

## Section V.H.

### Fresh Water Resources

## I. Fresh Water Resources

Though previous comprehensive plans indicate several dozen minor watersheds in Islesboro, each draining to Penobscot Bay, only two watersheds are identified in data provided by the Department of Environmental Protection (DEP). The entire island is included in one watershed, with the watershed around Meadow Pond delineated separately. There are a number of small, unnamed streams and ponds in the community, in addition to Meadow Pond, the only sizable water body, which is described below.

All streams in Islesboro are classified 'B' under State statute which is defined as "of such quality that they are suitable for the designated uses of drinking water supply after treatment; fishing; agriculture; recreation in and on the water; industrial process and cooling water supply; hydroelectric power generation, except as prohibited under Title 12, section 403; navigation; and as habitat for fish and other aquatic life. The habitat must be characterized as unimpaired. Discharges to Class B waters may not cause adverse impact to aquatic life in that the receiving waters must be of sufficient quality to support all aquatic species indigenous to the receiving water without detrimental changes in the resident biological community. "<sup>1</sup>

## II. Meadow Pond

According to the Pearl database,<sup>2</sup> Meadow Pond has:

- an area of 41 acres,
- a perimeter of 6,796 feet,
- a mean depth of 6 feet and maximum depth of 15 feet,
- a drainage area of 0.55 square miles,
- a dam at an elevation of 61 feet above sea level.

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<sup>1</sup> MRSA 38, § 465

<sup>2</sup> University of Maine Environmental Information Website [www.pearl.maine.edu](http://www.pearl.maine.edu)

In addition, the database identifies the trophic status of the Pond as eutrophic.

Given its size, Meadow Pond is defined as a Great Pond under State statute and its waters are classified 'GPA', the sole classification of great ponds and natural ponds and lakes less than 10 acres in size. "Class GPA waters must be of such quality that they are suitable for the designated uses of drinking water after disinfection, recreation in and on the water, fishing, agriculture, industrial process and cooling water supply, hydroelectric power generation, navigation and as habitat for fish and other aquatic life. The habitat must be characterized as natural. There may be no new direct discharge of pollutants into Class GPA waters."<sup>3</sup>

The Maine Department of Environmental Protection has calculated a per acre phosphorous allocation of 0.041 lbs/acre/year for new development in the Meadow Pond watershed to protect the water quality of Meadow Pond from additional phosphorous loading, which contributes to eutrophication.<sup>4</sup>

### III. Wetlands

Islesboro Wetlands						
	Upland		DownIsland		Total	
	Acres	% Island	Acres	% Island	Acres	% Island
<b>Fresh Water</b>						
<b>Pond</b>	10	0.00	7	0.00	17	0.00
<b>Salt Marsh</b>	56	0.01	28	0.00	84	0.01
<b>Shrubby Swamp</b>	318	0.04	175	0.02	493	0.06
<b>Forested Swamp</b>	735	0.09	381	0.05	1115	0.14

<sup>3</sup> MRSA 38, § 465-A

<sup>4</sup> Please note that development greater than ten acres would need to use another procedure to figure out the appropriate phosphorous allocation number, which would be smaller, so as not to use up all the allocation for development in the watershed.

<i>Subtotal</i>	1119	0.14	591	0.08	1710	0.22
<b>Marine/Estuarine</b>						
<b>Aquatic Bed</b>					1311	
<b>Emergent</b>					17	
<b>Rocky Bottom</b>					0	
<b>Rocky Shore</b>					70	
<b>Unconsolidated Sand</b>					292	
<i>Subtotal</i>					1690	
<b>Total</b>					3400	
<b>Total Island</b>					7753	
<b>Source: Town of Islesboro, 2002; National Wetlands Inventory</b>						

In earlier comprehensive plans, the community identified 94 fresh water wetlands, totaling 466 acres, in the community and 6 major wetland systems that feed estuarine waters.

A combination of Town and Maine Office of Geographic Information wetlands data indicate a total of 1,710 acres of fresh water wetlands and 1,690 acres of marine and estuarine wetlands.

#### **IV. State Regulations**

Since 2002, State law and rules have been revised to regulate storm water impacts from development, establishing additional standards for development in lake watersheds at most risk from development and in urban impaired streams – neither of which are identified in Islesboro.

#### **V. Islesboro Regulations**

The Town's Land Use and Subdivision ordinances establishes districts that are largely focused around surface water features – Meadow Pond, wetlands, coastal areas, etc. – protecting shorelands, wetlands, flood plains, salt marshes, and estuarine systems with use restrictions, setbacks, minimum lot size requirements, and standards governing

storm water runoff, septic waste disposal, spreading or disposal of manure, erosion and sedimentation control, and development permitting.

## VI. Issues and Implications

1. Meadow Pond is the only fresh water body of significant size in the community and plays an important role in the history and culture of the Town. The University of Maine indicates that the Pond is eutrophic. Should the Town Meadow Pond Committee investigate adopting regulations to limit the amount of additional phosphorous generated by new development in the vicinity of the Pond (phosphorous increases eutrophication)?
2. Should Islesboro adjust its land use districts to reflect the additional wetland acreages identified in the National Wetlands Inventory?