur. ³Cost is based on MaineDOT bid history for per-mile construction cost of new alignment roadway. ⁴Environmental mitigation costs at Mack Point assumes no mitigation costs associated with dredging impacts based on USACE and MaineDEP feedback. ⁵Environmental mitigation costs at Sears Island includes mitigation associated with about 9.25 acres of previously filled wetlands requiring after the fact authorization but does not include mitigation associated with impacts to the sand dune.</p>		