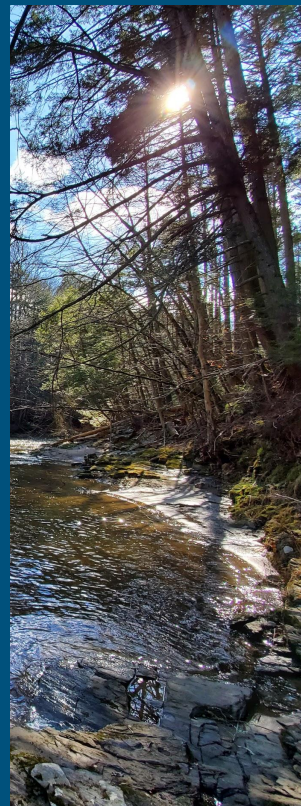


POMPERAUG RIVER



Water Watchers

Presented by
Pomperaug River Watershed Coalition
Co-Hosted by
New Morning Market



Overview

- About PRWC
- What is a watershed?
- Why water matters
- Water quality at a glance
- PRWC's monitoring & assessments
- Other tools for monitoring
- Do your part – Be RiverSmart
- How can you help report conditions?



In 1999, local residents formed a coalition to protect and preserve the Pomperaug River Watershed, a magnificent but limited resource. The watershed – contained mostly in the towns of Bethlehem, Woodbury, and Southbury – is an essential source of drinking water and endless scenic beauty and recreational opportunities to area residents.

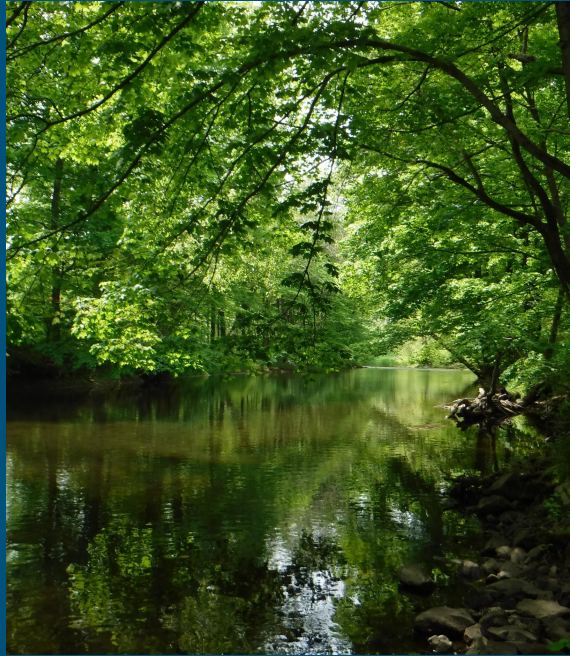
PRWC's founders – Dr. Marc Taylor, Larry Pond, and Dick Leavenworth – saw that the watershed was beginning to be seriously threatened by land development and by possible diversions of water out of the watershed. They were concerned about the effects that land development would have on water quality and whether there was enough water available to support this and future development. With focus on the local water supply, they created a partnership of stakeholders to protect this precious, irreplaceable resource.



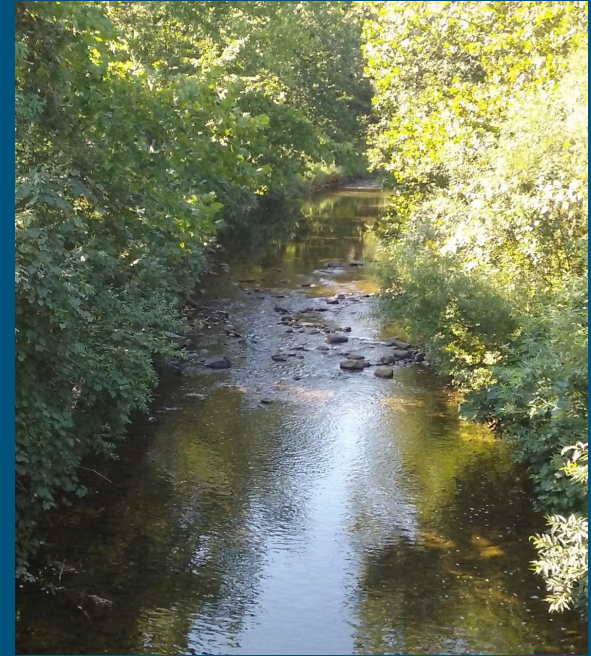
About PRWC



Nonnewaug



Pomperaug



Weekeepeemee

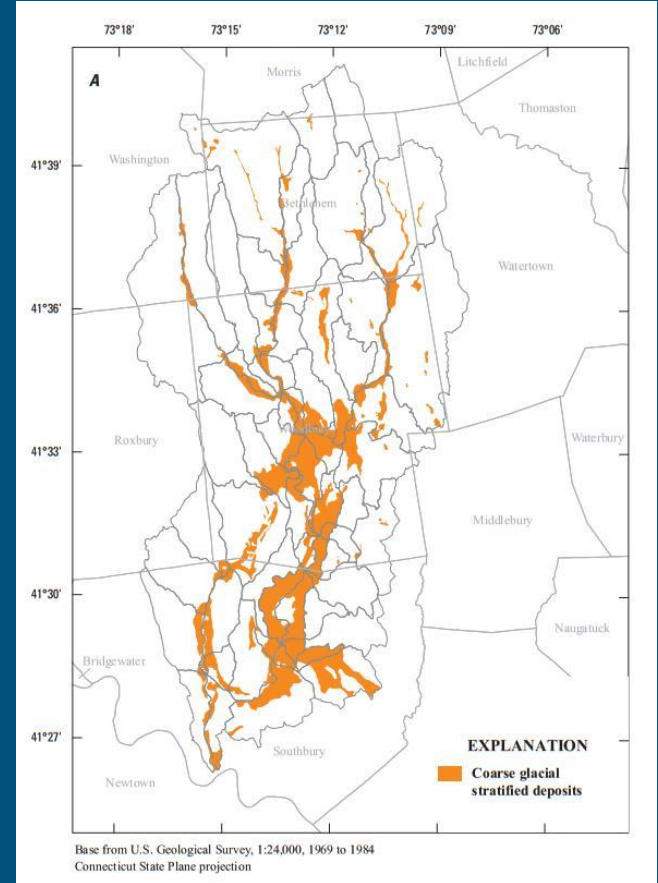
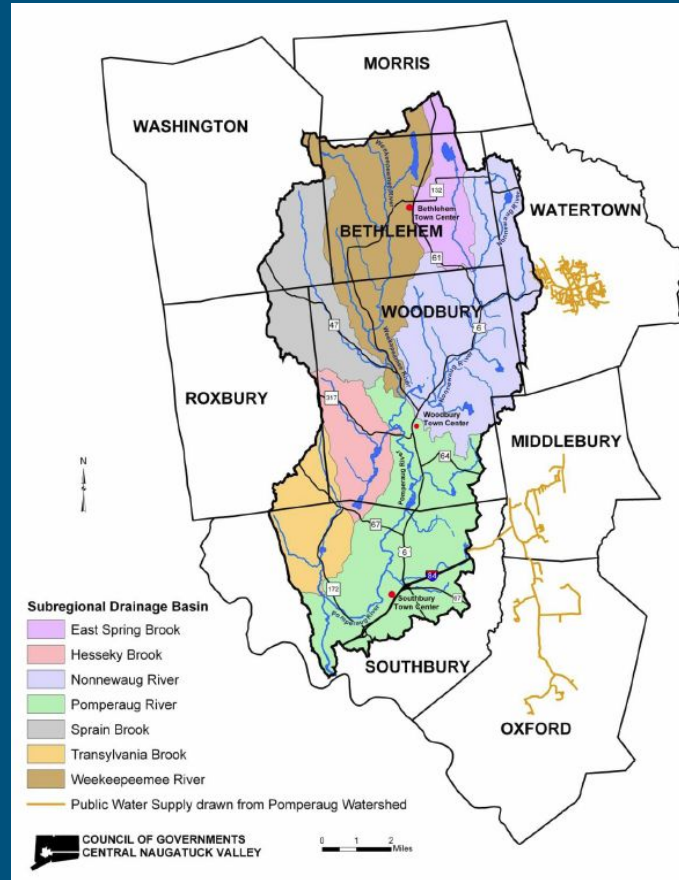
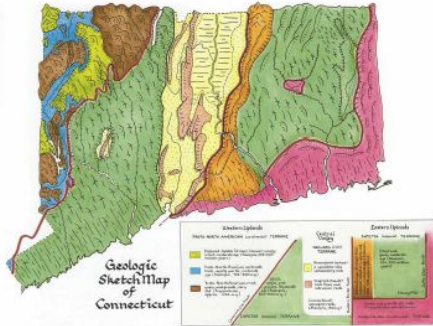
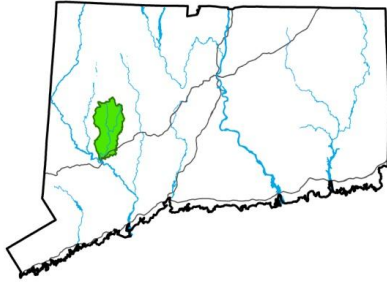
About PRWC

The Pomperaug River Watershed Coalition uses science to understand how our human activity impacts the quality and quantity of water both in our rivers and in the underground aquifers. We share that understanding with our communities, and find tangible ways to take care of our most valuable resource - **water**.



Pomperaug River Watershed

A 90-square mile watershed that drains to the Housatonic River Watershed in western Connecticut and that has geology mimicking the centrally located Connecticut River Watershed.



