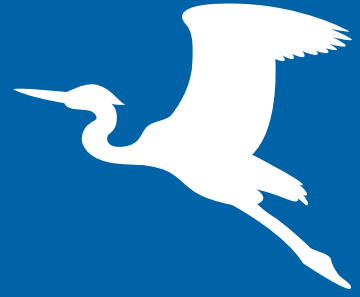


# Lower Farmington River and Salmon Brook WILD & SCENIC



*2022 Annual Report*





## Lower Farmington River and Salmon Brook WILD & SCENIC

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### COMMITTEE MEMBERS

AVON Jaime Polhamus Jim Williams	WINDSOR Charles Button Meghan Cote
BLOOMFIELD Lucy Eyre Paula Jones	FARMINGTON RIVER WATERSHED ASSOCIATION Aimee Petras
BURLINGTON Edward Jurkiewicz Sarah Hincks	PEQUABUCK RIVER WATERSHED ASSOCIATION Mary Moulton
EAST GRANBY Michael Krammen Paula Saaf	SALMON BROOK WATERSHED ASSOCIATION David Tolli
FARMINGTON Robert Hannon	CT DEEP Susan Peterson
GRANBY Don Rawling	NATIONAL PARK SERVICE Liz Lacy Andrew PetitdeMange
HARTLAND Sue Murray Hank Prussing	
SIMSBURY Stephen McDonnell Sally Rieger Michael Ryan	

PHOTO CREDITS: Tom Cameron, Sarah Faulkner,  
Leslie J. Mehrhoff (University of Connecticut),  
Jamie Meyer, Ethan Nedeau, Rick Naczi, Dennis  
Quinn, Dave Tolli, and Rick Warters.



### 2022 ANNUAL REPORT

## Welcome From the Committee

The Lower Farmington River and Salmon Brook Wild and Scenic Committee is proud to present its Annual Report for the fiscal year, 2022 (October 1, 2021 to September 30, 2022).

In its efforts to protect and enhance the special resources of the lower Farmington and Salmon Brook, the Committee focuses on the value of these resources to the communities within the designation area.

Today, sufficient flows and good water quality in both the lower Farmington River and Salmon Brook are critical to the streams' biological diversity, recreational value, and for use of the water for irrigating farmland. Good flows and water quality were also very important historically and archaeologically.

LFSWS recognizes that today's people are successors to the indigenous people who also valued these resources and lived along the streams as long as 12,500 years ago. It is the hope of LFSWS that the Wild & Scenic designation and the work of the partner towns and other organizations, which the Committee members represent, will help to protect these watercourses now and for generations to come.

Please read our report to learn how we spent our funding.

Sincerely,

*The Members of the  
Lower Farmington River  
and Salmon Brook  
Wild & Scenic Committee*



## What is Partnership Wild and Scenic Designation?

A Partnership Wild and Scenic Designation for a waterway is a federal recognition that the waterway has certain “outstandingly remarkable values” that set it apart from other rivers. In 2019, after a 12-year community effort, the lower Farmington River and Salmon Brook received their National Wild & Scenic Rivers designation. As a result, more than 60 miles of these watercourses are protected as Partnership Wild & Scenic Rivers under the Federal Wild & Scenic Rivers Act.



The National Wild & Scenic Rivers Act was enacted in 1968 to protect and preserve certain rivers with outstanding natural, cultural, and recreational values for the enjoyment of present and future generations. Partnership Wild & Scenic Rivers are a subset in which communities collaborate with local governments, watershed groups, the National Park Service and other stakeholders.



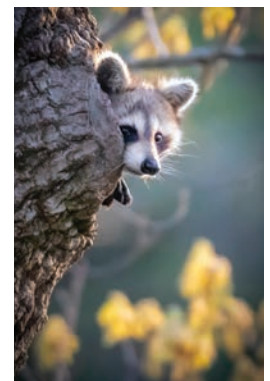
## What is the Lower Farmington River and Salmon Brook Wild and Scenic Committee?

