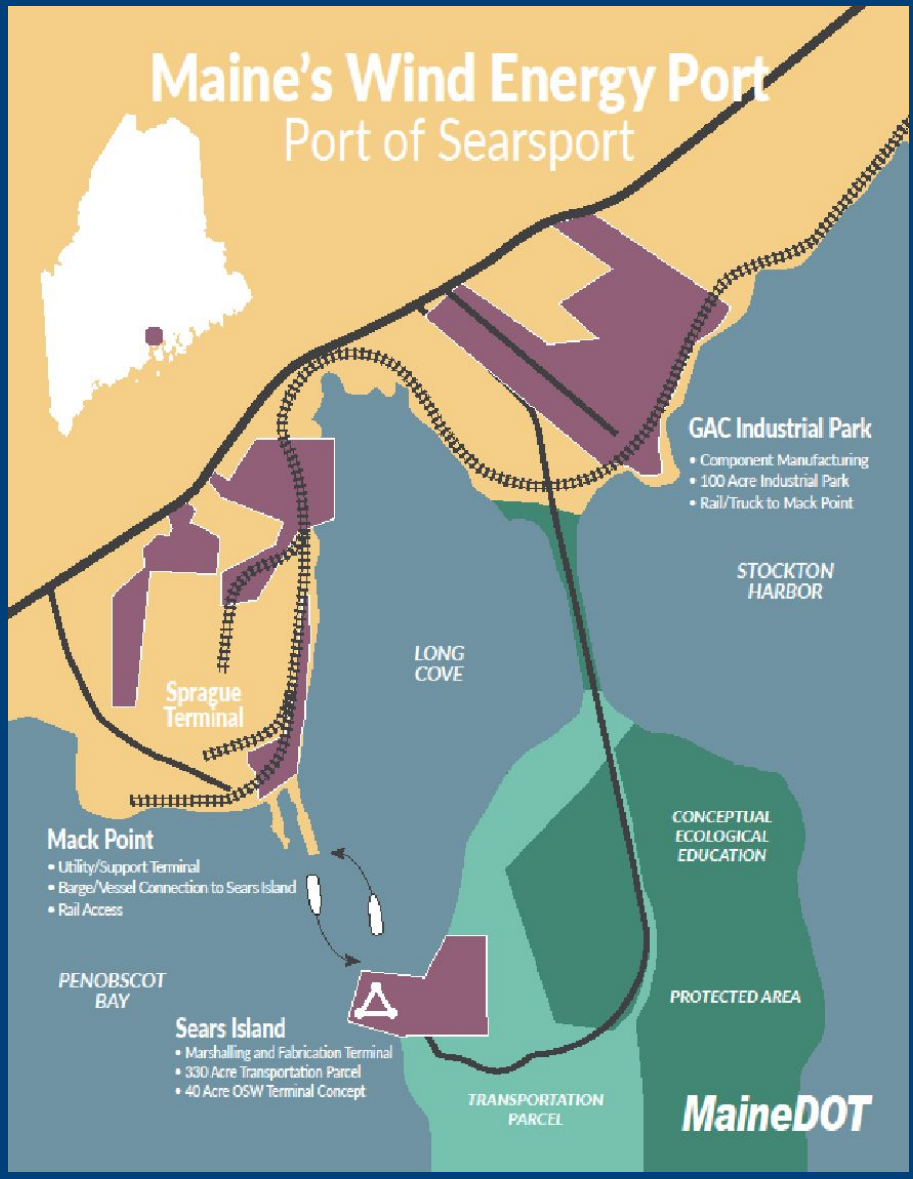
A Potential Wind Port Hub
Port of Searsport

A Long-term, Multi-terminal Concept
to Support
Research and Commercial OSW

November 2021



Searsport OSW Feasibility Study

- Directed by Gov. Mills in March 2020.
- Identify site(s) for marshalling and hull fabrication and WTG manufacturing facility to be analyzed further to support research and commercial scale phases of OSW.
- Does not relate to the demonstration project phase.
- Mills Administration issued a press release on on 11/23 regarding next steps to re: ports to support OSW.