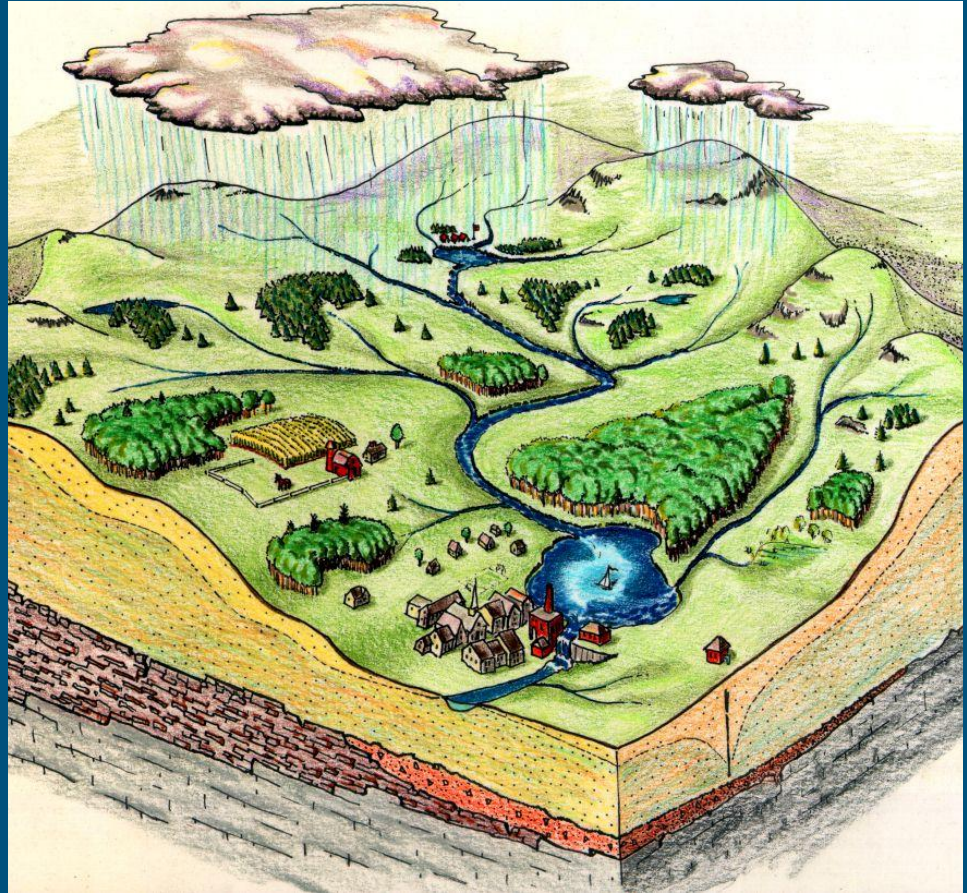
What is a watershed?

A watershed is a section of land that drains to a common point.

Water flows downhill from higher elevations and collects in streams, rivers, lakes, wetlands, and eventually the ocean.

It is all the land surrounding a body of water that – when it rains – drains to that body of water.

A watershed typically is named for the body of water.



Why water matters



“All the water that ever will be is, right now”

– *National Geographic*

Only 2.5% of the world's water is freshwater and only 1% of **THAT** water accessible in rivers, lakes, streams, and groundwater

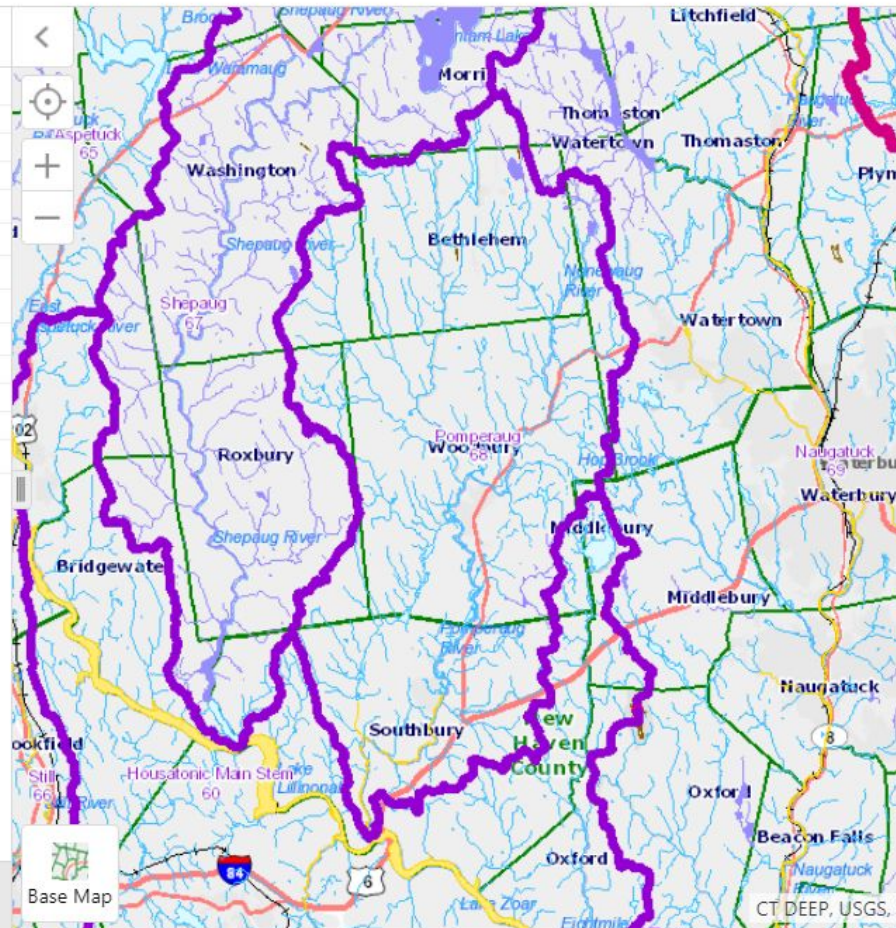
0.007% is deemed clean enough and is available to drink.

So, how is the Pomperaug?



Legend

- Regional Basins
- + Regional Basin Boundary
- Water Quality Classifications
- Surface Water Quality Line
 - A
 - AA
 - B, B*
 - SA
 - SB
- + Surface Water Quality
- + CT Base Map
- Gray Base Map
- Light Gray Canvas Base