The Lower Farmington River and Salmon Brook Wild and Scenic Committee (LFSWS) is the advisory river management committee that resulted from the waterways’ federal designation in 2019. LFSWS is made up of a town-appointed representative and alternate from each partner town (Avon, Bloomfield, Burlington, East Granby, Farmington, Granby, Hartland, Simsbury and Windsor), representatives from the Farmington River Watershed Association, the Pequabuck River Watershed Association, the Salmon Brook Watershed Association, Stanley Black & Decker, the Connecticut Department of Energy and Environmental Protection and the National Park Service.

## What is the purpose of the Committee?

The Lower Farmington River and Salmon Brook Wild and Scenic Committee’s (LFSWS) purpose is to protect the free-flowing character of the watercourses and to protect and enhance the special environmental, cultural and recreational values for which they were designated. The Committee’s Management Plan ([tinyurl.com/y82x9rfj](https://tinyurl.com/y82x9rfj)) is the guiding document for LFSWS outreach and educational efforts, research projects, stewardship efforts, and its Small Grants program.

*READ MORE about our 2022 educational efforts, research projects, stewardship efforts, and Small Grants program >*



# WATER QUALITY MONITORING

*Farmington River Watershed, 2022*

167 BACTERIA  
SAMPLES ANALYZED

94 CHLORIDE  
SAMPLES ANALYZED

43,000 TEMPERATURE  
DATA POINTS COLLECTED

22 SITES TESTED  
FOR BACTERIA

15 SITES TESTED  
FOR CHLORIDE

5 SITES  
MONITORED FOR  
TEMPERATURE

24 STREAM CROSSING ASSESSMENTS



# 2022 Education, Research & Stewardship Projects

## Water Quality Monitoring (\$27,600)

Water quality monitoring has been conducted by Farmington River Watershed Association (FRWA) on the Farmington River Watershed since 2004. The principal objectives are to:

- 1) document high quality waters for protection and preservation;
- 2) measure inputs from tributaries to the Farmington River;
- 3) establish a database for use in documenting future changes in water quality;
- 4) identify impairments and locate potential preservation & restoration opportunities;
- 5) educate and involve residents in waterbody protection;
- 6) inform a cohesive understanding of the entire Farmington River watershed, in CT; and
- 7) reveal trends relative to changing climate and precipitation patterns via long term monitoring.

Polluted stormwater runoff (nonpoint source pollution) is the primary water quality concern in the watershed. Water quality in all the Farmington River Watershed streams is important to maintain, but is especially important in those that supply drinking water for approximately 400,000 people in the Greater Hartford area. Our data is shared with partners, including the CT DEEP, and helps educate watershed residents. All data can be viewed in the Farmington River Watershed Water Quality Report 2022.



### BACTERIA

Twenty-two sites were monitored for bacteria, from June to September. Due to drought and lower flows in 2022, some sites did exceed the Water Quality Criteria for bacteria. Sites that exceeded the criteria include the Pequabuck River in Farmington, Nod Brook in Avon, Minister and Russell Brook in Simsbury, Salmon Brook East Branch in Granby, Salmon Brook mainstem in East Granby, Phelps Brook and Mill Brook in Windsor. This data can better inform where there may be higher levels of polluted stormwater runoff and help to determine potential land causes behind these factors. Results are submitted to CT DEEP and updated weekly during the summer on Connecticut River Conservancy's *Is It Clean?* website.



### WATER TEMPERATURE

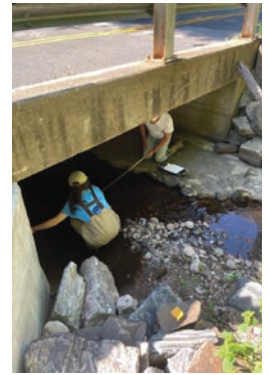
FRWA deployed water temperature loggers at five sites in 2022. Loggers record water temperatures hourly throughout the year to monitor ambient in-stream temperatures to identify and document cold water habitat to assess long term trends. FRWA's data is shared with the CT DEEP and uploaded to the regional Stream Temperature Database. Two sites are located in the West Branch Salmon Brook, and three in tributaries to it. The data recorded indicates cold and cool waters, even during drought.



