

The Ashuelot River

Report to the General Court

June 1993

I. Introduction

The Ashuelot River is located in southwestern New Hampshire. The river begins in Washington, New Hampshire and flows south and west to the town of Hinsdale where it enters the Connecticut River. The Ashuelot River flows for a total of 64 river miles prior to entering the Connecticut River. The Ashuelot River has been nominated by the Ashuelot River Nominating Committee for designation into the New Hampshire Rivers Management and Protection Program. The Ashuelot River 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 that 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 River 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 Ashuelot River is hereby forwarded to the General Court. The Department of Environmental Services recommends that the Ashuelot River be designated into the Rivers Management and Protection Program and be classified as outlined in Recommendation 1 on page 6 under the provisions of the protection measure and amendments to RSA Chapter 483. The outstanding statewide and local resource values and characteristics which qualify the Ashuelot River for designation are described in this report.

II. The Ashuelot River Nomination

A. Description

The Ashuelot River nomination begins at the dam at Butterfield Pond in Washington and flows for approximately 64 miles throughout the communities of Lempster, Marlow, Gilsum, Sullivan, Surry, Keene, Swanzey, Winchester and Hinsdale. The Ashuelot River drainage basin encompasses 420 square miles from its northern boundary including Cherry Brook and North Pond to its mouth at the Connecticut River.

Land use along the upper portion of the Ashuelot River, from Washington/Lempster to Gilsium/Sullivan is primarily forested and sparsely developed. The lower reaches of the river, from Surry to Hinsdale, are characterized by a mix of forests, wetlands, farmland, and commercial/residential/industrial development.

B. River Values and Characteristics

The Rivers Management and Protection Act (RSA Chapter 483) lists nine river values and characteristics which may qualify a river for designation into the program. The Ashuelot 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 Ashuelot River for designation include geological resources; wildlife, fish and plant resources; water quality; open space, scenic values; water withdrawals; wastewater discharges; historic and archaeological resources; community resources; and recreational resources.

1. Natural Resources

a. **Geologic Resources:** The headwaters of the Ashuelot River begin in Pillsbury State Park at an elevation of 1,600 feet. From here the river flows 30 miles, dropping at a rate of 37 feet per mile and creating a steep gorge in Gilsium. It is here that numerous waterfalls are located. A number of potholes, including Devil's Chair, are also located in this reach of the river. Rapids and a waterfall are also located at Shaw's Corner. Throughout the river corridor you can find remnants of glacial activity such as varved clay deposits, deltas, drumlins and glacial Lake Ashuelot. Also of interest are the many quarries in the area producing sand, gravel, semi-precious stones and the high potential aquifers found in the river corridor.

b. **Wildlife and Plant Resources:** The Ashuelot River corridor supports a variety of diverse habitats that are home to a wide array of plant and animal species, including several endangered species. Important river habitats include rocky ledges, mixed deciduous coniferous and hardwood forests, wetlands and pasture. Of particular note are several great blue heron rookeries in the watershed; a total of eight colonies comprise 7.5% of the statewide total for heron colonies. Fourteen deer yards have also been mapped within the river corridor. The Ashuelot River, due to the river's general north-south orientation, is naturally used as a migratory path for raptors, waterfowl, and songbirds.

A number of species of plants and animals which occur along the Ashuelot River corridor are considered to be endangered or threatened species. The river corridor provides feeding areas for the federally endangered bald eagle. The northern harrier, a state threatened species, has been observed in marshy areas along the river. The blue-gray gnatcatcher, common loon, and the common nighthawk, all state threatened species, have been seen nesting and feeding along the Ashuelot River. The state endangered wild sensitive senna and spiked needlegrass, as well as several other state threatened vegetative species, have been observed along the Ashuelot River. The river corridor supports two ecologically significant natural communities: the Northern New England seepage marsh and the Southern New England circumneutral talus forest/woodland, in Marlow and Surry, respectively.

c. Fishery Resources: The Ashuelot River is both a cold and warm water fishery that provides habitat for approximately 15 resident species, including eastern brook trout, large and small mouth bass, and walleye. The river also contains a catadromous species of fish (fish that live in freshwater but return to saltwater to spawn), the American eel. The Ashuelot River is also home to the federally endangered dwarf wedge mussel. The US Fish and Wildlife Service has identified the Ashuelot River as one of the four most important refuges for this mussel. The Ashuelot River is currently included in the Connecticut River Anadromous Fish (fish that live in saltwater but return to freshwater to spawn) Restoration Program for smelt rearing and fry release. However, the program is not anticipated to start in the Ashuelot River for approximately five years.