Home



Legend

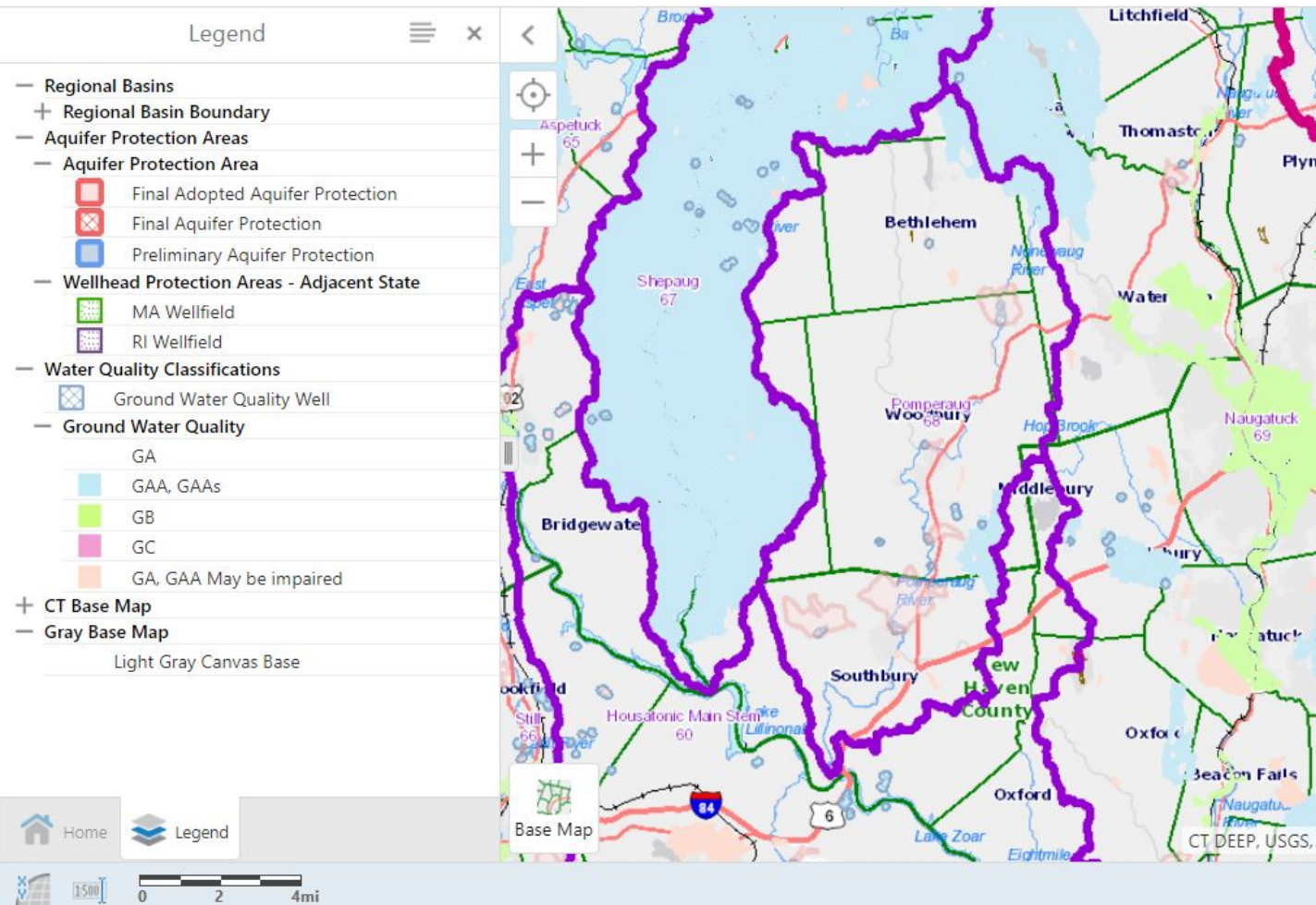


Base Map



1500

0 2 4mi





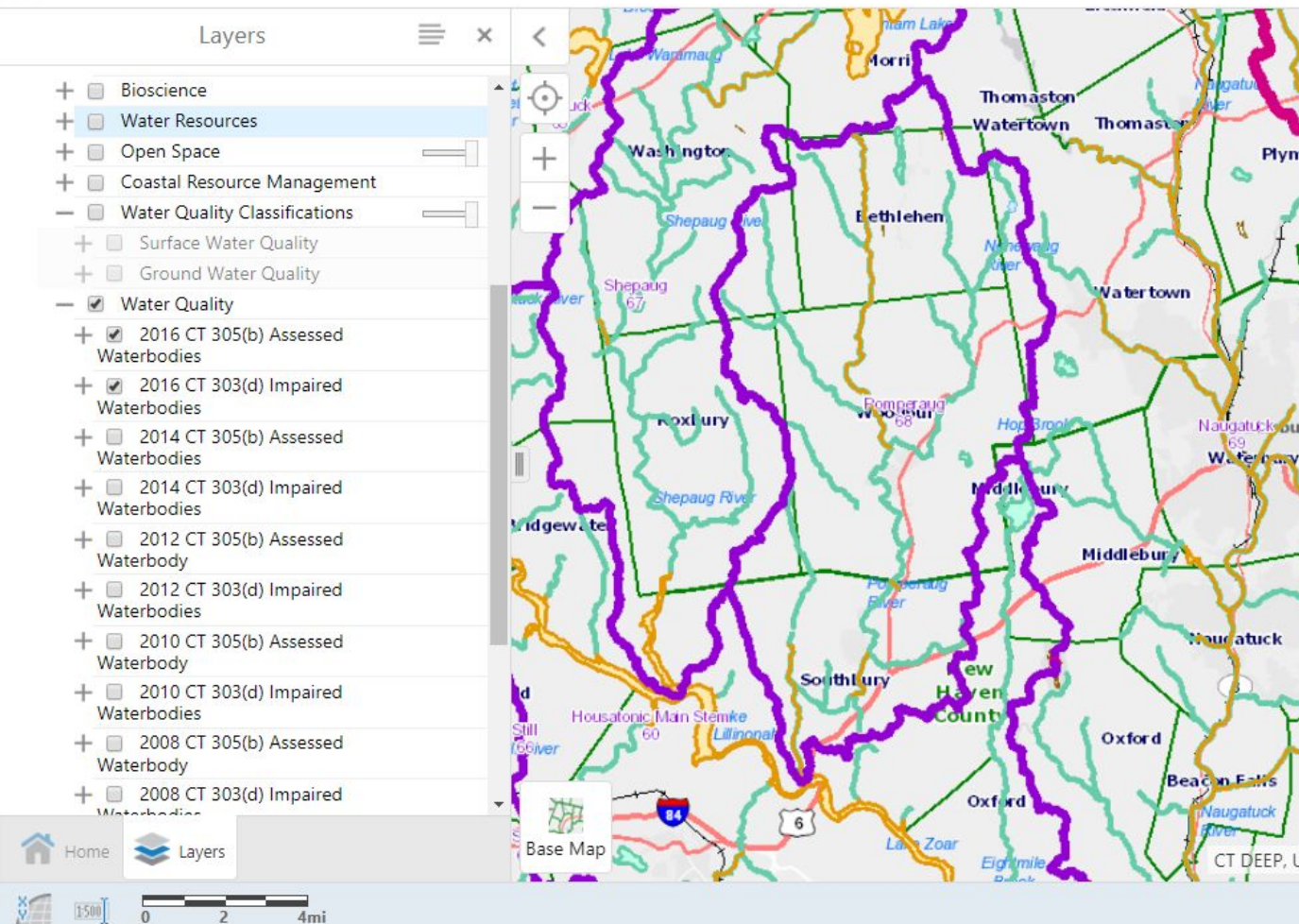










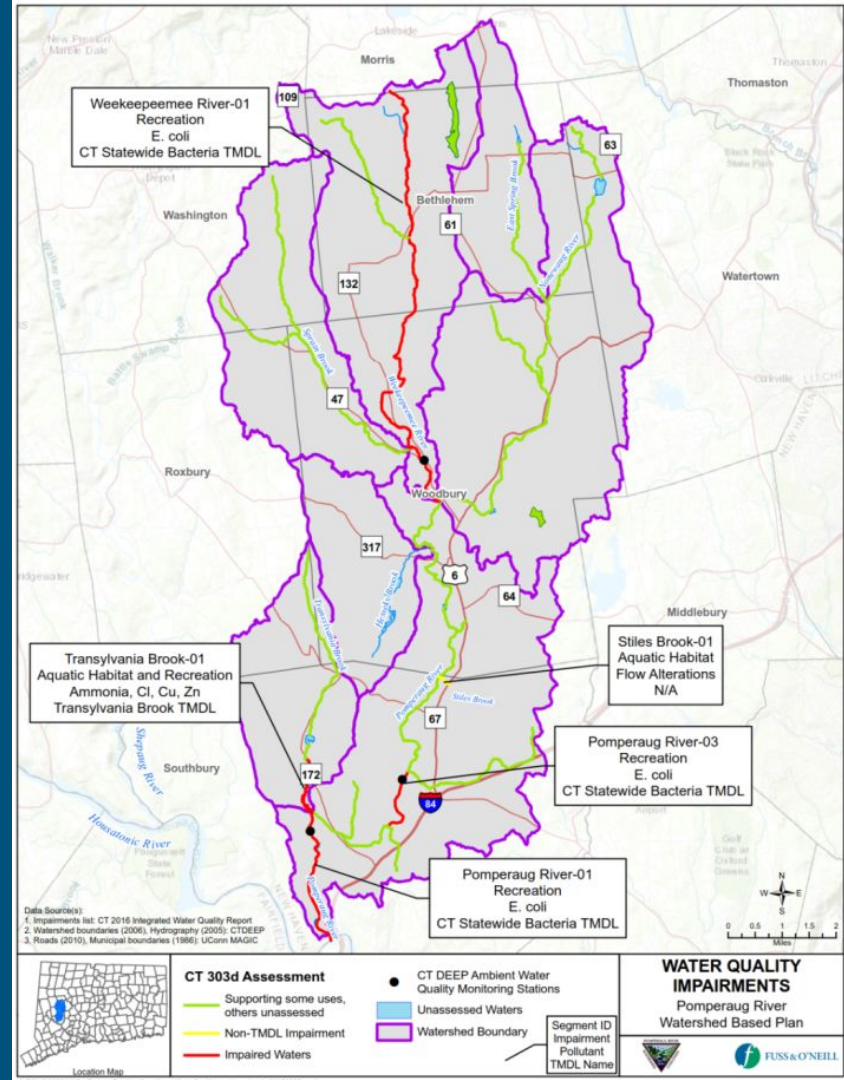


Water Quality at a Glance

Pomperaug has a mix of conditions.

Most areas support aquatic life and/or recreation.

But, room for improvement.



CT DEEP Waterbody Assessment Segments

Map of CT DEEP Waterbody Assessment Segments assessed for one or more designated uses



Figure 2-1. Waterbody segments assessed for one or more designated uses

CT DEEP Waterbody Assessments, Aquatic Life Use Support

Map of Connecticut CT DEEP Waterbody Assessment Segments showing Aquatic Life Use Support

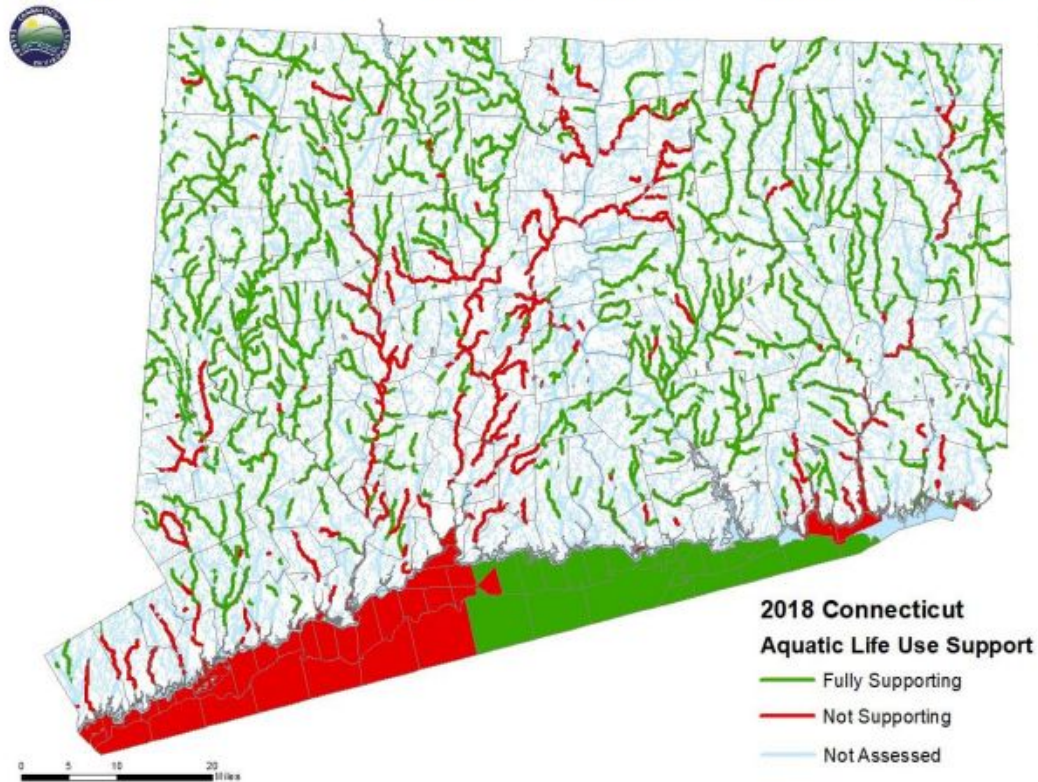


Figure 2-2. Waterbody segments assessed for Aquatic Life Use Support

CT DEEP Waterbody Assessments, Recreational Use Support

Map of Connecticut CT DEEP Waterbody Assessment Segments showing Recreational Use Support

