SALMON RIVER WATERSHED PARTNERSHIP

ANNUAL NEWSLETTER
SALMON RIVER WATERSHED
2023

A mother wood duck with duckling *Photo by Stan Malcolm, Performance Vision*

For more photos by Stan Malcolm, please visit the website: Along the Air Line…..

Along the Air Line... Air Line Trail Stan Malcolm (performance-vision.com)

"A river seems a magic thing.
A magic, moving, living part of the very earth itself."
— Laura Gilpin

Steering Committee

Watershed Towns

Bolton: Matt Rivers

Colchester: Open

Columbia: Ron Wikolm

East Haddam: Bernie Gillis, Jim Ventres

East Hampton: Jeremy DeCarli, Ansel Aarrestad

Glastonbury: Suzanne Simone

Haddam: Gail Reynolds,

Hebron: Brian O'Connell, Chris Frey

Lebanon: Tess Lundgren

Marlborough: Peter Hughes

Organizations

The Nature Conservancy: Shelley Green

Connecticut DEEP: Eric Thomas & Joe Cassone

Land Trusts

Colchester Land Trust: Scott Sivek, Lisa Hageman, (alternate)

Recreational Groups

Trout Unlimited: Gary Lussier

Member at Large

Silvio O. Conte Refuge-Haddam Neck: Jim McHutchison

Watershed Coordinator: Patricia Young

Email: salmonriverct@att.net

Website: www.SalmonRiverCT.org

Facebook: www.facebook.com/10towns/

Instagram: #salmonriverct

Hebron Open Space Acquisition protects Raymond Brook Marsh and Salmon River Watershed!

Upon Hebron's Open Space Land Acquisition Committee's (the Committee) recommendation to purchase the 8.5-acre Raymond Family parcel to the Board of Selectmen, Hebron residents voted unanimously to acquire this parcel for open space and natural resource protection!

The property, located along the west side of Millstream Road and within the Town's only "Groundwater Aquifer Protection" zone, contains a significant portion of Raymond Brook and its associated floodplain wetlands. Acquisition of this property protects the steep upland slopes and water quality of Raymond Brook, continuing the Committee's extensive efforts in preserving open space upstream of Raymond Brook Marsh, a Wetlands of Statewide Special Concern, and potential area of future drinking water supply. Raymond Brook is a tributary of the class A Jeremy River watercourse, a major tributary of Salmon River!

The purchase expands protection for an undisturbed wildlife corridor within the town's planned Raymond Brook Greenway, protects a known Trout Habitat area, provides for enhanced recreational access and use (fishing and hiking), and has the potential to connect to the 116-acre Raymond Brook Preserve to the north.

The purchase also protects the historic, tree-lined Millstream Road, a scenic gateway into Hebron Center.

The Committee wishes to thank the Raymond Family for the opportunity to preserve this beautiful and unique land. Preserving this property furthers the Committee's efforts to protect Hebron's high value open space land.

