The Eightmile River
Wild & Scenic Coordinating Committee (ERWSCC)

The Eightmile River Watershed News

2015 - 2016

Orthomosaic contributed by Joel Stocker. Aerial photographs were taken during channel restoration using a hexacopter on December 5, 2015. Photographs were then merged using Pix4dMapper (licensed with UConn Extension) and aligned over a 2012 aerial image from CT ECO.

After many years of planning, permitting and raising funds, Ed Bills Dam, a major dam on the East Branch of the Eightmile River is being removed and the river channel restored. A big thank you to the landowner, American Rivers, The Nature Conservancy and CT DEEP for all their efforts.

Chairman's Column: A Forested Landscape

Every few years we tabulate the number of open space acres in and around the watershed. We do this because open space protection is key to maintaining the outstanding resource values that led to the Eightmile's designation as one of the nation's Wild & Scenic river systems. The watershed is comprised of nearly 40,000 acres with most of the land within the three towns of Salem, Lyme and East Haddam with small bits in Colchester and East Lyme. Of this, a little under 15,000 acres or 38% of the watershed is in permanent protection. In just this past year four properties were added to the protection roles in East Haddam totaling 373 acres, in Lyme a 163-acre farmland easement was purchased by the state and seven acres were added in Salem. The groups involved in these efforts include the local land trusts, The Nature Conservancy, our towns, and the state. In fact these groups often times work cooperatively to save vital parcels.

These protected lands are home to unique habitats, foster linkages with other open space parcels, provide buffers for wildlife from development and reflect the scenic and cultural values that so define why most of us choose to live here. And when joined together they create an assemblage of larger, unbroken blocks. Because of these conservation efforts the Eightmile River watershed is recognized as an unusually intact ecosystem in that it provides the life cycle needs for the perpetuation of robust populations of many species whose habitats are in jeopardy throughout much of southern New England.

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In This Issue...

Update on the Four Town Trail

By Rob Smith

There have been a number of inquiries as to when the Richard H. Goodwin Trail (Phase 1 from East Lyme to East Haddam) will be marked and available for hiking. After a long delay, a DEEP trail grant has been awarded, which will primarily support access to the trail in East Lyme. The trail grant approval will allow the Eightmile Group to purchase trail markers needed to provide a uniform and easily recognizable tag for the trail. We anticipate that each stewarding organization will be tagging their section of the trail this year.

The decking replacement of a footbridge across the Eightmile River in East Haddam is also under way. Engineering plans were completed and the steel delivered in December. The decking and railing material is on hand. The National Park Service has awarded a $10,000 grant to ERWSCC for use in repairing the bridge.

And heading northward the Town of Colchester has submitted a grant for design of a critical connection between RT 16 and RT 149. With this connection the trail could then continue through Day Pond State Park and Salmon River State Forest up to the Airline Trail.

Members of the Trail Committee

How Many Fish Can a Fish Ladder Pass?