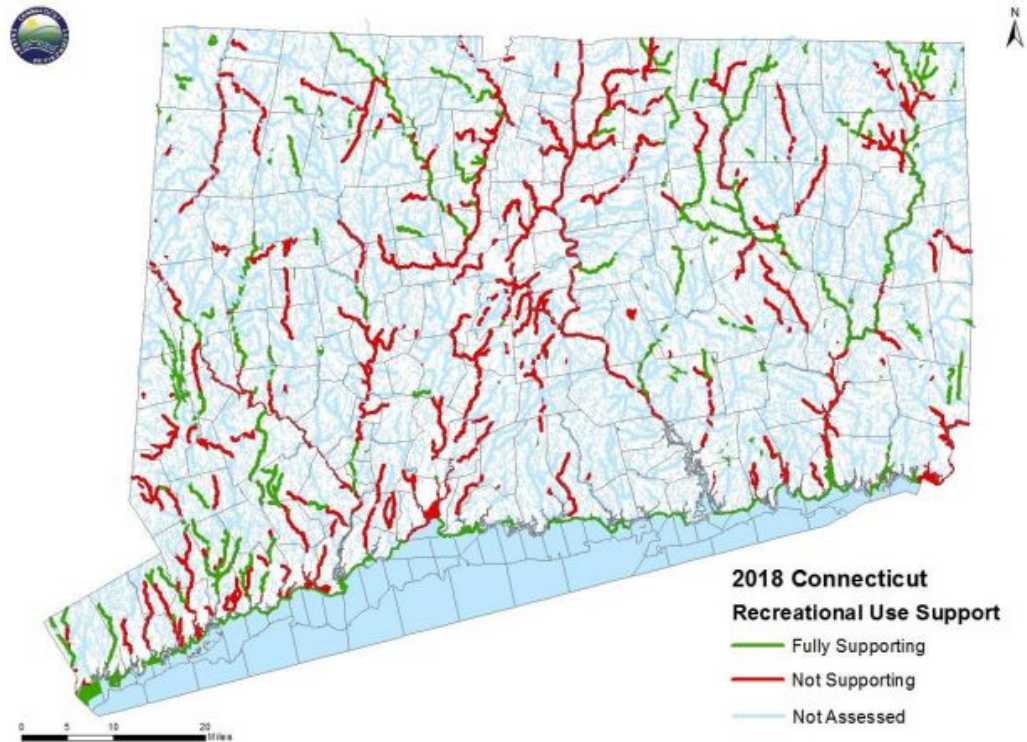
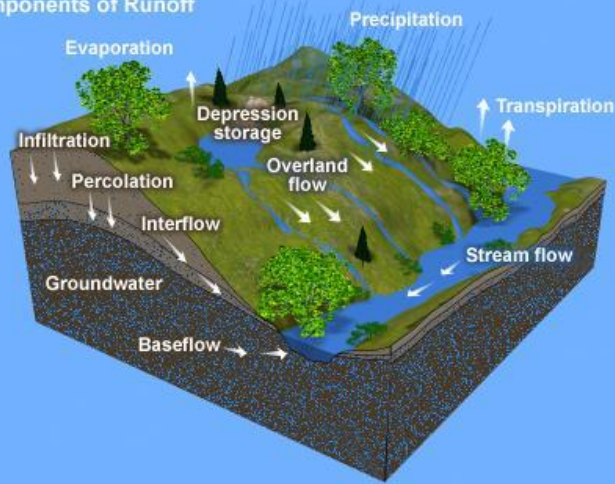


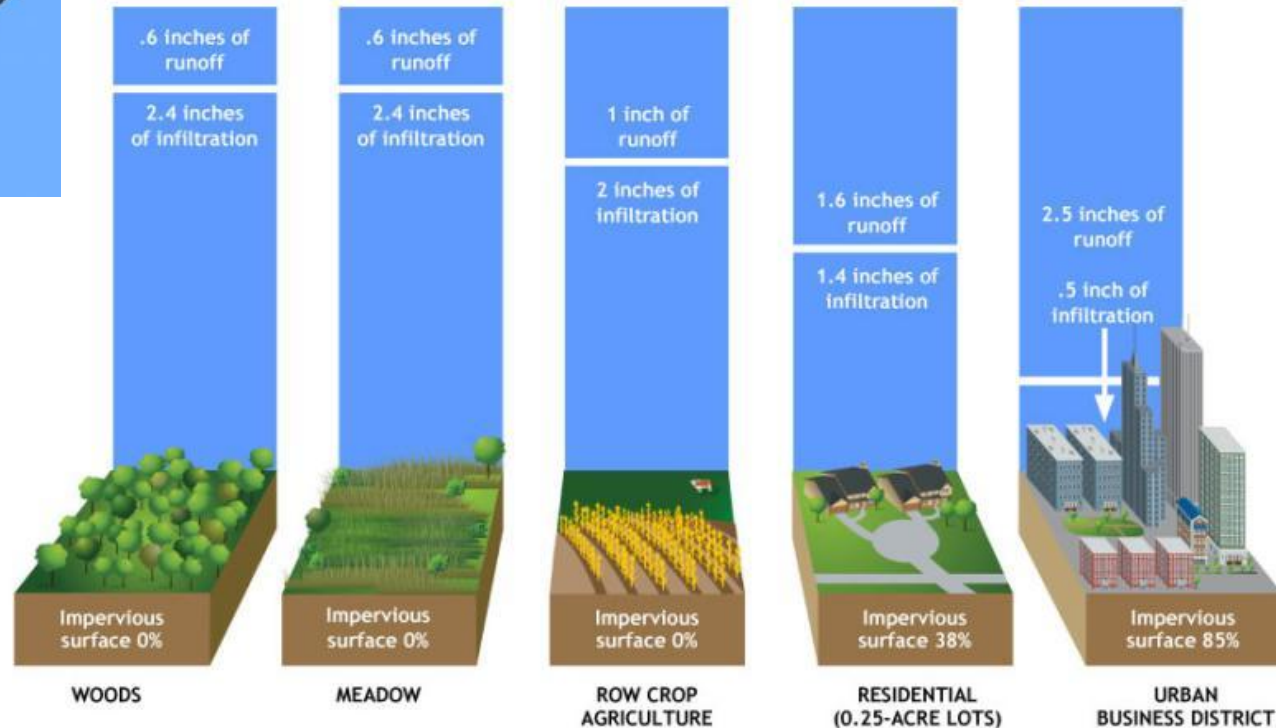
Figure 2-3. Waterbody segments assessed for Recreational Use Support

Components of Runoff



Impervious surfaces increase pollution in stormwater runoff!

Land Use Impacts on Water Quality



PRWC's Monitoring & Assessments

- Streamflow
- Groundwater Level
- Macroinvertebrates
- Stream Temperature
- Bacteria & Nitrate
- Other Physical Conditions



Streamflow & Groundwater Levels

Streamflow & Groundwater Tools Slides

- Slide w/ Screenshot of NOAA page – ask carol for this link

Related Notes:

- Reason for monitoring – drought and flooding conditions, also records precipitation, part of the record that help us plan sizing for infrastructure, understand extent of flood plain, pre-hazard mitigation planning, etc.; triggers for voluntary conservation measures like those in Low Flow Operations Plan
- Demonstrate how to access in real time (use Weekepeemee for example – also offers precipitation data) and how to sign up for flow alerts (which we have done in relation to low plan)
- Maybe a screenshot of the low-flow page on PRWC website?
- Also note importance of these tools in developing / implementing statewide streamflow regulations and CT State Water Plan

