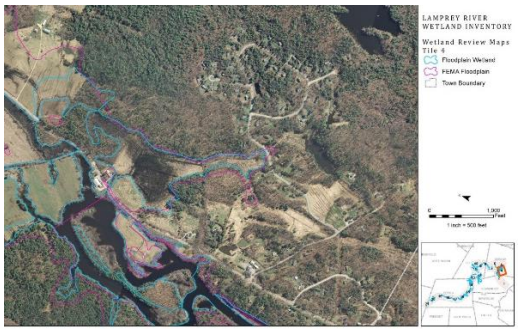
Wildlife and Ecology

Goals:

- *Work with towns and landowners to expand existing wildlife habitat inventories and conservation plans for the Lamprey River watershed area.*
- *Protect and restore the ecological functions and resources of the Lamprey River that are critical to wildlife and humans*.

Setting up equipment to detect bat calls.

Blanding's turtle



Riparian wetland inventory map

Background

The Lamprey River and its tributaries drain a land area, or watershed, of 214 square miles. This is the largest river watershed of the Great Bay Estuary, a National Estuarine Research Reserve. Despite an increasing human population, this largely forested and relatively undeveloped area supports important floodplain forests, extensive shrub and emergent marsh wetlands, and scattered openings and fields among the forested uplands. The floodplains, backwaters, vernal pools, fields, and forests are home to a great diversity of wildlife including significant populations of Blanding's, spotted, and wood turtles, each of which is a species of conservation concern in New Hampshire.

The Lamprey is one of the state's most significant rivers for anadromous fish (fish that migrate between fresh and salt water) such as river herring and American eels, as well as many strictly freshwater fish. More than 150 species of birds use the river corridors to breed, over-winter, or stop during migration. Protection of natural habitat ensures benefits for both wildlife and people, such as low or no-cost maintenance of clean groundwater, river water, healthy soils, and flood protection. In addition, the Lamprey supports the ecosystem and ecosystem services of the Great Bay Estuary by providing fresh water and habitat for the many species found there.

Compared to other rivers in the region, the Lamprey River's headwaters, channel, floodplain, and adjacent wetlands are still relatively intact, making possible the wide variety of plants, fish, and other wildlife that live here. Undeveloped riverside areas (buffers) and associated wetlands help to protect the river from soil erosion and sediments, excessive nutrients, pollutants, and overheating in summer sun, as well as slowing the flow of seasonal or storm flood waters.

Wildlife and habitats depend on maintaining clean water, natural flow patterns, riverside vegetation, and uplands that are developed in a sensitive manner and are not fragmented by haphazard development. Similarly, protecting and managing these natural areas is the most cost-effective way to ensure the services they provide to people, such as clean, abundant water, flood control, and quality of life.

The ecology of the Lamprey, as summarized above, was found by the National Park Service to represent an "outstandingly remarkable" resource worthy of recognition and protection through the National Wild and Scenic Rivers System (1995 Draft Report to Congress). In 2011, the entire Lamprey River and its five major tributaries were designated into the NH Rivers Management and Protection Program based on many of the same values.

The ecological integrity of the river corridor is being challenged by several issues: the human population increased 38.3% from 1990 to 2020 and more than tripled from 1960 to 2020; the amount of natural land lost to development is increasing even faster than the population. (See Appendix A.) As the landscape is developed, habitats are being fragmented and lost; invasive, non-native species are becoming more common; climate change is delivering more numerous and more extreme weather events; and stormwater runoff is carrying more sediments and nutrients into the rivers, resulting in more challenges to wildlife and local ecology.

Key Future Actions

- Encourage sustained ecological integrity in the watershed.
    - Partner with UNH and the NH Fish and Game Department to monitor a few key indicator species over time and synthesize the data into a trend analysis. Share with policy makers and town leaders.
    - Support research to discern why key fish species are missing from otherwise suitable habitat as identified in New Hampshire Fish and Game's Lamprey River Watershed Fish Surveys from 2012.
    - Seek out and conserve land that increases the degree of connectedness for aquatic organism and wildlife passage within the watershed.
    - Review the NH State Wildlife Action Plan | State of New Hampshire Fish and Game and the Climate Action Plan | NH Department of Environmental Services for guidance on research needs and best management practices.
    - Work with partners to conduct programs that inform riverside landowners about wildlife needs on their property.
    - Promote wide riverside buffers as important to wildlife and water quality.
    - Work with towns to enact buffer protection regulations.
    - Help people to understand their connection to nature and wildlife: how to maintain wildlife habitat, how to safeguard soil and clean water.
    - Protect headwater streams through land purchase/easement.
    - Collaborate with regional planning commissions to update the map of stormwater outfalls and barriers to aquatic organism passage with a goal of

prioritizing retrofit projects to ensure that the worst offending systems are dealt with first.

- Provide outreach that encourages the public to appreciate the importance of wildlife and ecology to clean, abundant water, public enjoyment, education, and land protection:
    - Continue to make wildlife and ecological considerations a priority in land protection efforts.
    - Identify key audiences and work with the outreach program to develop targeted materials.
    - Explore hosting a “big night” event to assist vernal pool amphibians.
    - Increase public awareness of wildlife and their habitats.
    - Address road salt and encourage towns to reduce it; study possible effects of extra road sand (from less salting) on wildlife.
    - Tap into local knowledge: landowners, recreationists, conservation commissions, etc..
- Prioritize projects and identify funding sources for research and restoration projects.
- Educate the public about invasive species and the problems they can cause.
- Engage with wildlife partners to track rehabilitated wildlife.
- Encourage people to report all rare wildlife sightings to the NH Fish and Game Department.

To view past Wildlife Accomplishments, click here or go to Appendix C, page 50.