

Beginning with  
HABITAT

An Approach to Conserving Maine's Natural  
Space for Plants, Animals, and People

www.beginningwithhabitat.org

Primary Map 1

Water Resources & Riparian Habitats

Bowdoinham

This map is nonregulatory and is intended for planning purposes only



LEGEND

This map depicts riparian areas associated with major surface water features and important public water resources. This map does not depict all streams or wetlands known to occur on the landscape and should not be used as a substitute for on the ground surveys. This map should be used as a planning reference only and is intended to illustrate the relationship between hydrologic connection and riparian features. Protecting riparian habitats protects water quality, maintains habitat connections, and safeguards important economic resources including recreational and commercial fisheries.

- Selected Town or Area
- Organized Township Boundary
- Unorganized Township
- Developed- Impervious surfaces including buildings and roads
- Drainage divides - These are the smallest hydrologic units mapped in Maine. They contain watershed boundaries for most ponds and rivers in Maine.
- NWI Wetlands - National Wetlands Inventory (NWI) uses aerial photographs to approximate wetland locations. NWI data is not a comprehensive mapping of wetland resources and typically under represents the presence of wetlands on the landscape. The presence of wetlands needs to be determined in the field prior to conducting activities that could result in wetland disturbance.
- Riparian Habitat - depicted using common regulatory zones including a 250-foot-wide strip around Great Ponds (ponds >10 acres), coastline, and wetlands >10 acres and a 75-foot-wide strip around streams. Riparian areas depicted on this map may already be affected by existing land uses.
- Shellfish Growing Areas - The Maine Department of Marine Resources maps growing areas for economically important shellfish resources. This map depicts softshell and hard clam resources in order to illustrate the relation of these resources to streams and shoreline areas vital to their conservation.
- Brook Trout Habitat - Streams and ponds, buffered to 100 feet, where wild Brook Trout populations have been documented, or managed to enhance local fisheries.
- Public Water Supply Wells
- Source protection area - Buffers that represent source water protection areas for wells and surface water intakes that serve the public water supply. Their size is proportional to population served and/or by the type of water supply system. These buffers range from 300 to 2,500 feet in radius.
- Aquifers - flow of at least 10 gallons per minute

Regional View of Watersheds

A watershed includes all of the land that drains to a common waterbody. The areas within the watershed are linked ecologically by the water, sediment, nutrients, and pollutants that flow through them. For the purpose of mapping "hydrological units," watersheds are often grouped into larger drainages or divided into smaller ones depending on the map's scale. Drainage divides (shown on main map as yellow lines), are the smallest hydrological units and generally drain into small ponds, wetlands, or streams. These units are grouped into subwatersheds (HU12) and are represented on the inset map above by the yellow-brown outlines.

- Main Map Extent
- Selected Town or Area
- Subwatersheds

1 inch = 4 miles

Relationship of Ground Water and Surface Water

Precipitation is the source of all water. Surface water and ground water are related. Drinking water can come from either source. Ground contaminants can affect both. The relationship between ground water and surface water is part of the **hydrologic cycle**. **Precipitation** that falls from the atmosphere as rain or snow reaches the land surface and recharges rivers, lakes, wetlands, and other surface bodies of water directly through **overland runoff**. Surface water also seeps into the ground through **infiltration** and eventually reaches the ground water, or through **evaporation**, returns to the atmosphere. Water evaporates from leaves and stems of plants through **transpiration**.

Shoreland Zoning

Maine's Mandatory Shoreland Zoning Act is intended to protect water quality, conserve wildlife habitat, and preserve the natural beauty of Maine's shoreline areas. Successful implementation requires local awareness of and appreciation for surface water resources and effective enforcement of setback and buffer requirements.

At a minimum, Maine's shoreland zones include all land within:

- 250 feet of the high-water line of any pond over 10 acres, any river that drains at least 25 square miles, and all tidal waters and saltwater marshes;
- 250 feet of a freshwater wetland over 10 acres (except "forested" wetlands); and
- 75 feet of a stream that is either an outlet stream of a great pond, or located below the confluence of two perennial streams as depicted on a USGS topographic map.

Shoreland zoning encourages towns to provide greater protection to their local water resources by applying shoreland zone protections to additional resource types such as smaller streams and wetlands, and rare terrestrial features. For specific guidance regarding Maine's Mandatory Shoreland Zoning Act contact the Dept. of Environmental Protection Shoreland Zoning Unit: 207-287-3901 (Augusta), 207-822-6300 (Portland), 207-941-4116 (Bangor), [www.maine.gov/dep/blw/docstand/szpage.htm](http://www.maine.gov/dep/blw/docstand/szpage.htm)

Data Sources

DATA SOURCE INFORMATION

TOWNSHIP BOUNDARIES  
Maine Office of GIS (2013); metwp24

ROADS  
Maine Office of GIS, Maine Department of Transportation (2015); medotpub

HYDROLOGY  
USGS National Hydrography Dataset (NHD) Maine (2012)

DEVELOPED  
Maine Office of GIS, Maine Department of Inland Fisheries and Wildlife (2015); inepervious\_change\_2015

NATIONAL WETLANDS INVENTORY  
U.S. Fish & Wildlife Service (2015); NWI

DATA SOURCE CONTACT INFORMATION

Maine Office of GIS: <http://www.maine.gov/dep/blw/docstand/szpage.htm>

Maine Natural Areas Program: <http://www.maine.gov/dac/natmap/index.html>

Maine Department of Marine Resources: <http://www.maine.gov/dmr/>

Maine Department of Transportation: <http://www.maine.gov/dep/blw/docstand/szpage.htm>

Maine Geological Survey: <http://www.maine.gov/doc/nr/mcgs/mgs.htm>

Maine Department of Inland Fisheries & Wildlife: <http://www.maine.gov/wildlife/index.html>

SHELLFISH  
Maine Department of Marine Resources; softshell\_clams, hard\_clams

RIPARIAN BUFFERS  
Maine Office of GIS, Maine Natural Areas Program (2011)

WELLS, WELL BUFFERS  
Maine Office of GIS, Maine Department of Human Services-Drinking Water Program (2011); wells, wetbuf

AQUIFIERS  
Maine Office of GIS, Maine Geological Survey (2011); aquifer\_polygons

DRAINAGE DIVIDES  
Maine Office of GIS (1994); medrdrvd

BROOK TROUT HABITAT  
Maine Department of Inland Fisheries & Wildlife (2011)