

RESULTS

Rivers, Streams and Ponds

Lyme contains about 1,033.8 acres of inland waters, including 8.3 miles bordering the Connecticut River. The Town's largest waterbody, (with the exception of the Connecticut River), is Post Pond, which is just over 114 acres and can be seen from Route 10. Reservoir Pond, most of which is in Dorchester, is nearly 162 acres. The ponds offer excellent open water wildlife habitat as well as good recreation potential. Many are stocked with fish by New Hampshire Fish and Game Department.



Post Pond lies between Demmick Hill to its north and Flint Hill to the south.
It is nearly 40 acres and its outlet feeds into Grant Brook.

The Connecticut River is the largest river or stream in Lyme, flowing for 43,800 feet (8.3 miles) along the western boundary of Lyme. Being the largest river in New England, it was designated into the NH Rivers Management and Protection Program. It has also been designated an American Heritage River by President Clinton. Protecting its biological diversity and scenic value has been a priority for the states of NH and VT since the 1980's.

Natural Resource Inventory for Lyme, NH



Edgell Covered Bridge on Clay Brook at the confluence with the Connecticut River. Built in 1885, it is 132 feet long.

There are three main named stream systems. The first main complex consists of Trout Brook which originates on the west slope of Smarts Mountain and flows into Post Pond. The outflow of Post Pond is Clay Brook which flows north until its confluence with the Connecticut River. The second main tributary in Lyme is Grant Brook which originates in the eastern part of Town on the south side of Smarts Mountain, flows west and has its confluence with the CT River approximately 2.5 miles southwest of Lyme Center. Hewes Brook starts in the south-central portion of Town, flows WNW, and has its confluence with the Connecticut River near the SE corner of Town.

Lyme's running water system contains several minor named and unnamed perennial and intermittent streams that flow in all directions, north, south, east and west, dependent on topography and aspect, reflective of its rugged terrain. These cold water systems are generally pristine with little to no turbidity, and very picturesque. With a few exceptions which flow through farmlands, water bodies and streams are well buffered with excellent riparian corridors.



Grant Brook to the north of Lyme Hill. The Riparian Buffers here offer excellent habitat and shading for the stream.

Sub-Watersheds

The ability to view the landscape from a watershed or sub-watershed perspective offers an opportunity to approach natural resources in varying plant communities. Sub-watersheds do not stop at town boundaries, which highlights the fact that all things downstream are affected by land management upstream, particularly in the headwaters.

Due to its rugged terrain and multiple ridgelines, Lyme contains the headwaters of eight sub-watersheds broken down to the level 12 hydrologic unit code (HUC) listings. The farthest west are the Hanover-Piermont tributaries and the farthest east are the Canaan Street Lake sub-watershed and a small portion of the South Branch/Baker River sub-watershed. The Clay Brook and Jacobs Brook sub-watersheds are located in the northern portion of Lyme with Goose Pond and Connecticut mainstem-Ompompanoosuc River to White River sub-watersheds located in the southern portion of Lyme. Located in the center portion and the only sub-watershed completely contained within Lyme, is the Grant Brook sub-watershed. As with their associated tributaries and streams, these sub-watersheds flow in all directions, north, south, east, and west, dictated by their respective aspect of topography at the landscape level. Please refer to the attached Sub-watershed map at the end of this report.

Riparian Habitat and Flood Plains

With miles of streams, brooks, and rivers, Lyme contains a significant amount of excellent riparian habitat. There are approximately 82 miles of rivers and streams flowing through the Town and just over 1,793 acres of wetlands creating opportunities for large amounts of adjacent riparian habitat. Lyme contains numerous riparian habitat types such as floodplain forests, scrub-shrub, grasslands, and meadows, with forested zones in the majority.



This photograph illustrates riparian habitat providing edge, grassland, and aquatic habitat along with excellent cover for a multitude of wildlife species: along the Connecticut River.

Riparian lands are an extremely significant and beneficial habitat type. These habitats are the plant and wildlife communities that are adjacent to rivers, streams, and other waterbodies. The habitats directly abutting these waterbodies are unique because of the varying water regimes that exist and periodic natural disturbances through events such as flooding. They also provide an important transition zone between terrestrial and aquatic habitats. Riparian lands are rich in

bird species; numerous songbirds, raptors, ducks, herons, and others are commonly found utilizing the scrub-shrub, grasslands, meadows, and forests that make up these areas. Aquatic and terrestrial mammals such as muskrat (*Ondatra zibethicus*), beaver (*Castor canadensis*), river otter (*Lutra canadensis*) and other weasel species, moose (*Alces alces*), white-tailed deer (*Odocoileus virginianus*), black bear (*Ursus americanus*), raccoons (*Procyon lotor*), bats, red fox (*Vulpes vulpes*) and gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), bobcat (*Lynx rufus*), and many others also rely heavily upon these habitats. Riparian areas provide important birthing, mating, feeding, and resting sites for these species. They are also commonly used as travel corridors. In many cases wildlife species may not linger within these habitats, but they are a relatively well protected mode for travel linking various uplands.

The riparian forests in Lyme which contain floodplain, wetland, and upland forests, are dominated by white pine (*Pinus strobus*), red maple (*Acer rubrum*), yellow birch (*Betula lutea*), white birch (*Betula papyrifera*), eastern hemlock (*Tsuga Canadensis*), and sugar maple (*Acer saccharum*) with some silver maple (*Acer Saccharinum*) and American basswood (*Tilia americana*). Much of this area has been used for agriculture in the past with its rich soils and flat terraces, ideally suited for crops and irrigation.

A specific riparian habitat type is floodplain forests which are relatively narrow strips of land in much of Lyme. The largest floodplain areas are found along the Connecticut River. They are diverse and dynamic ecosystems affected by periodic, temporary flooding. Sediments are transported from upstream and deposited where water slows and spreads out across the floodplain terraces.



The photo on the left illustrates excellent riparian and forested flood plain habitat found in Lyme. On the right is a hay field, which has been used for years for agriculture. Buffer enhancement along the CT River would help minimize erosion and runoff.

Intact riparian areas are also essential for creating and maintaining a healthy aquatic system. Overhanging vegetation such as shrubs and trees provide important shade to aquatic habitats allowing them to maintain cooler water temperatures and adequate amounts of dissolved oxygen. The root systems of the riparian vegetation are also important for reducing the amount of erosion that the constant moving water and flooding situations could potentially cause. By reducing erosion, relative stream bank stabilization and sedimentation are controlled. Riparian habitats also slow and hold floodwaters reducing far reaching damage and can work as a filtration system removing nutrients and toxicants from the water. Riparian vegetation can also provide habitat structure to aquatic systems through dead or broken limbs (or sometimes whole trees) that fall into the water.