



Lewis Creek Association: Then and Now

1990 – 2020

In 1989, just as the Hinesburg Land Trust was getting started, its members learned that a 100-acre parcel of land with a mile of frontage on the Lewis Creek was up for sale. Andrea Morgante, a founding member of the Hinesburg Land Trust, with support from the Vermont Land Trust, submitted one of the first grant applications to the newly formed Vermont Housing and Conservation Board (VHCB) asking for help to purchase the property. She made a strong case for protecting land along waterways and for taking a watershed perspective towards land-use planning and conservation, pointing out that rivers flow beyond town borders and zoning districts.

The VHCB agreed to provide some funding and encouraged her to form a citizen-based watershed association in order to engage local landowners and communities in protection of the stream corridor. This gave Andrea the seed of an idea, and she reached out to people with a connection to the creek, including Marty Illick and Lisa Kiley of Charlotte, Louis DuPont and Cecilia Bissell of Starksboro, Barry Borden and Jay Appleton of Ferrisburgh, Jon Corcoran and Sabrina Warner of Monkton, Paul Wiczoreck of Hinesburg, and others from the Lewis Creek watershed towns. They met and talked about what a watershed group could do and how it could be structured.

At about this same time, the Lake Champlain Basin Program was founded, and there was a state-wide effort to get more towns to set up local conservation commissions. The Lewis Creek group helped get the word out in the watershed towns for upcoming votes at their town meetings. All six towns voted to form Conservation Commissions that year. The new Lewis Creek group invited a representative from each of the Conservation Commissions to join its board. The mission of the Lewis Creek Conservation Committee (later renamed Lewis Creek Association), was to promote a watershed perspective, to raise awareness and appreciation for the resources that Lewis Creek provides, and to protect and enhance the health of the stream. In 1990 the Lewis Creek Association (LCA) incorporated as a Vermont nonprofit and hired its first coordinator. To guide its work, the LCA began by gathering all the information it could find about the watershed's geography, history, and current conditions.

Lewis Creek has a number of popular swimming holes, and the founders of the LCA recognized that these are places people care about and where they form strong personal connections with the river. One of the first field projects was testing for pollutants in the swimming holes. LCA volunteers took water samples to the Vermont State Laboratory in Burlington and had them analyzed for *E. coli*. It became immediately apparent that the bacteria in the creek often exceeded healthy levels in the summertime. This led to the first efforts to monitor stream health

and identify sources of pollution. It was the impetus for the first stream bank stabilization and revegetation projects.

One likely source of *E. coli* was the presence of dairy cows wading in the stream. This was common practice at the time, and one location in particular presented itself as an opportunity for improvements. The Rublee Farm in Starksboro had pastures on both sides of Lewis Creek, and the herd routinely forded the stream to cross from the milking barn on the east side to the pastures on the west side. This was dangerous for the cows when the water was high. The farmer, Leslie Rublee, was open to working with the LCA to find a better solution. Together with the Natural Resources Conservation Service and the Farm Service Agency, the LCA helped to find funding for a bridge for cows and machinery to cross the creek, as well as planting trees and shrubs along the eroded stream banks. Later sampling confirmed a drop in *E. coli* levels downstream from the farm.

Another way to prevent erosion and pollution is to plant vegetative buffers to naturalize river corridors and their recovering floodplains. Since early in its history, the LCA has undertaken many river corridor projects with federal partners by helping to plant native trees and shrubs such as willows, dogwoods, nannyberry, elderberry, oaks and others, as habitat and natural barriers to erosion. With the help of numerous volunteers, including scouts, elementary and high school students, college classes, Rotarians, Stark Mountain employees, and other community members, the LCA planted many thousands of trees and shrubs along exposed floodplains and stream banks in every town in the watershed. Working with state and federal agencies, the LCA also helped to install bank stabilizing revetments, coconut fiber rolls, and coarse woody debris, to restore habitat and reduce water pollution.

A primary focus of LCA activity has always been education. The directors have sought to learn from experts about the stream and the watershed and to share this knowledge with citizens, students, and conservation and planning commissions in watershed towns. The LCA carried out studies of river corridor geomorphology, habitat, and ecology. It co-sponsored conservation congresses, led outings, and held numerous presentations on a range of watershed-related topics over the years, from sustainable forestry to health effects of blue-green algae. In the 1990s the LCA worked with teachers in Vergennes, Champlain Valley Union (CVU), and Mount Abraham high schools to develop a river-study curriculum that included visits to the Lewis Creek to measure and evaluate different aspects of the stream (velocity, sedimentation, macro-invertebrate organisms, condition of the stream bank, etc.). The LCA lent equipment like kick nets to schools, provided teacher training, and coordinated CVU field days at Lewis Creek and a Mount Abe tenth grade field day at the Bristol Waterworks Property for several years. School classes and scouts helped with many streambank planting events, empowering children to feel and know they could do something to help the river.