d. Water Quality: The Ashuelot River has been designated Class B by the New Hampshire General Court. The upper reaches of the river have met or exceeded the standards for a Class B river. However, sections of the lower reaches have had some difficulties meeting the water quality standards for a Class B waterway. Efforts are underway to meet the standards through regulations, monitoring programs, and advances in municipal standards.

e. Open Space: The Ashuelot River corridor affords the surrounding communities a wide variety of open space opportunities. Located at the headwaters of the Ashuelot River is the 9,000-acre Pillsbury State Park, a relatively undisturbed wilderness of woods, ponds, wetlands, and hillsides. Surry Mountain Dam and Recreational Area encompasses 1,625 acres of open space. The City of Keene owns and operates the Ashuelot River Park, consisting of 46 acres and approximately 2.5 river miles. Further downstream, in the towns of Swanzey and Winchester, are more examples of open space, including Yale Forest, Dickinson Forest, a 189-acre parcel currently owned by the Winchester Conservation Commission, the Muster parcel, a 180-acre Winchester Town Forest, and the 13,400-acre Pisgah State Park.

f. Scenic Values: The Ashuelot River corridor abounds with scenic view and values. The Official New Hampshire Visitor's Guide lists all of Route 10 from Marlow to Winchester as a scenic drive, the river winding along much of this way. The guide also mentions the numerous covered bridges located in Swanzey and Winchester. The river itself provides outstanding visual characteristics, from the tumbling waterfalls at Gilsum Gorge to the quiet pools and meanders in West Swanzey. Along the way there are vistas of forested mountains and hillsides, farmlands and wetlands.

2. Cultural Resources

a. Historic and Archaeological Resources: The southern portion of the Ashuelot River Valley was first inhabited by the Squakheag Indians. The river valley was then settled by earlier pioneers in the 1700s. Settlement in the upper river valley began in the latter part of the 1700s. The river was a major source of food and power for the people of the valley. Evidence of mills are still visible today in all of the river towns where industry grew. There are numerous sites listed in the National Register of Historic Places, including Jones Hall, Gilsum Stone Arch Bridge, Dinsmoor-Hale House, and Sawyer's Crossing Covered Bridge. The Ashuelot River hosts seven Indian sites in Swanzey, and five sites in Winchester and Hinsdale. These sites range from the Paleo-indian (10,500 years ago) to the Fort Hill Hinsdale contact period (1640 A.D.) Of special interest is the Paleo-indian Site, the Whipple Site in Swanzey which boasts the first sign of man in New Hampshire.

b. Community Resources: The Ashuelot River has historically been an asset to the communities living near its shores. The river was important for food and later became important for power and still today the towns of Marlow, Winchester, and Hinsdale harness the river's power for hydroelectric dams. Other economic values include the assimilation of treated wastewater from the four municipal and two paper company wastewater treatment plants, and the use of river water for production by the paper industries. Two municipalities, Keene and Hinsdale, withdraw drinking water from wells located within aquifers along the river. The river continues to be of socio-cultural importance as towns hold various events around the river and its corridor such as the Upper Ashuelot Canoe Race, the Great Ashuelot River Duck Race, and the Art in Ashuelot Park events in Keene and the annual Poling Clinic in Swanzey to name a few.

3. Recreational Resources

a. Boating: The Ashuelot River provides a variety of boating experiences. The ponded sections are enjoyed by those who own small sailing vessels and motorboats while the open water is enjoyed by kayakers and canoeists. The Ashuelot River is listed in the AMC New England Canoeing Guide (1971) as a "beautiful tributary of the Connecticut"; the upper reaches are described as rapid and rough, the middle largely winding and placid, and the last few miles provide "some of the wildest running in New Hampshire." A six-mile stretch of river from the Gilsum Gorge to Surry is a very popular run for kayakers as well as whitewater canoeists. The run has four miles of continuous Class II-III rapids with a spectacular drop at Shaw's Corner. The Ashuelot River provides an area of Class V rapids, three miles south of Winchester, for the experienced kayaker. The "Upper Ashuelot Canoe Race" in the spring attracts participants from outside the state to compete in this US Canoe Association-sanctioned race, executed on a flatwater course.