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## RIFFLE BIOASSESSMENT FOR VOLUNTEERS (RBV)

FRWA also conducts macroinvertebrate sampling days in the fall to monitor watershed streams on a rotating basis using CT DEEP's Riffle Bioassessment for Volunteers (RBV) program. Macroinvertebrate and temperature data are provided to the CT DEEP. This data helps to inform river and stream water quality assessments. The CT DEEP must report this information every two years in its official "Integrated Water Quality Report to Congress" which is sent to the U. S. Environmental Protection Agency. The FRWA data also helps to identify high quality streams for CT DEEP's "Healthy Waters Initiative."



## Chloride (\$2,324)

Fifteen sites were monitored for chloride in 2022. This program is in partnership with the Izaak Walton League of America (IWLA) Salt Watch program. Sites are monitored year-round to determine how locations fare throughout the year, especially in winter months when road salts are applied, and in summer during high-production times for aquatic plants and animals. The majority of locations had low concentrations of chloride, with the Farmington River being the lowest, due to its large volume of water. Tributaries Pequabuck River (Farmington), Nod Brook (Avon), and Rainbow Brook and Mill Brook (Windsor) had fair concentrations, with Nod Brook exceeding the criteria of toxic concentrations during a winter storm.

## Stream Crossings (\$3,569)

FRWA has been continuing work assessing stream crossing (culvert) conditions within the Farmington River Watershed in order to determine structural integrity, as well as the ability of passage for aquatic and terrestrial wildlife. Road-stream crossing assessments can be useful in determining which crossings may pose a threat to public safety during storm events, and they also provide insight into the ability of aquatic organisms such as diadromous fish to move throughout the watershed. FRWA performs these assessments using the North Atlantic Aquatic Connectivity Collaborative (NAACC) protocols and contributes its findings to the NAACC data base. In 2022, FRWA received a small grant from LFSWS to support its culvert survey program, and 24 assessments were performed in the town of Burlington.

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## CT Green Snow Pro Training (\$3,200)

LFSWS supported funding for the lower Farmington River and Salmon Brook Wild and Scenic town employees and elected officials to attend the CT Green Snow Pro training. This training is offered by the T2 Center at UCONN. It provides resources on how to use road salt more effectively in order to reduce both costs to the towns and the negative impacts of road salts on water quality and wildlife.



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## Invasive Plant Management (\$21,575)

Invasive plants along a watercourse not only threaten the native species there that wildlife depends on, but can reduce water quality. Oriental Bittersweet is an especially bad actor. By winding around trees and growing up into them, it chokes the movement of sap and eventually kills them. Also, the weight of the vines breaks branches and makes the trees vulnerable to being blown over by the wind. Loss of trees along a watercourse results in higher water temperatures and soil erosion from the bank. Two Oriental Bittersweet removal projects were completed in the summer of 2022. A professional landscaper worked on cutting vines from trees along the Farmington River in Alsop Meadow in Avon and in Tunxis Mead in Farmington. In Farmington, the cut stumps were also painted with an herbicide to reduce the chance of regrowth.

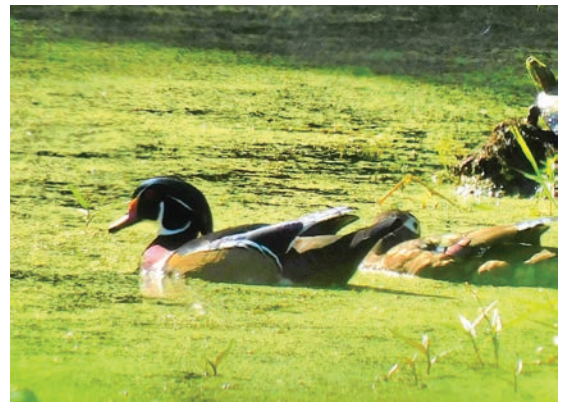
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## Survey of Birds Utilizing the Lower Farmington River/Salmon Brook Wild and Scenic Area (\$3,000)

Under a contract with Roaring Brook Nature Center, the center's executive director Jay Kaplan and other local birding experts conducted summer surveys in the towns along the Wild and Scenic Farmington River and Salmon Brook.

