ENVIRONMENTAL
Fact Sheet

NEW HAMPSHIRE DEPARTMENT OF Environmental Services

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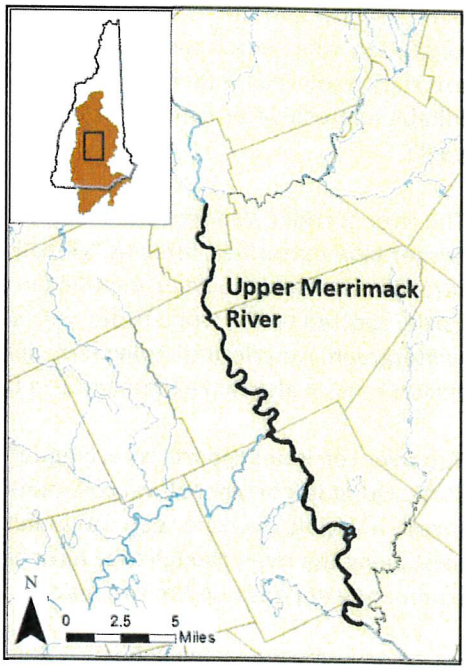
The Upper Merrimack River



The upper Merrimack River begins at the confluence of the Pemigewasset and Winnipesaukee Rivers and flows for approximately 30 miles through the communities of Franklin, Northfield, Boscawen, Canterbury and Concord to Garvins Falls in the town of Bow. The segment is part of the larger Merrimack River system, which bisects the lower third of New Hampshire, drains a 5,014-square-mile watershed, and extends 116 miles from the White Mountain region to northeast Massachusetts, where it empties into the Atlantic Ocean. Approximately 3,550 square miles of drainage area is located in New Hampshire. The upper and lower segments of the Merrimack River were both designated into the New Hampshire Rivers Management and Protection Program in June 1990, protecting nearly 45 miles of the river.

During the 19th century industrial era, the Merrimack River was the most noted waterpower stream in the world. Today, although flowing through Concord, New Hampshire's state capital and third largest city, nearly 80 percent of the land within three-quarter miles of the upper Merrimack River is undeveloped forest, farm or wetland. Due in part to its undeveloped nature, the river generally has good water quality and the ability to support valuable wildlife and plant habitat. Maintenance of this level of water quality is critical to ensuring the river's continued use for water supply and recreational purposes. For these reasons, along with its designation into the New Hampshire Rivers Management and Protection Program, the upper Merrimack was found to be eligible for inclusion in the National Wild and Scenic Rivers System, administered by the National Park Service.

History

The Merrimack River played a pivotal role in the early settlement and subsequent development of the region. The river and its banks provided many resources for early inhabitants, including fish and migratory birds, and an important route for communication and transportation. A preliminary archaeological survey has revealed at least four Native American sites, dating from 8,000 to 350 years ago, one of which is listed on the National Register of Historic Places. A notable historic site dating from colonial times is the Sewalls Falls dam in Concord, which is the longest timber crib dam in the world. It is also credited with being the oldest hydroelectric dam in the country. Other significant historic sites along the upper Merrimack include the Brookford Farm residence and barn in Canterbury and the Timothy Walker House and the Sullivan Farm in Concord.

Wildlife, Habitat and Vegetation

As one of New England's major north-south running rivers, the upper Merrimack River serves as an important migratory route for birds, including waterfowl and songbirds. These species are dependent on the variety of habitats associated with the river for migratory stopovers as well as for summer breeding habitat that includes protected oxbows (in Canterbury and Concord) and associated wetlands, backwaters, marshes, cornfields, mixed upland forests, and pastures, as well as the river itself. The river's banks provide nesting sites for the bank swallow and the kingfisher, while herons and ducks depend on the river itself for their livelihood. Several state-listed bird species are known to occur within the river corridor including the state-listed species of concern osprey and sora (a rail inhabiting freshwater marshes), the state-endangered common nighthawk, and the state-listed threatened bald eagle.

The river corridor also provides habitat for the federally endangered Karner blue butterfly. This population of Karner blue butterflies, listed as "globally very rare," is the only one in New England. In addition, the following rare species have also been identified in the river corridor: Fowler's toad, northern leopard frog, Blanding's turtle, spotted turtle, wood turtle, wild senna, ram's head lady slipper, golden heather, wild lupine, pink wintergreen, American climbing fern, and fall witchgrass. The American eel and state-listed endangered brook floater mussel also make their home in the upper Merrimack River.