By Tim Wildman, DEEP Fisheries

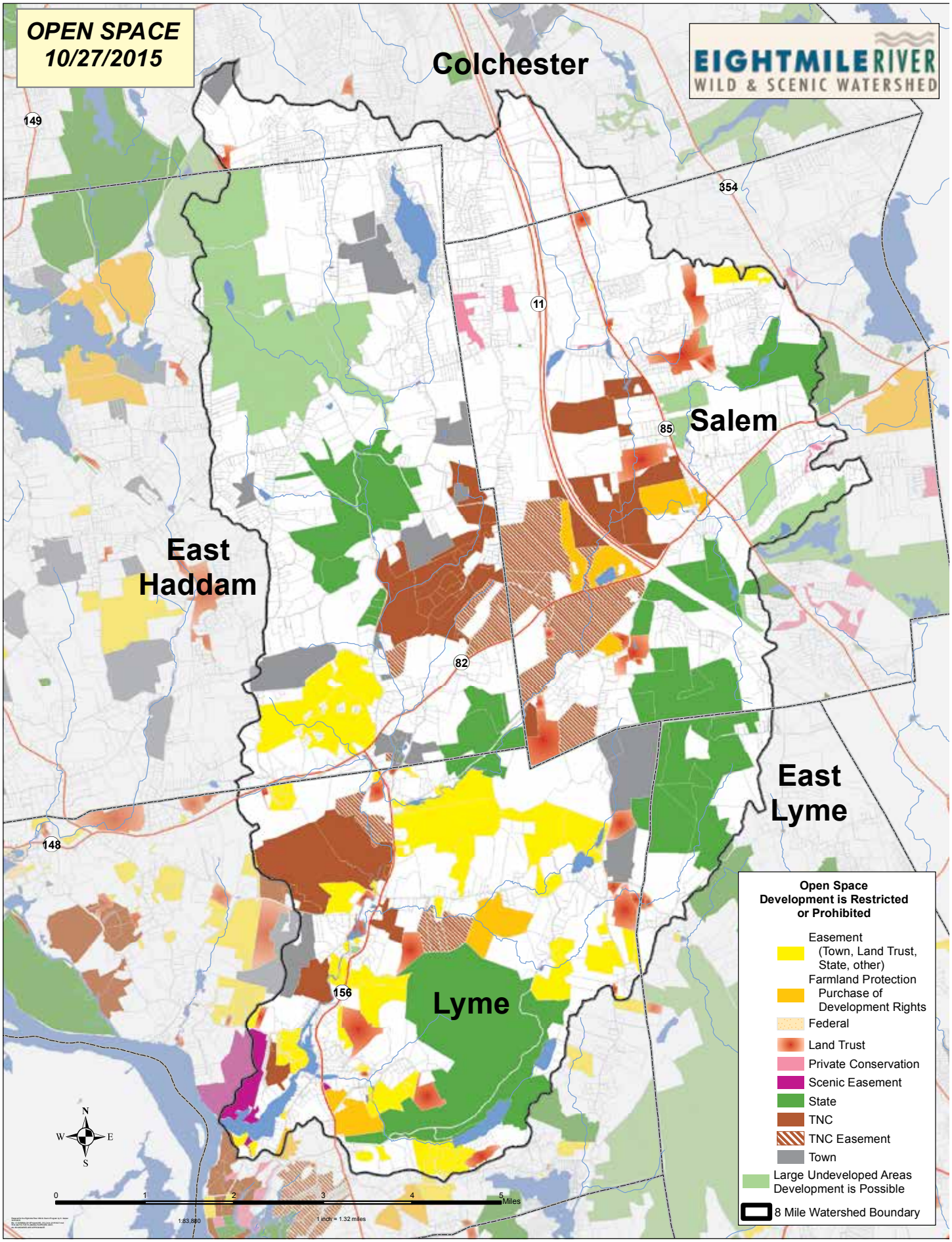
In 2014, the newly installed video recording system at Moulson Pond Fishway in Lyme, was plagued with problems. There were really high spring flows, poor lighting and ants, so many ants and they made a nest in the computer which essentially shut it down.

This year it was a different story. The over-all performance of the corrected video recording system was excellent. Thanks to some very dedicated volunteers, we were very effective at identifying and counting almost every fish that passed through the fishway this year.

American Shad

There were more American Shad than expected based on DEEP fisheries biologists projections. They may represent a true run of Eightmile River fish that managed to persist despite low numbers, or they may represent CT River strays. The Moulson Pond Fishway had the largest counted run of Blueback Herring in the state of Connecticut this year; however Blueback runs in other rivers remain low. Fewer Alewife than expected were seen, but an exciting treat was capturing the bright sea-run Atlantic Salmon fly past the window. Since salmon fry have not been stocked since 2011, this adult must have been at least four years old.

Fish Type	Upstream	Downstream
Atlantic Salmon	1	0
American Shad	19	0
Alewife	72	1
Blueback	11,690	611
Sea lamprey	34	0
Brown Trout	30	0
Brook Trout	42	0
White sucker	304	0
Bluegill		-7
Largemouth Bass	1	0
Totals	12,192	605
Total Fish Passed	**11,587**	


OPEN SPACE
10/27/2015
EIGHTMILE RIVER
WILD & SCENIC WATERSHED
Colchester
Salem
East Haddam
East Lyme
Lyme
149
354
11
85
82
148
156
Open Space
Development is Restricted
or Prohibited
Easement
(Town, Land Trust, State, other)
Farmland Protection
Purchase of Development Rights
Federal
Land Trust
Private Conservation
Scenic Easement
State
TNC
TNC Easement
Town
Large Undeveloped Areas
Development is Possible
8 Mile Watershed Boundary
N
W
E
S
0 1 2 3 4 5 Miles
1:83,880
1 inch = 1.32 miles