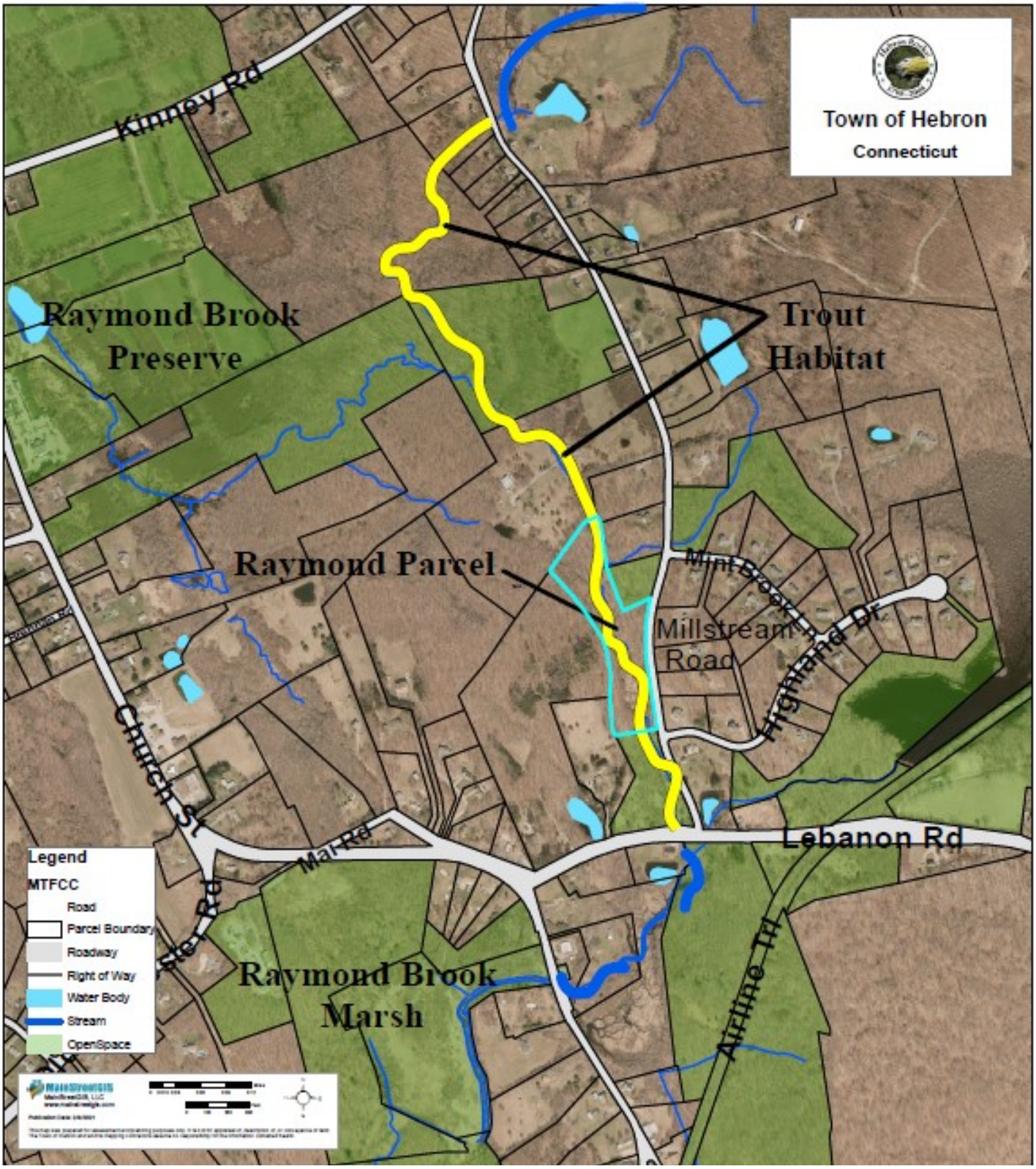
By Frank Zitkus, Hebron Open Space Land Acquisition Committee Secretary

Our thanks to…….

The efforts of the Salmon River Watershed Partnership would not be possible without the support of many volunteers, the watershed towns and local businesses and organizations. Special thanks to…

GZA GeoEnvironmental Inc., Ken Geisler (GIS Mapping), CT River Coastal Conservation District, Department of Energy and Environmental Protection, The Nature Conservancy, Stan Malcolm-Performance Vison Photography, Steven Gephard, University of Connecticut, Moodus Sportsmen's Club, Cato Corner Farm and E. Nadeau, Biodrawversity

Hebron Open Space-Raymond Parcel



Right to Farm in Colchester

Colchester is a "Right to Farm" community, hosting more than two dozen family farms totaling over 600 acres and offering products as diverse as wine, beer and cheese to adorable pet dwarf goats and delicious oversized duck eggs. Like most New England towns, our roots are firmly planted in agriculture. Interest and activity in agriculture has waxed and waned over the decades of Colchester's growth now at 15,500 strong. Colchester was once a mecca for egg and chicken meat producing farms with the number of chickens in town often far exceeding the number of residents and chicken coops dotting the landscape like tiny multi-story dormitories. The town was nicknamed the "Catskills of Connecticut" as much for its respite from city life as for its vast open space, an early adopter of agri-tourism. Today, at a summer Sunday Farmer's Market on the historic town green, residents and tourists alike can purchase direct from local farmers and enjoy a vast variety of fresh produce which has not been trucked across the country. Pop up farm-to-table dinners are the norm in Colchester and these events showcase the bounty of the growing community.

