

## NATURAL RESOURCES

### Introduction

Critical natural resources define much of the physical character of Union. Natural resources are also described in the Agricultural and Forestry Resources Chapter and the Water Resources Chapter.

### State Goal

*To protect the State's other critical natural resources, including without limitation, wetlands, wildlife and fisheries habitat, sand dunes, shorelands, scenic vistas, and unique natural areas.*

### Analyses

- (1) *Are any of the community's critical natural resources threatened by development, overuse, or other activities?*

Many of the identified critical natural resources in Union are in wetlands and shoreland zones and accordingly are protected by relevant ordinance provisions. Residential development has been relatively --- modest and small-scale around wetlands, allowing for the continued protection of larger habitats. Commercial development has occurred along existing roadway corridors, primarily in the village area and along portions of Routes 17 and 131, outside of most critical resource areas, with the exception of ---. Other activities that have threatened habitats in recent years in Union include the discharge of polluted runoff and inadequately treated septage into ---. See the Public Facilities and Services Chapter for more information.

- (2) *Are local shoreland zone standards consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities?*

The Town's shoreland zoning standards are consistent with state guidelines and with the standards placed on adjacent shorelands in neighboring communities.

- (3) *What regulatory and non-regulatory measures has the community taken or can the community take to protect critical natural resources and important natural resources?*

By updating its ordinances and through the recommendations in this Comprehensive Plan, the Town is attempting to continue to protect critical natural resources. The shoreland zone ensures a good measure of protection of waterbodies and wetlands. As noted, many of the Town's critical natural resources are found in the shoreland zone and in wetlands. Protection for critical natural resources could be improved by incorporating the map information included in this chapter into the land use ordinances and the permitting process. See the Water Resources Chapter and Land Use Chapter for more information on municipal ordinances and state regulations that help to protect natural resources.

Non-regulatory measures include working with property owners and land trusts to promote the voluntary use of conservation easements in areas with critical natural resources. The use of conservation easements or purchases may be more acceptable to residents and voters than increased regulations. Easements and conservation purchases result in permanent protection while municipal ordinances are subject to future amendments or repeal. Parklands currently held by the Town of Union, include these properties: Ayers Park, Union Common, and ---.

Preserves owned and managed by the Georges River Land Trust include Pool Preserve (three acres along the St. George River), Stickney Preserve (no public access), and 100-Acre Island on Crawford Pond (access only available through private lands). The Georges River Land Trust also holds conservation easements for other private lands the do not allow public access, approximately 283 acres.

Medomak Valley Land Trust is active in Union as well. They manage 65 acres on Clarry Hill in Union and more land in Waldoboro. The Carroll Farm Trail is located on a 70-acre parcel known as Sweetgrass Farm Winery and Distillery. The farm is under private ownership, and is open to the public year-round for low-impact recreation, while the Medomak Valley Land Trust maintains the trail.

*(4) Is there current regional cooperation or planning underway to protect shared critical natural resources? Are there opportunities to partner with local or regional groups?*

The Town has worked with state agencies, the Georges River Land Trust and Medomak Valley Land Trust to protect shared natural resources like the St George River, Medomak River, Crawford Pond, Clarry Hill, and ---. The Town has worked with state agencies regarding conservation efforts and easements in other parts of the community as well.

### **Conditions and Trends**

*(1) The community's Comprehensive Planning Natural Resources Data Set prepared and provided to the community by the Department of Inland Fisheries and Wildlife, Department of Environmental Protection and the Office, or their designees.*

The data set has been incorporated into this chapter and in the state-prepared excerpted maps titled Critical Habitat (includes High Value Plant and Animal Habitats), USFWS Priority Trust Species Habitats, Wetlands Characterization, and Undeveloped Habitat Blocks. See also, the Water Resources Chapter.

Areas of special concern include these threatened species in Union: tidewater mucket and yellow lampmussel (freshwater mussel), spotted pondweed, upland sandpiper, and swamp white oak. Species of special concern in Union include the bald eagle and wild garlic. Along a portion of the southwestern border with Washington are wetlands termed by the state as an Appalachian-Acadian Basin Swamp Ecosystem. Atlantic Salmon spawning and rearing habitat are found along the St George River from Sennebec Pond to Round Pond. Significant wildlife habitats, as defined by the State, are present in Union consisting of candidate (approximate) deer wintering

areas and inland waterfowl and wading bird areas, which are found in wetlands and shorelands. See the map titled Critical Habitat (includes High Value Plant and Animal Habitats).

Wetlands (freshwater emergent, freshwater forested/shrub) are found throughout the Town adjacent to lakes, ponds and rivers. See the map titled Wetlands Characterization.