OSW Port Feasibility Study

Terminal Criteria – What is Needed to Support OSW and Compete for the Green Jobs That Come With It

- 1300-1600 ft quay (2 berths + assembly area)
- 33-35 draft at berth
- 50-60 ft deep sinking basin
- 40-80 acres of level upland area
- 5000 psf quay loading (lbs per sq. ft.)
- 3000 psf upland loading
- Launching System – submersible barge, rails, other
- No air draft (height) restrictions

Five Stages of Quay-side Floating Offshore Wind Turbine Assembly

Fabrication

Loadout

Float Off

WTG Installation at Berth

Tow to Installation Site

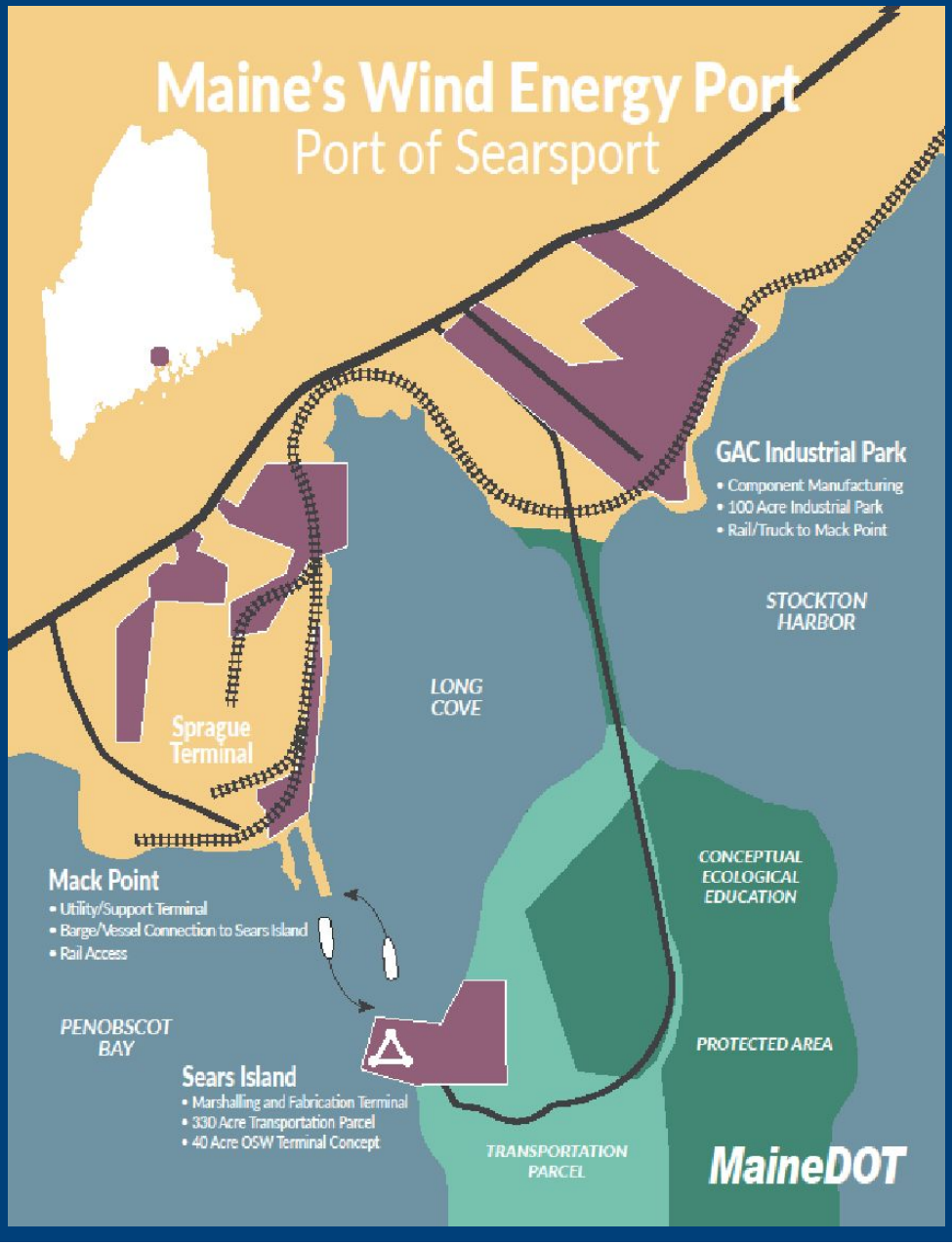
Searsport OSW Feasibility Study

Four sites evaluated in Searsport:

1. Mack Point
2. Sprague Put Parcel
3. GAC Chemical
4. Sears Island

A Wind Port Hub Concept

- No final decisions have been made. More environmental, design, and stakeholder outreach work is necessary.
- A concept that incorporates Mack Point, a relatively small piece of Sears Island, and potentially GAC site.
- Could provide more versatility than any OSW port project planned on the US East Coast.
- Fully utilize Mack Point. Provide rail and truck connections to Sears Island via barge.
- All three sites may support the overall goal of commercial scale fabrication of foundations and building floating wind turbines.



Searsport OSW Feasibility Study

Why Sears Island is in the mix for further analysis?

- Available contiguous acreage
- Deep water
- Limited dredging potential
- No conflicting rail line
- No conflicting marine terminal operations
- Potentially lower cost
- State-owned land that was reserved for development, fewer conflicting development and operational goals.