Rivers serve as corridors for wildlife movement, and the LCA became interested in finding out what kinds of wildlife live in the watershed, identifying their core habitats, and learning how

they move from one habitat area to another. The organization enlisted the help of Susan Morse of *Keeping Track, Inc.* to train volunteers in tracking methods. From 1993 to 1998, the LCA engaged over 100 participants in tracking surveys and *Keeping Track* training outings, many of whom went on to set up and monitor transects in their towns and record data on the presence of bear, bobcat, otter, fisher, mink and moose—six keystone mammal species in this region. Also, because a great many watershed residents had become interested in tracking, LCA created a set of life-sized animal track cards and provided sets to every school and town library in the watershed, where they continue to be in high demand to this day.

From 1998 to 2003, the LCA surveyed road crossings and the travel patterns of resident mammal species. This program helped to identify active wildlife movement corridors and their home habitat blocks. Then, in 2003, with the Vermont Department of Fish and Wildlife, the LCA produced a contiguous wildlife habitat map for wide-ranging species based upon the field studies. During this time the LCA also produced two complementary maps showing stream corridors as well as key diverse landscapes and natural communities in the watershed region. In 2007, these three maps were combined to depict LCA's current Conservation Priorities for informing conservation planning in the two-county region. Technical consultants and Addison County Regional Planning Commission helped LCA to design and produce these planning maps, which were provided to each of the watershed towns.

The road-crossing survey identified one section of Monkton Road in particular as a key wildlife crossing, as bobcat and other mammal tracks were frequently found there. This same stretch of road was later discovered to be a major amphibian crossing—a place where thousands of salamanders and frogs cross the road in early spring as they travel between upland and wetland habitats for breeding, and where they were being killed in huge numbers by nighttime traffic on the road. The LCA led fundraising efforts to design and build wildlife underpasses in this section of road. The campaign included appeals to local donors, an online funding campaign, and grant-writing, which, together with federal transportation wildlife-crossing funds, provided \$300,000 for the project. In 2015 the Town of Monkton built two wildlife underpasses, the first of their kind in the Northeast. These passages have been extremely successful from the start, giving safe passage to many amphibians (as well as raccoons, bobcats, and other wildlife) and helping to reduce the carnage of frogs and salamanders along this busy roadway between Vergennes and Monkton.

In addition to learning about the biota of the watershed, the LCA also studied stream geomorphology to understand the physical dynamics of stream movement in the Vermont landscape. With grant funding, the LCA worked with hydrogeologists to analyze the past history of every reach of the stream in order to recognize the various human and natural disturbances that cause rivers and streams to adjust over time. With engineers Milone and McBroom, Inc., the LCA surveyed the culverts and bridges of Lewis Creek, LaPlatte River, and other waterways, identifying those that are undersized or that impede fish (and other aquatic organisms) from moving between feeding and spawning areas. This information was provided to towns in the

area, as well as the Vermont Agency of Transportation as they work towards upgrading these structures.

Throughout its history, the LCA has worked closely with federal, state, regional, and local officials, land trusts, watershed organizations, and area schools to share information and work together on various projects. Building these strong relationships has been helpful for informing planning and policy decisions. However, one unsuccessful endeavor was in supporting the Vermont Endangered Species Committee's recommendation in 2011 to list the Mudpuppy as a threatened species. Because of this salamander's virtual disappearance from Lewis Creek over the course of a decade, the LCA took an active role in advocating for its protection. But listing the Mudpuppy would affect the state's ability to apply lampricide in the creek, a program favored by the fishing industry. On this highly-charged issue the LCA was unsuccessful, but it continues to advocate for the importance of monitoring and evaluating the efficacy of this treatment and the impact of lampricide on non-target species.