A sizeable amount of area between roadways is an un-fragmented habitat block that benefits multiple species. See the map titled Undeveloped Habitat Blocks.

**State Definition of Critical Natural Resources** (105 Chapter 208 CP Review Criteria Rule)

*“Critical natural resources” means the following natural resources which under federal and/or state law warrant protection from the negative impacts of development:*

1. *Resource Protection District areas as set forth in MDEP Guidelines for Municipal*
  - a. *Shoreland Zoning Ordinances (Chapter 1000 § 13.A) pursuant to the Mandatory Shoreland Zoning Act (38 MRSA §438-A, subsection 1);*
2. *Wetlands of special significance as defined in MDEP Wetlands and Waterbodies Protection Rules (Chapter 310 § 4);*
3. *Significant wildlife habitat as defined in the Natural Resources Protection Act (38 MRSA §480-B(10))*
4. *Threatened, endangered and special concern animal species habitat as identified and mapped by MIFW pursuant to the Maine Endangered Species Act (12 MRSA, Chapter 925);*
5. *Significant freshwater fisheries spawning habitat as identified and mapped by MIFW or MDMR;*
6. *Natural communities that are critically imperiled (S1), imperiled (S2) or rare (S3) as defined and mapped by MNAP;*
7. *Areas containing plant species declared to be threatened or endangered by the MDOC.*
8. *Coastal sand dune systems as defined in the Natural Resources Protection Act (38 MRSA §480-B(1));*
9. *Fragile mountain areas as defined in the Natural Resources Protection Act (38 MRSA §480-B(3)); or*
10. *National Natural Landmarks designated by the National Park Service pursuant to its National Natural Landmark Program (36 Code of Federal Regulation, Section 62).*

- (2) A map or description of scenic areas and scenic views of local importance, and regional or statewide importance, if available.

The physical character of much of Union is enhanced by its scenic resources, which contribute to the local quality of life and the value of surrounding properties. Perhaps the most important scenic water views and vistas are those visible to the public from public roads and public parks. See the map titled Scenic Views [\[TO BE CREATED\]](#) for the location of prominent views.

<b>Scenic Resources in Union</b>			
<b>Site Name</b>	<b>Feature (s) Seen from Site</b>	<b>Prioritized Rating - Ranking</b>	<b>Protection Status Ownership/Easement</b>
Ayers Park	Seven Tree Pond		Town-owned
Carroll Farm Trail	Medomak River		Privately-owned, with Medomak Valley Land Trust easement
Clarry Hill	Fields		Medomak Valley Land Trust Preserve with Maine DACF easement
Coggins Hill	Fields		
Overlock Hill	Fields		
Union Common	Village		Town-owned
<a href="#">ADD AS APPROPRIATE</a>			

Source: Town of Union

**Policies**

- (1) To conserve critical natural resources in the community.
- (2) To coordinate with neighboring communities and regional and state resource agencies to protect shared critical natural resources.

**Strategies**

<b>Natural Resources: Strategies</b>	<b>Responsible Parties</b>	<b>Timeframe</b>
(1) <i>Ensure that land use ordinances are consistent with applicable state law regarding critical natural resources.</i>	Select Board, Planning Board, Code Enforcement Officer, Ordinance Review Committee, Town Voters	Immediate and Ongoing
(2) <i>Designate critical natural resources as Critical Resource Areas in the Future Land Use Plan.</i>	Comprehensive Planning Committee	Immediate
(3) <i>Through local land use ordinances, require subdivision or non-residential property developers to look for and identify critical natural resources that may be on site and to take appropriate measures to protect those resources, including but not limited to, modification of the proposed site design, construction timing, and/or extent of excavation.</i>	Select Board, Planning Board, Code Enforcement Officer, Ordinance Review Committee, Town Voters	Midterm
(4) <i>Through local land use ordinances, require the planning board (or other designated review authority) to include as part of the review process, consideration of pertinent BwH maps and information regarding critical natural resources.</i>	Select Board, Planning Board, Code Enforcement Officer, Ordinance Review Committee, Town Voters	Immediate and Ongoing
(5) <i>Initiate and/or participate in interlocal and/or regional planning, management, and/or regulatory efforts around shared critical and important natural resources.</i>	Select Board, Town Manager, Planning Board, and Code Enforcement Officer	Midterm and Ongoing
(6) <i>Pursue public/private partnerships to protect critical and important natural resources such as through purchase of land or easements from willing sellers.</i>	Select Board, Town Manager, and Property owners	Long Term and Ongoing
(7) <i>Distribute or make available information to those living in or near critical or important natural resources about current use tax programs and applicable local, state, or federal regulations.</i>	Town Clerk and Code Enforcement Officer	Immediate and Ongoing