Above, Colchester Sign

Below:
Photos courtesy of Cato Corner Farm, Colchester

Agriculture is a by-right use on all parcels in Colchester; however, the land use regulations require a minimum of 100,000 square feet to host farm animals on a parcel. At nearly 50 square miles, Colchester still has large viable parcels of land available for startup farms and the ordinance protecting the right to farm has attracted a number of new as well as established farmers to Colchester. Resources, in the form of grants and technical support for new farmers are available from various sources, including the Connecticut State Department of Agriculture and the University of Connecticut.

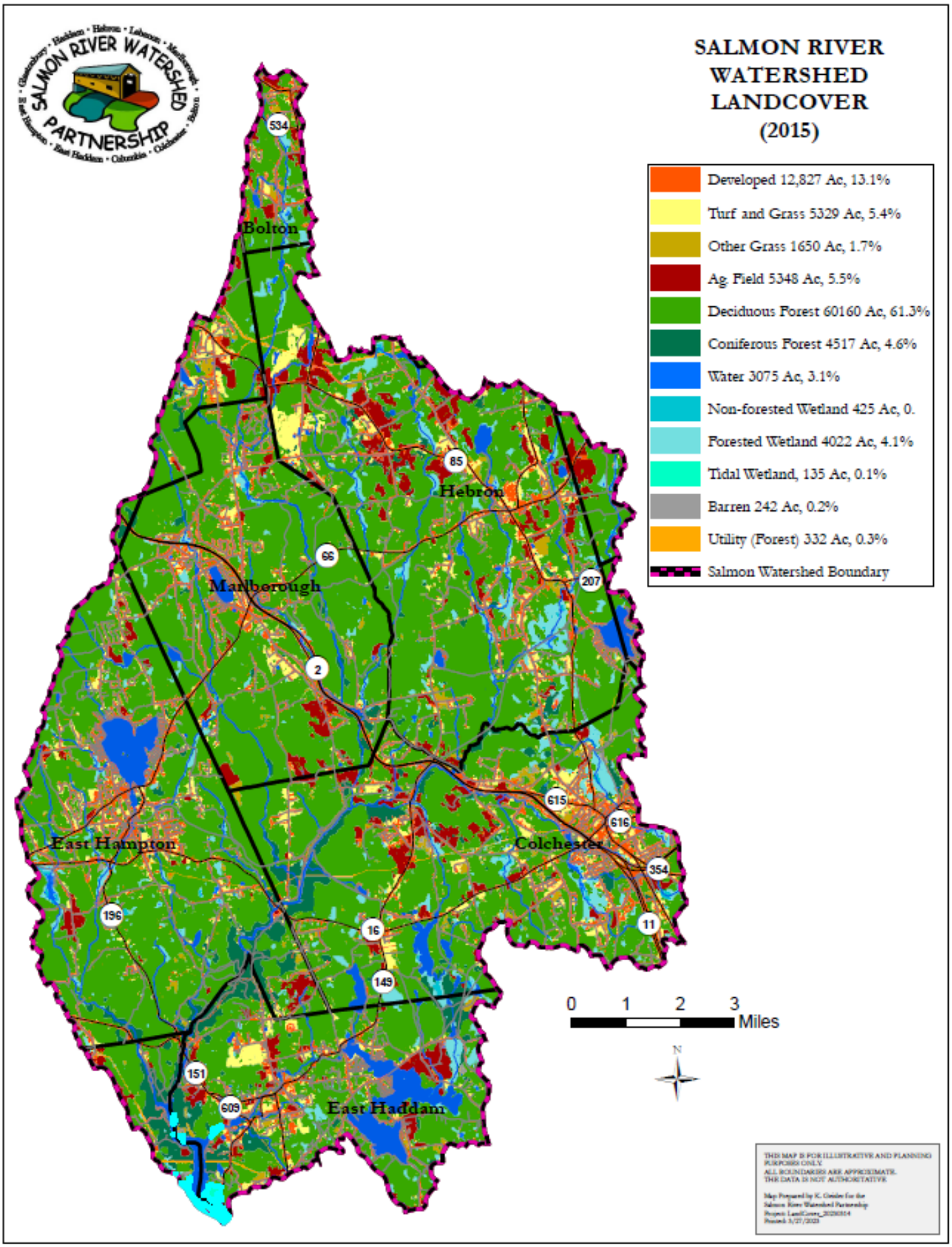
For purposes of protecting water quality, we all live (and drink) downstream. Just as we want our upstream neighbors to protect "our" water, we should be mindful to protect those downstream of us. Poorly maintained septic systems and over-fertilized lawns can adversely impact water quality just as a farm's poorly sited manure piles can. Farmers play a vital role in protecting water quality in a watershed. Following Agricultural Best Management Practices (BMPs) ensures that wetlands and watercourses are protected for drinking water purposes—for both present and future needs. Proper manure storage is a critical piece of the water quality puzzle.