Eightmile Community Programs

Enviroscape Program at Salem Elementary

By Barbara James and Gloria Fogarty

On Wednesday, June 6, 45 students at Salem elementary School used our Enviroscape device to share adventures

in learning how waterbodies get polluted and how difficult it is to clean the polluted water. Specially trained teachers, Robin Jensen and Sara Jolly-Ballentine, along with ERWSCC members, Barbara James and Gloria Fogarty held two consecutive one-hour teaching sessions with sixth grade science pupils. The students were enthusiastic, fully engaged, and learned to be quite appreciative of the difficulties encountered when trying to clean dirty water. The Enviroscape is an educational tool

recently purchased by ERWSCC with grant funds. It is available to local school systems and other groups interested in providing students with hands-on opportunities to explore real-life wastewater management issues.

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Even here, however, the wildness that we take for granted is being slowly chipped away. Although the watershed is relatively remote from the state's suburban and urban centers, population growth and the subsequent demands for housing are putting pressure on our remaining undeveloped lands. In the three principal watershed towns, between 2000 and 2012, population grew 10% from 14,207 to 15,630. This is important to know and to act upon because as population and building intensify remaining lands become parcelized and fragmented.

Although advocating for open space conservation is at the forefront in our watershed protection efforts, other tools are critical as well. One of these is streamside and river setback buffer zones. Varying from 50 to 100 feet, setbacks not only save fragile streamside habitat, but this interface zone between land and water acts as a filter to ensure high water quality. This buffer zone approach was adopted by all three water-shed towns and is unique in Connecticut.

Programs in the Park

This summer, the Eightmile Committee expanded its outreach to include some free family programs at Devils Hopyard State Park. What did we learn about?

Woodland Critters with Mark LaCasse

Native Reptiles with Meigs Point Nature Center

Stream Bugs with the Watershed Coordinator and The Nature Conservancy

We hope you will be able to join us next July for more **Programs in the Park!**

FrogWatch USA

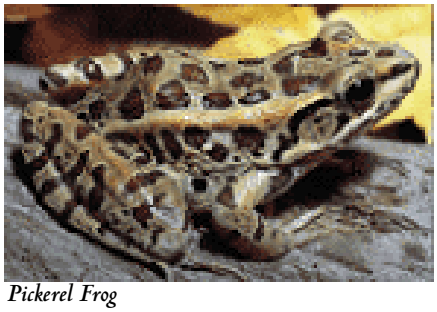
By Liz Robinson

On a balmy Wednesday night this past March, nearly thirty people came to The Lyme Public Library to attend the Frog-Watch USA citizen science training hosted by James Sirch of Yale's Peabody Museum and Liz Robinson of The Nature Conservancy. FrogWatch USA is a national program sponsored by the Association of Zoos and Aquariums to train local citizens to monitor their nearby wetlands for breeding frog and toad populations. Frogs and toads serve as important clues to environmental health because they are highly sensitive to changing conditions. They also help keep insect populations low, preventing the spread of disease. Sadly, frogs and toads are on the decline. According to the FrogWatch USA Volunteer Manual, 38 of the 280 native amphibian species in the United States are currently listed under the Endangered Species Act. Frog-Watch participants learned the mating calls of ten local frog and toad species and were certified to report data on their own local wetlands back to the larger FrogWatch USA effort. To find out more about Frog-Watch visit https://www.aza.org/frogwatch/; and check out The Nature Conservancy Connecticut Chapter for upcoming citizen science events near you! http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/connecticut/events/index.htm

Spring Peeper

Wood Frog

American Toad



Pickerel Frog

To learn about native Connecticut frogs go to http://www.ct.gov/deep and type ***"frogs"*** into the search box
Photos from DEEP Website

ERWSCC rolls out a Small Community Grant Program

By Sue Merrow

Are you an educator, a civic group leader, someone in charge of field trips for your organization? We have the destination for you and a Community Small Grant Program to help you get there. Your Eightmile River Wild and Scenic Coordinating Committee wants to hear from you if you think your civic organization, community agency, library or non-profit group could use some funding to bring people to the wonderful outdoor classroom that is the Eightmile River and its watershed. We will be giving small grants ($50 to $300, and possibly $500 in some circumstances) to support programs that connect people with their river.

Here are some examples of programs we would like to support: field trips and programs about water quality, plant life, wildlife, geology, watershed ecology, history, geology; programs that use our interactive watershed ecology teaching device, Enviroscape; programs that show how to be a better environmental citizen of any watershed.

