

# MEMORANDUM

## Maine Natural Areas Program

Department of Agriculture, Conservation and Forestry  
State House Station #177, Augusta, Maine 04333

**Date:** October 4, 2019

**To:** Jami MacNeil, DEP

**From:** Kristen Puryear, Ecologist

**Re:** Rare and exemplary botanical features, L-28397-4E-A-N, Spinney Boat Ramp and Pier System, Alna, Maine.

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files for rare or unique botanical features in the vicinity of the proposed site in response to your request received October 3, 2014 for our agency's comments on the project.

According to our current information, there is a rare plant (Horned Pondweed) and wetland type (Mixed Saltmarsh) near the project area. The project itself does not immediately impact either of these features. However, all measures to prevent downstream siltation during construction and installation of the permanent pilings should be employed to avoid impacts to the Mixed Saltmarsh and the species that depend on it. Please refer to the table below and attached map and factsheets for more information about these features.

Feature	State Status	State Rank	Global Rank	Occurrence Rank	Notes
Mixed Saltmarsh <i>Mixed graminoid-forb saltmarsh</i>	N/A	S3	G5	BC Good-Fair	Dyer & Sheepscot River Marshes
Horned Pondweed <i>Zanichellia palustris</i>	SC	S2	G5	H Historical	Alna Center Tidal Marsh

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys.

Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site. You may want to have the site inventoried by a qualified field biologist to ensure that no undocumented rare features are inadvertently harmed.

The Maine Natural Areas Program is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We welcome the contribution of any information collected if a site survey is performed.

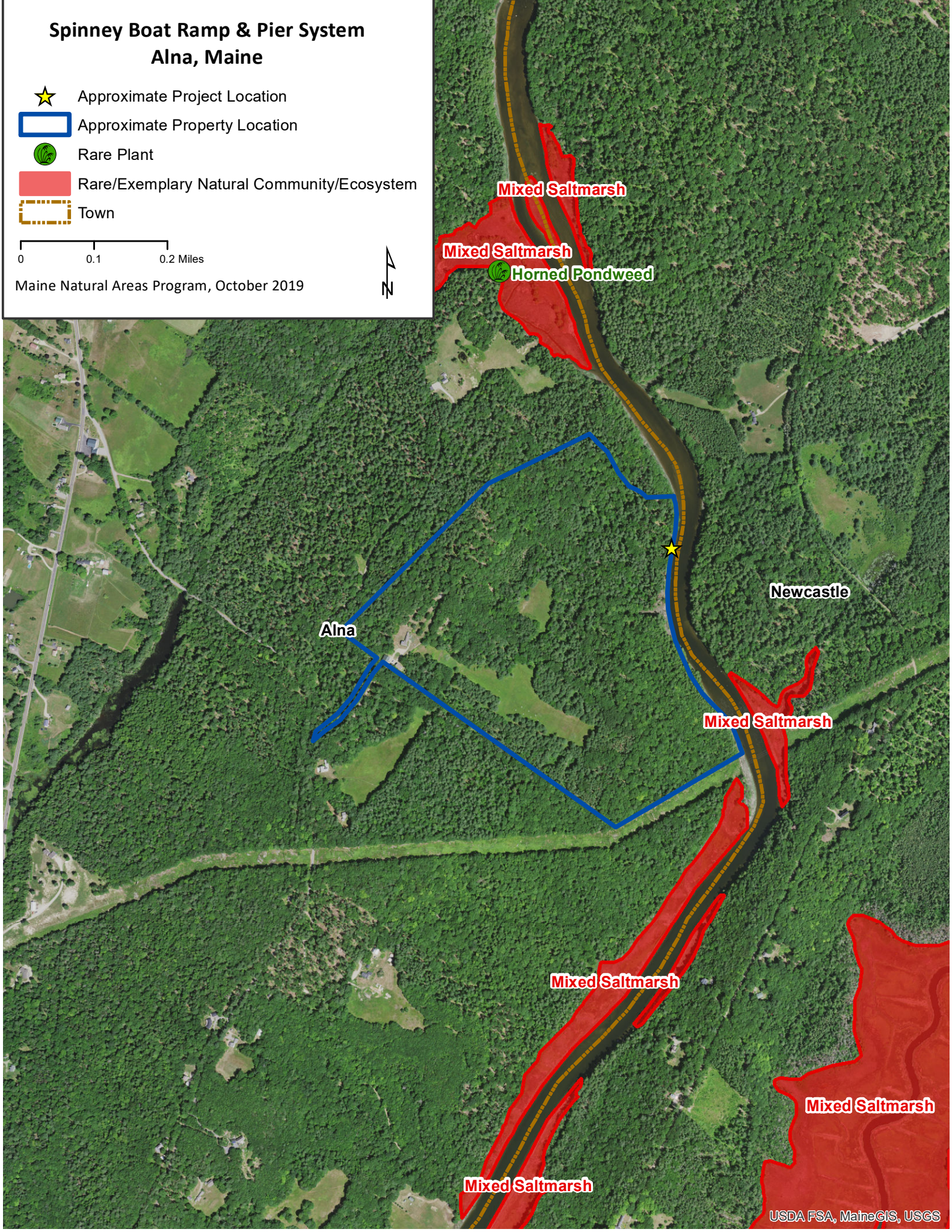
Thank you for using the Maine Natural Areas Program in the environmental review process. Please do not hesitate to contact our office if you have further questions about the Maine Natural Areas Program or about rare or unique botanical features at this site.