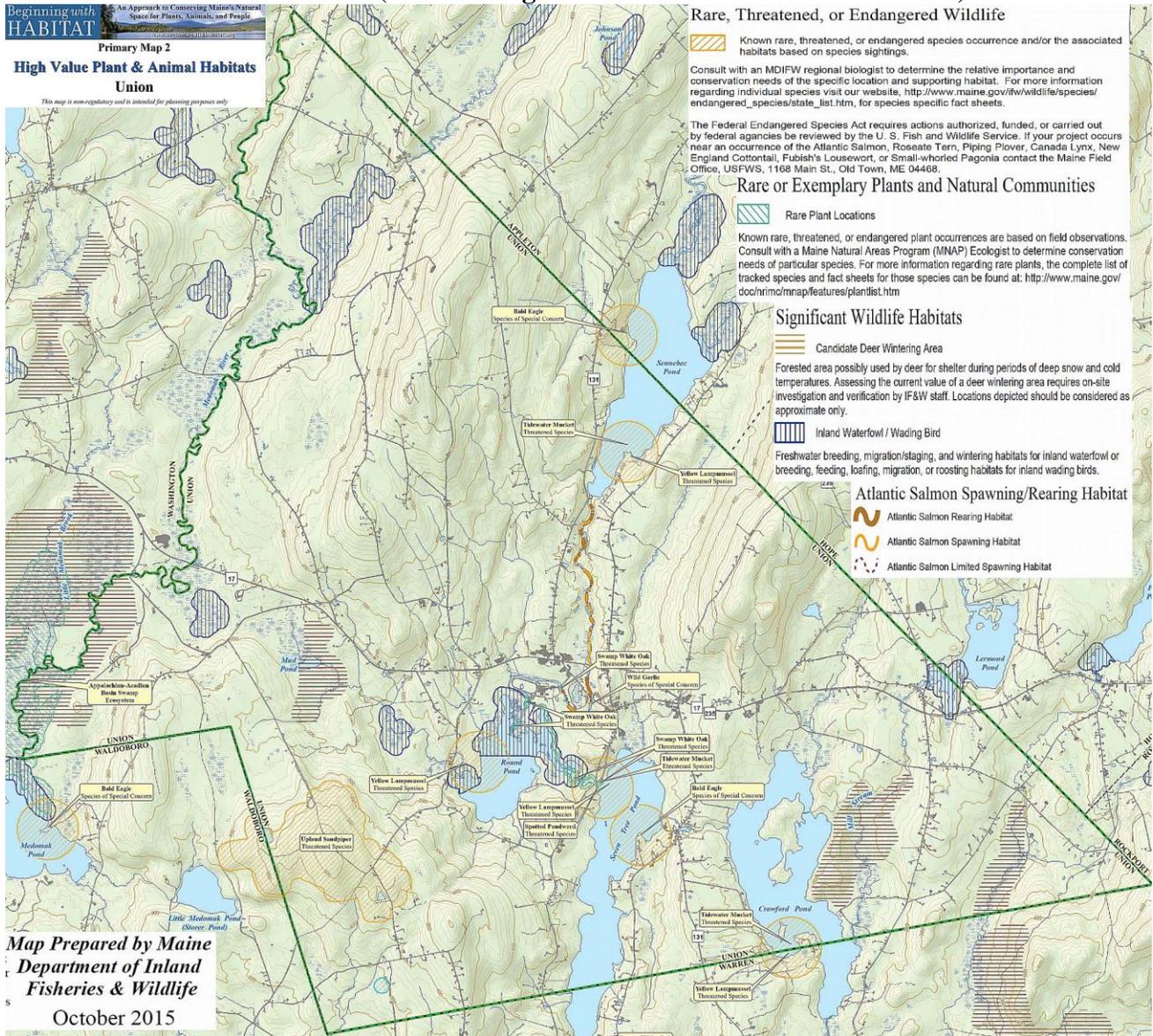
Note: Strategies proposed in this Comprehensive Plan are assigned responsible parties and a timeframe in which to be addressed. Immediate is assigned for strategies to be addressed within two years after the adoption of this Comprehensive Plan, Midterm for strategies to be addressed within five years, and Long Term for strategies to be addressed within ten years. In addition, Ongoing is used for regularly recurring activities.

SELECTED STRATEGIES FROM THE COMPREHENSIVE PLAN ADOPTED IN 2005 ARE SHOWN BELOW. RELEVANT STRATEGIES SHOULD BE RETAINED OR REVISED AND INCLUDED IN THE UPDATED COMPREHENSIVE PLAN.

