SALMON RIVER WATERSHED PARTNERSHIP

# ANNUAL NEWSLETTER
## *SALMON RIVER WATERSHED*
## 2021

## A New Vision

The Salmon River Watershed Partnership is excited to announce that it will be undertaking a new venture in 2021. *Creating a long-term vision for a path forward towards sustainable management and funding.*

In 2008, a steering committee, the Salmon River Watershed Partnership, was formed when The Nature Conservancy was awarded a Long Island Sound Futures Fund Grant to conduct a comprehensive land-use evaluation for the watershed towns. Upon completion of that project, it was agreed that the Partnership should be continued, and municipal funding has provided for a part time watershed coordinator and summer interns who, along with many volunteers, conduct water monitoring, outreach and education, resource mapping and provide other municipal project support as needed.

*Pine Brook-Haddam Neck*

With a higher emphasis on working regionally and collectively to protect local rivers and water quality and to ensure long-term viability, the steering committee is entering a new phase of long-term planning. With funds already secured, the committee, along with town and community representatives, will begin work with the same firm that conducted the earlier study, Horsley-Witten Group, to identify long term goals, committee management options and funding opportunities. Please watch our social media accounts for updates.

*By Pat Young, Watershed Coordinator*

***"We must begin thinking like a river if we are to leave a legacy of beauty and life for future generations."***

**— David Brower**

## Watershed Land Preservation

Creating a watershed-wide open space map was one of the first projects SRWP, working with the new watershed coordinator, conducted in 2013. State data does not always reflect certain open space parcels, such as subdivision set asides, or private conservation easements. Knowing exactly where the preserved lands are in the watershed allows towns and other conservation organizations to establish greenways, connecting preserved lands together for greater conservation impact. The first map produced for the watershed tallied 23,638 acres of land preserved. And note, we do not typically include parks dedicated to ballfields, cemeteries or lands that are often thought of as "open space" but do not have legal restrictions for future development. In 2021, including several parcels of land that are pending acquisition, the total is now 26,493 acres meaning that over the last nine years 2,855 acres have been added to the original 2013 total. Preserving land remains the number one tool for watershed and water quality protection.

*Please note: Due to the size of the watershed and complexity of merging 10 towns' data—there may be some discrepancies in mapping and dates.* *By Pat Young & Ken Geisler*

## Improvements to Colchester's Bulkeley Hill Preserve

When the Colchester Land Trust (CLT) purchased, in two parts, the Bulkeley Hill Preserve property we outlined plans to develop the 130-acre forest for public access, including a parking lot for up to eight cars. We envisioned an educational aspect to the property that would benefit school children, farmers, homeowners, and the town in general.

The process has continued for four years. The effort to develop Bulkeley Hill Preserve took some time to get off the ground, then immediately encountered an obstacle: intermittent wetlands. This small vernal freshet was not shown on the maps that were made for the housing development that had been proposed for this piece of property, back in 2006.

By February CLT was meeting with a contractor (who had been identified two years earlier). In April, plans were reviewed, and permits were applied for. Through the following months, we pursued other improvements to Bulkeley Hill Preserve, including installation of bog bridge #1 on August 24, 2019. Materials for a second bog bridge were purchased and the red (loop) trail was blazed.

In November of 2019, our surveyor provided an updated parking lot design that would better meet engineering and environmental requirements. CLT sought estimates from three contractors for this parking lot project, and by February 2020: we had these estimates. The lowest bid was accepted, with clauses that would reduce the final cost if our members did some of the clearing of trees and brush.

On June 1, 2020, the parking lot permit was received, and we started to clear the space shortly thereafter. On July 28, 2020, actual site development began and by August 29, the specific site work was staked out. In September, the driveway and parking area were graded and await a substantial layer of gravel to be placed. In the course of grading, two very large boulders were unearthed and moved.