Streamflow - Drought



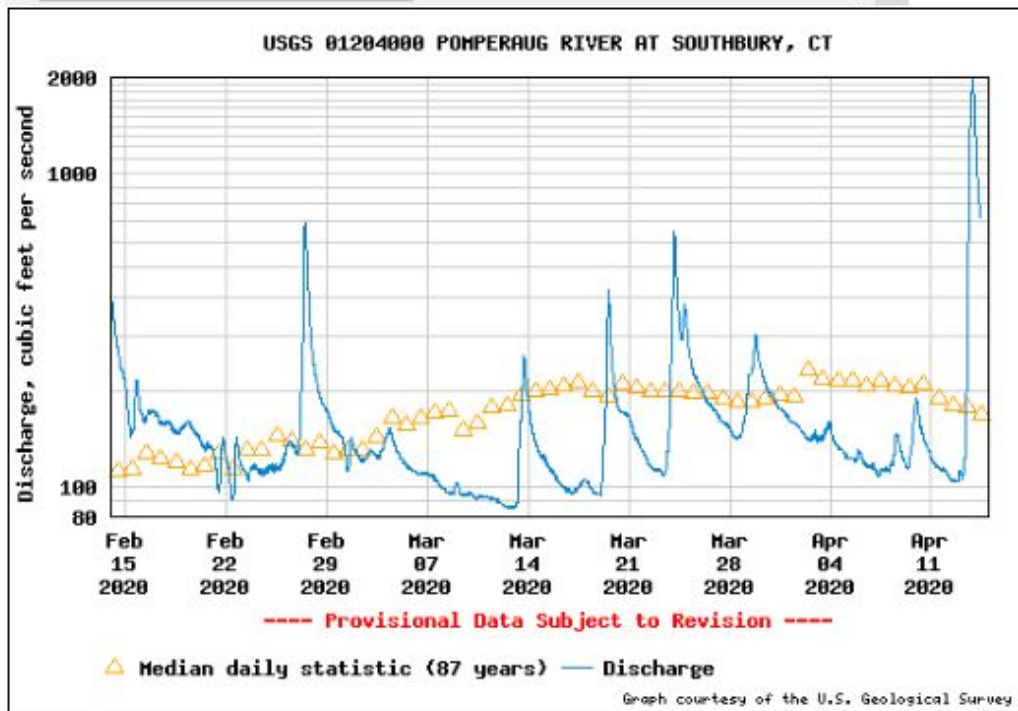
Streamflow - Flooding



Streamflow - Gauging Stations



Streamflow

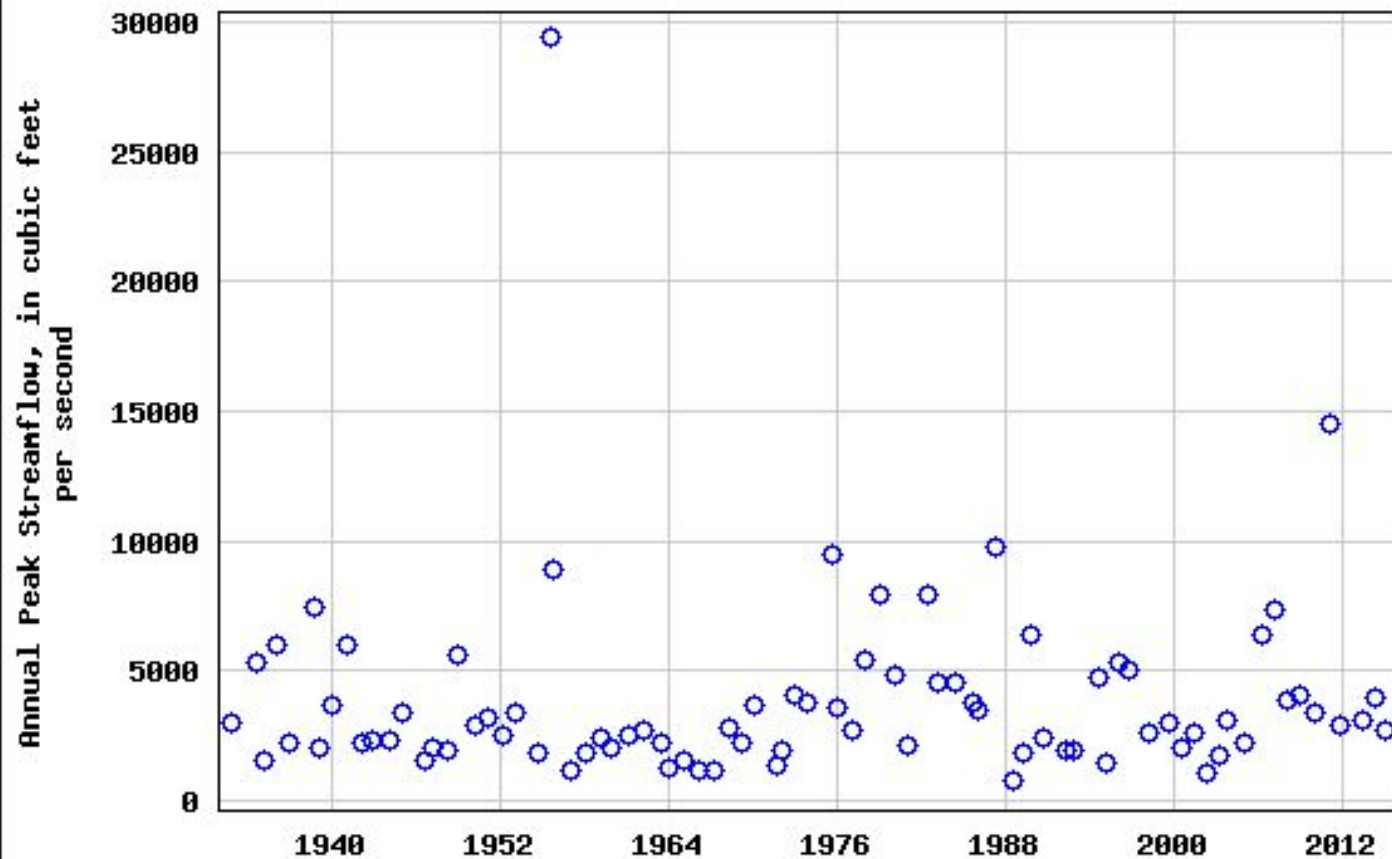


Real Time Stream Flow Data- Pomperaug

Stream flows in the Pomperaug River watershed are recorded by the U.S. Geological Survey (USGS) gauging stations on the Pomperaug, Nonnewaug, and Weekepeemee Rivers. These gauging stations provide real-time flow data that can be accessed via the USGS website.

LIVE DEMO www.pomperaug.org/water-watch & USGS Water Alerts

USGS 01204000 POMPERAUG RIVER AT SOUTHBURY, CT





National Weather Service Advanced Hydrologic Prediction Service

weather.gov



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Local weather
forecast by
"City, ST"

City, ST

Go

National Conditions

Rivers

Satellite

Climate

Observed Precip

Local Conditions

Warnings

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Radar

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Feedback/Questions

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Feedback

Ask Questions



National Observations

WFO Observations

Hydrograph

Weather Forecast Office Upton, NY

Northeast River Forecast Center

Hydrograph

River at a Glance

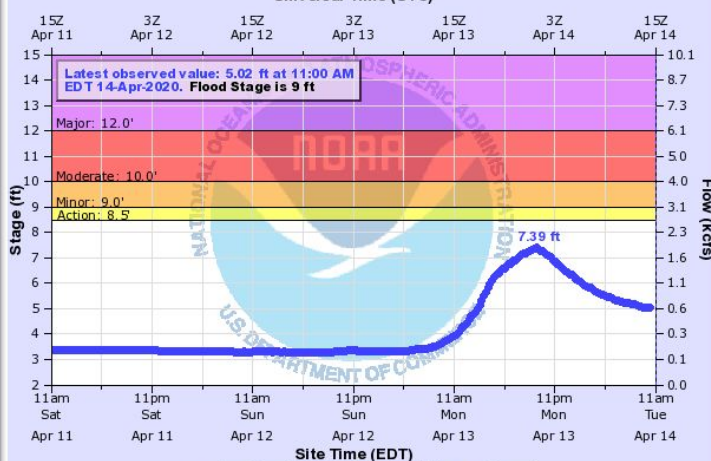
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Auto Refresh: OFF



POMPERAUG RIVER ABOVE SOUTHBURY

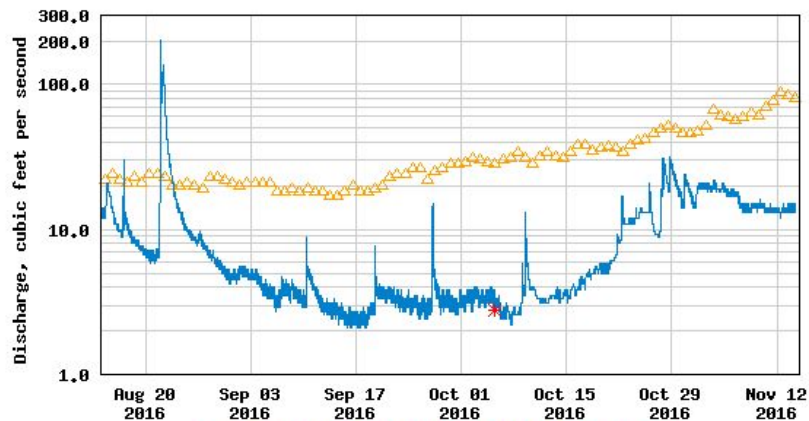
Universal Time (UTC)



