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Designated Rivers

Upper Merrimack River

II. The Upper Merrimack River Nomination

A. Description

The Upper Merrimack River begins at the confluence of the Pemigewasset and Winnepesaukee Rivers and flows for 30 miles through the communities of Franklin, Northfield, Boscawren, Canterbury, Penacook, Concord, and Bow (see map). 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 from the White Mountain region to east-central Massachusetts. Important tributaries to the Upper Merrimack River include the Contoocook, Suncook, and Soucook Rivers.

Nearly 80 percent of the land within 3/4 of a mile of the Upper Merrimack River is currently in some type of open space (i.e., forest, farm, or wetland). In general, existing developments are setback and well-screened from the river. Land use along the river segment can be divided into sections, with each section showing a different predominant land use. The upper section, from Franklin to Boscawren, is primarily forested and undeveloped. The middle section, reaching to Horseshoe Pond in Concord, contains the greatest concentration of agricultural activity, as well as a wooded gorge at Sewalls Falls. The lower section, in Concord and Bow, contains forest, farmland and a mixture of residential and commercial development.

In 1987, Governor John Sununu directed the Council on Resources and Development to initiate the designation of the Upper Merrimack River under the Rivers and Lakes Protection Program (Chapter 190, Laws of 1986). Under this program, the Office of State Planning (OSP) has established the Merrimack River Area Planning Committee composed of representatives from all the towns along the river. This committee has been working with OSP since May 1988 to prepare a river management plan and has also acted as a sponsor for the nomination of the Upper Merrimack River under the New Hampshire Rivers Management and Protection Program.

B. River Values and Characteristics

The Rivers Management and Protection Program Act (RSA Ch. 483) lists nine resource values and characteristics which may qualify a river for designation into the program. The Upper Merrimack River supports many of these natural, managed, cultural, and recreational resource values and characteristics at a level of either statewide or local significance. The resource values which qualify the Upper Merrimack River for designation include: geologic resources; wildlife, plant, and fish resources; water quality; scenic values; water withdrawals; wastewater discharges; historic and archaeological resources; community resources; and recreational resources.

1. Natural Resources

a. **Geologic Resources:** The Upper Merrimack River is rich in geologic formations. The most unique example is in Canterbury where the river supports the only inland sand dune community in New Hampshire. Striations in rock forms are seen along the river and tell the geologic history of the area. Rapids are found at both Sewalls and Garvins Falls.

b. **Wildlife and Plant Resources:** The Upper Merrimack River supports diverse habitat for a wide variety of wildlife and plant species, including several endangered species. Important river habitats, in addition to the river itself, include protected oxbows (in Canterbury and Concord) and associated wetlands, backwaters, marshes, cornfields, mixed upland forests, and pastures. The rivers banks provide nesting sites for two birds, the bank swallow and the kingfisher, which ornithologists associate closely with the Merrimack River. Three deer yards have been mapped within the river corridor. As one of New England's major north-south running rivers, the Upper Merrimack River also serves as an important migratory route for waterfowl and songbirds.

A number of species of plants and animals which occur along the Upper Merrimack River corridor are considered to be endangered or threatened species. The river's corridor provides significant wintering habitat for the federally endangered bald eagle, and is seasonally important to the state-threatened Osprey. The karner blue butterfly, a state endangered species, is known to occur along the river. 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 river corridor supports five ecologically significant natural communities, including the only inland dunes community in the state, three occurrences of a sandy riverbluff community, a mesic riverbluff forest, an acidic riverside seep community, and floodplain forest communities.

c. **Fishery Resources:** The Upper Merrimack River is a cold water fishery that provides habitat for at least 19 resident species, including 8 species which are of sport and recreational importance. According to state and federal fisheries biologists, the river segment also contains a significant amount of habitat for anadromous fish - fish that live in the ocean and return to fresh water to spawn. The New England River Protection and Energy Development Project ranked the Upper Merrimack River as "of highest significance" as an anadromous fishery and "highly significant" as an inland fishery.

d. **Water Quality:** The Upper Merrimack River has been designated a Class B water by the New Hampshire General Court and is currently supporting the standards of this water quality goal. The maintenance of a high level of water quality in this river segment is critical to its future use for water supply and recreational purposes, as well as the rivers ability to support high quality wildlife and plant habitat.

e. **Scenic Values:** The view from the Upper Merrimack River includes river bluffs, farms and fields, forests, and wetlands. This diverse landscape serves to enhance the scenic characteristics of the river, as do the historic, 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. The capitol dome and church steeples of Concord provide a striking view. From bridge crossings and nearby roads, glimpses of the river reveal one of New Hampshire's largest "working" rivers.

2. Managed Resources

a. **Water Withdrawals:** The Upper Merrimack River is an important surface water supply for riparian owners, serving both agricultural and commercial purposes. The river segment does not currently supply public drinking water to the seven river communities.

b. **Wastewater Discharges:** As an assimilator of municipal and industrial wastewater, the Upper Merrimack River serves a vital function. Eight permits to discharge wastewater to the river have been granted under the federal Clean Water Act and state water quality laws. Dischargers include four wastewater treatment facilities, one hydroelectric facility, and three industrial facilities. Population growth and development in this region of the state will likely lead to additional applications to discharge wastewater to the river.

3. Cultural Resources

a. **Historic/Archaeological Resources:** The Merrimack River played a pivotal role in the 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 and three are eligible for listing on the National Register of Historic Places. Adjacent to or in the river are several historic sites dating from colonial times, including the Sewalls Falls dam (among the oldest and longest timber crib dam in the world), three metal truss bridges, and three historically significant homesites.


b. **Community Resources:** The Upper Merrimack River provides many significant resources for the seven river communities, including recreation, water supply, waste assimilation, and open space. The river communities have joined in both state and federal efforts to protect the river. Under NH Chapter 190 (Laws of 1986), the communities have formed the Merrimack River Area Planning Committee. This committee has been working with the Office of State Planning since May 1988 to advise on the development of a river nomination and a management plan for the protection of the Upper Merrimack River. Under the federal Wild and Scenic Rivers Act, all seven communities have endorsed the introduction of legislation by the state's congressional delegation which authorizes a study of the Upper Merrimack River by the National Park Service.

4. Recreational Resources

a. **Boating:** Canoeing is a popular boating activity on the Upper Merrimack River. There are nine public access points to the river for boaters and more are planned on properties which have been purchased by the river communities. The river offers both quickwater and flatwater experiences for canoeists.

b. **Fishing:** The Upper Merrimack River is a cold water fishery that provides habitat for at least eight fish species which are of sport and recreational importance. The New Hampshire Fish and Game Commission has recognized this river segment for, among other values, its "important angling opportunities." The Fish and Game Department regularly stocks the Sewalls Falls area and tributary streams with brook and rainbow trout.

c. **Other Recreation Potential:** The Upper Merrimack River has tremendous potential to support a variety of recreational activities, both on the water and on shore. The river offers easy canoeing along most of the segment, thus broadening the base of potential users. In addition, the river is swimmable, scenic, and rich in wildlife for observation, study, hunting, and enjoyment. Public access points occur with increasing frequency as one travels down the river. In August 1988, a one day survey of river users revealed that the most popular recreational activities on the river include swimming, canoeing, walking/exploring, and fishing. Bird watching, nature study, viewing scenery, and tubing were less frequently cited, while power boating and jet skiing had only a small following. Efforts are underway to obtain easements for a hiking trail that would become part of the New Hampshire Heritage Trail, stretching from the Massachusetts border, up the Merrimack, Pemigewasset, and Connecticut Rivers to the Canadian border.

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