b. Fishing: The Ashuelot River is mentioned in various fishing guides as a popular river for fishing. The AMC Guide to Freshwater Fishing in New England describes the upper reaches with cold, fast moving water as good locations for rainbow and brown trout. DeLorme Mapping Co. in its book New Hampshire Fishing Maps, lists Ashuelot Pond for small and large mouth bass, pickerel, horned pout, and yellow perch. This guide also maps the upper reaches between Marlow and Gilsum for best fishing. Local fishermen extol the portion of the river between Route 10 in Gilsum and Surry Mountain Lake as some of the best fly-fishing for trout in the region. Where the Ashuelot meets the Connecticut is a popular spot for walleye, bass, bullheads and perch. Much of the river is accessible by roads; therefore, fishing is not limited to the areas mentioned above.

c. Other Recreation: The Ashuelot River offers many opportunities for a variety of recreational activities, both on the water and onshore. The water activities include swimming, tubing, and boating. Onshore activities abound with three campgrounds located along the river from Pillsbury State Park in Washington to Forest Lake Campground in Winchester. There are also locations along the river to picnic, play golf, play horseshoes, or have a game of softball. The scenic beauty of the river corridor affords opportunities to hike either in the state or municipal parks located in the river corridor.

d. Access: There are five boat landings along the Ashuelot River, two in Washington at Pillsbury State Park and Ashuelot Pond, two in Marlow at Baptism Beach and Big Pond, and one at the Surry Mountain Recreational Area. These access areas are equipped with boat

ramps and landings. Ashuelot River Park in Keene provides a small boat access. The proximity of roads along the river and numerous pulloffs provide informal access to cartop boats along much of the river's 64 miles.

4. Managed Resources

a. **Water Withdrawals:** Water is currently drawn from the Ashuelot River corridor for use as drinking water by the towns of Keene, Winchester, and Hinsdale. This water is obtained from municipal drinking water wells located adjacent to the river. Water drawn from the river is also used for hydroelectric power in Marlow, Winchester and Hinsdale; sewage treatment in Keene, Swanzey, Winchester, and Hinsdale; and for industrial purposes in the towns of Ashuelot and Hinsdale.

b. **Wastewater Discharges:** Eight permits to discharge wastewater to the Ashuelot River have been granted under the Federal Clean Water Act and state water quality laws. Dischargers include four wastewater treatment facilities, one medical facility (cooling water), one groundwater contamination treatment system, and two paper companies (treated industrial effluent/wastewater).

III. Local Support

Local support for the designation of the Ashuelot River into the River Management and Protection Program is strong. In June 1991, a group of local citizens met with the state Rivers Coordinator and made the decision to pursue nomination of the entire Ashuelot River. All towns were invited to participate in the nomination process. All but two of the ten river towns (Lempster and Sullivan) participated through active working groups. Formed as the Ashuelot River Nominating Committee, these groups met jointly at advertised monthly public meetings. A total of 45 citizens participated in the work groups.

Three formal public meetings were held on the draft nomination through the watershed: Winchester on June 30, 1992, Keene on July 1, 1992, and Marlow on July 2, 1992. Letters were written to planning boards, conservation commissions, and selectmen inviting them to the meetings; notices were placed in the local papers; and ad announcements were posted throughout the watershed. The public reacted in favor of the draft nomination and expressed no opposition at the public meetings.

In April 1992, riverfront property owners were surveyed using a questionnaire modeled on that suggested in the River Nomination Guidebook. Seventeen percent of the landowners responded to the survey. Respondents indicated that they value the natural beauty, recreation, wildlife and waterfowl habitat, wetland ecosystems, open space, and the free-flowing character of the Ashuelot River. Ninety-three percent indicated that the river contributes to the quality of life in the community. Eighty-six percent of the respondents believe that the Ashuelot River is worthy of designation and that the local government should take action to protect the river in their community.

In addition to the support mentioned above, 11 area businesses have demonstrated their approval of the process by donating over \$10,000 to the nominating group for collecting the information, developing the nomination and sending out the questionnaires.