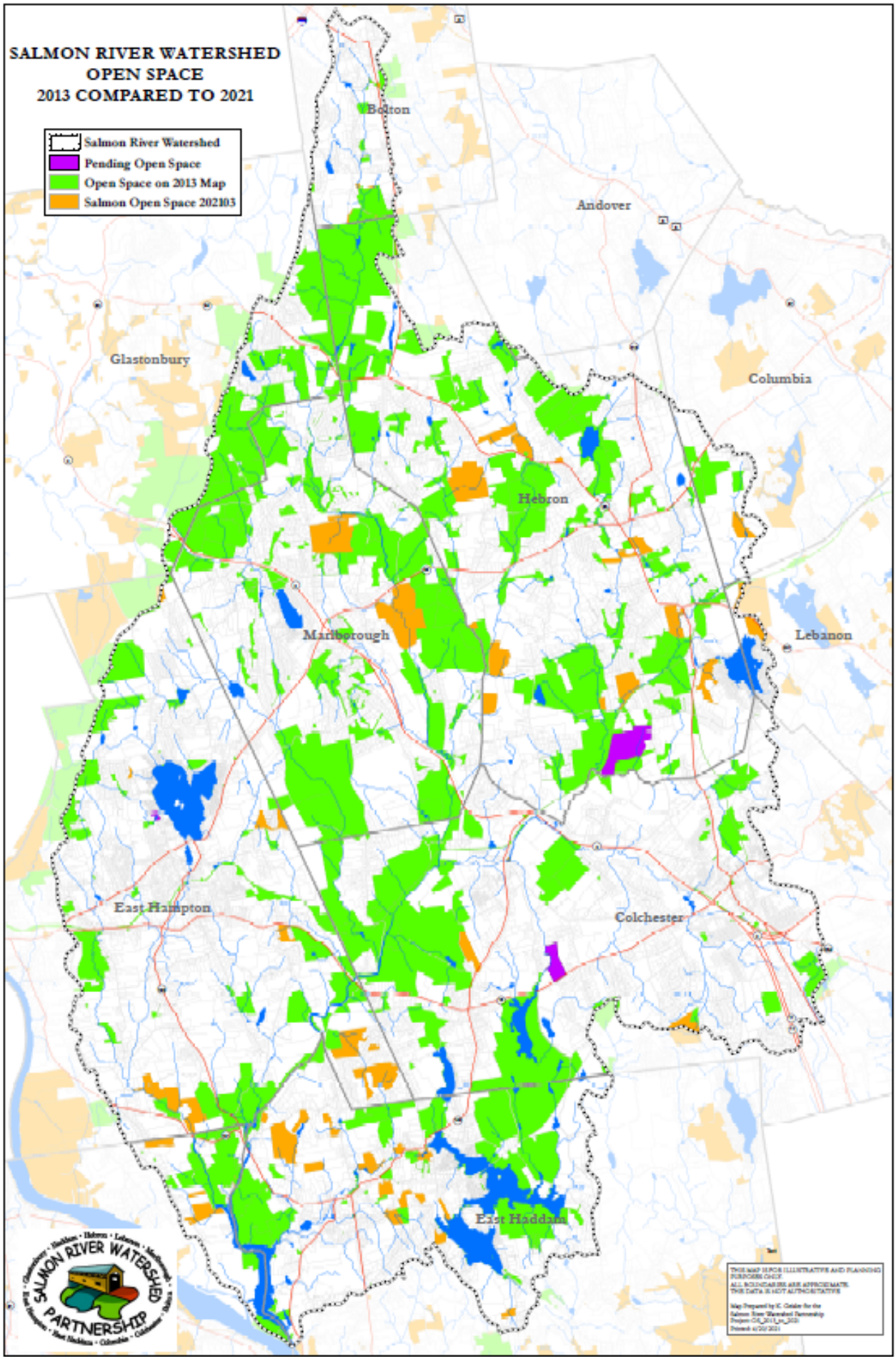
The parking lot was completed, with the gravel and marked parking spaces, in November 2020. The parking lot immediately started to get regular use, even without advertising it as complete! There are cars there every day and several on the weekends. An official ribbon cutting with Colchester First Selectman Mary Bylone is scheduled as part of Trails Day, June 5, 2021.