Mack Point: Concept for Research Scale OSW Project (10-12 turbines)

38 acres total (30 Acre Upland/7.9 Acre Heavy Lift Area)
$165 Million ±
Substantial amount of dredging
Support up to 150-200 MW OSW
Infrastructure for research scale project

Subject to Permitting, Design, Cost

Phased Development

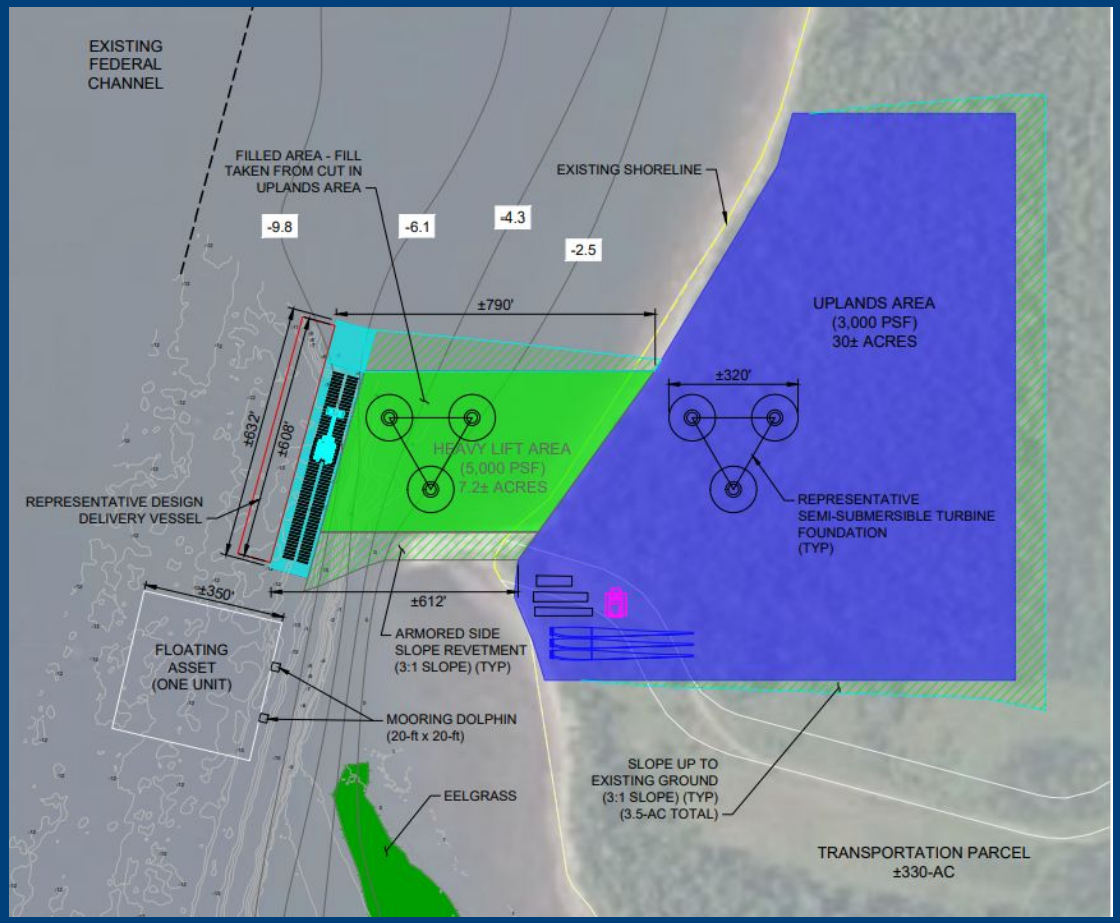
Mack Point: Concept for Commercial Scale OSW Project

Subject to Permitting, Design, Cost

Phased Development

65 acres total (40 Acre Upland/25 Acre Heavy Lift Area)
$284 Million ±
Substantial amount of dredging
Support up to 1000 MW OSW
Infrastructure for commercial scale project

Sears Island: Concept for Research Scale OSW Project (10-12 turbines)

