

Appendix 1A Summary and Key to the Inventory of Harpswell Wetlands

The Importance of Wetlands for Our Habitat, Scenic Views, Recreation and Health

Wetlands are abundant in Maine, a blessing born of the state's glacial history. They vary from ephemeral ponds to great salt marshes.... To hunt, fish, bird watch, or simply listen to a chorus of frogs on an early spring evening is to partake of Maine's wetland heritage.¹

Twenty-seven wetlands have been identified as having important functions for the Town of Harpswell in the preservation of habitat and scenic views, for the safety of our water supply, and for our recreation. Harpswell's wetlands provide important health and environmental functions for our town. In the 2002 Land Use Committee report to the selectmen on the protection of wetlands, member and Conservation Commission co-chair, Jim Burke wrote:

“Wetlands, both freshwater and coastal, provide habitat for fish, wildlife, and plants; they act as natural filters to improve water quality; and are important for their recreational, educational, and scenic value. Since our land area is small relative to our coastline, wetlands are especially important in Harpswell.

Coastal wetlands are extremely productive breeding grounds for marine fish, shellfish, waterfowl, and small mammals, as well as providing staging areas for a variety of migratory birds. The salt marshes, which are relatively rare in Maine, are particularly valuable for fish and shellfish nurseries. Clam flats provide a significant source of income, and certain wetland locations are productive lobster nurseries.

Freshwater wetlands have particular value for storm water retention and filtering, which in turn, helps to protect coastal waters from pollution and sedimentation and can be valuable for aquifer purification and recharge. These wetlands also provide habitat for fish, numerous types of birds, mammals, and amphibians. In Harpswell, where the land area is small, even the smaller wetlands can have great value.

The uplands adjacent to wetlands have a great deal of influence on the wetlands themselves and how they function. If left in their natural state, these uplands provide wildlife corridors and isolation from human activities. Also they constitute a local watershed around the wetland which can act as a pre-filter to control runoff and reduce sedimentation and pollution.”²

¹ State of Maine Wetlands Conservation Plan (1999) (Excerpted)

² Report to Selectmen on Review and Recommendations for Protection of Harpswell's Mainland Wetlands and Off-shore Islands, January 2, 2002. *Functions and Values of Wetlands and Adjacent Uplands*

Yet, our wetlands are vulnerable and sensitive to human activities that degrade their values. Run-off contamination from our roads and gardens can introduce pesticides and other poisons into the water. Wildlife travel corridors can be destroyed by cutting cover plants in riparian areas. When our wetland areas are drained and filled, they lose their filtering and pollution control functions. Their buffering values are lost. As a result, Harpswell will benefit in many ways if a strong wetland protection program is in place.

The Town of Harpswell's 27 wetlands are described in the **Wetlands Inventory in Appendix 1B**. In summary, our wetlands in Harpswell function in:

- Groundwater recharge/discharge
- Flood flow alteration
- Sediment/shoreline stabilization
- Sediment/toxicant retention
- Production export (nutrients)
- Fish/shellfish habitat
- Wildlife habitat
- Significant and essential Wildlife habitat
- Visual quality aesthetics
- Education/scientific value
- Consumptive and non-consumptive recreation
- Uniqueness/heritage

History of Protection of Wetlands in Maine and Harpswell

On August 4, 1988, the **Maine Natural Resource Protection Act (NRPA)** was passed. This Act provided protection for natural resources, including coastal sand dune systems, coastal wetlands, significant wildlife habitat, fragile mountain areas, freshwater wetlands, great ponds and rivers, streams or brooks. The Act states that these protected natural resources have great scenic beauty and unique characteristics, unsurpassed recreational, cultural, historical and environmental value of present and future benefit to the citizens of the State. The Department of Environmental Protection (DEP) contends that the current uses of these resources are causing the rapid degradation and, in some cases, the destruction of these critical resources, producing significant adverse economic and environmental impacts and threatening the health, safety and general welfare of the citizens of the State. The law therefore mandates that a permit is required when an "activity" will be located in, on or over any protected natural resource or located adjacent to a coastal wetland, great pond, river, stream or brook, or certain freshwater wetlands, or significant wildlife habitat contained within a freshwater wetland.

The Town of Harpswell has had shoreland zoning ordinances and shoreline zoning maps since 1974 when the **State of Maine Mandatory Shoreland Zoning Act** was adopted. This zoning has changed over the years as new land use ordinances have been approved in Town Meetings and the shoreline zoning maps updated. On March 6, 1999, for example, the **Harpswell Shoreline Zoning Ordinance** was amended and the **Harpswell Shoreland Zoning Map** was updated. This amendment was based in part on a 1995

Wetlands study carried out by Woodlot Alternatives, Inc. and the field analysis completed by the Harpswell Conservation Commission (HCC).

Using the results of the Woodlot Alternatives study and the Conservation Commission's analysis, the Commission prepared the **Report of Wetland Resource Protection Recommendations for Major Wetlands in the Town of Harpswell, Maine** dated December 16, 1999. This report contained classifications of the 27 major wetlands in Harpswell, with recommendations to the Town to zone each wetland for Resource Protection (RP), Shoreland Residential (SR), and /or Commercial Fisheries (CF I & II) districts.