There is currently a 1-mile (approx.) trail on the property, with more planned in the Spring. A trailhead sign is in the works as an Eagle Scout project, and a trail map is planned. Plus, a location for an outdoor classroom is under consideration.

We are thrilled to be able to offer this area for hiking and nature walks to the residents of Colchester and the surrounding towns and look forward to seeing you at one of our guided hikes, events, or just passing you on the trail!

*By John Barnowski, President, Colchester Land Trust*

Info: https://www/colchesterlandtrust.org


SALMON RIVER WATERSHED
OPEN SPACE
2013 COMPARED TO 2021
Salmon River Watershed
Pending Open Space
Open Space on 2013 Map
Salmon Open Space 202103
Bolton
Andover
Glastonbury
Columbia
Hebron
Marlborough
Lebanon
East Hampton
Colchester
East Haddam
SALMON RIVER WATERSHED PARTNERSHIP

# Hebron Open Space Grant Award - Protecting the Salmon River Watershed!

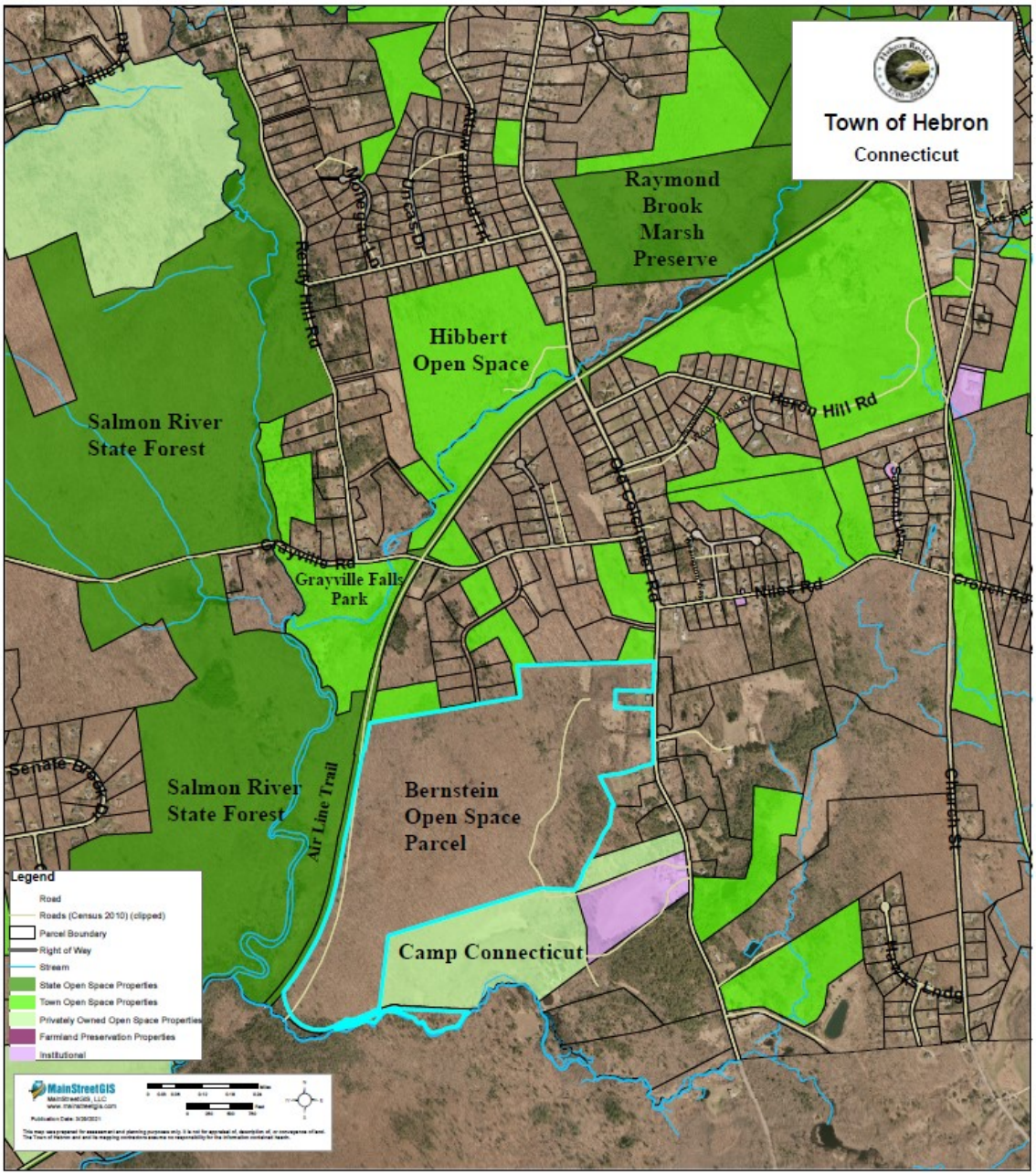
On February 24, 2021, the State Dept. of Energy and Environmental Protection awarded an Open Space and Watershed Land Acquisition grant award of $199,960 to the Town of Hebron for the acquisition of the 215.5-acre Ella Bernstein Trust property located in town along 3,300 feet of the Air Line Trail State Linear Park.

