

Admin # 279

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## Designated Rivers

The Upper Merrimack River [Report to the General Court](#)

The Upper Merrimack River begins at the confluence of the Pemigewasset and Winnepesaukee 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 and drains a 5,014 square mile watershed extending 116 miles from the White Mountain region to east-central Massachusetts where it empties into the Atlantic Ocean. It is one of two segments protecting nearly 45 miles of the Merrimack River designated into the NH Rivers Management and Protection Program in June 1990.

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 capitol and third largest city, nearly 80 percent of the land within 3/4 miles of the Upper Merrimack River is currently undeveloped as forest, farm, or wetland. Due in part to its undeveloped nature, the river has a high level of 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 future use for water supply and recreational purposes. For these reasons, along with its designation into the NH 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

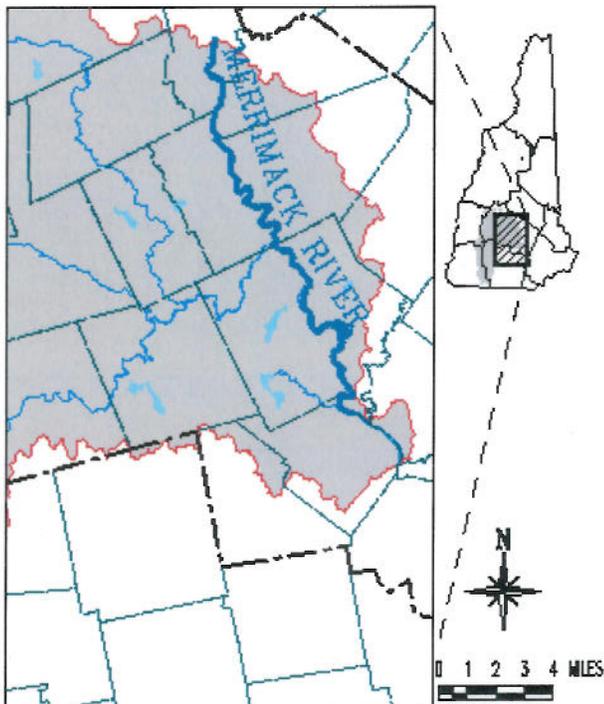
The Merrimack River played a pivotal role in the early settlement and subsequent development of the region. The river and its banks provided many resources for early inhabitants, including fish, migratory birds, and an important route for communication and transportation. A preliminary archaeological 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 the late 1800s 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 Gold Star Sod Farm residence and barn in Canterbury, and the Timothy Walker House and the Sullivan Farm in Concord.

### Wildlife and Plant Resources

As one of New England's major north-south running rivers, the Upper Merrimack River serves as an important migratory route for waterfowl and songbirds. These species are dependent on the variety of habitats associated with the river including protected oxbows (in Canterbury and Concord) and associated wetlands, backwaters, marshes, cornfields, mixed upland forests, pastures as well as the river itself. The river's banks provide nesting sites for the bank swallow and the kingfisher. Its corridor provides significant wintering habitat for the federally-listed threatened bald eagle, and is seasonally important to the state-listed threatened osprey. Herons and ducks are also dependent on the river for their livelihood.

The Karner blue butterfly, a federally-listed endangered species, is known to occur along the river. This population of Karner blue butterflies, listed as "globally very rare", is the only one in all of New England. The New Hampshire Natural Heritage Inventory has also identified the following rare species as occurring in the river corridor: Fowler's toad, Blanding's turtle, blue-gray gnatcatcher, blunt-leaved milkweed, wild senna, ram's head lady slipper, golden heather, wild lupine, pink wintergreen, burgrass, and fall witchgrass. The state-listed endangered brook floater mussel is yet another significant species which makes its 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 sandy river bluff forest, 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 have been extensively degraded by development. This globally rare community which depends on fire to continue, is important to the survival of a variety of butterflies and moths.



*The Upper Merrimack River and its watershed.*

#### Recreation

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 which 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 currently maintain riverfront parks for recreational use.

Efforts are also underway 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 NH Technical Institute and Hall Street.

#### Boating

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. The Merrimack River Watershed Council sponsors 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 Sewall's Falls Dam in Concord. More are planned on properties that have been purchased by the riverfront communities.

#### Fishing

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 NH 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 is 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 the New Hampshire Department of Environmental Services and the Merrimack River Watershed Council. Sampling sites have been established along the designated portion of the Upper Merrimack, and the Pemigewasset, Winnepesaukee and Contoocook Rivers. Water samples are taken at these sites 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 the Merrimack River Initiative's Volunteer Environmental Monitoring Network and the NH Department of Environmental Services Bioassessment Program.

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