Should your town promote agriculture? Absolutely! Agricultural land is as valuable to your community as forest land, open space and ridgeline protection. Think: wineries, breweries, pop up farm to table dinners, fresh cheese and charcuterie and crudité and raw milk. Local farms are community assets that give far more than they take, and the fresh food and bucolic views are a bonus most people thoroughly enjoy.

….contributed by Colchester Land Use Office

Land-Cover: A Mosaic of Color

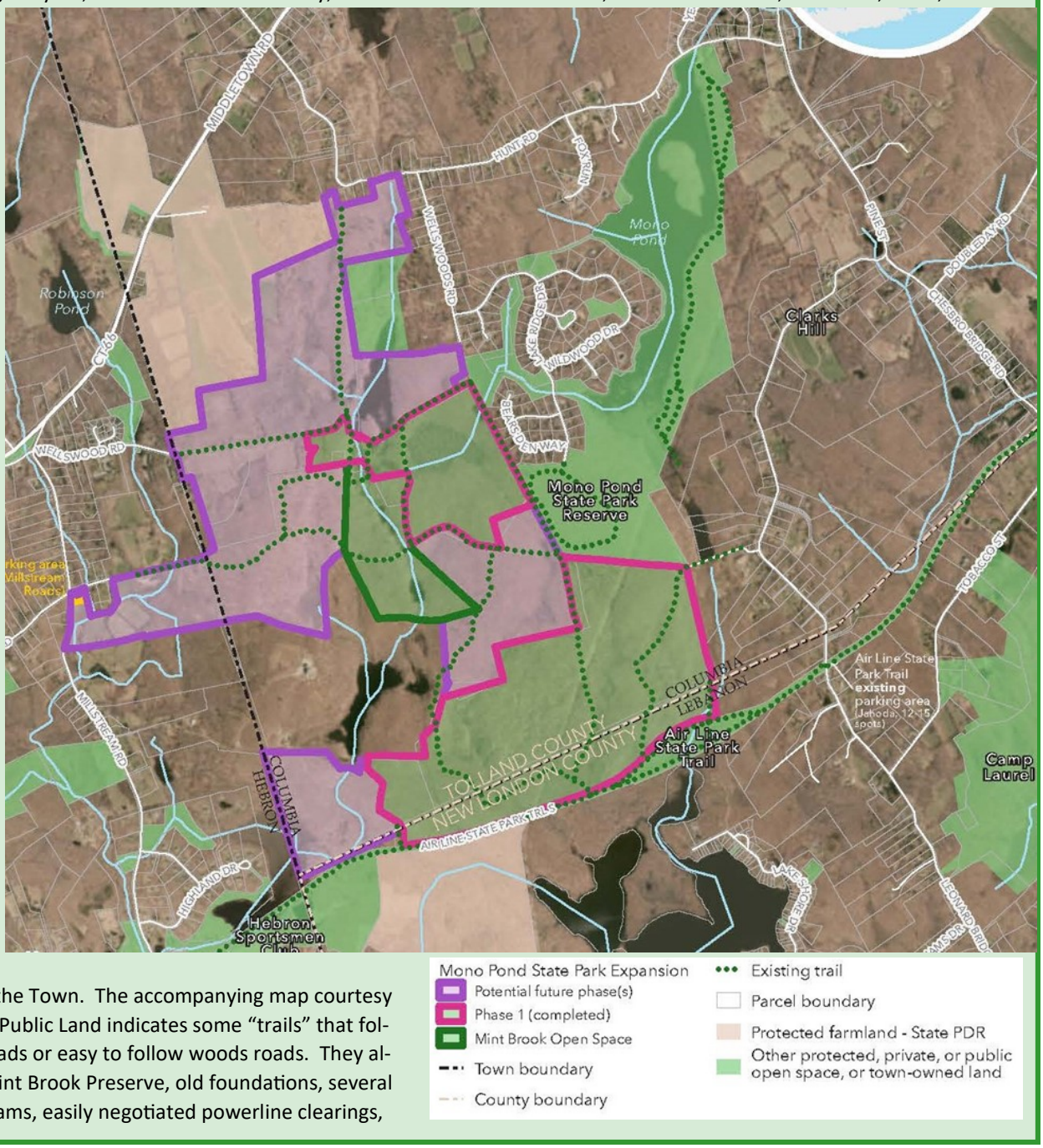
A bird's eye view of our landscape looks like a mosaic of greens, browns and greys of various shapes and sizes, criss-crossed by a ribbon-like network of lines-some straight and others winding their way throughout the canvass. Closer to the surface these shapes emerge as fields and forests, lakes and streams and buildings and roads. These can change over time: new buildings emerge, forests change to field, which may then turn back to forests, new bridges are built, streams are piped, and in some