The property abuts 273 acres of the Salmon River State Forest, which itself is adjacent to the town-owned Grayville Falls Park. Together with additional abutting town-owned open space from the Grayville Estates subdivision, these large undeveloped parcels comprise a significant area of connected, undisturbed forested land vital for wildlife habitat and watershed protection.

The Bernstein property, consisting of two parcels, is located within the Jeremy River Greenway as depicted in the Town's Plan of Conservation and Development. Jeremy River is one of two major tributaries of the Salmon River, a watercourse of great fishery interest. The property is also located within the State DEEP's Natural Diversity Database, Areas of Special Concern. Permanent preservation of this property would serve to protect several endangered and species of special concern living in this area.

Formerly known as the Grossman Farm, the larger parcel consists of a diversified, primarily deciduous forest with two wetland corridors traversing north to south toward Judd Brook. The parcel is also characterized by mature evergreen stands, a pond, former agricultural fields in various stages of succession, and is traversed by historic stone walls outlining former pastures and property boundaries.

The smaller parcel features a cascading portion of Judd Brook, a tributary of the Class A (drinking water quality) Jeremy River watercourse and features impressive historic bridge foundations that were once used to deliver materials to construct the Air Line Railroad long ago. Judd Brook, in this area, is a known Trout and Salmon habitat area.




The Committee would like to thank the Trustees of the Ella Bernstein Trust for the opportunity to preserve this beautiful, pristine land; Hebron's Director of Planning, Michael O'Leary, for preparing the state grant application; and the State of Connecticut for its preservation efforts and financial assistance. Preserving this property furthers the Committee's endeavor to protect Hebron's natural resources, including Salmon River's headwaters.

*By Frank Zitkus, Hebron Open Space Land Acquisition Committee*

## Colchester Open Space Acquisition

In July of 2020, the Colchester Planning & Zoning Department submitted an application to the CT Department of Energy and Environmental Protection Open Space & Watershed Lands Acquisition grant program. The Town's grant application was made for funding needed to acquire 65 acres on Middletown Road (Route 16), for open space purposes. In late February of 2021, the Town was notified the grant application had been awarded, however less than what was applied for. In order to complete the transaction additional funding was needed. In March of 2021, the Board of Selectmen voted to recommend an additional appropriation of $87,000 to the Board of Finance. The Board of Finance approved the appropriation, allowing the Town to proceed with the land acquisition.

*Aerial view of the 65 acre parcel*

The 65-acre property is located on the north side of Route 16, in the area of the Skinner Road. The currently forested parcel is bordered by Pine Brook and is in the State Designated Pinebrook Greenway, a strategic area for open space preservation. This acquisition permanently protects the land from development, ensuring protection of the property's natural resources. The land shall be open to the public and will include a small parking lot, picnic area and a trail network.

