



Protecting and Enhancing Open Space Along the Presumpscot River

Why is There Concern for Protecting Open Space Along the Presumpscot River?

The Presumpscot River is located only minutes from Maine's largest urban area, Portland, and is undergoing significant changes that augur well for recovery from what was once a highly polluted river nearly unsuitable for fish, to a river with restored water quality and fisheries. The cleanup of the river and removal of the dam at the head-of-tide have started the process of ecological recovery, and communities along the river are now seeing new potential in the river.

The good news is that a surprising amount of the Presumpscot shoreline (83.9%) remains undeveloped. However, while the pace of development since the 1950's has been very modest, the pressures for development along the Presumpscot are stronger now than they have been in the past as a result of new interest in the river, and the lack of permanent protections for open space along the river. Having an undeveloped river corridor along a river that offers significant public benefits and amenities, located so close to Portland, is an opportunity that should be seized before it is too late.

What Are the Public Values of Open Space Along the Presumpscot River?

Open space along the Presumpscot River:

- is important for fish and wildlife habitat;
- provides a unique habitat for many plants not found elsewhere;
- offers space needed to accommodate and absorb floodwaters;
- is a buffer that helps maintain the water quality of the river;
- provides viable opportunities for agriculture in the areas that are "prime" soils for crops; and
- provides opportunities for outdoor recreation, and appreciation of our history.

Wildlife and Fish Habitat Values

Well-vegetated open space corridors along river or streams (riparian lands) have special value as wildlife habitat for several reasons:

A unique edge habitat: These lands form the edge between two important habitat types (terrestrial and aquatic) which are used by animals that depend on both habitats for food, shelter, or reproduction.

Importance to aquatic habitats: These riparian lands help maintain the habitat values of the river and estuary through filtration of pollutants and sediment in runoff; transport nutrients and other materials needed to sustain aquatic life; provide shade which controls fluctuations in temperatures in the river; and stabilize streambanks against the erosive force of high flows.

Importance to birds: Riparian lands are home to unique riverine shrub-scrub wetlands, which are an important habitat for many bird species and other animals.

Deer yards: Low-lying riparian lands are often the most fertile and well-watered lands in landscape, and support important habitats such as deer yards.

Wildlife travel corridors: Riparian lands are often the most continuous wildlife travel corridors available within a region, linking otherwise disjunct upland habitats and compensating, to some degree, for the loss of large continuous habitat blocks in a developing landscape.

Overall importance to wildlife and plants: ***80% of Maine's terrestrial vertebrate wildlife species use riparian areas to meet their habitat needs at some point in their life cycle.*** Further, a Maine Audubon report states that "Over half of all owl, salamander, frog and toad species that breed in Maine are listed as of special concern, threatened or endangered in other northeastern states" (species that depend heavily on riparian areas). Thus, Maine has a chance to protect important habitat types other areas have already lost.

The combination of these values has led a coalition of planning and conservation organizations to conclude that protecting riparian habitat should be the "backbone" of local and regional planning efforts, as "conservation of wetlands and surrounding riparian habitat is essential to ensuring that the full compliment of Maine's plants and animals persist on the landscape" (Maine Audubon Society, Maine Department of Conservation, Maine Department of Inland Fisheries and Wildlife, Maine State Planning Office, U.S. Fish & Wildlife Service, Wells National Estuarine Research Reserve, Maine Coastal Program, U.S. Geological Survey, Southern Maine Regional Planning Commission, and The Nature Conservancy).

Plant Habitat Values

Riparian open space areas have special values for plants and plant communities.

Rich alluvial/ floodplain soil habitats: Community types such as silver maple forest require riparian sites with high water tables and relatively rich soils for successful development. Species such as black willow occur commonly only in riparian locations. Other common plant species that require rich alluvial (floodplain) settings, e.g., species such as the ostrich fern or fiddleheads, are largely limited to floodplain sites.

Importance to Rare Plant Species: Many plants that thrive in the rich alluvial flats in riverine riparian zones are rare now, in part because many of these areas nationwide have been converted to agricultural use or developed for other purposes. Two plant species identified by the State as threatened or endangered have been observed in areas along the Presumpscot above Dundee Dam: *Isotria medeoloides* (small whorled pogonia) and *Lindera benzoin* (spicebush). Spicebush, so named because of the spicy aroma it gives off, is often found in moist, shady sites along floodplain forests. The small whorled pogonia has been labeled the rarest orchid east of the Mississippi River and north of Florida.

Riverine Wetland Habitats: Certain types of shrub-scrub wetlands are specific to riverine areas, and occur along the aquatic edge of the riparian zone or on islands within the river. They include a variety of plant species, including shrubs such as willows, as well as grasses and sedges, and provide special values for a variety of wildlife species.