The river corridor supports six ecologically significant natural communities, including the only inland dunes in the state. Other important natural communities include three occurrences of a dry river bluff, a mesic river bluff forest, an acidic riverside seep community and floodplain forest communities. Pitch pine/scrub oak barrens also exist along the river, though they have been extensively degraded by development. This globally rare barrens community depends on fire to continue, and is important to the survival of a variety of butterflies and moths.

Recreation, Boating and Fishing

The view from the upper Merrimack River includes bluffs, farms and fields, forests, and wetlands. This diverse landscape serves to enhance the scenic characteristics of the river, as do the historic and picturesque villages of Penacook and Canterbury and the many unique bridges that cross the river. In the vicinity of Boscawen, a church steeple rises against a backdrop of wooded hills, with a rare view of Mt. Kearsarge, while the capitol dome and church steeples of Concord provide a striking view down river.

In addition, the river is swimmable and rich in wildlife for observation, study, hunting, and enjoyment. Public access points occur with increasing frequency as one travels down the river. Both Concord and Boscawen maintain riverfront parks for recreational use.

Efforts are under way to obtain easements for the New Hampshire Heritage Trail. When complete, this multiple-use historic trail will extend from the Massachusetts border, north along the Merrimack, Pemigewasset and Connecticut Rivers to the Canadian border. Sections of the trail are complete in Concord at Sewalls Falls and along the river near the New Hampshire Technical Institute and Hall Street.

Canoeing is a popular boating activity on the upper Merrimack River. The river offers both quickwater and flatwater experiences for canoeists as well as short stretches of whitewater, including rapids in the vicinity of the

breached dam at Sewalls Falls. Local watershed associations sponsor a variety of canoe trips on the Merrimack and its tributaries throughout the spring, summer and fall for beginner and intermediate paddlers. There are nine public access points to the river for boaters, including those at Franklin High School, Jamie Welch Park in Boscawen, Penacook Treatment Plant, and the former Sewalls Falls Dam in Concord. More are planned on properties that have been purchased by the riverfront communities.

The river is a cold water fishery that provides habitat for at least 19 resident species, including eight species of sport and recreational importance. The New Hampshire Fish and Game Department regularly stocks the Sewalls Falls area and tributary streams with brook and rainbow trout. The New England River Protection and Energy Development Project ranked the upper Merrimack River "of highest significance" as an anadromous fishery and "highly significant" as an inland fishery. The river has been included in the Anadromous Salmon Restoration Program, a cooperative effort between federal and state agencies to recreate and maintain upstream access for anadromous fish. This is primarily carried out through construction of fish ladders.

Upper Merrimack River Monitoring Program

In 1995, the Upper Merrimack River Local Advisory Committee created a volunteer water quality monitoring program in cooperation with NHDES and the Merrimack River Watershed Council. Sampling sites have been established along the designated portion of the upper Merrimack River, as well as the Pemigewasset, Winnipesaukee and Contoocook rivers and other tributaries. Water samples are collected at regular intervals during summer months by volunteers from area high schools, colleges and various professional and recreational organizations. These volunteers also assist with identification of macroinvertebrates within the river. Rock baskets, acting as artificial substrate, are placed in the river at the sampling sites and are collected in six to eight weeks. Aquatic insects colonize the substrate during the time the baskets are in the river, providing plenty of work for the dedicated volunteers who remove and identify these abundant stream dwellers. Once identified, the macroinvertebrates' quantity, health and diversity can provide a comprehensive, long-term picture of the river's health. The project's data are shared with NHDES, municipalities and a variety of federal, state and local officials, including municipal health officers. The data are also used in the State's Report to Congress.

For More Information

For further information about the New Hampshire Rivers Management and Protection Program, visit the NHDES website at http://des.nh.gov/organization/divisions/water/wmb/rivers/, or contact the Rivers Coordinator, 29 Hazen Drive; PO Box 95; Concord, NH 03302-0095; (603) 271-2959; riversprogram@des.nh.gov. To learn more about the Upper Merrimack River Local Advisory Committee, visit www.MerrimackRiver.org.