*By Jay Gigliotti, Planning & Zoning Department*

## Giving a River Room

Structures that allow us to safely traverse from one side of a watercourse to the other have been constructed for hundreds of years. Due to building and material limitations however, many of these older bridges and culverts have become bottlenecks; forcing streams that were say 40 feet wide in a natural channel condition, including the streambanks, down to maybe half that width. This has resulted in increasing velocities, slope erosion, streambank changes and undercutting of structures. Poorly designed, sized or placed road culverts can also result in problems for fish and other wildlife that use these streams and banks as their own kind of highway. A perched culvert, for instance, results in a kind of waterfall on the downstream side and is impossible for fish to jump up and swim through. And then there are those culverts that are plenty wide, think flat-bottomed box culvert, but may only have a depth of water that is just an inch of two in normal to low flows, so again, an impediment for fish access. And its not just the fish, other critters such as mink, turtles and amphibians use the exposed banks along rivers and streams or the natural bottoms of undisturbed streambeds to travel upstream.

In the last decade or two, we have begun to pay more attention to the design of stream crossings that function more "naturally", providing both stormflow passage along with fish and wildlife travel corridors. One example is a recent bridge reconstruction on Fawn Brook in Marlborough on South Main Street. The original bridge was built in 1928 and reconstructed in 1986, but retained a 23 foot stream opening. This resulted in continued restricted stream flow, causing scouring and backwater flooding during storm events rated as 50 years and beyond (a 50-year storm event is calculated to happen on average once every 50 years—but they can also be back to back). The watershed area that contributes to the point of this structure is 12.8 square miles and was deemed to be greatly undersized. The new bridge provides a 44-foot wide opening, an increase of 21 feet, to allow a natural stream flow and bottom with 2 feet of "dry" streambank on either side of the channel.

*By Pat Young, Watershed Coordinator*

*Fawn Brook, Marlborough*

## Steering Committee

**Watershed Towns***

**Bolton:** Rod Parlee (temp)

**Colchester:** Jay Gigliotti, Matthew Bordeaux (alternate)

**Columbia:** Bryan Tarbell

**East Haddam:** Bernie Gillis, Jim Ventres (alternate)

**East Hampton:** Jeremy DeCarli

**Glastonbury:** Tom Mocko,

**Haddam:** Gail Reynolds,

**Hebron:** Brian O'Connell,

**Lebanon:**

**Marlborough:** Peter Hughes

**Organizations**

**The Nature Conservancy:** Shelley Green

**Connecticut DEEP:** Eric Thomas

**Land Trusts**

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

**Recreational Groups**

**Trout Unlimited:** Duke Preston

**Member at Large**

**Silvio O. Conte Refuge-Haddam Neck:** Jim McHutchison

**Watershed Coordinator**: Patricia Young

**Website:** www.SalmonRiverCT.org

**Facebook:** www.facebook.com/10towns/

**Please Note: there are a number of pending new board appointments*

# Update on Colchester's Norton Park


The Norton Park Committee has been making steady progress in the creation of Colchester's newest park at the former site of the Norton Paper Mill in North Westchester village. Norton Park will create public access to the Jeremy River, an important water resource with a Class A designation for surface water quality by CT DEEP. The Jeremy River is fed by Pine Brook, Judd Brook, Meadow Brook, Mint Brook, Raymond Brook & Hope Valley Brook. Approximately 3/4 of Colchester's land drains into the Salmon River Watershed, the vast majority of which will pass through Norton Park via the Jeremy River. The removal of the Norton Paper Mill dam opened up 17 miles of river to migratory fish for the first time in nearly 300 years. Since the dam has been removed, DEEP Fisheries believes that several species have recolonized in the Jeremy and upstream, these species include Blacknose & Longnose Dace, Fallfish, White Sucker, Common Shiner and possibly stocked Atlantic Salmon. We hope that both Norton Park and the environmental accomplishments of the dam removal will serve as a model to the rest of the state and beyond.