Flood Protection

Maintaining open space is important for floodwater storage and mitigating flood damage in downstream areas. Open space along rivers provides an area for floodwaters to spread out, reduce their velocity, and recharge groundwater stores. Having such storage available can reduce downstream flood flows and velocities thereby preventing increased flood damage downstream.

Historical and Archaeological Resources

Rivers provide food, water, transportation, and power, and naturally attract human habitation and development. As a result, river corridors are often enriched with traces of the past, and the Presumpscot is no exception. Along the river corridor, there is a patchwork of relics from early prehistory to the recent past. Preserving and celebrating historic resources can provide important opportunities for education, add interest to the physical landscape, and help to define an area's sense of place.

The Presumpscot has a particularly rich prehistory and history as it was used heavily by Native Americans, developed as a water transportation corridor with creation of the Cumberland and Oxford Canal, and was the site of many early industrial countries, *e.g.*, the Oriental Powder Mill which supplied much of the gunpowder for the Union Army during the Civil War.



Farming and Open Space

Agriculture has been an important contributor to open space along the Presumpscot River. Native Americans were reported to grow corn in the area around Saccarappa Falls where they could "fish" the corn (using fish as fertilizer). The rich alluvial soils that support a diverse plant community are also prime farmland soils. Once the dominant use of the landscape starting in Colonial times, agriculture or maintained fields now comprise less than 10% of the lands in the Presumpscot River corridor. The Presumpscot was an important area for agricultural experimentation and the development of modern agriculture methods during the Colonial and Early American period.

Recreation

Open space along the Presumpscot River is important for the following activities:

- Boating, canoeing
- Swimming
- Fishing and hunting
- Snowshoeing
- Wildlife observation
- Cross-Country Skiing
- Historical study
- Education
- Snowmobiling
- Bicycling
- Walking
- Kayaking

The open space recreation activities afforded by the Presumpscot River are important because of the undeveloped nature of the river corridor, the diversity of opportunities available, and its proximity to Portland. The river fishing opportunities on the Eel Weir Bypass section of the Presumpscot River, which provides year-round opportunities for trout fishing, are particularly noteworthy.

What is the Current Status of Open Space Along the Presumpscot River?

An Undeveloped Corridor

Today, 84% of the area immediately along the Presumpscot River (within 250 feet) is undeveloped; only 16% is developed. Above Westbrook, about 14% of the land adjacent to the river is developed, and below Westbrook to the site of the former Smelt Hill Dam, about 21% of the river corridor is developed. The table below shows the percentage of river frontage that was undeveloped in the 1950's and 1970's, by town.

City/Town	Total Frontage (miles)	Percent Undeveloped 1950's	Percent Undeveloped 2000
Gorham	14.4	91.8	88.8
Windham	13.6	93.9	85.2
Westbrook	9.75	75.0	62.5
Portland	3.80	100	96.5
Falmouth	5.30	97.8	97.5
TOTAL	46.85	90.1	83.9

How Does Current Development Pressure Compare to Past Pressures?

Past Trends in Development Along the River

The pace of development since 1950 has been modest. Prior to 1950 about 4.6 miles of the river frontage was developed. Since the mid 1950's, another roughly 3 miles has been developed, with half of that development above Westbrook and half below. Only about a half-mile of this 3 miles of development occurred after the mid 1970's.

This relatively slow development pace along the river can be linked largely to the past uses of the river. Industrial development made many areas immediately adjacent to the river less attractive for residential and recreational development than they would have been if the water were cleaner. In addition, in the past, strong odors from the Westbrook pulp plant impacted the desirability of shoreland property as a place to live. With the elimination of the pulping process at the SAPPI mill, both water and air quality have been improved. These changes are expected to increase development pressure along the river.

New Development Pressure Prompts a Major Protection Effort in Portland

As evidence of the current desirability of Presumpscot River frontage, in the Fall of 2001, the City of Portland narrowly prevented development of one of Portland's largest tracts of remaining open space along the river. A developer proposed building a 67-home, riverfront subdivision in North Deering, the City's fastest growing neighborhood. The Portland Landbank Commission, Portland Trails, and the Land for Maine's Future Program worked collaboratively to negotiate a deal to make the purchase of the riverfront affordable for the City. As a result of the agreement, the City now owns 48 acres of land along the river's edge to a depth of 500 feet and the developer was able to construct 30 new homes.

The acquisition of these properties, known as the **Presumpscot River Preserve**, combined with the property of the Falmouth Conservation Trust and the acquisition of several other private parcels by Portland Trails, has since resulted in the protection of more than 80% of the riverfront between the Maine Turnpike and the Allen Avenue Bridge.