Stormwater runoff accounts for the vast majority of phosphorus that reaches Lake Champlain, because of surface runoff, development, and antiquated stormwater systems. From 2013 to 2015, the LCA worked with the Last Resort Farm in Monkton to re-engineer their farm's field drainage system and lower the impact of erosion and phosphorus runoff into Pond Brook, Lewis Creek's largest tributary, which originates at Bristol Pond. Then, in 2015, the LCA launched the *Ahead of the Storm* (AOTS) education, stormwater resilience, and pollution prevention program in partnership with the Charlotte Congregational Church, Charlotte Library, and Charlotte residents. The idea was to showcase optimal conservation practices for responding to the more frequent and extreme weather events caused by the changing climate. Since then, the LCA has been working with engineers to establish fifteen problem areas as AOTS demonstration sites, including schools, roadways, homes, and other public buildings; to prepare those landscapes for the impacts of more extreme weather events; and to showcase these AOTS sites to surrounding property owners. In addition, the LCA is partnering with school classes to teach students about design improvements such as rain gardens, swales, and other systems for slowing, spreading out, and soaking stormwater into the ground to prevent pollutants from being washed into the lake.

Another ongoing program is the removal of invasive plants along waterways in the region. The first target species was European frogbit. The LCA has been working to minimize its presence in Town Farm Bay in Charlotte and the lower LaPlatte River in Shelburne since 2007. With the help of town governments, volunteers, willing landowners, Shelburne Bay Boat Club, and the Point Bay Marina (which supplies a barge and plant composting services), the frogbit population has been reduced from 50% coverage to less than 5%. Removal of frogbit allows native plants and animals to survive. The LCA is also working with Lake Champlain Basin Program, Vermont Department of Environmental Conservation, and the Vermont Fish and Wildlife Department to manage other invasive aquatic plants in the watersheds, including yellow iris, water chestnut, flowering rush, loosestrife, common reed, and knotweed.

Conserving riparian lands and upland habitats has been a long-standing priority for the LCA from its very beginnings. Since the initial Hinesburg Land Trust project the LCA has worked with conservation commissions, land trusts, and others to protect significant natural areas in the region, including Raven Ridge in Charlotte and Monkton, the LaPlatte headwaters in Hinesburg, the Pond Brook wetlands in Monkton, and river corridor reaches in Starksboro, Hinesburg, Monkton, Ferrisburgh, and Charlotte. In addition, the LCA helped to conserve a number of farms and forests with frontage on the creek. LCA continues to work towards protecting and restoring natural areas and farmland for their value in promoting and protecting the health, beauty, and ecological functions of the streams and watersheds within the greater Lake Champlain watershed.

Stream monitoring, begun in 1990, continues to this day and is now carried out by two groups sponsored by the LCA: the Addison County River Watch Collaborative (ACRWC) and the South Chittenden River Watch (SCRW). Many volunteers help with the seasonal sampling, and LCA reports the findings on its website, to towns in the region, and to the Vermont Department of Environmental Conservation and other partners. Sampling now includes nutrients and solids as well as *E. coli*, and today covers Addison and Chittenden County towns from Shelburne to Starksboro and from the western Green Mountains to Lake Champlain. LCA stream monitoring occurs on Lewis Creek, Hollow Brook, Pond Brook, LaPlatte River, McCabe's Brook, Mud Hollow Brook, Patrick Brook, Kimball Brook, Thorp Brook, and Holmes Creek.

A history of the LCA would be incomplete without any mention of the annual parties, held every year since 1990. Each fall the LCA holds an afternoon gathering to which all watershed community members are invited. These have been held in many different locations, from town halls to farms to historic properties in the watershed. The program includes an annual meeting of the association and updates about that year's projects, as well as a keynote speaker and often a nature walk, farm tour, or other outing. These events give the LCA a chance to celebrate and share its work and goals with the community.

The many successful projects of the Lewis Creek Association are due in large part to a succession of excellent leaders. Linda Henzel served as able Coordinator from 1990 to 1998, initiating and leading many of the school programs that were held then. Marty Illick became the Executive Director in 1999 and under her skillful leadership the organization took on many new projects and expanded its reach. She wrote and received numerous grants, conceived of and carried out many new projects, including wildlife tracking, streambank restoration, conservation efforts, invasive plant control, and the *Ahead of the Storm* program. She also guided policy discussions with state and local officials, fielded questions from concerned landowners, and managed large volunteer projects.

Marty Illick continues to serve as Executive Director of the LCA. In 2016 the LCA created a Program Manager position and Krista Hoffsis served in this capacity for two years. She made great improvements to the website and social media, as well as managing volunteer projects and

initiating a fun connection between the UVM research vessel Melosira and town road crews. In 2018 Kate Kelly took on the role of Program Manager, while Krista has joined the board. The effectiveness of the LCA stems from the excellent work of these program managers, LCA board members, and the inspirational leadership of founders Andrea Morgante and Marty Illick.

Chris Runcie, LCA Starksboro Representative 1992 - present.