**Recommendations/Implementation Strategies**

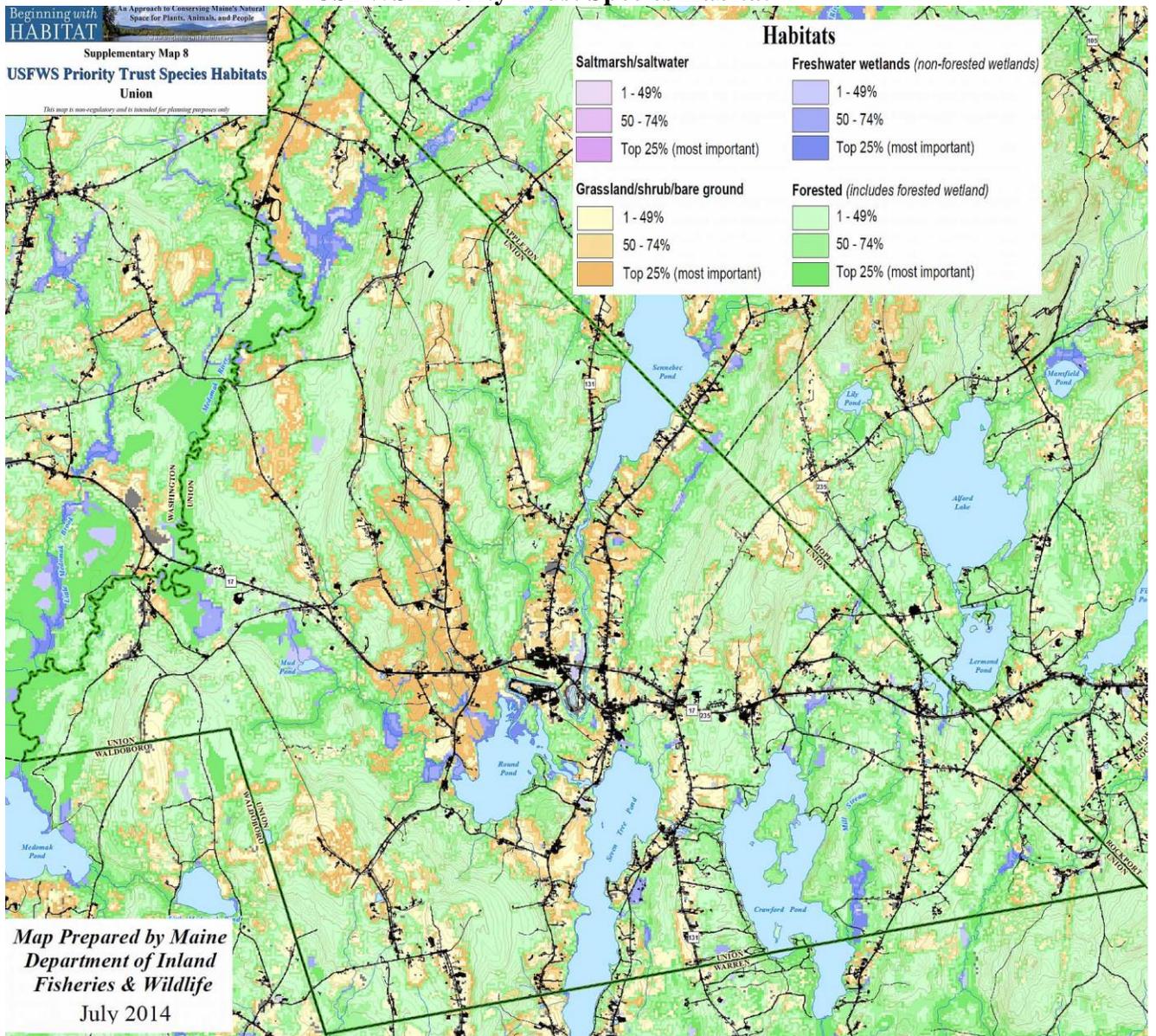
- Additional development should be concentrated close to existing “village” centers, where soil, drainage and other conditions allow and in order to protect and preserve natural resources. Amend the Land Use Ordinance to encourage development to occur primarily in these areas. (Planning Board, Town Meeting) Immediate
- Consult and cooperate with neighboring communities by (a) drafting land use ordinance amendments that harmonize environmental performance standards to protect shared critical habitats and water bodies, and by (b) notifying neighboring planning boards of proposals for large developments near their borders and/or on shared water bodies (with Appleton and Warren) and shared aquifers (with Washington). (Planning Board, Conservation Commission, Town Meeting) Ongoing

### Critical Habitat (includes High Value Plant and Animal Habitats)



Source: Maine IF&W, 2015 (excerpt of state-prepared map)

### USFWS Priority Trust Species Habitat



Source: Maine IF&W, 2015 (excerpt of state-prepared map)

Note: Map legend continues on next page.