What Public Recreation Lands and Access Areas Exist Along the Presumpscot River?

Public Recreation Lands

The table below shows current public recreation lands and water access points along the Presumpscot River.

City/Town	# Water Access Sites	Public Recreation Lands Acres/Sites	% of Acres in 250-ft Corridor in Public Recreation Lands
Gorham	6	60/ 6	1.1%
Windham	3	132/ 4	4.7%
Westbrook	0	90/ 8	3.0%
Portland	1	333/ 4	5.2%
Falmouth	1	60/ 7	1.4%
TOTAL	11	675/ 29	15.5%

Public Water Access Points

Access for carry-in boat access, swimming or fishing include:

1. Route 35 Bridge in Windham over the old river bed - access for fly fishing.
2. North Gorham Park in Gorham - a public swimming and carry-in boat launch on North Gorham Road for access to North Gorham Pond.
3. Windham Center Road carry-in boat launch - access to the river and Dundee Pond.
4. Dundee Park in Windham on Dundee pond - swimming, picnicking and carry-in launching.
5. Dundee Dam canoe portage in Gorham - an access gate on the road to the powerhouse and dam, limits use of this access other than for canoe portage.
6. Oriental Powder Mill/Cumberland Oxford Canal historic sites in Gorham - trails and informal canoe portage around Gambo Dam. Access via an abandoned road off Route 237.

7. Hawkes/Tow Path Property in Gorham - access off Tow Path Road in Little Falls village. Access to the river with carry-in boat launching and trails.
8. Mallison Falls canoe portage and fishing access site in Gorham and Windham - two canoe portage trails at Mallison Falls Dam, one on each side of the river. On the west side near the powerhouse, the put-in site is also used for fishing access.
9. Little River Carry-in Boat Access in Gorham - located off Rt. 237; provides access to the Little River and the Presumpscot near their confluence. Trails and a carry-in boat launch.
10. Riverton Trolley Park - owned by the City of Portland. Trails and access to the river through an informal carry-in boat launch.
11. Town of Falmouth - there is a small park after the Allen Avenue Extension Bridge across the river in Falmouth. Parking is available, but no easy access to the river due to steep banks.

Additional water access, not listed above, is being developed at the Presumpscot Falls properties recently acquired by Portland Trails and the Town of Falmouth.

Trails Along the Presumpscot River

Trails presently include the towpath of the Cumberland and Oxford Canal in Gorham, and the urban riverfront walk in Westbrook. Westbrook plans to extend its trail system, and Portland and Falmouth are developing a trail system with their recent acquisitions along the Presumpscot River.

The State of Maine owns a portion of the 50-mile Mountain Division Rail Line from Route 202 in Windham to the Maine/New Hampshire border in Fryeburg and has plans to convert this corridor into a “rail-with-trail” project. The State eventually hopes to purchase the remainder of the rail line from South Windham to Portland to create a continuous multi-use path from Portland to the White Mountains. The entire length of the rail line from Gambo Road to Westbrook runs directly adjacent to Presumpscot River (on the east side) and would provide a great recreational opportunity along the river.



What Protections Exist for Open Space Along the Presumpscot River?

Regulation and Zoning

Zoning ordinances are tools used to regulate both land use as well as the characteristics of the permitted uses. Town-wide zoning, Shoreland Zoning, and Floodplain Management Zoning are the three most prevalent types of zoning in the State.

Shoreland Zoning: The shoreland zone along the Presumpscot River consists of areas within 250 feet of the normal high-water line of the river. Development is prohibited in areas zoned as resource protection districts; however, these districts often include less than 100 feet of the 250-foot shoreland zone, and development can occur beyond the 100 feet.

Open space/recreation districts: The City of Portland zones public recreation lands to exclude future development not related to recreation and open space. This district is established along the Presumpscot River from Route 302 (the bridge at Riverton) to the city line at the I-95 bridge, and includes two city-owned parks, the Riverton Trolley Park and the municipal golf course. These two parcels include about 1.8 miles of river frontage.

Floodplain Zoning: Federal law requires that local governments establish flood plain protection ordinances in order for the residents of those communities to qualify for federal flood insurance. Flood plain protection ordinances provide that first floor elevations must be above the 100-year frequency flood and that flood flows not be restricted by development in velocity areas. This affords some protection, but development is only prohibited in the “velocity” zone.

Protection by Ownership or Easements

A number of areas along the Presumpscot River are protected to some degree as open space through public ownership or conservation easements. The degree of protection varies, depending on the nature of the ownership and presence of any legal restrictions.