<https://water.weather.gov/ahps2/hydrograph.php?gage=sbyc3&wfo=okx>



USGS 01204000 POMPERAUG RIVER AT SOUTHBURY, CT

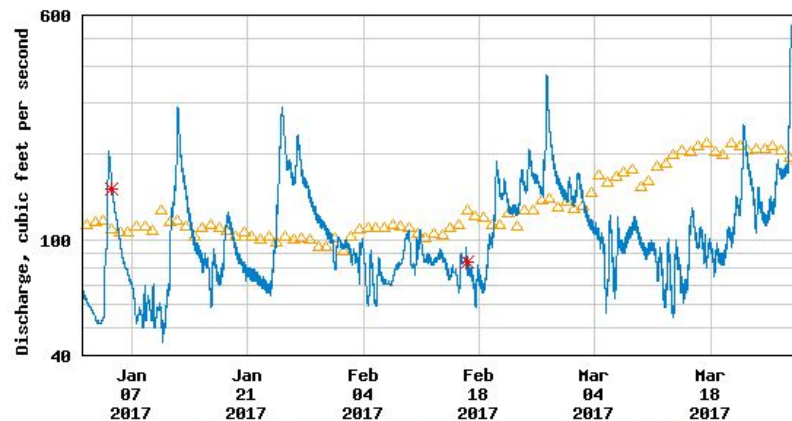


----- Provisional Data Subject to Revision -----

△ Median daily statistic (83 years) * Measured discharge
— Discharge



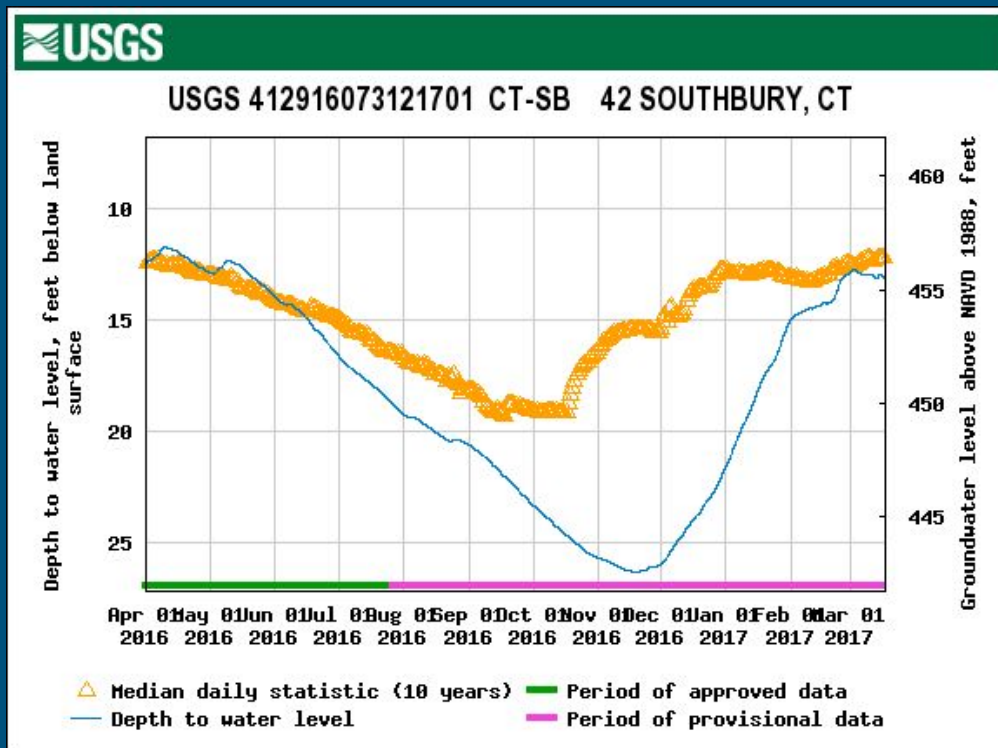
USGS 01204000 POMPERAUG RIVER AT SOUTHBURY, CT



----- Provisional Data Subject to Revision -----

△ Median daily statistic (84 years) * Measured discharge
— Discharge

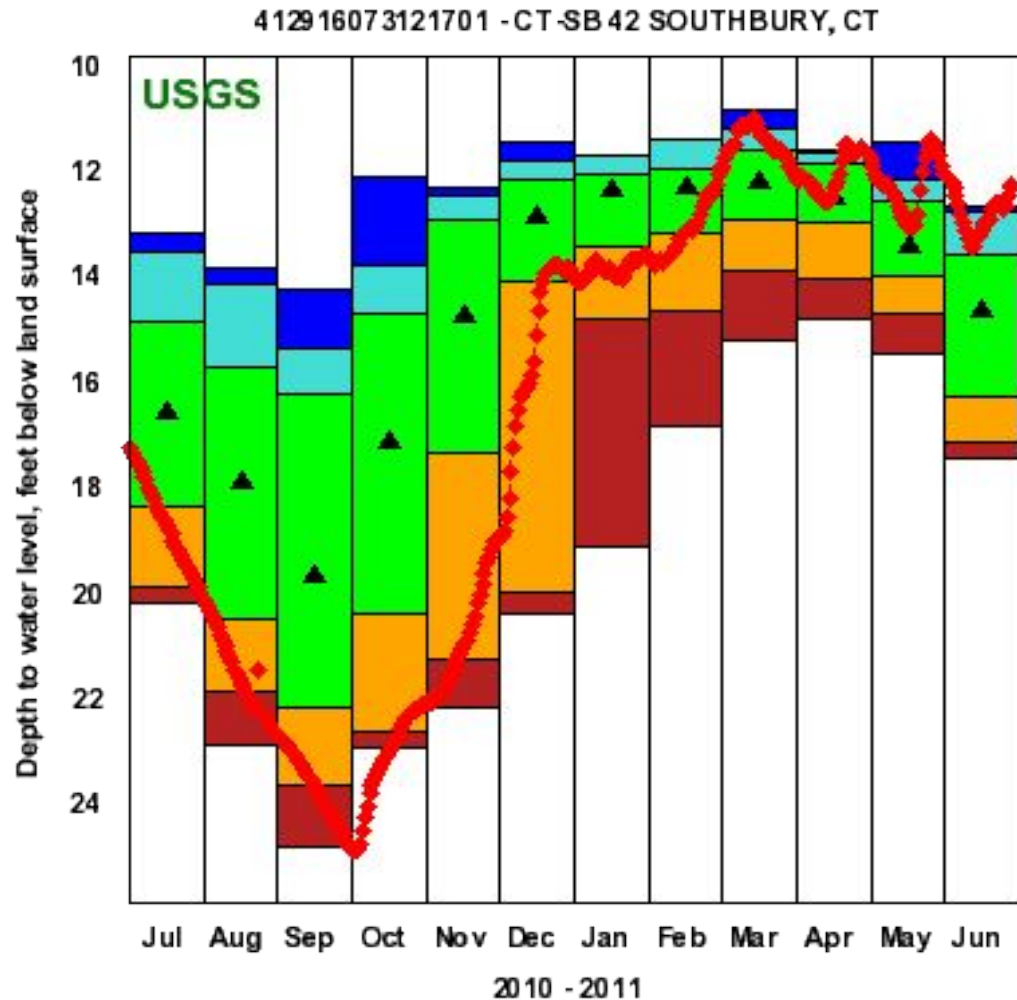
Groundwater Level



Groundwater

- Provides base stream flow w/o precipitation
- Large impact on potential flood level: higher = more “discharge”
- Reacts to precipitation but slower: “Recharge” vs. runoff
- Southbury data based on 76 years

<https://groundwaterwatch.usgs.gov/AWLSites.asp?mt=g&S=412916073121701&ncd=awl>



Data Applications

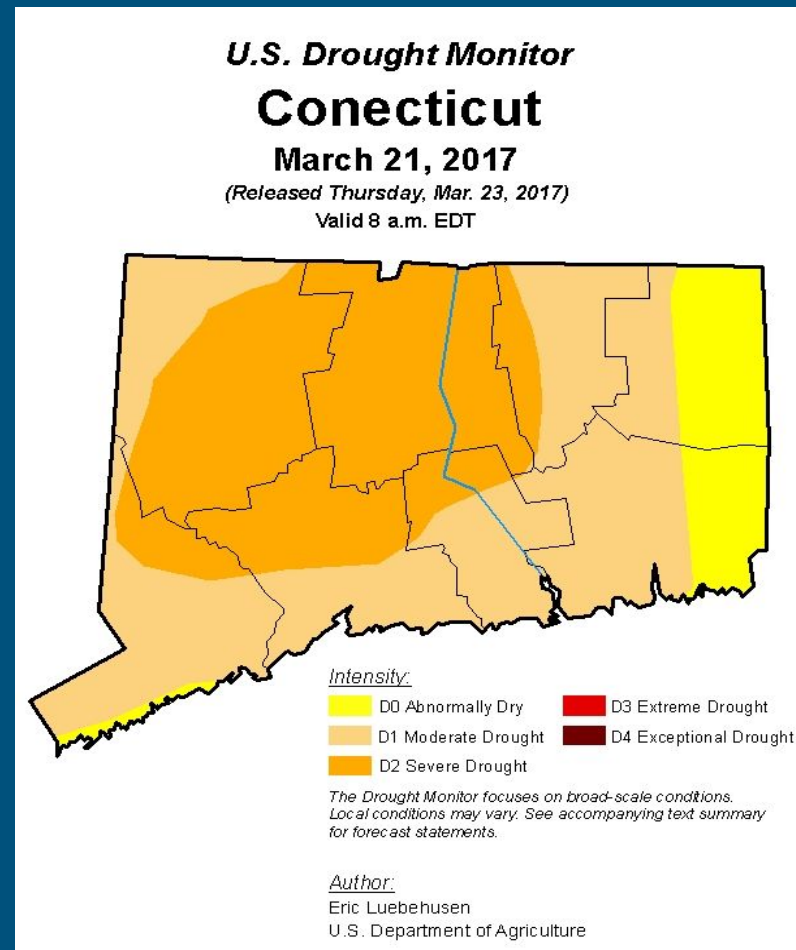
Drought Monitor

Low Flow Operations Plan

Streamflow Regulations

Pre-Hazard Mitigation (risk assessment)

Infrastructure Sizing





Pomperaug River Watershed Coalition

[HOME](#)[ABOUT US](#)[SCIENCE](#)[EDUCATION](#)[OUR WATERSHED](#)[EVENTS](#)[GET INVOLVED](#)

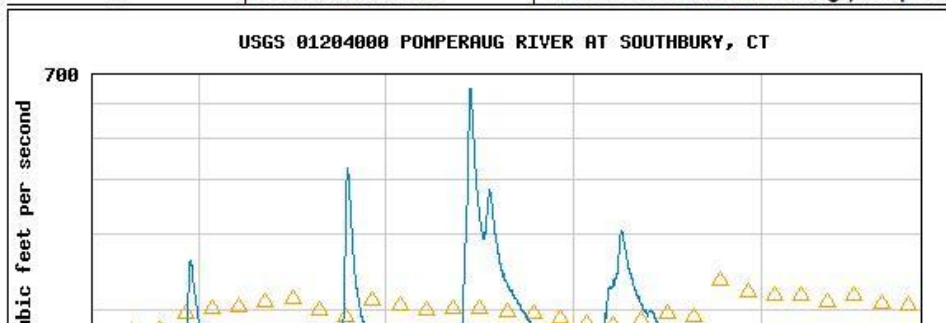
Pomperaug River Low-Flow Operations Plan Public Notification

Current Action Level – **NONE**

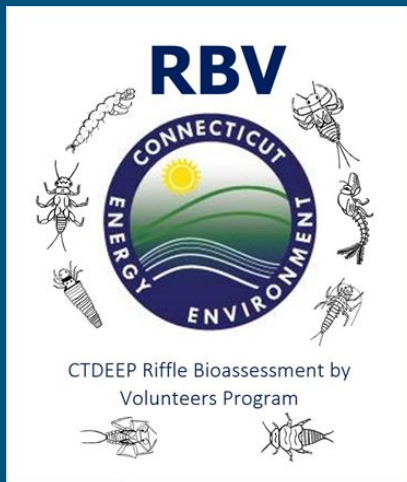
Pomperaug River Low-Flow Operations Plan was developed through a collaborative effort of the Pomperaug River Watershed Coalition, the Town of Southbury and the Heritage Village Water Company to reduce water use during low flow periods. The plan calls for increasing levels of voluntary water conservation based on Pomperaug River flows.

The Plan uses three river flow threshold levels based on flow in the river and issues three corresponding action levels as follows:

Low Flow Mitigation Threshold	Pomperaug River Discharge	Action Level
I	Less than 32.7 cfs	Increased Awareness
II	Less than 15.0 cfs	Water Conservation Desired
III	Less than 7.0 cfs	Water Conservation Strongly Requested



Macroinvertebrates



Revised 10/01/2016

"DEEP STAFF USE ONLY - PLEASE DO NOT WRITE IN THIS TOP GRAY SECTION"

Review Date: _____ Review By: _____ ASQC Site #: _____
Most Wanted: _____ Stream: _____
Volunteer Group #: _____

PLACE SITE INFORMATION (Voucher Here)

CT DEEP RBV Program - Field Data Sheet

Stream Name: _____ Latitude: _____ Longitude: _____ Upstream of Site: _____ Downstream of Site: _____
RBV Site Location (i.e. "100m downstream of Route 44 crossing"): _____ Collection Date: _____
Site Town: _____ Volunteers' Names (First & Last): _____ Organization Responsible for Volunteers: _____

BEFORE TURNING IN THIS DATASHEET PLEASE MAKE SURE THAT ALL BLUE FIELDS ABOVE ARE COMPLETE:

DIRECTIONS: Using the RBV Sorting Guide and the RBV Field Identification Cards, identify the macroinvertebrate types in your sample. Check off each macroinvertebrate type found in your sample. (Note: "sample" is 6 kicks or the 3 trays from one site combined). Complete a voucher label with the information above and place it into the voucher container. Fill the container part way with isopropylalcohol. Place 2-3 representatives of each type into the voucher container. Add additional isopropyl alcohol to the voucher container to insure there is no air in the container; seal tightly.