## Legend for USFWS Priority Trust Species Habitat Map

### Priority Trust Species

The 91 USFWS Gulf of Maine Priority Trust Species include animals and plants that regularly occur in the Gulf of Maine watershed and meet any of the following criteria:

- + Federally endangered, threatened, or candidate species;
- + Migratory birds, sea-run fish and marine fish that show significant and persistent declining population trends, or have been identified as endangered or threatened by 2 or 3 states in the Gulf of Maine watershed;
- + Species of concern as identified in the U.S. Shorebird Conservation Plan, Colonial Waterbird Plan or Partners in Flight.

An asterisk (\*) following the name in the list of priority species below indicates that high value habitat depicted on the map at left has the potential to support that species.

#### **BIRDS**

American bittern\*  
 American black duck\*  
 American oystercatcher  
 American woodcock\*  
 Arctic tern  
 Bald eagle\*  
 Baltimore oriole\*  
 Bay-breasted warbler  
 Bicknell's thrush  
 Black scoter  
 Black tern  
 Black-bellied plover  
 Blackburnian warbler\*  
 Blackpoll warbler  
 Black-throated blue warbler\*  
 Blue-winged warbler  
 Buff-breasted sandpiper  
 Canada warbler\*  
 Cape May warbler  
 Chestnut-sided warbler\*  
 Common loon\*  
 Common tern  
 Eastern meadowlark  
 Field sparrow  
 Golden-winged warbler  
 Grasshopper sparrow  
 Hudsonian godwit  
 Killdeer\*  
 Least sandpiper  
 Least tern  
 Little blue heron  
 Little gull  
 Louisiana waterthrush

#### **BIRDS (cont'd)**

Marsh wren\*  
 Nelson's sparrow  
 Northern flicker \*  
 Northern goshawk\*  
 Northern harrier  
 Olive-sided flycatcher  
 Osprey\*  
 Peregrine falcon  
 Pied-billed grebe\*  
 Piping plover  
 Prairie warbler  
 Purple sandpiper  
 Razorbill  
 Red crossbill  
 Red-headed woodpecker  
 Red knot  
 Red-shouldered hawk\*  
 Roseate tern  
 Ruddy turnstone  
 Saltmarsh sparrow  
 Sanderling  
 Scaup (greater and lesser)  
 Seaside sparrow  
 Sedge wren  
 Semipalmated sandpiper  
 Short-billed dowitcher  
 Short-eared owl  
 Snowy egret  
 Solitary sandpiper  
 Spruce grouse  
 Surf scoter  
 Tricolored heron

#### **BIRDS (cont'd)**

Upland sandpiper  
 Veery\*  
 Whimbrel  
 Whip-poor-will  
 White-winged scoter  
 Wilson's Snipe\*  
 Wood duck\*  
 Wood thrush\*  
 Yellow rail

#### **FISHERIES**

Alewife\*  
 American eel\*  
 American shad\*  
 Atlantic salmon\*  
 Atlantic sturgeon  
 Blueback herring\*  
 Bluefish  
 Horseshoe crab  
 Shortnose sturgeon  
 Winter flounder