Survey sites were chosen for easy access along the river and Salmon Brook. Three visits were made to each site and the 82 species of birds that were observed were categorized as likely to be breeding along the river or brook, or as *flyovers* (species unlikely to breed in the area). Some species observed in the survey are marked as (SB), meaning that it is likely they only breed along Salmon Brook or in the Western Highlands.

The report contains a list of threats to bird species along the river and brook and suggestions of ways that bird habit could be improved. Both of these aspects of the report should be viewed and considered by the towns' Open Space Committees and Conservation Commissions with a view to making recommendations for needed changes to their towns. You can read the full report online at [tinyurl.com/birdsurvey23](https://tinyurl.com/birdsurvey23).







Left, *Drosera rotundifolia*, round-leaved sundew (Wikipedia); right, *Vaccinium macrocarpon*, American cranberry (Kristine Paulus).

## Botanical Inventory at McLean Game Refuge (\$2,250)

With grant funding from LFSWS, botanist Steven Messier, conducted an intensive botanical inventory at the McLean Game Refuge from August into September 2022. He focused on eight sampling areas including bogs, floodplains, waterfalls, and a mountain peak. For one waterfall and the bogs, he completed a comprehensive plant inventory that included all plants. For the other waterfall, the floodplains, and the peak, he only documented plants not previously recorded at the Game Refuge. In all sites, he also recorded previously undocumented species of lichens and fungi. Steven Messier recorded a remarkable 101 species previously undocumented at the McLean Game Refuge.

## Amphibian & Reptile Critical Habitat Analyses (\$23,000)

For the Amphibian and Reptile Critical Habitat Analyses for the Lower Farmington River and Salmon Brook, Quinn Ecological, LLC conducted a GIS desk analysis of and follow-up field work for both areas.



## Macroinvertebrate Survey Training for High School Students (\$553)

In October, the Farmington River Water Association and the Pequabuck River Watershed Association (PRWA) were awarded a grant for training Region 10 High School students on the CT DEEP protocol Riffle Bioassessment for Volunteers (RBV) to survey macroinvertebrates. Eighteen students participated in the training and sampling of Whigville Brook in Burlington. Seven of the most sensitive species of macroinvertebrates were found during the training, indicating high water quality at this location in Whigville Brook.



In assessment of water quality in a stream using the CT DEEP's RBV protocol, the damselfly nymph is a "moderately desirable" find.



## Supplemental Survey for Dwarf Wedgemussels in Simsbury and Avon (\$6,895)

Freshwater mussel surveys conducted by Ethan Nedeau/Biodrawiversity from 2005-2008 in the lower Farmington River documented potentially viable populations of the federally endangered dwarf wedgemussel (*Alasmodonta heterodon*) in the stretch from Avon to Simsbury. Surveys also documented the presence of 10 other mussel species in the lower river, making this the most diverse mussel assemblage in Connecticut.

In 2021-2022, LFSWS contracted with Biodrawiversity to resurvey the lower Farmington River to reassess the mussel community and habitat, provide updated mapping of species and habitats, and identify threats and conservation opportunities. Biologists surveyed 27 sites in the Farmington River and six sites in Salmon Brook.

From the dwarf wedgemussel perspective, results were both alarming and disheartening. Compared to 2005-2006, far fewer dwarf wedgemussels were found at far fewer sites, despite a larger survey effort in 2021-2022. The data suggests that the dwarf wedgemussel population in the lower Farmington River has declined and may no longer be viable, while other mussel species appear to be faring better.

