

# ENVIRONMENTAL Fact Sheet



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R&L-17

2023

## The Souhegan River

Formed by the convergence of its South and West branches in New Ipswich, the Souhegan River flows approximately 34 miles through the communities of New Ipswich, Greenville, Wilton, Milford, Amherst and Merrimack before joining the Merrimack River. The Souhegan River is one of the largest tributaries to the Merrimack River in southern New Hampshire, with a drainage area of approximately 425 square miles. Throughout history, the river provided transportation, powered early mills, supplied water for irrigation and drinking, and carried away wastes. Today, the river continues to provide these services; however, there is also greater appreciation for its natural, recreational and cultural resources.



### Open Space

Despite the rapid pace of development in southern New Hampshire, large areas of undeveloped land exist along the Souhegan River in each community, particularly in the western sections of the corridor. Major parcels of undeveloped land along the river have been protected in the communities of Merrimack, Amherst, Milford, Wilton, Greenville and New Ipswich.

### Geology

During the last ice age, glacial Lake Merrimack extended up the Souhegan River to Milford Center, leaving behind the fine sands and silts that underlie the floodplains of the river. Streams flowing from melting glaciers additionally deposited sediments in layers of similar sized grains. These geologic resources, known as stratified drift aquifers, provide a source of high-quality public drinking water used by the towns of Merrimack, Milford and Wilton. The aquifers also supply water for a spring water company in Wilton and a fish hatchery in Milford. Other significant geologic resources include scenic areas such as the gorge in Greenville, Horseshoe Falls in Wilton, and Wildcat Falls in Merrimack.

### History

The Souhegan River corridor has accommodated a wide range of land uses. Over 300 years ago, a band of Penacook Indians settled on the banks of the river they named "Souhegan." Rough English translations of Souhegan are "river of the plains" and "river of difficult portages." A 1652 scouting report indicated there were about 50 Penacook families near the mouth of Salmon Brook and the Nashua River and many more along the banks of the Souhegan and Merrimack rivers. In the 1700s, European settlers increasingly populated the area, which saw increased agrarian development of the land, the establishment of mills, and the incorporation of towns. The development of mills, largely textile, continued through the 1800s and into the early 1900s. In the 1920s, shoe factories began locating in the region, further increasing the manufacturing base of the area. The

prosperity of mills and factories became threatened by the end of World War II when textile industries shifted from the northeast to the southern U.S. Today, few of the communities in the Souhegan River corridor maintain a strong manufacturing role, having undergone a transition to other industries including electronics, defense, and computer technology. Other communities have become primarily residential.

### **Wildlife, Habitat and Vegetation**

Mammals and birds found in the Souhegan River corridor are those commonly found in southern New Hampshire. Depending on the season, the river corridor is host to a wide diversity of birds such as warblers, sparrows, wrens, ducks, geese, herons and raptors, some of which nest in the area or migrate through the corridor. Rural areas of the watershed support animals that require larger territories such as moose and black bear. The river corridor is also home to the state-listed endangered Blanding's turtle and Eastern hognose snake, and the state-listed threatened grasshopper sparrow. Bald eagles and Northern leopard frogs are among the state species of special concern that live in the river corridor.

Typical plant species in the river corridor include white pine, hemlock, red maple, red oak, sycamore and numerous species of grasses and shrubs. In addition, state-listed threatened species such as the bird-foot violet, clasp milkweed, and Giant Rhododendron, as well as state-listed endangered northern wild senna and red-footed spikeweed, have been documented in the river corridor.

### **Fishing and Recreation**

Native fish species in the Souhegan River include brook trout, smallmouth bass, sunfish, yellow perch, suckers and dace. In addition, the New Hampshire Fish and Game Department annually stocks game fish, including over 5,000 rainbow, brown, and brook trout in the Souhegan River. The river was also an important part of the now-discontinued Merrimack River Anadromous Fish Restoration Program, which aimed to restore Atlantic salmon, American shad, and river herring. The upper reaches of the Souhegan and its tributaries provide ideal habitat for Atlantic salmon, but the dams on the river are equipped with downstream passage only since anadromous fish are unable to swim upstream past dams on the Merrimack River. However, the Merrimack Village dam, the lowermost dam near the Souhegan River's mouth at the Merrimack River, was removed in 2008, improving fish passage opportunities for many species.

Boating on the Souhegan River is limited to canoes and kayaks since water depth is generally low for motor boats. Both the Appalachian Mountain Club's River Guide and the New England Whitewater River Guide identify the river as good, intermediate whitewater. The rapids in the Greenville/Wilton stretch are classified as Class II, III and IV whitewater. Flatwater canoeing is popular in Amherst and Merrimack. Public access sites for paddle boats are available in the towns of Merrimack, Amherst, Milford and Wilton.



### **Protected Instream Flow**

The Souhegan River was one of the first two designated rivers on which the Instream Flow Program was applied. Studies of the river's flow-dependent, instream public uses were conducted to determine the seasonal flows necessary to support both natural aquatic habitats and human uses. These flows were established as protected flow criteria in 2013 and are implemented under a water management plan that includes conservation and water use management by larger water users and impoundment management at selected dams. Examples of water management actions include water-use restrictions or bans and water releases from the dams to create relief flows to support protected instream flows during periods of unusually low flow and droughts. The program aims to ensure that lake and river ecosystems as well as the water needs of human users are equitably supported.

### **For More Information**

For further information, visit the New Hampshire [Rivers Management and Protection Program](#) page on the NHDES website, or contact the Rivers Coordinator, 29 Hazen Drive; PO Box 95; Concord, NH 03302-0095; [603-271-2959](tel:603-271-2959); [riversprogram@des.nh.gov](mailto:riversprogram@des.nh.gov).