cases, on abandoned sites, nature reclaims the landscape. In the world of watershed planning, this ever changing pattern is what we refer to as "land-use" or "land-cover". Broad scale mapping of land-cover allows us to look at the watershed as a whole, beyond municipal lines, and is one of the many tools we use in watershed management. *By P. Young*


SALMON RIVER WATERSHED PARTNERSHIP
SALMON RIVER WATERSHED LANDCOVER (2015)
Developed 12,827 Ac, 13.1%
Turf and Grass 5329 Ac, 5.4%
Other Grass 1650 Ac, 1.7%
Ag. Field 5348 Ac, 5.5%
Deciduous Forest 60160 Ac, 61.3%
Coniferous Forest 4517 Ac, 4.6%
Water 3075 Ac, 3.1%
Non-forested Wetland 425 Ac, 0.
Forested Wetland 4022 Ac, 4.1%
Tidal Wetland, 135 Ac, 0.1%
Barren 242 Ac, 0.2%
Utility (Forest) 332 Ac, 0.3%
Salmon Watershed Boundary
Bolton
Hebron
Marlborough
East Hampton
Colchester
East Haddam
534
85
66
207
2
615
616
354
196
16
11
149
151
609
0 1 2 3 Miles
N
THIS MAP IS FOR ILLUSTRATIVE AND PLANNING PURPOSES ONLY.
ALL BOUNDARIES ARE APPROXIMATE.
THE DATA IS NOT AUTHORITATIVE.

