The Souhegan 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 has 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 a 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 fine sands and silts that underlie the floodplains of the river. Additionally, streams flowing from melting glaciers deposited sediments in layers of similar sized grains. These geologic resources, known as stratified drift aquifers, provide a source of high quality drinking water used for public supplies 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 three hundred 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, the area became increasingly populated by European settlers. Settlements were accompanied by 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 a shift in the textile industries from the northeast to the southern U.S. occurred. 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, or having 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 bird species such as warblers, sparrows, wrens, and several species of raptors. A number of species of ducks, geese and herons 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 eagle, and Northern leopard frog.

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, clasping milkweed, and Giant Rhododendron, as well as state-listed endangered northern wild senna and red-footed spikesedge, 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 and was considered one of the most productive rivers in the watershed. The upper reaches of the Souhegan and its tributaries provide ideal habitat for Atlantic salmon. The dams on the river are equipped with downstream passage only at this time since natural reproduction is not expected. 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. 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. There are public access sites 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 in 2013 as protected flow criteria, 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. 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 about the New Hampshire Rivers Management and Protection Program, visit the NHDES website and search for RMPP, or contact the Rivers Coordinator, 29 Hazen Drive; PO Box 95; Concord, NH 03302-0095; (603) 271-2959; riversprogram@des.nh.gov.