The cause(s) of the dwarf wedgemussel decline in the Farmington River is not specifically understood. Water quality, water quantity, habitat degradation, loss or decline of native fish fauna, and invasive species have all likely contributed to the decline of freshwater mussels throughout Connecticut and North America.



*Dwarf Wedgemussel*



*Dwarf Wedgemussel*



*Eastern Pondmussels*



*Eastern Pondmussel*



*Eastern Lampmussel*



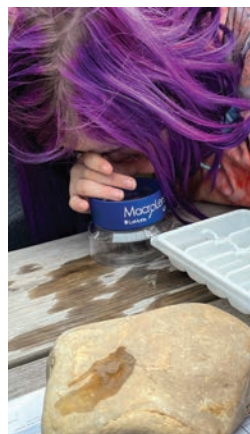
*Yellow Lampmussel*



*Alewife Floater*



*Eastern Pearlshell*



## East Granby Middle School (\$550)

LFSWS funded a grant to support an 8th Grade field trip to release Atlantic salmon and brown trout into Salmon Brook. The students raised the fish from eyed eggs in the classroom in the winter and they were ready for release in late April. This annual field trip combined the fish release with fish learning stations and a team-building picnic at Granbrook Park in East Granby.





## Unearthing History Virtual Series (\$3,350)

LFSWS sponsored a virtual series of lectures covering the archaeology, genetics, ice age mammals, trade routes and food ways of early life along the Farmington River, with a focus on the Brian D. Jones Paleo-Indian discovery in Avon. The Unearthing History: 2022 series is available on the Avon Free Public Library's YouTube page. ([tinyurl.com/yph6324z](https://tinyurl.com/yph6324z))

## Simsbury Free Library: Farmington Canal Aqueduct Exhibit (\$5,050)

The Simsbury Free Library requested funding to purchase a sturdy lucite cover to protect a hand-built precise and detailed 10 foot by 2 foot Farmington Canal Aqueduct model. Carl Walters, an expert on the Farmington Canal, built the model to enable people to better understand the Canal structure and to appreciate the importance of its history. The model will sit on a table built by Simsbury High School technology students, making this project a community effort.







### Avon Trail Clearing (\$6,000)

LFSWS awarded funding to the Town of Avon to complete cleaning and improvement of the trail along the river at Fisher Farms. The trail is heavily used and difficult to maintain. This project involved removing downed trees and brushy invasive species that thrive in the damp areas along the river.

### Avon Land Trust (\$4,509)

LFSWS awarded \$4509 to the Avon Land Trust to remove a derelict cabin on a riverside property and to provide a picnic table and benches to create a publicly accessible riverside picnic area and fishing spot. The debris resulting from the demolition was disposed of in an environmentally responsible way.

*“It is hereby declared to be the policy of the United States that certain selected rivers of the Nation which, with their immediate environments, possess outstandingly remarkable scenic, recreational, geologic, fish and wildlife, historic, cultural or other similar values, shall be preserved in free-flowing condition, and that they and their immediate environments shall be protected for the benefit and enjoyment of present and future generations.”*