	1	2	3	4A	4B	5A	5B	6
MOST WANTED (Most Sensitive to Pollution)	1 "Sticky" Baetis Mayfly Baetidae sp.	2 Stone-Legged Mayfly Plecoptera sp.	3 3-Tail Fishhook Mayfly Plecoptera sp.	4A Stonefly Caddisfly Plecoptera sp.	4B Stonefly Caddisfly Plecoptera sp.	5A Stonefly Caddisfly Plecoptera sp.	5B Stonefly Caddisfly Plecoptera sp.	6 Stonefly Caddisfly Plecoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	7 Bottle-Cover Caddisfly Trichoptera sp.	8 Common Caddisfly Trichoptera sp.	9 Free-Living Caddisfly Trichoptera sp.	10 Horsefly Caddisfly Trichoptera sp.	11 Pencil Case Caddisfly Trichoptera sp.	12 Pencil Case Caddisfly Trichoptera sp.	13 Pencil Case Caddisfly Trichoptera sp.	14 Pencil Case Caddisfly Trichoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	15 Common Nematode Nematode	16 Fingered Caddisfly Trichoptera sp.	17 3-Tail Flat Head Mayfly Plecoptera sp.	18 Water Penny Psephenidae sp.	19 Dobsonfly Megoptera sp.	20 Dobsonfly Megoptera sp.	21 Dobsonfly Megoptera sp.	22 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	23 Common Nematode Nematode	24 Fingered Caddisfly Trichoptera sp.	25 3-Tail Flat Head Mayfly Plecoptera sp.	26 Water Penny Psephenidae sp.	27 Dobsonfly Megoptera sp.	28 Dobsonfly Megoptera sp.	29 Dobsonfly Megoptera sp.	30 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	31 Common Nematode Nematode	32 Fingered Caddisfly Trichoptera sp.	33 3-Tail Flat Head Mayfly Plecoptera sp.	34 Water Penny Psephenidae sp.	35 Dobsonfly Megoptera sp.	36 Dobsonfly Megoptera sp.	37 Dobsonfly Megoptera sp.	38 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	39 Common Nematode Nematode	40 Fingered Caddisfly Trichoptera sp.	41 3-Tail Flat Head Mayfly Plecoptera sp.	42 Water Penny Psephenidae sp.	43 Dobsonfly Megoptera sp.	44 Dobsonfly Megoptera sp.	45 Dobsonfly Megoptera sp.	46 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	47 Common Nematode Nematode	48 Fingered Caddisfly Trichoptera sp.	49 3-Tail Flat Head Mayfly Plecoptera sp.	50 Water Penny Psephenidae sp.	51 Dobsonfly Megoptera sp.	52 Dobsonfly Megoptera sp.	53 Dobsonfly Megoptera sp.	54 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	55 Common Nematode Nematode	56 Fingered Caddisfly Trichoptera sp.	57 3-Tail Flat Head Mayfly Plecoptera sp.	58 Water Penny Psephenidae sp.	59 Dobsonfly Megoptera sp.	60 Dobsonfly Megoptera sp.	61 Dobsonfly Megoptera sp.	62 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	63 Common Nematode Nematode	64 Fingered Caddisfly Trichoptera sp.	65 3-Tail Flat Head Mayfly Plecoptera sp.	66 Water Penny Psephenidae sp.	67 Dobsonfly Megoptera sp.	68 Dobsonfly Megoptera sp.	69 Dobsonfly Megoptera sp.	70 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	87 Common Nematode Nematode	88 Fingered Caddisfly Trichoptera sp.	89 3-Tail Flat Head Mayfly Plecoptera sp.	90 Water Penny Psephenidae sp.	91 Dobsonfly Megoptera sp.	92 Dobsonfly Megoptera sp.	93 Dobsonfly Megoptera sp.	94 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	111 Common Nematode Nematode	112 Fingered Caddisfly Trichoptera sp.	113 3-Tail Flat Head Mayfly Plecoptera sp.	114 Water Penny Psephenidae sp.	115 Dobsonfly Megoptera sp.	116 Dobsonfly Megoptera sp.	117 Dobsonfly Megoptera sp.	118 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	127 Common Nematode Nematode	128 Fingered Caddisfly Trichoptera sp.	129 3-Tail Flat Head Mayfly Plecoptera sp.	130 Water Penny Psephenidae sp.	131 Dobsonfly Megoptera sp.	132 Dobsonfly Megoptera sp.	133 Dobsonfly Megoptera sp.	134 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	135 Common Nematode Nematode	136 Fingered Caddisfly Trichoptera sp.	137 3-Tail Flat Head Mayfly Plecoptera sp.	138 Water Penny Psephenidae sp.	139 Dobsonfly Megoptera sp.	140 Dobsonfly Megoptera sp.	141 Dobsonfly Megoptera sp.	142 Dobsonfly Megoptera sp.
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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MOST WANTED (Most Sensitive to Pollution)	167 Common Nematode Nematode	168 Fingered Caddisfly Trichoptera sp.	169 3-Tail Flat Head Mayfly Plecoptera sp.	170 Water Penny Psephenidae sp.	171 Dobsonfly Megoptera sp.	172 Dobsonfly Megoptera sp.	173 Dobsonfly Megoptera sp.	174 Dobsonfly Megoptera sp.
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MOST WANTED (Most Sensitive to Pollution)	175 Common Nematode Nematode	176 Fingered Caddisfly Trichoptera sp.	177 3-Tail Flat Head Mayfly Plecoptera sp.	178 Water Penny Psephenidae sp.	179 Dobsonfly Megoptera sp.	180 Dobsonfly Megoptera sp.	181 Dobsonfly Megoptera sp.	182 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	183 Common Nematode Nematode	184 Fingered Caddisfly Trichoptera sp.	185 3-Tail Flat Head Mayfly Plecoptera sp.	186 Water Penny Psephenidae sp.	187 Dobsonfly Megoptera sp.	188 Dobsonfly Megoptera sp.	189 Dobsonfly Megoptera sp.	190 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	191 Common Nematode Nematode	192 Fingered Caddisfly Trichoptera sp.	193 3-Tail Flat Head Mayfly Plecoptera sp.	194 Water Penny Psephenidae sp.	195 Dobsonfly Megoptera sp.	196 Dobsonfly Megoptera sp.	197 Dobsonfly Megoptera sp.	198 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	199 Common Nematode Nematode	200 Fingered Caddisfly Trichoptera sp.	201 3-Tail Flat Head Mayfly Plecoptera sp.	202 Water Penny Psephenidae sp.	203 Dobsonfly Megoptera sp.	204 Dobsonfly Megoptera sp.	205 Dobsonfly Megoptera sp.	206 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	207 Common Nematode Nematode	208 Fingered Caddisfly Trichoptera sp.	209 3-Tail Flat Head Mayfly Plecoptera sp.	210 Water Penny Psephenidae sp.	211 Dobsonfly Megoptera sp.	212 Dobsonfly Megoptera sp.	213 Dobsonfly Megoptera sp.	214 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	215 Common Nematode Nematode	216 Fingered Caddisfly Trichoptera sp.	217 3-Tail Flat Head Mayfly Plecoptera sp.	218 Water Penny Psephenidae sp.	219 Dobsonfly Megoptera sp.	220 Dobsonfly Megoptera sp.	221 Dobsonfly Megoptera sp.	222 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	223 Common Nematode Nematode	224 Fingered Caddisfly Trichoptera sp.	225 3-Tail Flat Head Mayfly Plecoptera sp.	226 Water Penny Psephenidae sp.	227 Dobsonfly Megoptera sp.	228 Dobsonfly Megoptera sp.	229 Dobsonfly Megoptera sp.	230 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	231 Common Nematode Nematode	232 Fingered Caddisfly Trichoptera sp.	233 3-Tail Flat Head Mayfly Plecoptera sp.	234 Water Penny Psephenidae sp.	235 Dobsonfly Megoptera sp.	236 Dobsonfly Megoptera sp.	237 Dobsonfly Megoptera sp.	238 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	239 Common Nematode Nematode	240 Fingered Caddisfly Trichoptera sp.	241 3-Tail Flat Head Mayfly Plecoptera sp.	242 Water Penny Psephenidae sp.	243 Dobsonfly Megoptera sp.	244 Dobsonfly Megoptera sp.	245 Dobsonfly Megoptera sp.	246 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	247 Common Nematode Nematode	248 Fingered Caddisfly Trichoptera sp.	249 3-Tail Flat Head Mayfly Plecoptera sp.	250 Water Penny Psephenidae sp.	251 Dobsonfly Megoptera sp.	252 Dobsonfly Megoptera sp.	253 Dobsonfly Megoptera sp.	254 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	255 Common Nematode Nematode	256 Fingered Caddisfly Trichoptera sp.	257 3-Tail Flat Head Mayfly Plecoptera sp.	258 Water Penny Psephenidae sp.	259 Dobsonfly Megoptera sp.	260 Dobsonfly Megoptera sp.	261 Dobsonfly Megoptera sp.	262 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	263 Common Nematode Nematode	264 Fingered Caddisfly Trichoptera sp.	265 3-Tail Flat Head Mayfly Plecoptera sp.	266 Water Penny Psephenidae sp.	267 Dobsonfly Megoptera sp.	268 Dobsonfly Megoptera sp.	269 Dobsonfly Megoptera sp.	270 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	271 Common Nematode Nematode	272 Fingered Caddisfly Trichoptera sp.	273 3-Tail Flat Head Mayfly Plecoptera sp.	274 Water Penny Psephenidae sp.	275 Dobsonfly Megoptera sp.	276 Dobsonfly Megoptera sp.	277 Dobsonfly Megoptera sp.	278 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	279 Common Nematode Nematode	280 Fingered Caddisfly Trichoptera sp.	281 3-Tail Flat Head Mayfly Plecoptera sp.	282 Water Penny Psephenidae sp.	283 Dobsonfly Megoptera sp.	284 Dobsonfly Megoptera sp.	285 Dobsonfly Megoptera sp.	286 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	287 Common Nematode Nematode	288 Fingered Caddisfly Trichoptera sp.	289 3-Tail Flat Head Mayfly Plecoptera sp.	290 Water Penny Psephenidae sp.	291 Dobsonfly Megoptera sp.	292 Dobsonfly Megoptera sp.	293 Dobsonfly Megoptera sp.	294 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	295 Common Nematode Nematode	296 Fingered Caddisfly Trichoptera sp.	297 3-Tail Flat Head Mayfly Plecoptera sp.	298 Water Penny Psephenidae sp.	299 Dobsonfly Megoptera sp.	300 Dobsonfly Megoptera sp.	301 Dobsonfly Megoptera sp.	302 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MOST WANTED (Most Sensitive to Pollution)	303 Common Nematode Nematode	304 Fingered Caddisfly Trichoptera sp.	305 3-Tail Flat Head Mayfly Plecoptera sp.	306 Water Penny Psephenidae sp.	307 Dobsonfly Megoptera sp.	308 Dobsonfly Megoptera sp.	309 Dobsonfly Megoptera sp.	310 Dobsonfly Megoptera sp.
	<input type="checkbox"/>	<input type="checkbox"/>	<					

CT Volunteer Water Monitoring Program

The Connecticut Department of Energy and Environmental Protection

1 Introduction

2 Monitoring Results and Guidance

The Results and Guidance map shows previous volunteer monitoring locations and provides suggestions for where your group should monitor next.