#### **PLANTS**

E. prairie fringed orchid  
 Furbish's lousewort  
 Robbins' cinquefoil  
 Small whorled pogonia

#### **MAMMAL**

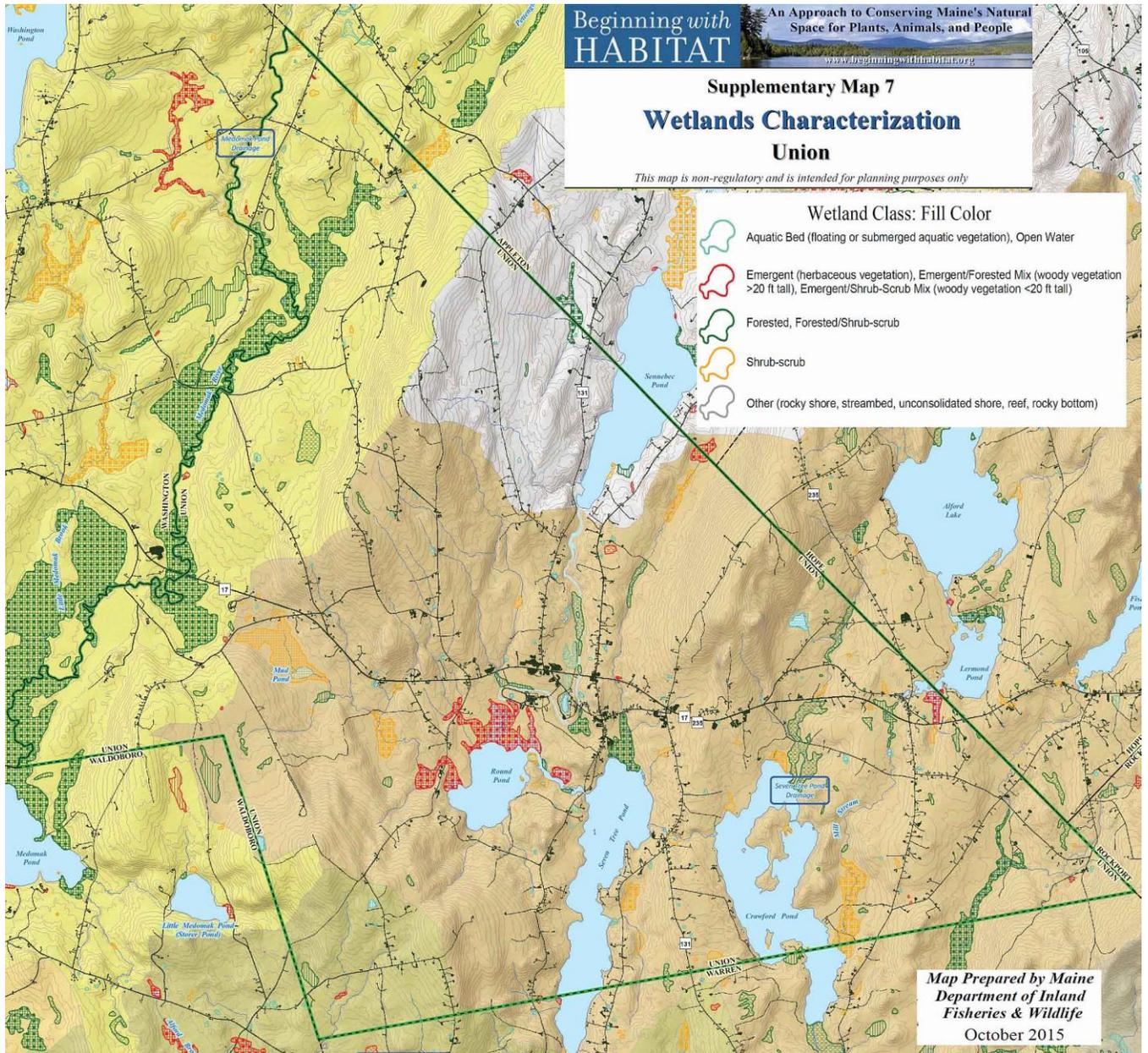
Canada lynx

#### **REPTILE**

Plymouth redbelly turtle

Source: Maine IF&W

### Wetlands Characterization



Source: Maine IF&W, 2015 (excerpt of state-prepared map)

Note: Map legend continues on next page.

## Legend for Wetlands Characterization Map

### LEGEND

This map depicts all wetlands shown on National Wetland Inventory (NWI) maps, but categorized them based on a subset of wetland functions. This map and its depiction of wetland features neither substitute for nor eliminate the need to perform on-the-ground wetland delineation and functional assessment. In no way shall use of this map diminish or alter the regulatory protection that all wetlands are accorded under applicable State and Federal laws. For more information about wetlands characterization, contact Elizabeth Hertz at the Maine Department of Conservation (207-287-8061, elizabeth.hertz@maine.gov).

The Wetlands Characterization model is a planning tool intended to help identify likely wetland functions associated with significant wetland resources and adjacent uplands. Using GIS analysis, this map provides basic information regarding what ecological services various wetlands are likely to provide. These ecological services, each of which has associated economic benefits, include: floodflow control, sediment retention, finfish habitat, and/or shellfish habitat. There are other important wetland functions and values not depicted in this map. Refer to [www.maine.gov/dep/water/wetlands/ipwetfv2.html](http://www.maine.gov/dep/water/wetlands/ipwetfv2.html) for additional information regarding wetland functions and values. Forested wetlands and small wetlands such as vernal pools are known to be underrepresented in the National Wetlands Inventory (NWI) data used to create this map. The model developed to estimate the functions provided by each wetland could not capture every wetland function or value. Therefore, it is important to use local knowledge and other data sources when evaluating wetlands, and each wetland should be considered relative to the whole landscape/watershed when assessing wetland resources at a local level.