WILD & SCENIC RIVERS ACT, OCTOBER 2, 1968

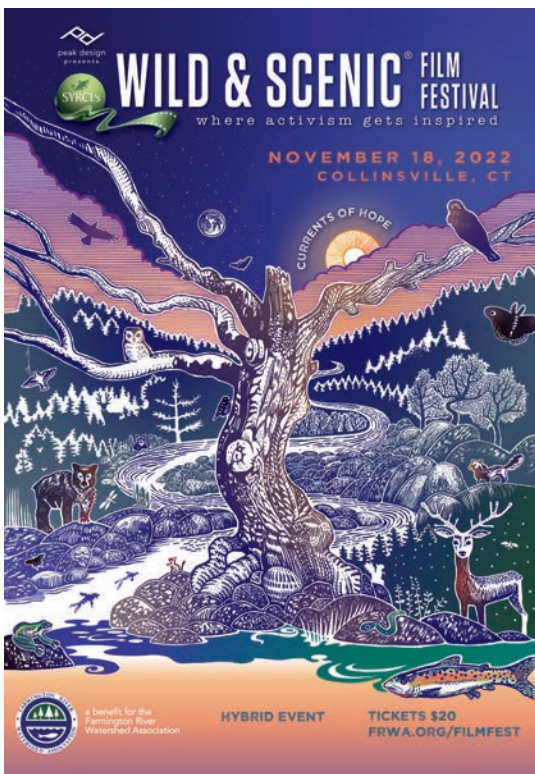




## Kiosks – Hartland & Avon (\$7,843)

LFSWS procured the physical structures for two kiosks for placement in Avon and one for placement in Hartland. These kiosks are similar in structure to those used by the upper Farmington River's Wild and Scenic group, the Farmington River Coordinating Committee (FRCC). The design and fabrication of informational signs for the kiosks and their installation is planned for fiscal year 2023. The content of the signs will be developed cooperatively by LFSWS and the towns.

*This completed kiosk shows the style and construction of the kiosks, which have not yet been installed.*



## LFSWS Sponsorship of Wild & Scenic Film Festival (\$1,600)

LFSWS was proud to yet again help host the Wild & Scenic Film Festival along with our partners, FRWA and the Farmington River Coordinating Committee (FRCC). The greater Farmington River community came together for the Wild & Scenic Film Festival as a hybrid event. The live event was at the Canton Town Hall Auditorium, and it was also accessible virtually. Over 300 people enjoyed celebrating the river and learning more about the Wild & Scenic designation.

## Library Displays (\$48)

LFSWS committee members worked with FRWA to create library displays for towns in the Wild & Scenic designation. The library displays highlighted each town's specific Outstandingly Remarkable Values (ORV's) and provided information on what a Wild & Scenic designation is and the requirements for eligibility.



## Needs Assessment (\$6,300)

Joshua Mead was contracted to conduct a survey of committee members and appropriate town staff and elected officials in the nine towns in the designation. The goal was to evaluate needs related to the public's use and enjoyment of the river, including river safety and river protection, that potentially could be addressed by the Committee through education and outreach programs. One significant finding was that town leaders felt they did not have enough communication with the Lower Farmington River and Salmon Brook Wild and Scenic Committee about the work of the Committee. This suggests that the town-appointed representatives need to make contact with town officials more often.



Eastern Black Racer



Fowler's Toad



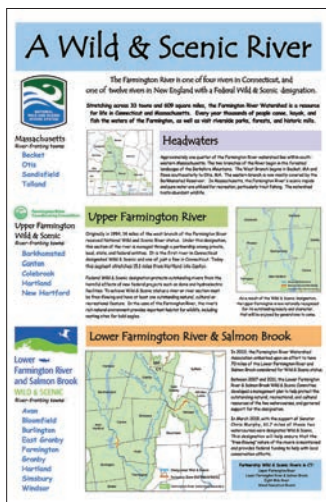
Gray Treefrog



Mudpuppy

## Herpetology Presentation (\$250)

In March 2022, herpetologist Dennis Quinn presented a program at the Simsbury Public Library about the reptile and amphibian survey his company, Quinnecological LCC, had done in Simsbury in the summer of 2021. To an audience of about 50 people, he explained the various habitat requirements of amphibian and reptile species found along the Farmington River, emphasizing that not only the river and immediate environs were essential to these animals, but also, that in order to complete various parts of their lifecycles they require conserved wetland and upland areas.



## LFSWS Updating of Roaring Brook Nature Center Signs (\$1,600)

LFSWS contracted with Roaring Brook Nature Center to update the four panels of the Roaring Brook Nature Center exhibit about upper and lower Farmington River and Salmon Brook and about the two Wild and Scenic designations. The panels provide information on the National Park Service's Partnership Wild and Scenic program and the designations of the upper and lower Farmington River and Salmon Brook, the industrial history of Farmington River, the wildlife habitat value of the watercourses and their use for recreation.