For Norton Park Committee information including a link to recent public forums to learn more about the project, go to: https://www.colchesterct.gov/norton-park-committee

For fundraising information or to make a donation, go to: https://www.colchesterct.gov/norton-park-committee/files/norton-park-flyer-0

# New Overlook on the Salmon River

The Salmon River Overlook Property is a 17 acre parcel located in East Haddam on the west side of Route 149 just north of the Salmon River Boat Launch. Donated to the Town in 2017 by the D'Aquila Family, it was the previous site of the Town Landfill (now remediated). The Pavilion, paid for by Town funds supplemented by a generous donation from an East Haddam resident, was recently situated on the site. Its location, at the mouth of the Salmon River, is ideal for bird watching in all seasons. Find this destination on an interactive outdoor recreation map at https://www.WanderOurWatershed.org

*By Bernie Gillis*


## SRWP Summer Intern to Herpetologist:
### Catching up with Matt Benedict

**Q. Can you fill us in on what you are doing now?**

A. I am working as a herpetologist in the Australia: Wild Extremes Exhibit at the National Aquarium in Baltimore. Our exhibit includes species native to Australia such as the olive python, death adder, freshwater crocodiles, shingleback skinks and the newly famous sandstone long-necked turtles. My job is to perform the highest care and husbandry for all of the reptile and amphibian species in the exhibit. I also work on training and enrichment projects, designing breeding programs, and coordinating interns.

**Q. What is one of the coolest things you have done as part of your job?**

A. I was challenged to come up with a breeding protocol for the sandstone long-necked turtle (C*helodina burrungandjii* ). It had not been successfully bred anywhere in the world and the aquarium had been trying various methods for over 15 years. This species of turtle is native to a remote part of Australia called the Arnhem Land Escarpment in the Northern Territory. Very few researchers have been able to explore this landscape so not much is known about their life cycle. After researching the native conditions of habitats in that region, such as rain patterns and water temperature, I attempted to replicate those conditions in our behind the scenes breeding area. To my surprise, the experiment worked!

We gathered twelve eggs that were laid in the provided nest box. We didn't know what temperatures to incubate them at so at that point, the second half of the experiment had begun. We decided to split them between a warmer and cooler clutch to increase the possibilities of hatching. Only two out of six from the warmer clutch hatched and five of the six from the cooler clutch hatched. Using candling (a method where we hold the egg up to a light source) we could see that there still appeared to be a viable yolk in the sixth egg from the cooler clutch, so we waited awhile and nothing. Unsure of how long to wait, we tried one more experiment, we lightly misted the egg to see if a "light rain" effect would stimulate development. Two months later, the last turtle emerged. We learned so much from this first successful clutch that we can perfect our next attempt with this species and also apply similar methods to related species that have been difficult to captive breed.

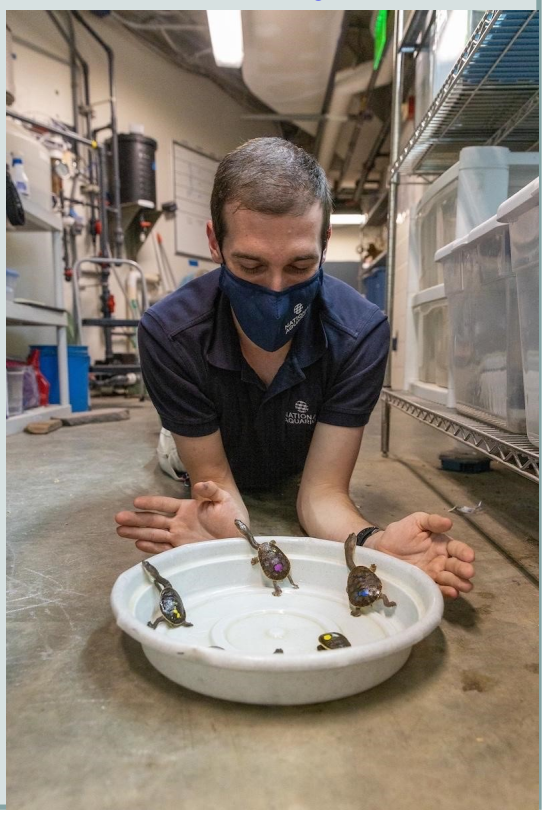
**Q. What prepared you for your position as a herpetologist?**

A. I studied Ecology & Evolutionary Biology at the University of Connecticut, so much of my coursework focused on biological diversity, evolution of species, functional biology of organisms, and conservation. I was able to secure an internship at Mystic Aquarium working with amphibians and reptiles early in my college career.