The Conservation Commission presented the Report to the Harpswell Land Use Committee in November, 1999. The committee consisted of Land Use Chair, representatives of the Conservation Commission, Board of Appeals, Marine resources and the Harpswell Heritage Land Trust. They visited and evaluated the 12 largest freshwater wetlands during the next two years and vetted their findings with the community. The report titled, *Land Use Committee Report to Selectmen for Protection of Harpswell's Mainland Wetlands and Off-Shore Islands*, was released to the Selectmen, but never voted upon. It recommended four wetlands be added to Resource Protection.

During the March 8, 2003 Town Meeting, the Town voted to amend the Land Use Ordinances to add **tributary streams** (defined as a channel between defined banks) to the language concerning the uses and standards for wetlands. As a result of this change, Harpswell's many small seasonal **streams** were included for protection in the Town's shoreline zoning. The Town also voted to reduce the required setback from a forested wetland from 75 feet to 25 feet.

On September 1, 2007, the **Maine Natural Resource Protection Act (MNRPA)** was amended to protect activities in, on, or over a significant or potentially **Significant Vernal Pool (SVP)** habitat. Significant vernal pool habitat consists of a vernal pool depression and the portion of the critical terrestrial habitat within a 250-foot radius of the spring or fall high water mark of the depression. A vernal pool, also referred to as a **seasonal forest pool**, is a natural, temporary to semi-permanent body of water occurring in a shallow depression that typically fills during the spring or fall and may dry during the summer. Vernal pools have no permanent inlet and no viable populations of predatory fish. A vernal pool may provide the primary breeding habitat for wood frogs (*Rana sylvatica*), spotted salamanders (*Ambystoma maculatum*), blue-spotted salamanders (*Ambystoma laterale*), and fairy shrimp (*Eubranchipus* sp.), as well as valuable habitat for other plants and wildlife, including several rare, threatened, and endangered species. A vernal pool intentionally created for the purposes of compensatory mitigation is included in this definition. Man-made vernal pools are excluded.

The September 1, 2007 amendment to the **Maine Natural Resource Protection Act** mandates but does not require towns to regulate vernal pools. Currently, the Town of Harpswell does not have zoning ordinances which protect vernal pools.

Definition of Terms Used in Harpswell's Shoreline Zoning Map

1. Resource Protection District (RP)

The Resource Protection District includes areas in which development would adversely affect water quality, productive habitat, biological ecosystems, or scenic and natural values. This district includes areas, such as, flood plains and steep slopes when they occur within the limits of the Shoreland Zone, except those areas which are developed and areas which meet the criteria for Shoreland Business, or Commercial Fisheries I and II Districts need not be included within the Resource Protection District.

2. Shoreline Residential District (SR)

The Shoreland Residential District includes those areas suitable for residential and recreational development. It includes areas other than those in the Resource Protection District, and areas which are used less intensively than those in the Shoreland Commercial District, or the Commercial Fisheries I & II District.

3. Commercial Fishing District (CF)

The Commercial Fisheries I District (CFI) is defined as a Commercial Fishing District existing prior to March 14, 1992 that is limited to 75 feet inland from maximum high water mark and includes areas where the existing predominant pattern of development is consistent with the allowed uses for this district and other areas which are suitable for functionally water-dependent uses. The Commercial Fishing II District (CFII) is defined as the remaining 175 foot zone behind CF I to 250 feet inland from maximum high water mark.

Methodology Used to Prepare the Inventory of Harpswell Wetlands

In 2007, the Harpswell Conservation Commission, in collaboration with FB Environmental consultants, prepared a draft Open Space Plan for presentation to the Selectmen and the public. As part of this process, members of the Commission prepared an inventory of Harpswell's wetlands, based on the 1999 **Report of Wetland Resource Protection Recommendations for the Town of Harpswell, Maine**. The inventory presents:

- The **Location** of the wetlands in Harpswell
- The Town of Harpswell's **Property Map Number** on which the wetland appears. Note that some wetlands cover more than one map. (For example, at the junction of Cundys Harbor Road and Bethel Point Road, the wetland is on both maps 58 and 59. This is listed as 58, 59.)
- The **Wetland Classification** which lists category of wetlands in a location, such as, coastal wetlands, freshwater wetlands, coastal marshes and freshwater wetlands, streams (one only), coastal marshes, coastal floodplains, and/or impounded freshwater wetlands.
- The **Wetland Characteristics** are referred to by a number. The number corresponds to the following types of wetlands:
 1. Seasonal flooded basins and flats
 2. Inland fresh meadow

3. Inland shallow fresh marsh
 4. Inland deep fresh marsh
 5. Inland deep open water (**5a**), Inland shallow open water (**5b**)
 6. Swamps
 7. Wooded swamp
 8. Bogs
 9. Estuaries, inter-tidal emergent vegetation
 10. Estuaries inter-tidal aquatic bed
 11. Marine inter-tidal unconsolidated shore
- The **number of acres** that the wetland covers is listed. The data listed in the inventory of Harpswell Wetlands is taken from the information outline in the Town's Wetland Report located in the Planner's Office.