## Other Education & Outreach Projects



# 2022 LFSWS Community Events



## GREEN LIVING EVENT

The LFSWS participated in the Farmington Valley Green Living Festival at the Avon Congregational Church in May 2022. LFSWS displayed information about the ORVs that make our watercourses special and engaged youth with an interactive activity on the cycle of water. The festival was family-friendly, low-waste, and focused on environmental solutions at the community level.



## GRANBY MEMORIAL DAY PARADE AND HARTLAND FIREMEN'S PARADE

LFSWS participated in the Granby Memorial Day Parade and provided information about the Partnership Wild & Scenic designation. Stops in the parade were made to lay wreaths at the War on Terror, Legion and World War I monuments before continuing to the cemetery.



## CELEBRATE THE VALLEY

Salmon Brook Watershed Association (SBWA), as a partner of LFSWS, participated in the Simsbury/Granby Chambers of Commerce first "Celebrate the Valley" event at Salmon Brook Park in September 2022. SBWA had a booth with information for the public and answered many questions from people who stopped by.



## RIVER CLEAN UP

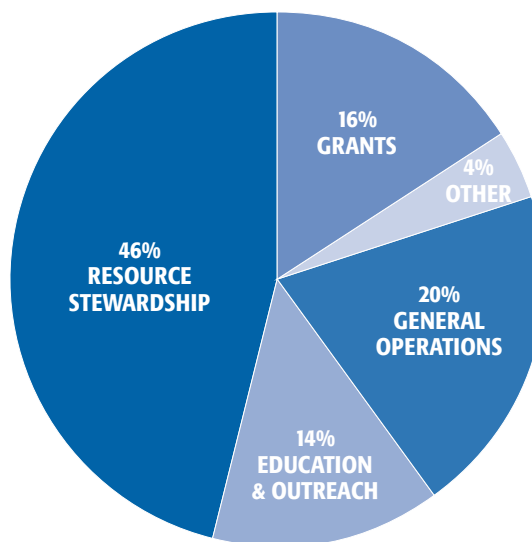
LFSWS participated in the annual Farmington River Watershed Association's Annual River Clean up, collecting and properly disposing of trash found along and in the river.



## SMALL GRANTS

TOWN OF AVON: Fisher Farm River Trail Clearing	\$6,000
AVON HISTORICAL SOCIETY & AVON FREE LIBRARY: Unearthing History Virtual Series	\$1,500
AVON LAND TRUST: Building Demolition & Creation of a Picnic Area	\$4,509
EAST GRANBY MIDDLE SCHOOL: Salmon Rearing & Fish Stocking Project	\$550
FRWA/REGIONAL 10 LEWIS MILLS HIGH SCHOOL: RBV Training	\$553
MCLEAN GAME REFUGE: Botanical Inventory at McLean Game Refuge	\$2,250
SIMSBURY FREE LIBRARY: Farmington Canal Aqueduct Exhibit	\$5,050
TRINITY COLLEGE: Develop Protocol to Identify Lifeline of Local Nature & Agriculture	\$5,750

# AT-A-GLANCE



## 2021-2022 EXPENSES

*These numbers represent the funding that the Lower Farmington River and Salmon Brook provided spent in Fiscal Year 2022 by various categories.*