-  **Organized Township Boundary**
-  **Unorganized Township**
-  **Selected Town or Area of Interest**
-  **Developed:** Impervious surfaces including buildings and roads



**Subwatersheds-** The shaded, background polygons are subwatersheds (areas that drain to a particular lake, wetland, pond, river, stream, or the ocean). The subwatersheds are shaded to show topographic relief. This "hillshading" assumes the sun is shining from the northwest, so ridgetops and northwest-facing slopes appear light, whereas valleys and southeast-facing slopes appear dark. Because many areas of Maine are relatively flat, the topographic relief shown here has been exaggerated to make the details easier to see.

### Wetland Functions: Fill Pattern

*Some wetlands may have more than one function (fill pattern)*



**RUNOFF / FLOODFLOW ALTERATION**

Wetlands provide natural stormwater control capabilities. As natural basins in the landscape, wetlands are able to receive, detain, and slowly release stormwater runoff. Wetland shelves along stream banks naturally regulate flood waters by providing an area for swollen stream flows to expand and slow, thereby protecting downstream properties. This map assigns Runoff/Floodflow Alteration Functions to wetlands that are (a) contained in a known flood zone, (b) associated with a surfacewater course or waterbody, and (c) with slope < 3%.

**AND/OR**

**EROSION CONTROL / SEDIMENT RETENTION**

Wetlands act as natural sponges that can hold water, allowing suspended particles such as sediment to settle out. The dense vegetation in most wetlands helps to stabilize soil and slow water flows, thereby reducing scouring and bank erosion. This map assigns Erosion Control / Sediment Retention functions to wetlands with (a) slope < 3%; (b) emergent vegetation; and (c) close proximity to a river, stream, or lake.



**FINFISH HABITAT**

Wetlands with documented finfish populations, including wetlands adjacent to a river, stream, or lake.

**AND/OR**

**SHELLFISH HABITAT**

Inland wetlands and streams can directly affect the status of coastal shellfish harvest areas. Fecal coliform bacteria and waterborne nutrients resulting from land use changes away from the coast can travel via surface water to harvestable flats. One failed septic system near a stream could close a mudflat several miles away. Excessive nutrients can reduce water clarity and stimulate epiphytic growth that degrades eelgrass meadows. Conservation of freshwater wetlands and stream buffers in coastal watersheds is a key component in marine resource conservation. This map assigns a Shellfish Habitat function to wetlands within 0.5 miles of (a) identified shellfish habitat, (b) identified shellfish closure areas, or (c) mapped eelgrass beds OR palustrine wetlands directly connected by a stream of < 0.5 mile in length to (a) identified shellfish habitat, (b) identified shellfish closure areas, or (c) mapped eelgrass beds.



**PLANT/ANIMAL HABITAT**

Nearly all wildlife species, and many of Maine's plant species, depend on wetlands during some part of their life cycle. For the purposes of this map, wetlands containing open water or emergent vegetation, 3 or more wetland vegetation classes (see below), and within ¼ mile of a known rare, threatened, or endangered plant or animal occurrence, within ¼ mile of a mapped significant or essential habitat, or within ¼ mile of a rare or exemplary natural community have been assigned this function. Rare element occurrences and mapped habitats can be found on Map 2 High Value Plant & Animal Habitats.



**OTHER FUNCTIONS**

**CULTURAL/EDUCATIONAL.** Wetlands within ¼ mile of a boat ramp or school have been assigned this value as these wetlands are likely candidates for use as outdoor classrooms, or similar social benefit. Wetlands rated for other functions listed above may also demonstrate cultural/educational values although not expressly shown.

**OR**

**NO DOCUMENTED FUNCTION.** The basis of this characterization is high altitude aerial photos. Photo quality often limits the information that can be interpreted from small wetland features, or those with dense canopy cover. Although not assigned a function under this study, ground surveys may reveal that these wetlands have multiple functions and values.