Mint Brook and the Newly Expanded Mono Pond State Park

Arising in the drainage near the intersection of Hunt Road and Wells Woods Road in Columbia, Mint Brook is in the Easternmost region of the Salmon River Watershed. The Town of Columbia has acquired several parcels of land in this upper drainage and has protected this portion as the Mint Brook Preserve under the aegis of the Columbia Conservation Commission. The Preserve is surrounded by the newly expanded Mono Pond State Park and the area certainly warrants a visit from outdoorsy folks. Although a relatively minor tributary, Mint Brook joins Raymond Brook in Hebron, which flows to the Jeremey River in Grayville Falls Town Park. The Jeremey finds the Blackledge in North Westchester (Colchester) to form the Salmon River.

Mono Pond State Park surrounds the Mint Brook Preserve. With substantial assistance from The Trust for Public Land and the State of CT DEEP (https://www.tpl.org/media-room/mono-pond-state-park-reserve-expanded-400-acres), the Towns of Columbia and Lebanon acquired properties that were turned over to the State and have led to a significantly expanded Mono Pond State Park. Roughly 400 acres have been added to the former 218-acre reserve. The Wells Woods area is home to serene forests, archaeological remnants of a 19th-century settlement, several ponds, and miles of trails, farm roads, and woods roads. A century ago, it was an almost self-contained community of more than 800 acres that included a dozen farms, several factories, a small quarry, a graveyard, and a schoolhouse. Today, what remains are cellar holes, stone foundations, rock walls, dams, and abandoned roadways.



While management details remain to be worked out, the opportunity exists for exploration and enjoyment of the Wells Woods area of Columbia. Several historic roadways, farm roads, and woods roads allow relatively easy access to beautiful woodlands extending to the Air Line State Park Trail in Lebanon. Now is a perfect opportunity for the adventurous hiker to explore this little-visited area of the Town. The accompanying map courtesy of The Trust for Public Land indicates some "trails" that follow old town roads or easy to follow woods roads. They allow access to Mint Brook Preserve, old foundations, several brooks and streams, easily negotiated powerline clearings,

and make up an exciting network to access a variety of experiences in the great outdoors. Please note that there is no signage in the area as yet, so a certain amount of map-reading and sense of direction is in order.

A suggested loop is to proceed down the unpaved Wells woods Rd a hundred yards or so to a right turn on a clear woods road. Turn left at the first opportunity after taking in the beauty of Mint Brook Pond (an unofficial name). The next major intersection is with an old Kinney Rd out of Hebron. There are old foundations nearby (CAUTION: they are extremely fragile and unstable). Go left to return to Wells Woods Rd; a left takes you back to the paved road.

A slightly more ambitious route might start at the Air Line Trail parking area on Leonard Bridge Rd. Go west about ¼ mile to a spur to the right. In about ¼ mile a very obvious right begins to ascend on a woods road, eventually reaching the old Kinney Rd. Go left, passing the power lines to the intersection with Wells Woods. A left turn on Wells Woods eventually reaches the powerlines, which can be followed downhill to the Air Line Trail and a left back to Leonard Bridge.

By Ron Wikholm, Columbia Open Space Committee

Challenges for Native Species in a Changing Climate

The old saying goes "If you don't like the weather in New England, just wait a minute, it will change." Changing weather is one thing---but a changing climate is something else. And what does that mean for some of our native aquatic species?

According to the National Oceanic Atmospheric Administration (NOAA), "Weather and climate describe the same thing—the state of the atmosphere—but at different time scales.". "Weather", according to NOAA "is what you experience when you step outside on any given day. In other words, it is the state of the atmosphere at a particular location over the short-term. Climate is the average of the weather patterns in a location over a longer period of time, usually 30 years or more."

According to the Department of Energy and Environmental Protection's *Connecticut: Our Changing Climate Booklet*, climate change can affect everything from our health, agricultural practices, threats to infrastructure such as roadways, to changing forest species and yes, even our local rivers. Since 1950 there has been an increase in average air temperature of 2.2°F resulting in warmer seasons. While it may seem like a small change, it could be the difference between snow or rain. And wet rainy winters come with drier summers, with higher heat indexes and humidity. According to the National Integrated Drought Information System, the Northeast region experienced historic droughts in 2000, 2016, 2020 and 2022. And locally we see the results with smaller streams drying up and limited flow in larger watercourses.

