

ENVIRONMENTAL Fact Sheet



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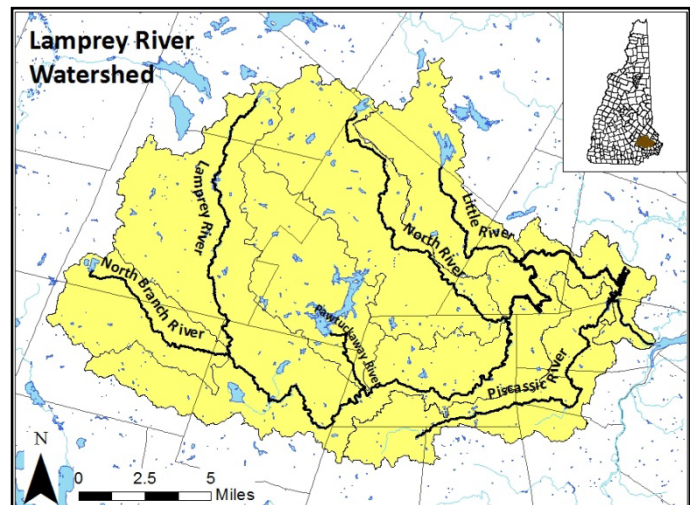
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The Lamprey River Watershed

Including the Lamprey, North Branch, North, Little, Pawtuckaway and Piscassic Rivers

The Lamprey River watershed drains approximately 215 square miles in southeastern New Hampshire and consists of the mainstem of the Lamprey River, five large tributaries and numerous smaller tributaries. The headwaters of these rivers and streams are located in Rockingham and Strafford counties. From there, they flow east through 14 municipalities and eventually empty into Great Bay. Of the eight rivers flowing to Great Bay, the Lamprey River watershed contributes the greatest volume of freshwater to the estuary, providing diverse habitat for numerous species and playing a significant role in maintaining the overall health of the protected bay's environment.



Because of the watershed's significant ecological, historic, recreational and water supply resources, stakeholders have long recognized the need to protect and sustainably manage the Lamprey River and its major tributaries at the state, federal and municipal levels. In 1990, the 12-mile segment of the Lamprey River mainstem in Lee and Durham was one of the first rivers to be designated into the New Hampshire Rivers Management and Protection Program (RMPP). In 2011, seven additional river reaches totaling 75.7 miles were added to the RMPP Lamprey River designation. These rivers included the North Branch, North, Little, Pawtuckaway and Piscassic rivers as well as the both the upper and lowest/estuarine portions of the mainstem of the Lamprey River. The lower freshwater mainstem of the Lamprey River has also been designated for protection at the federal level under the National Wild and Scenic Rivers System, the initial 11 miles in 1996 and an additional 12 miles in 2000.

History

The river network within the Lamprey River watershed has provided transportation and served as a freshwater resource for people, fish and wildlife for thousands of years. Early native peoples left evidence of a campsite in Lee that the University of New Hampshire has dated back to at least 8,000 years ago. The outlet of the Lamprey River into Great Bay made the watershed a natural water highway for early settlers, and thus many of New Hampshire's oldest towns are located on its banks. Beginning around the 1660s, the river was dammed to power the more than 100 mills that were built along its banks. The mills processed a variety of materials to supply local and regional needs such as timber, grain, cloth, paper, wallpaper, leather, shoes and iron agricultural tools.

The outstanding historic resources of the Lamprey River watershed played an important role in both the state and federal protective designations. Today, over 30 identified historical sites, including two that are on the National Register of Historic Places (Wiswall Dam area and the mill district of Newmarket), are found within the

Lamprey watershed. Other historical sites include hotels, camps, bridges, railroads, churches and homesteads. Currently, portions of the Lamprey River watershed are being protected and carefully developed with an eye towards preservation, as the rivers are now valued more for their tourism and recreational values than their ability to provide power or remove sewage.

Wildlife, Habitat and Vegetation

Due to its wide diversity of habitats, the Lamprey River watershed is home to a vast number of plants and animals, including dozens of endangered or threatened species. For example, the state-listed threatened spotted turtle and Northern black racer, as well as the state-endangered Blanding's turtle and brook floater mussel, are among the notable species that inhabit the river. The Great Bay is noted to have the highest abundance of wintertime bald eagle activity in the State of New Hampshire, and this state species of special concern is known to forage in the Lamprey River. The first osprey nest known to have been built in the seacoast region during the 20th century was discovered within two miles of the river in 1989.