**18** High School Students Trained in RBV/ Macroinvertebrate Survey

**82** Species of Birds Observed During Survey

**101** Botanical Species Newly Documented at The McLean Game Refuge

**3** New Kiosks Being Built

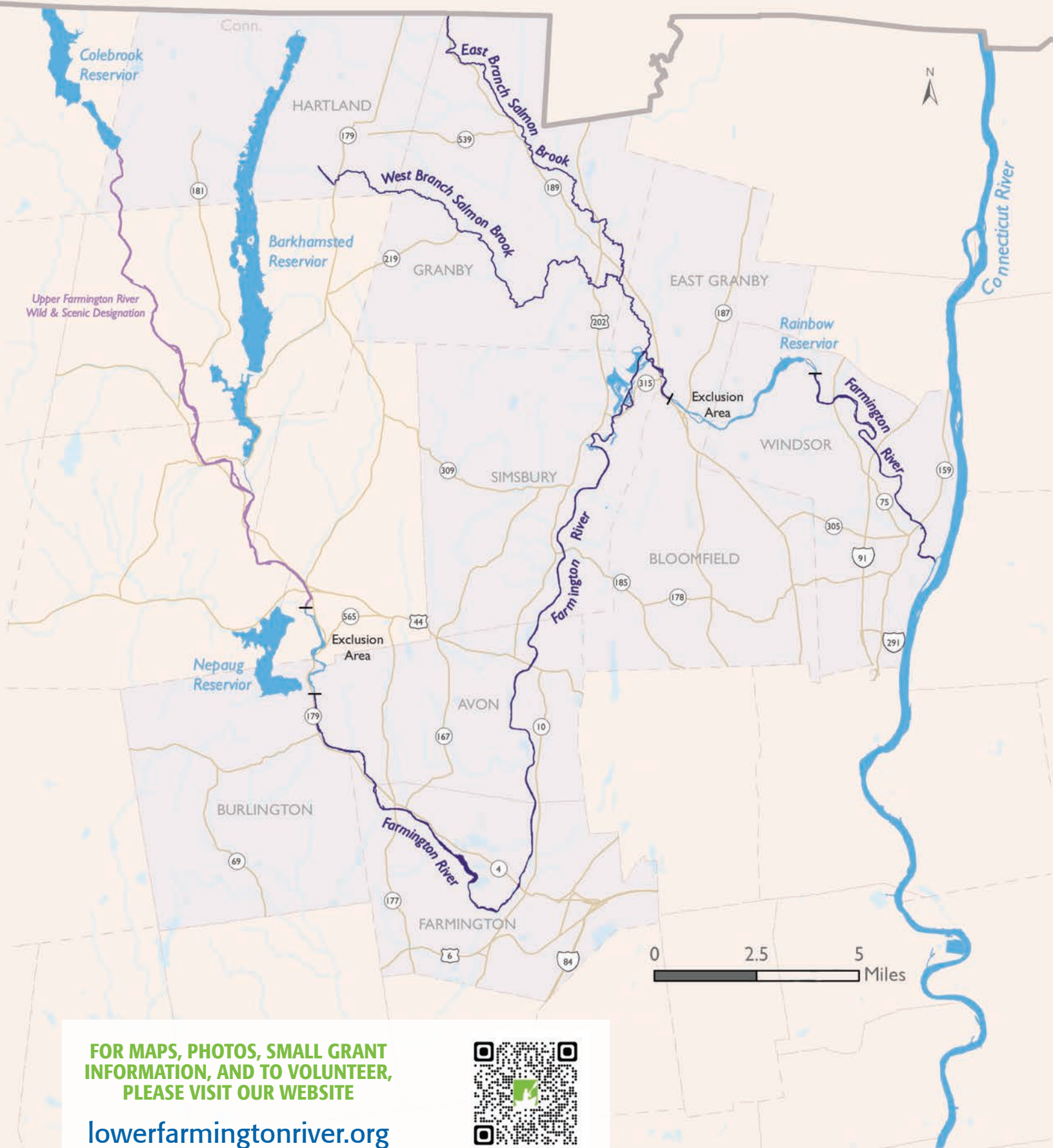
**9** Towns Surveyed for Needs Assessment

**300** People Attended the Wild & Scenic Film Festival



*In Fiscal Year 2022, LFSWS successfully supported a variety of its own research, conservation, and outreach work in the partnership towns. It also provided grant funding to local organizations for river-related projects consistent with the mission of the Partnership Wild & Scenic Rivers program.*

# Lower Farmington River and Salmon Brook Wild & Scenic



**FOR MAPS, PHOTOS, SMALL GRANT  
INFORMATION, AND TO VOLUNTEER,  
PLEASE VISIT OUR WEBSITE**

[lowerfarmingtonriver.org](http://lowerfarmingtonriver.org)