# Spinney Boat Ramp & Pier System Alna, Maine

- ★ Approximate Project Location
- Approximate Property Location
- Rare Plant
- Rare/Exemplary Natural Community/Ecosystem
- ⋯ Town

0 0.1 0.2 Miles

Maine Natural Areas Program, October 2019





# Mixed Saltmarsh

*State Rank S3*

## Community Description

These saltmarshes contain a mixture of graminoids and forbs, sometimes with patches of saltmarsh cordgrasses, but saltmeadow cordgrass is not strongly dominant. Chair-maker's rush is almost always present, at least in small amounts. Dominants can vary, but indicator species include creeping bentgrass, freshwater cordgrass, sea lavender, wire rush, saltmarsh bulrush, New England aster, saltmarsh sedge, and narrow-leaved cattail. Sweetgrass is often present, though not abundant. The vegetation occurs as a mosaic of dominants and lacks the strong zonation typical of the larger *Spartina* Saltmarshes.

## Soil and Site Characteristics

These are often fringe marshes in sheltered coastal pockets, estuaries, and tidal creeks; not typically covering large acreages although they may be strung along a fairly long stretch of shoreline. They often occur along tidal creeks, or as a shoreline fringe in coves. Vegetation consists predominantly of low marsh species (saltmarsh regularly inundated twice daily by tides).

## Diagnostics

These are tidal marshes in which various saltmarsh plants share dominance with

cordgrasses and/or black-grass; chair-maker's rush is typically present and may be dominant; saltmarsh sedge is also characteristic. Vegetation tends to be patchy rather than zoned.

## Similar Types

*Spartina* Saltmarshes have many of the same species, but have much greater relative cover of saltmeadow cordgrass, smooth cordgrass, and black-grass. They also appear more uniform, and tend to occur at the outer reaches of estuaries (back-barrier marshes and finger marshes). Brackish Tidal Marshes also share many species, but lack the saltmarsh cordgrasses and other strictly saltmarsh species (black-grass, saltmarsh bulrush, saltmarsh false-foxglove, sea lavender, etc.).



Mixed Graminoid - Forb Saltmarsh

## Conservation, Wildlife, and Management Considerations

Saltmarshes have received considerable conservation attention. Many occur on public lands or private conservation lands, only a few of which are listed. With development of the uplands that border these marshes, maintenance of appropriate wetland buffers can help reduce degradation that could result from adjacent land uses.

Saltmarshes are important nesting habitat for Nelson's sharp-tailed sparrow, seaside sparrow, and the rare saltmarsh sharp-tailed sparrow. These wetlands also provide foraging habitat for a large number of wading birds and shorebirds, including the rare least tern. The big bluet, a rare damselfly, inhabits saltmarsh ponds with emergent vegetation in southern Maine.