Want to know more? Just go to the our website at **http://eightmileriver.org/** and click on **GRANTS** for a description of this grant program and a downloadable application form that can be emailed back to us.

It's that easy. We want to help you spread the word about the Eightmile and its place in the natural world.

For more Events…

including presentations, hikes, paddles, and other family fun, visit the following websites:

Lyme Land Conservation Trust
http://lymelandtrust.org

East Haddam Land Trust
http://ehlt.org

Salem Land Trust
http://salemlandtrust.org

2014-2015 Financial Report

Income

2014 - 2015 Financial Report

- **Federal**
  - **NPS Annual Program Funding: $56,000**
  - ***NPS Cost-Share Grant: $10,000**
- **Organization Grant**
  - ***SWEP Grant $1,920**
- ****Individual Donation: $500**

Total: ***$68,420***

Expenditures

- **Operating Costs $45,734**
- **Subcommittees**
  - **Outreach & Education $1,536**
  - **Project Review 0**
  - **Monitoring & Science $1,435**
  - **Protection & Management $3,354**
  - **Executive $333**
- **SWEP Grant $1,364**

Total: ***$53,756***

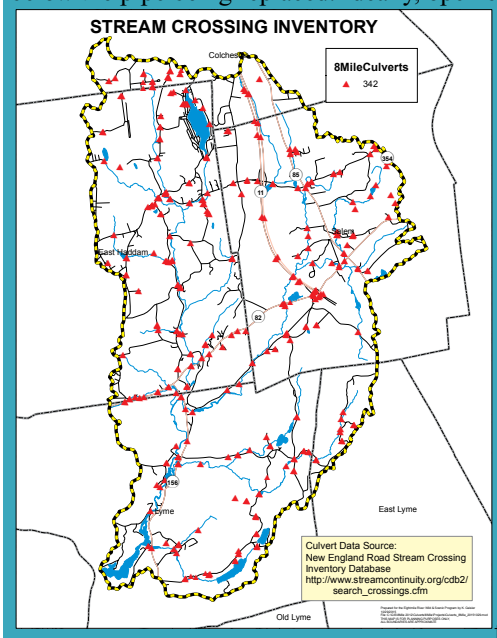
**The NPS Cost-Share and SWEP Grant timeframes extend beyond 2014-2015 fiscal year*
***The generous donation of $500 was used to fund 2015 Summer Family Programs with remainder put towards new community grant funds.*

L to R: P. Young (ERWSCC), A. Irving (ERWSCC), A. Tisdale (SWEP), C. Karlson (SWEP), R. Smith (ERWSCC), D. Kahn-Bureau (TRCC), F. Mastroluca (TRCC) and B. DesRoche (TRCC)

Fish Friendly Culverts

Our local rivers, streams and brooks are nature's highways for fish, amphibians, reptiles and other terrestrial wildlife. We are well aware that dams can be major obstacles for critter movement, but road and driveway crossings can also be hurdles for passage. Pipes that are too long, too steep or where the water runs to fast or is too shallow, all present challenges for movement, particularly for fish. Fish need to move to spawn, for food and to escape to areas of cooler water when temperatures are high and streamflow is low.

Many road culverts or pipes were originally installed to simply pass water as efficiently as possible, resulting in conditions that are just not fish-friendly. The good news is that as these road culverts are being replaced we can often fix those problems to restore passage. The best fish-friendly designs are the ones that mimic the undisturbed channels above and below the pipe being replaced. Ideally, open bottom crossings are best. Where closed pipes are needed however, using a wider pipe that allows some exposed streambank and burying the pipe to create a natural bottom with a design that maintains the natural stream depth is also a good solution. Since fish-friendly designs are closer to natural conditions they also function better in larger storm events, keeping our roads safer and reducing expensive repairs. This year the ERWSCC applied for and received a grant from the Society of Women Environmental Professionals (SWEP). This allowed the hiring of two Three Rivers Community College Environmental Engineering students to complete the field measurements and uploading of data to the North Atlantic Aquatic Connectivity Collaborative (NOACC), a thirteen state initiative. This data will allow local town departments to identify which culverts are particularly vulnerable to large storms and which ones could also be better fish highways.