IV. Summary and Recommendations

As it flows through the towns of Washington/Lempster, Marlow, Gilsum/Sullivan, Keene, Swanzey, Winchester, and Hinsdale, the Ashuelot 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 Ashuelot River into the Rivers Management and Protection Program and classifies the Ashuelot River as follows:

- a. NATURAL: from the dam at Butterfield Pond to and including the falls above Ashuelot Pond;
- b. RURAL: from the falls above Ashuelot Pond to Symondsville Road in Marlow;
- c. COMMUNITY: from Symondsville Road in Marlow to the dam at Village Pond owned by Audio Accessories;
- d. RURAL: from below the Audio Accessories dam in Marlow up to the breached dam, owned by James Blackstock, located above the Village of Gilsum;
- e. COMMUNITY: from the breached dam owned by James Blackstock to above the stone arch bridge in Gilsum;
- f. RURAL: from the stone arch bridge in Gilsum to the Court Street bridge in Keene;
- g. COMMUNITY: from the Court Street bridge in Keene to the Branch River;
- h. RURAL: from the Branch River in Keene to the unnamed brook entering on the west bank near the intersection of Winchester Street and Route 10 in West Swanzey;
- i. COMMUNITY: from the unnamed brook on the west bank near the intersection of Winchester Street - and Route 10 in West Swanzey to the Denman Thompson bridge;
- j. RURAL: from the Denman Thompson bridge in West Swanzey to and including the oxbow on the west bank before the A.C. Lawrence building in Winchester;
- k. COMMUNITY: from the oxbow on the west bank before the A.C. Lawrence building in Winchester to the Route 119 bridge;
- l. RURAL: from the Route 119 bridge in Winchester to the dam owned by G. E. Robertson & Company in Hinsdale;
- m. COMMUNITY: from the dam owned by G. E. Robertson & Company in Hinsdale to the Route 63 bridge; and
- n. RURAL: from the Route 63 bridge in Hinsdale to the mouth of the Ashuelot River at the Connecticut River.

Under the provisions of the protection amendments to RSA Chapter 483, a designation will provide increased protection for the river against new dam construction, damaging channel alterations, water quality impairment, and siting of hazardous and solid waste facilities in the river corridor. 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, recreation, and scenic values. 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.

The headwaters of the Ashuelot River in the towns of Washington and Lempster, from the dam at Butterfield Pond to and including the falls above Ashuelot Pond, is being recommended for a "natural river" classification. Under the protection measure amendments to RSA Chapter 483, natural rivers are defined as "free-flowing rivers or segments characterized by the high quality of natural and scenic resources. River shorelines are in primarily natural vegetation and river corridors are generally undeveloped. Development, if any, is limited to forest management and scattered housing." The dam at Butterfield Pond maintains the level of Butterfield Pond and does not affect the natural flow characteristics of the river. The location of the headwaters within the 9,000-acre Pillsbury State Park ensures the continued presence of a high quality natural and scenic resource and a generally undeveloped river corridor on the upper Ashuelot River. The Department of Environmental Services has determined that the outstanding public resources of the upper Ashuelot River warrant a natural river classification.

As listed above, several sections of the river are recommended for a "rural river" classification. Under the protection measure amendments to RSA Chapter 483, rural rivers are "those rivers or segments adjacent to lands which are partially or predominantly used for agriculture, forest management, and dispersed or clustered residential housing. Some instream structures may exist, including low dams, diversion works, or other minor modifications." As the Ashuelot River flows through towns and farmland of the countryside, the river clearly meets the definition of a rural river.

Other segments of the Ashuelot River are further classified as a "community river." Under the protection measure amendments to RSA Chapter 483, community rivers are "those rivers or segments which flow through developed or populated areas of the state and which possess existing or potential community resource values, such as those identified in official municipal plans or land use controls. Such rivers have mixed land uses in the corridor reflecting some combination of open space, agriculture, residential, commercial and industrial land uses. Such rivers are readily accessible by road or railroad, may include existing impoundments or diversions, or potential sites for new impoundments or diversions for hydropower, flood control or water supply purposes, and may include the urban centers of municipalities." The Ashuelot River, in certain sections such as Keene and Winchester, clearly meets this classification.

Recommendation 2: The communities of Washington/Lempster, Marlow, Gilsum/Sullivan, Keene, Winchester, Swanzey, and Hinsdale should continue to work toward protection of

the Ashuelot River through the adoption of local river corridor management plans, including comprehensive shoreland protection ordinances.

While a state designation will improve the protection and management of the river itself, continuing local effort will be needed to address the use and conservation of the river corridor. A growing recognition by local citizens of the Ashuelot River's valuable contribution to the overall quality of life in their communities is reflected in their desire to see the river designated into the state program. Citizen appreciation and concern for the river should be reflected in the decisions and actions of local government officials. Upon request, the Department of Environmental Services will provide technical assistance to any of the communities along the Ashuelot River on the development of local river corridor management plans, including comprehensive shoreland protection ordinances.

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 Ashuelot River will endure as part of the river uses to be enjoyed by New Hampshire people.