## Distribution

Coastwide; almost all of the east coastal Maine saltmarshes contain this type. Extends eastward into the Canadian Maritimes (Laurentian Mixed Forest Province) and westward into New Hampshire and Massachusetts.

Landscape Pattern: Small Patch

## Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

### Herb

- Alkali bulrush\*
- Black-grass\*
- Chaffy sedge\*
- Chair-maker's rush\*
- Common arrow-grass
- Creeping bentgrass\*
- Freshwater cordgrass
- New York aster\*
- Salt-loving spikerush\*
- Saltmeadow cordgrass\*
- Wire rush\*

## Associated Rare Plants

- Gaspé arrow-grass
- Marsh-elder
- Saltmarsh false-foxglove
- Saltmarsh sedge
- Small saltmarsh aster

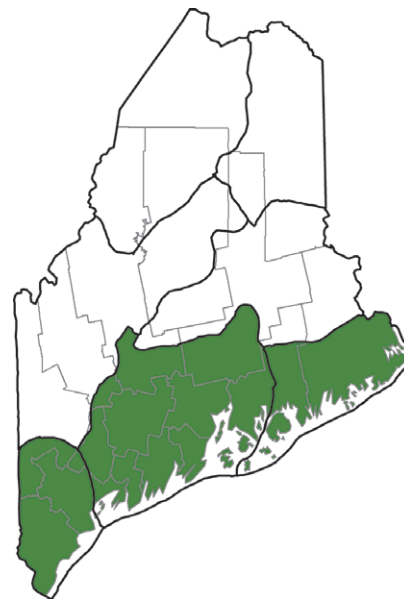
## Associated Rare Animals

- Big bluet
- Black-crowned night-heron
- Laughing gull
- Least tern
- Saltmarsh sharp-tailed sparrow
- Short-eared owl

## Examples on Conservation Lands You Can Visit

- Cobscook Bay State Park - Washington Co.
- Great Wass Island Preserve - Washington Co.
- Petit Manan National Wildlife Refuge - Hancock Co.
- Reid State Park - Sagadahoc Co.
- Scarborough Marsh Wildlife Management Area - Cumberland Co.

## Location Map



- Community is known from this Ecoregion
- Community may occur in this Ecoregion
- Bailey's Ecoregion
- County



Saltmarsh Bulrush

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## Maine Natural Areas Program

### *Zannichellia palustris* L.

#### Horned Pondweed

- [State Rank](#): S2
- [Global Rank](#): G5
- [State Status](#): Special Concern

**Habitat:** Fresh, brackish, or alkaline waters and stream edges. [Tidal wetland (non-forested, wetland)]

**Range:** Newfoundland to Alaska, south throughout United States to Mexico. Also South America, Africa, Eurasia.



**Aids to Identification:** Horned pondweed is a submersed aquatic with slender, thread-like branches arising from a fragile rhizome. It can be distinguished from other pondweeds by its linear, opposite leaves and its distinctive fruits borne in the axils. The fruits are short, flattened, somewhat toothed along one edge and have a distinct beak (1-2 mm long) on the tip. In flower, the carpels have a distinctive, funnel-shaped stigma.

**Ecological characteristics:** Along our coast, horned pondweed grows on the mud at the lowest level of the intertidal zone where it is exposed only at full low tide and is subjected to higher salinities than most other estuarine species. It usually grows singly and is rare even within its few stations. A pH range of 6.5-7.2 and chloride range of 185-1200 mg/l has been reported for water where *Zannichellia* is found in New England.



**Phenology:** Fruits can be found July - October.

**Family:** Potamogetonaceae

**Synonyms:** *Zannichellia palustris* L. var. *major* (Hartman) Koch.

**Known Distribution in Maine:** This rare plant has been documented from a total of 15 town(s) in the following county(ies): Cumberland, Hancock, Knox, Lincoln, Penobscot, Sagadahoc, Waldo, York.

**Reason(s) for rarity:** Habitat is naturally scarce and in



some cases has been altered by human activities. Possibly overlooked.



**Conservation considerations:** Prevent degradation of marsh and estuary habitat from adjacent land uses.

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#### Contact

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