Over 200 native plant species have been documented in the watershed including 37 endangered or threatened plant species listed by the New Hampshire Natural Heritage Inventory. Several of these species, such as the American featherfoil, climbing hempvine, northern tubercled bog-orchid, northern blazing star and Atlantic mudwort, are considered critically imperiled due to the rarity of their occurrence and are thus state-listed endangered species. State-listed threatened species include the little-headed spikesedge, long-leaved pondweed, marsh elder, and one-glumed spikesedge, among others.

The wide variety of notable natural communities include low brackish riverbank marsh, high salt marsh, alder-dogwood-arrowwood alluvial thicket, black gum-red maple basin swamp, swamp white oak floodplain forest and red maple floodplain forest. The low brackish riverbank marsh and swamp white oak floodplain forests in the Lamprey River mainstem are considered critically imperiled communities that contain many of the rare species found in the watershed.

Fishing

The Lamprey River furnishes every possible type of freshwater stream environment habitat in a river corridor that is largely forested with some residential development and open fields. The diversity of habitat makes it possible for a wide range of freshwater and migratory/diadromous fish populations, as well as other aquatic species, to prosper in the watershed. These species depend on the maintenance of good water quality, seasonal flow patterns, cold and warm water fish habitat, and river-friendly riparian land uses to survive. Over 30 fish species, both native and introduced, have been documented in the watershed. Many locations within the Lamprey River watershed are stocked by the New Hampshire Fish and Game Department with brook trout, brown trout or rainbow trout.

The lower portion of the river is tidally influenced, supplying feeding, spawning and rearing habitat for diadromous fish species such as rainbow smelt. Access into critical freshwater spawning and rearing habitat for other diadromous fish (e.g., river herring, sea lamprey, American shad and American eel) is feasible due to fish ladders at the Macallen Dam in Newmarket and the Wiswall Dam in Lee above the head-of-tide.

Roads, bridges and trails along the river and its tributaries allow fishing access, and fishing by wading into the river is permitted and encouraged in some areas. The more western and shallow reaches of the rivers within the watershed are highly amenable to fly fishing. Fishing continues into the winter, with ice-fishing popular in the slower moving waters. Agreements negotiated with private landowners allow access for fishing along key areas of the river.

Recreation

The scenery and uniquely beautiful array of environments within the Lamprey River watershed make it very desirable for boating, hiking, camping and tourism. A number of the towns located within the watershed are home to skiing and snowmobiling facilities and trails; however, the predominant means of recreation on the river is kayaking and canoeing. Swimming is also a popular activity in the summer. In the winter, impoundments in the watershed freeze and are available for ice fishing and other recreational activities. Facilities for camping or wildlife watching are located in or near many of the municipalities within the watershed. The watershed is becoming a popular tourist destination for nature enthusiasts and efforts are being made to increase the number and availability of facilities for tourists while leaving the natural wilderness undisturbed.

The Lamprey, North, and Piscassic rivers are known for exceptional kayaking and canoeing, with class I, II and III rapids providing wide array of flat water and whitewater opportunities for any level of paddling enthusiast. Canoes and kayaks are available for rent in many areas, and several of these businesses offer organized tours with registered guides. Both public and informal launching areas provide canoe access to the river. Boat launches exist up and down the river, although motorized boating is prohibited or impractical in most areas due to low water levels.



Instream Flow Program

The lower portion of the Lamprey River was one of the first two designated rivers on which the Instream Flow Program was applied. Studies of the river's flow-dependent, instream public uses were conducted to determine the seasonal flows necessary to support both natural aquatic habitats and human uses. These flows were established in 2013 as protected flow criteria and are implemented under a water management plan that includes conservation and water use management by larger water users and impoundment management at Pawtuckaway Lake and Mendums Pond. Examples of water management actions include lawn water restrictions or bans, shifts to alternate water supplies, and brief water releases from the dams to support protected instream flows during periods of unusually low flow. The program aims to ensure that lake and river ecosystems as well as the water needs of human users are equitably supported.

For More Information

For further information about the New Hampshire Rivers Management and Protection Program, visit the [Rivers Management and Protection page](#) on the NHDES website, or contact the Rivers Coordinator, 29 Hazen Drive; PO Box 95; Concord, NH 03302-0095; [\(603\) 271-2959](tel:6032712959); riversprogram@des.nh.gov.