My volunteering and summer internship with the Salmon River Watershed Partnership doing water quality monitoring and field work was also instrumental in giving me experience and future references. For instance, the culvert and bridge data collection we did for aquatic fish and animal passage made me realize the impacts that barriers, such as dams or perched road culverts, can have on animal populations. Now, I have an opportunity to mentor interns myself and know how important these first field education experiences can be for their futures.

**Q. So What's Next for You?**

A. I will be working on developing a breeding program for the Irwin's Turtle, a native Australian turtle that has suffered a severe decline due to water quality degradation and a dam that impedes their movement. There are only approximately 300 known individuals left in the wild. I will also be pursuing a Masters of Herpetology Certificate this summer and I have a 10-year goal to work with the *Turtle Survival Alliance* , www.turtlesurvival.org , which is dedicated to global turtle conservation. Fingers crossed, I would like to finally take that pre-covid planned trip to Madagascar I've been dreaming of, which has over 700 herp species.



*By: Pat Young, Watershed Coordinator*

***Note:** Matt B. was the first summer intern for SRWP and is from East Hampton*

## Implementing the Watershed Protection Plan for Lake Pocotopaug

While the COVID-19 pandemic stole the spotlight in 2020 keeping most of us locked in our houses and tuned into national news, the Town of East Hampton continued working diligently to improve the water quality of Lake Pocotopaug. Several projects were implemented and other were completed using a combination of 319 grant funding and Town funds.


The Conservation Lake Pocotopaug Commission continued working on the list of items in the Nine Elements Watershed Plan which included stormwater retrofit projects at the base of Clark Hill, Wangonk Trail, South Wangonk Trail, and a large project at Sears Park. These Low Impact Development projects will improve the stormwater quality which reaches the lake, reducing nutrient and pollutant loading.

The Planning and Zoning Commission held several public workshops prior to the start of the pandemic and created the first updated watershed regulation in 26 years. A public hearing was held and there was near unanimous support from the community for adopting the new regulations, which were finally put into effect in November 2020. The new regulations minimize the amount of land clearing that can be done at one time, put a time frame on large construction project start dates, and require vegetated buffers around the lake and its tributaries.

In June, the Town and EverBlue Lake Solutions turned on two large aeration systems which are designed to destratisfy the water column in the deepest parts of the Lake. The first system, referred to Oakwood, is focused on the deep portion of the lake in the northwestern portion. The second system got turned on in Markham Bay and is focused on the deepest areas in the western portion of the lake. For the first time in recent memory, the lake was not closed to swimming in the 2020 summer season.

Finally, a dedicated group of volunteers has implemented the Lake Pocotopaug Lake Smart effort, which awards a Lake Smart placard to homeowners who have created an environment on their property which reduces stormwater runoff and protects the natural environment. Several awards were granted in 2020 with more to come in 2021.

A new round of grant funding is expected in 2021 which will allow for several more stormwater infrastructure upgrades on public and private property and the aeration system will again be turned on before the summer season. Finally, the Town was awarded an Open Space and Watershed Acquisition (OSAW) grant in order to purchase the Christopher property, a key parcel surrounding Christopher Pond, which accounts for approximately 26% of the surface water which enter Lake Pocotopaug. This will allow a future LID retrofit to the pond in order to reduce nutrient loading along with the permanent of the parcel.

With continued community support and strong momentum, the Town is moving in a direction to finally begin to repair the sins of the past and improve the water quality of Lake Pocotopaug.

*By Jeremy DeCarli*

**More Info...**

Lake Pocotopaug residents interested in the ***LakeSmart*** Program should contact either name below.

*Jeremy DeCarli at jdecarli@easthamptonct.gov*

*Jeremy Hall at jhall@easthamptonct.gov*.

For more information on Protecting Lake Pocotopaug check the link below (copy and paste in search browser)

Protecting Lake Pocotopaug | East Hampton CT


*Cap Egan accepting a LakeSmart plague from volunteer John Purple*