Limited Protection Lands: These lands include areas in public or quasi-public ownership that do not have easements or deed restrictions that protect the land from future development. Lands that are in public ownership may or may not stay as open space in the future, unless there is a conservation easement protecting the property from future development. Even public lands that are currently dedicated to open space or recreation and zoned for open space are vulnerable to future changes in municipal objectives; for example, a golf course could be converted, in the future, to a riverside office park or residential development to meet municipal economic development objectives if the political and economic conditions support such a change.

Permanent Protection Lands: Only lands that have legal restrictions for future development applied through permanent conservation easements, or ownership by a land trust or land conservation organization, are considered to be truly protected open space, shown as Permanent Protection in the table below.

City/Town	% of Acres in 250-ft Corridor in	
	Permanent Protection	Limited Protection
Falmouth	0.7	2.4
Portland	1.1	4.1
Westbrook	0.0	3.5
Windham	0.0	6.4
Gorham	1.0	<0.1
Standish	0.0	0.0
Total Corridor	2.8	16.4

What Lands Should Be Protected as Open Space Along the Presumpscot?

Defining Priorities for Protection

Deciding which of the many potential areas that are in need of protection should be a priority for protection necessarily depends on the objectives of the protection effort. There are many values worthy of consideration in open space protection, including fish and wildlife values, scenic and recreational values, ecological and scientific values including protection of rare plants and plant communities, the value of prime agricultural soils, and historic or archaeological values. ***This Plan identified priority areas for open space protection based on high value natural resources*** using available natural resources information. Because of the limitations of the available information (much compiled from air photos, not fieldwork), a more detailed analysis and systematic ranking of each of these and other values based on additional surveys and field data would be useful to sharpen the focus and to identify priorities for protection of high value natural resources.

This Plan does not address priorities for acquisition or management of public lands for recreation. The Steering Committee chose not to address recreation priorities in part because the FERC licensing of the SAPPI hydropower projects would include requirements for public recreation at the projects; and because the scope of effort needed to assess recreation facility needs and resource suitability for recreational use was beyond the resources available for this Plan.

Any future acquisitions of lands along the Presumpscot River should integrate the results of this high value natural resources analysis, and any further refinement thereto, with an analysis of recreational needs and opportunities, and areas suitable for recreational use. The Steering Committee received a number of comments expressing concern that recreational use of protected lands and the river be kept in balance with, and not damage, its outstanding natural resource values. This Plan should be viewed as a starting point towards that goal.

Priorities for Protecting High Value Natural Resources

While a comprehensive and detailed analysis was beyond the scope of this study, it was possible to identify, with available information, areas that should be considered a priority for protection due to high value natural resources and lack of current protections. Using natural resources information from state and federal resource agencies, and land use protection information gathered as part of this project, a preliminary analysis was conducted by the U.S. Environmental Protection Agency, Region 1, utilizing their Geographical Information System (GIS) capabilities. The results, which show high value resource areas that have no current protection, are shown on the attached map (Map 7 from the Open Space White Paper).

Examining the areas identified through this analysis, a number of general areas can be identified as having a cluster of priority high value natural resources. These include:

1. The backland behind the Resource Protection District along the shoreline of Dundee Pond on the east (Windham) side, from south of Dundee Park to roughly 500 feet north of Dundee Dam.
2. The Windham side of Dundee Falls below the Dundee Dam (about a one-half mile stretch of the river with rapids and a series of islands).
3. An area below the Mallison Falls Power Station access point in Gorham, roughly 500 feet in length, extending back beyond the 250-foot corridor area.
4. The area at the confluence of the Little River and Presumpscot River in Gorham.
5. The area in Gorham from just north of the power line near Mosher Brook to the Westbrook town line.
6. In Westbrook, from just below the railroad near the Windham/Gorham town lines, to the Golf Course, about three quarters of a mile downriver.

Securing Permanent Protection on Limited Protection Lands

In addition to defining priority high value natural resource protection areas, there is an opportunity to enhance the level of protection that exists on a number of parcels along the river

held in public ownership but lacking any deed restrictions to ensure their status as open space lands in perpetuity. For a minimal cost, a restriction could be placed on the deeds for these lands to accomplish permanent protection.

For further information, see the white paper "Protecting and Enhancing Open Space Along the Presumpscot River" and accompanying maps listed below, which are posted on the Casco Bay Estuary website:

<http://www.cascobay.usm.maine.edu>

Open Space Maps

(available at the above website)

- Map 1: Developed and Undeveloped Areas Along the Presumpscot River Corridor
- Map 2: Open Space with High Natural Resource Values
- Map 3: Public Recreation Lands and Public Access Points Along the Presumpscot River Corridor
- Map 4: Resource Protection Zones Along the Presumpscot River
- Map 5: Open Space Protected by Ownership or Easement
- Map 6: Open Space Vulnerable to Development
- Map 7: Priorities for Open Space Protection Based on Natural Resource Values