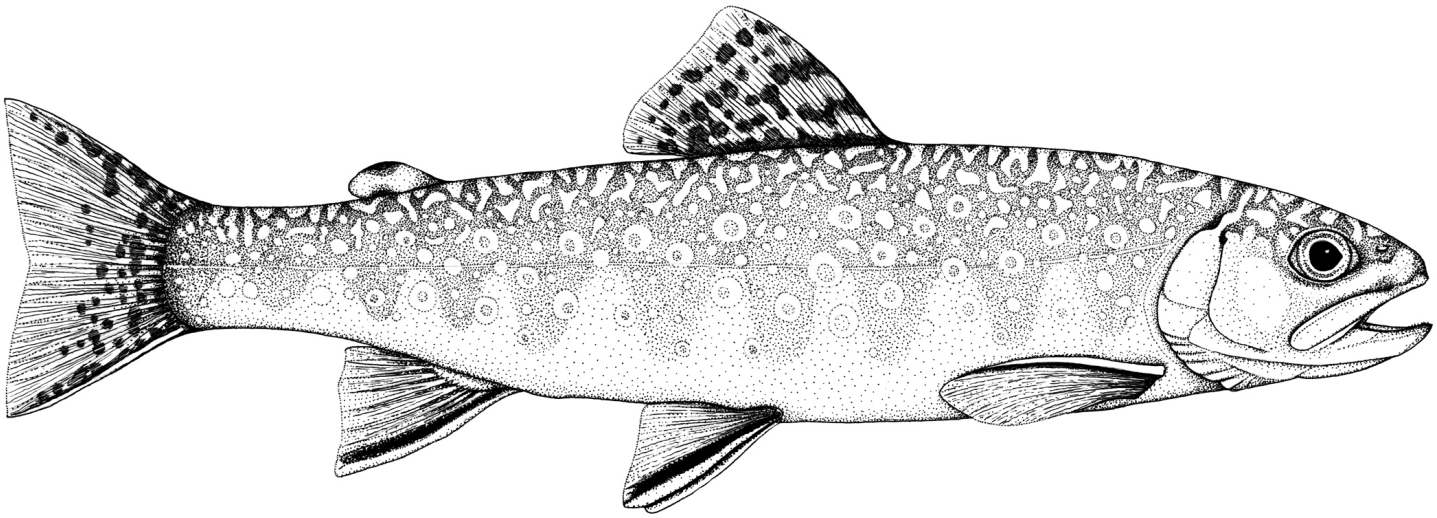
Warmer air temperatures mean warmer water temperatures. Warmer water holds less dissolved oxygen. Increased storm intensities send torrents of stormwater to local rivers and streams, eroding streambanks and carrying soil and other pollutants. And all of these events lead to changes in streams, presenting challenging living conditions for aquatic animals.

Fish, such as our native brook trout, along with other macroinvertebrates, such as mussels, caddisflies, mayflies and stoneflies, are often referred to as "indicator" species. Their presence or absence can give us further information about the quality of the habitat.

Native brook trout for instance need specific temperature ranges to survive, becoming stressed at 65°F (18.3°C) and during times of low stream flow can become physically trapped along stream segments.

continued on page 8

Illustration of native brook trout by Ethan Nadeau, Biodrawversity



River Herring Runs of 2022 Were Dismal

The millions of river herring (anadromous Alewife and Blueback Herring) that used to annually enter the Connecticut River and its tributaries declined dramatically when Europeans arrived and began building dams to power mills. These dams blocked the fishes' migration and greatly reduced the amount of spawning habitat available to them.