### Wetland Class: Fill Color



Aquatic Bed (floating or submerged aquatic vegetation), Open Water



Emergent (herbaceous vegetation), Emergent/Forested Mix (woody vegetation >20 ft tall), Emergent/Shrub-Scrub Mix (woody vegetation <20 ft tall)



Forested, Forested/Shrub-scrub



Shrub-scrub

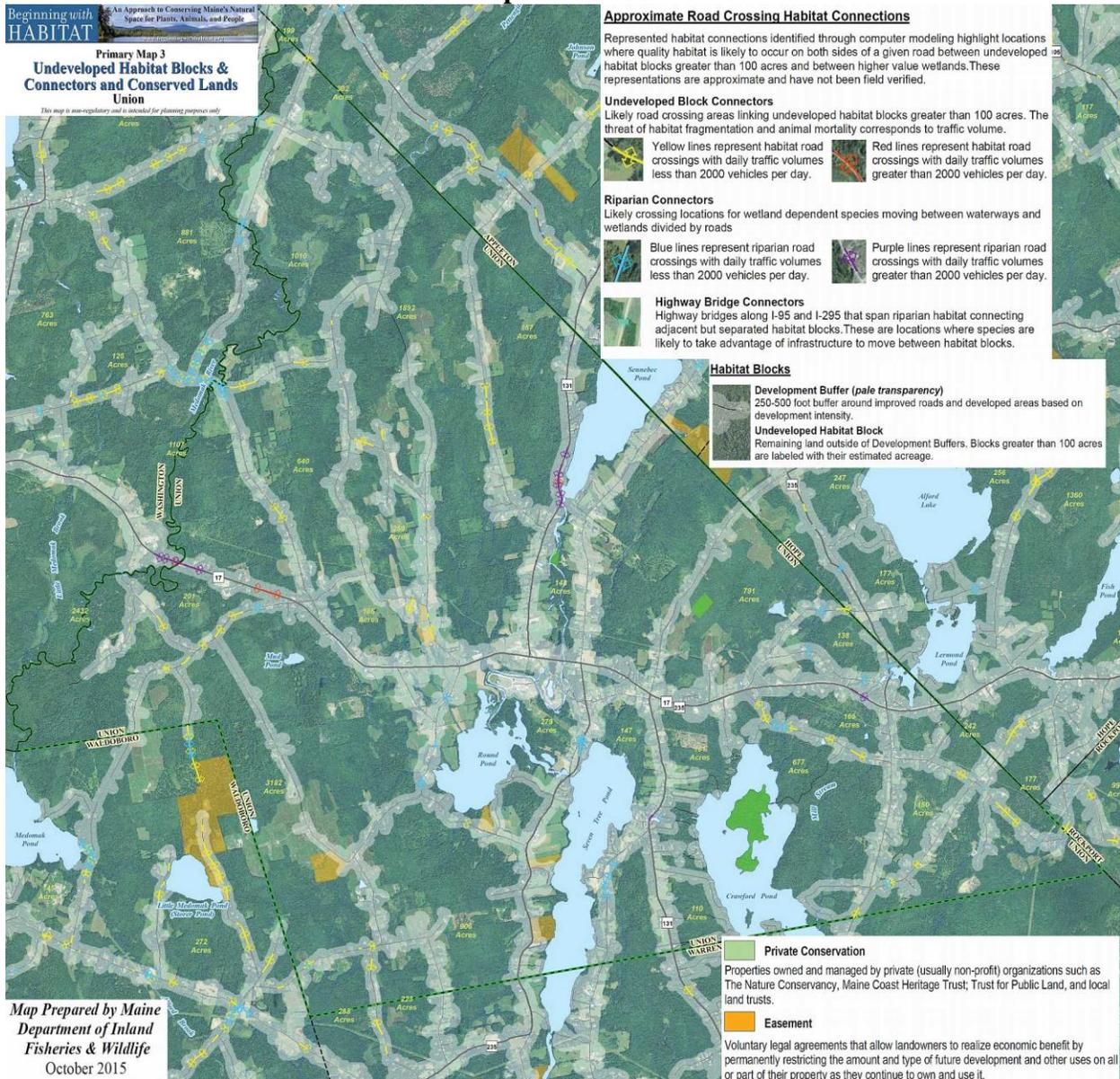


Other (rocky shore, streambed, unconsolidated shore, reef, rocky bottom)

National Wetlands Inventory (NWI) maps (the basis of wetlands shown on this map) are interpreted from high altitude photographs. NWI Wetlands are identified by vegetation, hydrology, and geography in accordance with "Classification of Wetlands and Deepwater Habitats" (FWS/OBS-79/31, Dec 1979). The aerial photographs document conditions for the year they were taken. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State, or local government. NWI maps depict general wetland locations, boundaries, and characteristics. They are not a substitute for on-ground, site-specific wetland delineation.

Source: Maine IF&W

## Undeveloped Habitat Blocks



Source: Maine IF&W, 2015 (excerpt of state-prepared map)

Notes: This map does not include all public land and private land under conservation easements in Union. Most lands under conservation easement in Union do not presently include public access. However, any landowner has the right to offer public use with permission.

**NOTE: A SCENIC RESOURCES MAP WILL BE CREATED BASED UPON TOWN INPUT.**