P. Young

For more information about the SWEP:
www.swep-ct.org/
For more information about TRCC:
www.trcc.commnet.edu/

Baseline Water Quality Monitoring Continues

By Bobbi DesRoche and P. Young

The Eightmile River watershed contains over 150 miles of pristine streams meandering through Lyme, East Haddam, and Salem. An essential tool for watershed management to ensure local waterways stay healthy for fish and other animals, is water quality monitoring. With the help of two Three Rivers Community College students, ERWSCC conducted its second 10 week summer baseline monitoring program.

Parameters sampled include dissolved oxygen, pH, salinity, conductivity and temperature. See below for a brief description of desired ranges for native trout.

Dissolved Oxygen - To meet state targets, levels should not be below 5 mg/L, but higher levels are often needed for fish to thrive, especially with higher stream temperatures.

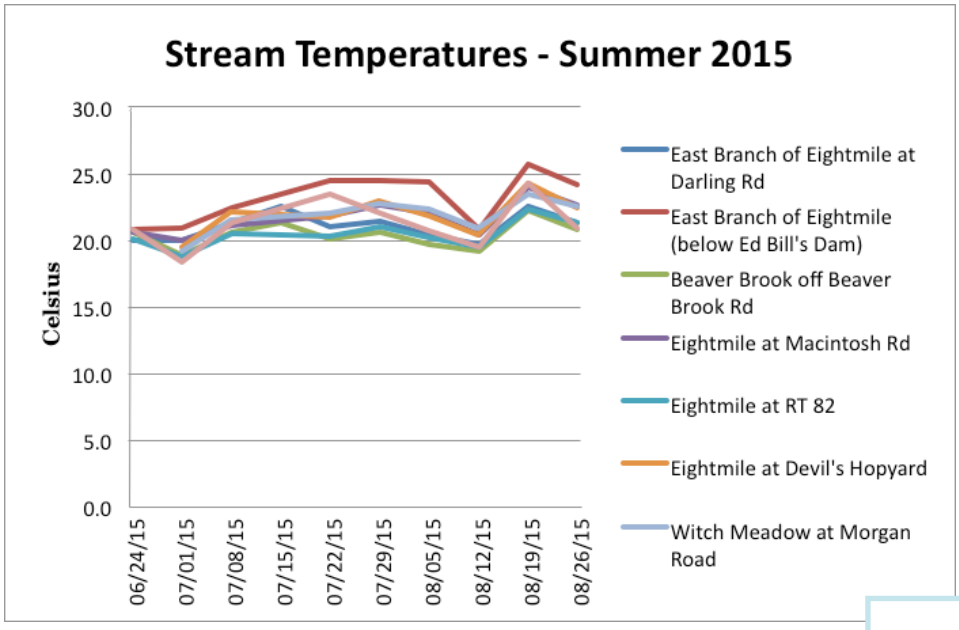
pH- Most native fish survive best in ranges between 6.5 to 8.0.

Salinity-Freshwater levels for most streams and lakes should be below 500ppm.

Conductivity- measures the ability of water to pass an electrical current and is affected by the presence of inorganic dissolved solids such as chloride, nitrate, phosphate, sodium, magnesium, calcium and iron among others. Ranges are expected to be in the 50-500(µs/cm) range for native fish survival.

Temperature - Water temperatures above 24°C (75F) affect short term survival of juvenile native Brook Trout.

As seen on the chart below, summer stream temperatures in several segments reached levels which negatively impact juvenile trout. Stream temperatures were generally higher in the summer of 2015 compared to 2014 likely due to lower than normal streamflow. Dissolved oxygen also dipped intermittently in several locations towards the 5 mg/L, but levels were generally similar as the previous year. Also of important note: measurements for DO were taken first thing in the morning, when they tend to be at their lowest level. Other parameters were generally within desired ranges.



To review the full report, please visit our website at ***www.eightmileriver.org***

Eightmile River Wild & Scenic Coordinating Committee Members

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Town of Salem

Staff

Patricia Young
Program Director

We are Now on Facebook!
Check for Upcoming Events and "LIKE" us on facebook at: "Eightmile Wild & Scenic River Watershed"

EIGHTMILE RIVER
WILD & SCENIC WATERSHED
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Haddam, CT 06438

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Three Great Ways to Stay Connected

- Visit our Website at www.EightmileRiver.org
- Call us at 860-345-8700
- "Like" us on at Eightmile Wild & Scenic River Watershed

GO WILD ON THE EIGHTMILE!

Eightmile River Watershed-www.eightmileriver.org