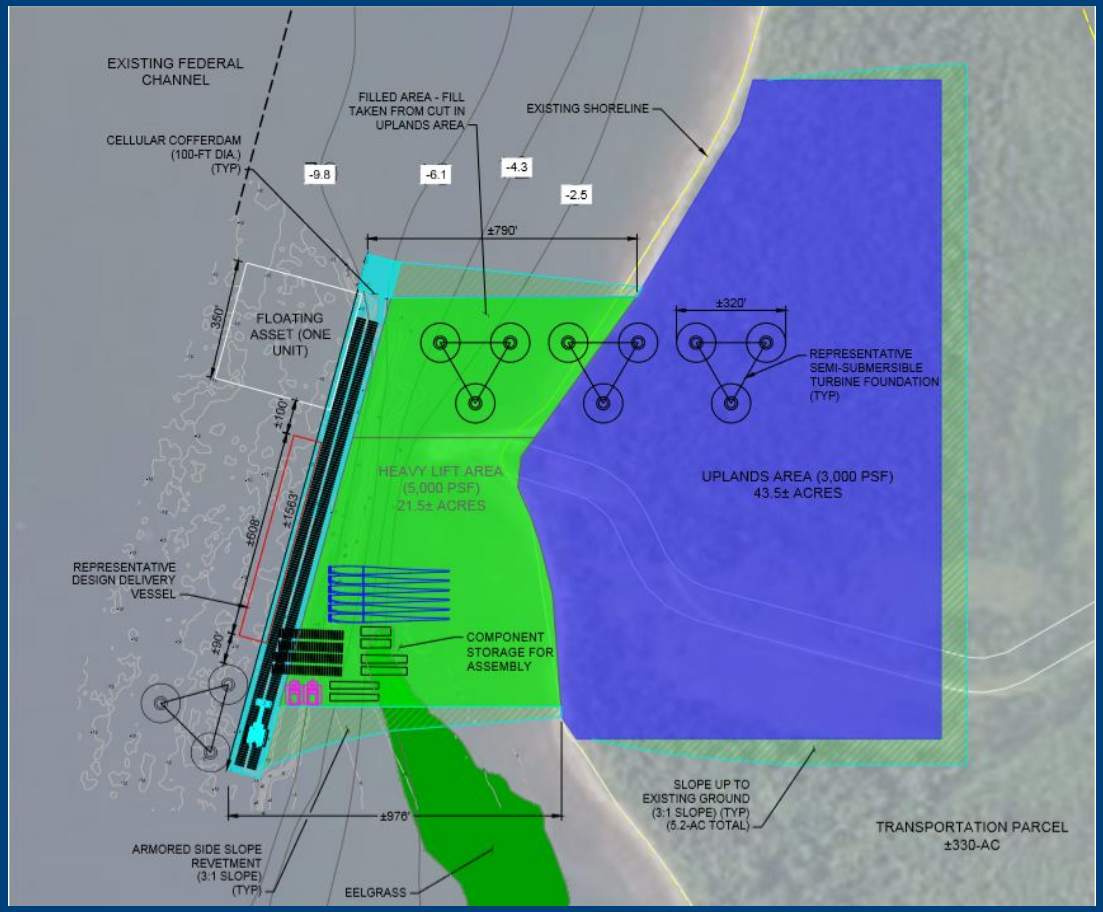


Subject to Permitting, Design, Cost

Phased Development

37 acres total (30 Acre Upland/7.2 Acre Heavy Lift Area)
$100 Million ±
Limited Dredging Potential
Support 150-200 MW OSW
Infrastructure for research scale project

Sears Island: Allows Maine to Compete for Commercial Scale OSW



Subject to Permitting, Design, Cost

Phased Development

65 acres total (21.5 Acre Heavy Lift/43.5 Acre Upland)
20% of Transportation Parcel, 7% of Island
$184 Million ±
Limited Dredging Potential
Support up to 1,000 + MW OSW
Generates thousands of good-paying, green jobs.

A Whole Island Approach

to Sustainably Support Wind Energy and the Education / Ecological Uses

- Western side: Transportation parcel and OSW marshalling yard.
- Remainder: east side, south end: conservation easement and education and maintenance uses in northeast corner.
- Education / ecological concepts shown are consistent with the Sears Island Joint Use Plan, the conservation easement, and informal discussions between MaineDOT and FOSI over the years.
- Actual improvements TBD by conservation groups (incl. MCHT).

Education / Maintenance Improvements

- Visitor/Education Center
- Water access
- Trail improvements
- Restrooms
- Additional parking areas
- Explore endowment to support operations

Companion Study of Potential for a State-Wide OSW Port Network

State-wide port infrastructure develops as the OSW industry matures in Maine

Portland
- Proximity to MeRA
- Existing assets that could pivot to OSW, available acreage on the water
- O&M, crew transfer facilities

Searsport
- Hub location – core of Maine OSW port infrastructure
- Foundation fabrication, WTG installation.
- Other nearby facilities provide utility.

Eastport
- Long term potential exists as a WTG component manufacturing site.
- Available acreage and natural deep water at the Estes Head Pier.
- Existing marine facilities and workforce.

Next Steps Re: Port of Searsport

- Continue initial rollout of next steps. (Present)
- Develop a robust stakeholder and public communication process. (Present)
- Start environmental assessment, geotechnical work / bathymetric work on site. (Late 21 / Early 22)
- Move beyond concepts. Consider practicable alternatives, designs, analyze environmental and cost implications. (2022)
- Pursue federal funding. (2022)