The Salmon River watershed was not as heavily impacted as other tributaries because natural waterfalls stopped the runs fairly low in the watershed. The Leesville Dam (Haddam and East Haddam) is at the head-of-tide and was built atop an eight-foot high bedrock drop that likely prevented river herring (which cannot leap) from ascending any farther. This was probably no great loss since the Salmon River is a cool, shallow, fast-flowing stream without lake and pond habitat that river herring need.

Falls also stopped the fish from ascending very far on the two tidewater tributaries: Pine Brook and Moodus River. However, the run of river herring—particularly Blueback Herring—to the base of the Leesville Dam was previously legendary and one of the thickest congregations of these fish anywhere in the state.

Elsewhere, the CTDEEP along with many partners has been working to get river herring around dams and rebuild the size of runs in our state. Over 65 fishways have been constructed and over a dozen dams removed.

Moreover, water quality has greatly improved everywhere since the 1970s, when river herring were very abundant. So, the numbers of fish should be going up. But they are not. In the 1980s, waves of spawning river herring amassed at Leesville weekly from April to July and each wave numbered in the tens of thousands. In recent years the site experiences only one or maybe two waves, mostly around Memorial Day, and often don't exceed 1,000 fish.

Last year, 2022, saw the worst returns that have ever been recorded. The causes could be many but a major factor is believed to be the offshore trawl fishery for ATLANTIC Herring, a close ocean relative. River herring mingle with the schools of Atlantic Herring and the fishery targets Atlantic Herring off Block Island in late winter when our river herring are congregating to enter Long Island Sound. The nets capture river herring at the same time as Atlantic Herring, as a bycatch. T

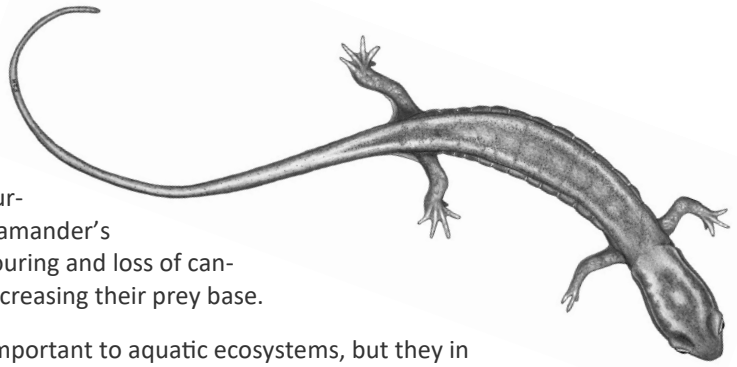
he New England Fisheries Management Council (NEFMC) closed the fishery but after one year the courts vacated the action, saying the process was done improperly. The fishery resumed in the winter of 2021-22, just before the 2022 spawning runs. Runs throughout CT, RI, and NY were disastrously low. Conservationists appealed to the NEFMC to restore the closure properly and the Council has indicated that it will undertake that in 2023.

We need to stop these large nets from intercepting our river herring before they can spawn. They need the same protection in inshore waters as that granted to them off the coast of Maine, where river herring runs are still abundant.

By Steve Gephard

Challenges... *continued from page 7*

Caddisflies and other sensitive macroinvertebrates require high levels of oxygen which they get from the water by filtering it through their gills or their skin and are therefore impacted by polluted or warm water.



While they are somewhat tolerant of urbanization, our common two-lined salamander's habitat can be impacted by stream scouring and loss of canopy, altering both their habitat and decreasing their prey base.

As "living filters", native mussels are important to aquatic ecosystems, but they in turn are heavily impacted by water pollution caused by stormwater, industrial discharges and streambank erosion. And mussel species like the brook floater, which are now found in only about a dozen streams in Connecticut depend on fish species like the native brook trout as a host for reproduction.

As a river group, the Salmon River Watershed Partnership spends considerable time monitoring local streams to document water quality and habitat health. It is only through a long-term approach that we can most effectively work with local communities and state organizations to make management decisions that consider both weather events along with climate change. *By Pat Young*

Illustrations of caddisfly and two-lined salamander by Ethan Nadeau, Biodrawversity