

Upper Merrimack River Report to the General Court 1990

Note: This document has been edited from its original form.

Prepared by
State of New Hampshire
Department of Environmental Services
Office of the Commissioner
29 Hazen Drive
Concord, NH 03302-0095
Robert W. Varney
Commissioner
John E. Dabuliewicz
Assistant Commissioner

I. Introduction

The Merrimack River flows for 116 miles through the center of New Hampshire and into Massachusetts before running into the Atlantic Ocean in Newburyport, Massachusetts. The Central New Hampshire Regional Planning Commission, Lakes Region Planning Commission, Merrimack River Area Planning Committee, and the Merrimack River Watershed Council have nominated a 30 mile segment of the Merrimack River from the confluence of the Pemigewasset and Winnepesaukee Rivers in the town of Franklin to Garvins Falls in the town of Bow for designation into the New Hampshire Rivers Management and Protection Program. This river segment has been evaluated by the Department of Environmental Services and found to qualify for designation.

The Rivers Management and Protection Program Act was passed by the General Court in 1988. The Act states in part: "it is the policy of the state to ensure the continued viability of New Hampshire rivers for the benefit of present and future generations. The state shall encourage and assist in the development of river corridor management plans and regulate the quantity and quality of in-stream flow along certain protected rivers or segments of rivers to conserve and protect outstanding characteristics including recreational, fisheries, wildlife, environmental, cultural, historical, archaeological, scientific, ecological, aesthetic, and community significance so that these valued characteristics shall endure as part of the river uses to be enjoyed by New Hampshire people."

The Act directs the Department of Environmental Services to receive and evaluate nominations for the designation of rivers or river segments to protect outstanding values and characteristics under the Rivers Management and Protection Program. The Commissioner must forward approved nominations to the General Court for review and approval.

In fulfillment of this statutory directive, the nomination of the Upper Merrimack River is hereby forwarded to the General Court. The Department of Environmental Services recommends that this river segment be designated into the Rivers Management and Protection Program and classified as a "Rural River" under the provisions of the protection measure amendments to RSA Ch. 483. The outstanding statewide and local resource values and characteristics which qualify this river segment for designation are described in this report.

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, Boscawen, 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 Boscawen, 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 river bluff community, a mesic river bluff 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 home sites.

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.

III. Local Support

Local support for the designation of the Upper Merrimack River into the Rivers Management and Protection Program is very strong. On January 3, 1990, over 30 people attended a public hearing on the nomination of the river at the Legislative Office Building in Concord; a majority of those in attendance strongly supported the designation of the river segment. The department has received letters of support for the nomination from the Bow Board of Selectmen and Planning Board; the Concord Planning Board and Conservation Commission; the Canterbury Planning Board; the Boscawen Board of Selectmen, Planning Board, and Conservation Commission; and the Northfield Planning Board. On January 15, 1990, the Franklin City Council agreed to support the designation of the Upper Merrimack River as a "rural river."

In 1989, the state's congressional delegation submitted legislation to authorize a study of the Upper Merrimack River by the National Park Service under the federal Wild and Scenic Rivers Act. This legislation has been endorsed by all of the river communities and is further evidence of the local support which exists for the protection and management of the Upper Merrimack River.

IV. Summary and Recommendations

As it flows from Franklin to Garvins Falls, the Upper Merrimack River supports a variety of significant state and local resources. To better protect and manage these resources the Department of Environmental Services recommends the following actions:

Recommendation 1: The General Court should adopt legislation which designates the Upper Merrimack River from the confluence of the Winnepesaukee and Pemigewasset Rivers to Garvins Falls in the town of Bow into the Rivers Management and Protection Program and classifies the segment as a "Rural River."

Under the provisions of HB 1432-FN (1990), a rural river designation will provide increased protection for the river against new dam construction, damaging channel alterations, water quality impairment, and the inappropriate use of motorboats. A designation will also require the establishment of protected instream flow levels to maintain the minimum amount of water in the river that is necessary to safeguard public trust resources, including fisheries, water quality, and recreation. A Local River Management Advisory Committee will be established to coordinate local issues related to the protection and management of the river and will provide local residents with a direct avenue for formal input to state decisions that affect the river. Finally, a designation will result in the development of a long-range management plan for the river that coordinates state planning and management of fisheries, water quality and quantity, and recreation.

A "Rural River" classification is recommended for the Upper Merrimack River. Under HB 1432 (1990), rural rivers are defined as "those rivers or river segments which are partially or predominantly used for agriculture, forest management and dispersed or clustered residential development. Some instream structures may exist, including low dams, diversion works and other minor modifications." Although some sponsors of the nomination recommended a natural river classification for the upper portion of the river segment and other supporters recommended a community river classification for the river as it flows past downtown Concord, the

Department and the Rivers Management Advisory Committee have determined that the river and its corridor best meet the definition of a rural river. This determination was reached following consultations with the Franklin City Council and the Concord Planning Board. The Franklin City Council objected to the natural rivers classification because of its potential impact on the expansion of the regional wastewater treatment facility. The Concord Planning Board considered the options of a rural or community classification and have supported the rural classification as being appropriate for the future planning and management of the river. The designation of the Upper Merrimack River as a "Rural River" under the Rivers Management and Protection Program will clearly express the intent of the General Court with regard to the protection and management of the river and will focus attention on the river as a natural resource of both statewide and local significance. This attention will help to insure greater scrutiny of plans and proposals which have the potential to significantly alter or destroy those river values and characteristics which qualify the river for designation.

Recommendation 2: The communities of Franklin, Northfield, Boscawen, Canterbury, Penacook, Concord, and Bow should continue to work toward protection of the Upper Merrimack River through the adoption and implementation of a river management plan developed by the Merrimack River Area Planning Committee.

While a state designation will improve the protection and management of the river itself, continuing local efforts will be needed to address the use and conservation of the river corridor. A growing recognition by local citizens of the Upper Merrimack River's valuable contribution to the overall quality of life in their communities is reflected in their desire to see it designated into the state program and by the efforts of the Merrimack River Area Planning Committee and the Office of State Planning to develop a river management plan. The seven river communities should work toward the completion and implementation of the recommendations in this river management plan.

In summary, the establishment of a clear policy and specific instream protection measures by the General Court, and a continuing commitment on the part of local governments and residents to protect and manage the river corridor through sound land use decisions will ensure that the outstanding resources of the Upper Merrimack River will "endure as part of the river uses to be enjoyed by New Hampshire people."