Past VSTeM and RBV Monitoring Locations

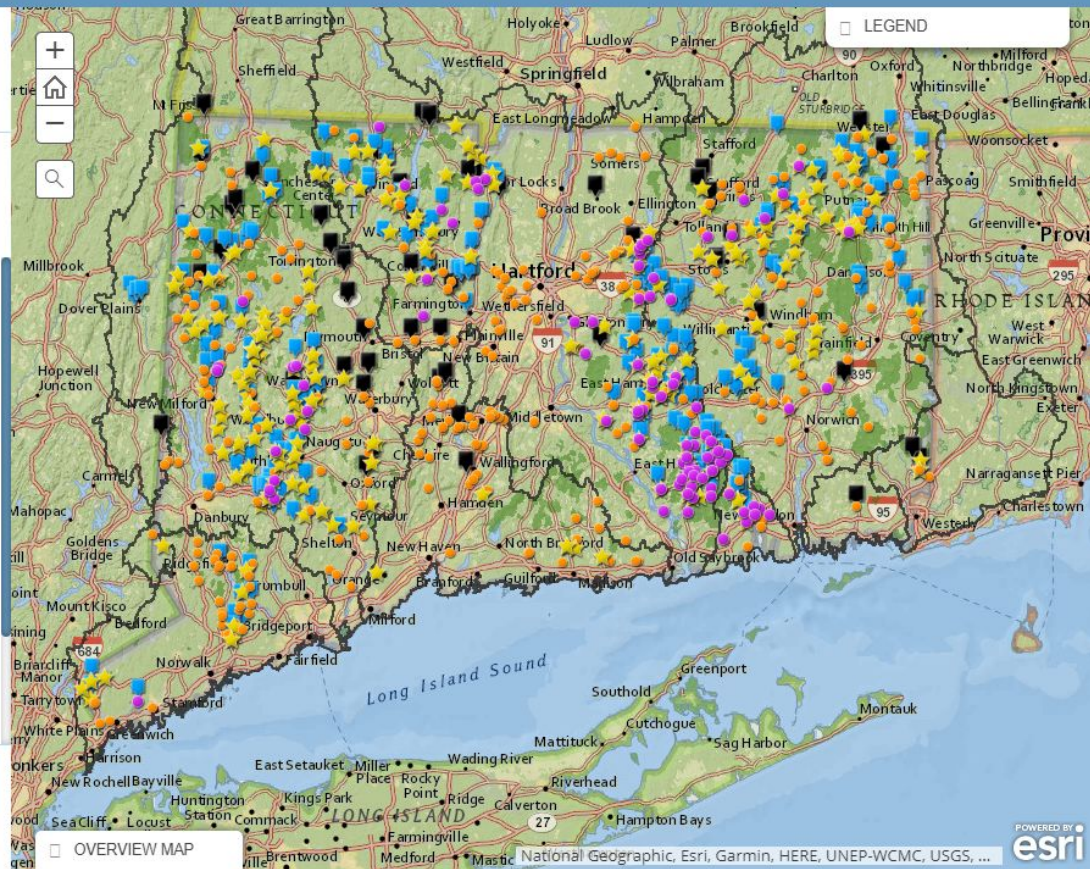
RBV sites at which four or more 'most wanted' macroinvertebrate types have been found are depicted as a yellow star; these are now confirmed healthy waters. All other past sites are shown as orange circles. Click on a star or circle to learn more about the location, when it was monitored, and what the results were. RBV Program data is available for download using the [Water Quality Monitoring Portal](#).

VSTeM monitoring locations are shown as blue pushpin icons. (Monitoring results are not yet shown but will be uploaded soon.) Click on a pushpin to see the site details. VSTeM Network data is available for download from the [SHEDS Stream Temperature Database](#).

How to Use the Map to Decide Where to Monitor Next

Areas of the map that are shaded green are a priority for RBV monitoring. All green locations are good candidates for RBV monitoring, but the darkest green locations are predicted to have the best water quality in the state. If there is a stream located in a green-shaded watershed that has not yet been assessed (no green or red line over it) this

3 Learn More and Get Involved!



CT DEEP Waterbody Assessments, Aquatic Life Use Support

Map of Connecticut CT DEEP Waterbody Assessment Segments showing Aquatic Life Use Support

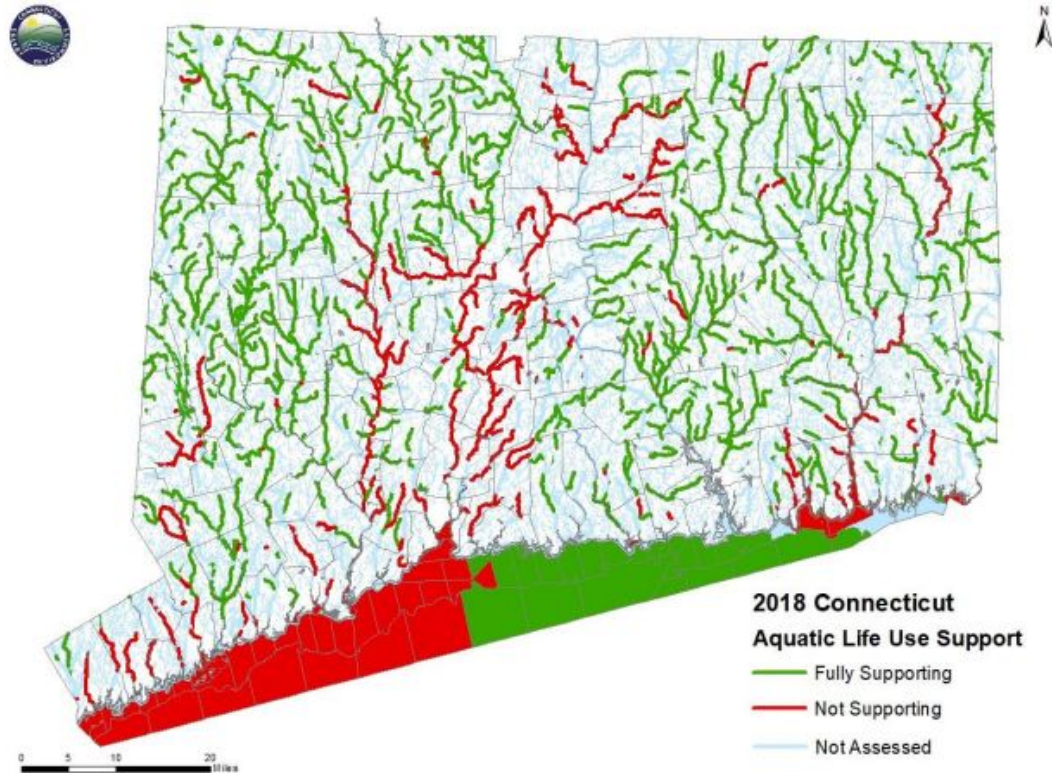


Figure 2-2. Waterbody segments assessed for Aquatic Life Use Support

Stream Temperature Monitoring

- Establish baseline data set
- Monitor for warm stormwater inputs
- Watch for trends in context of climate change
- Identify cold water habitat
- Basis for restoration and protection efforts

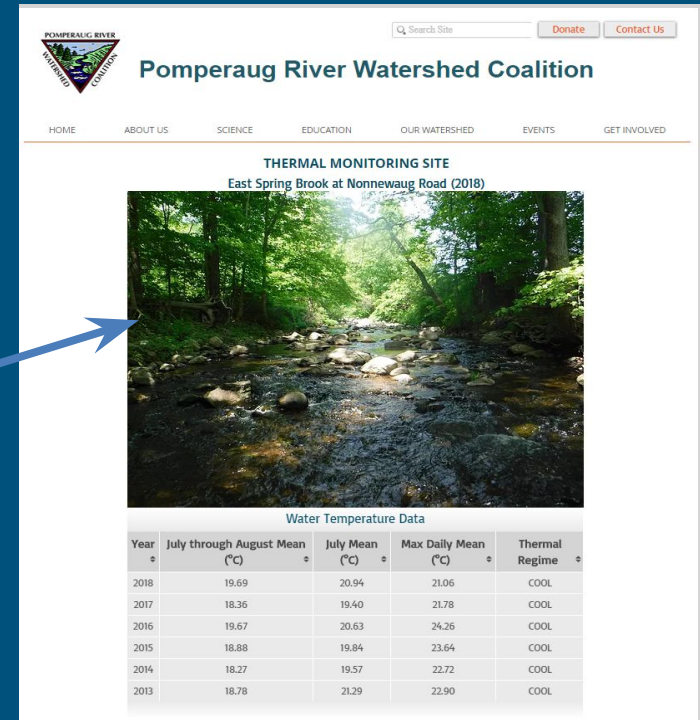
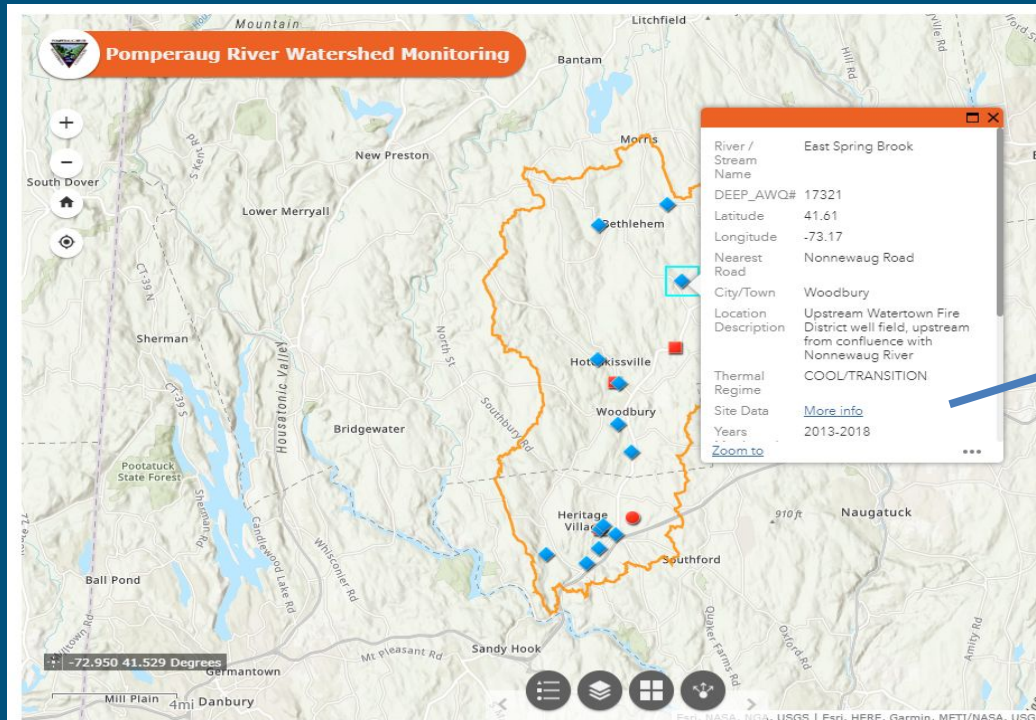


PRWC Stream Temperature Monitoring Results

Interactive Map (supported by NVCOG) on PRWC's Monitoring webpage:

www.pomperaug.org/monitoring

Displays Thermal Classification which is based on a combination of July – Aug Mean; July Mean; and Max Daily Mean thresholds established by DEEP research



Thermal Monitoring at Bullet Hill Brook at Ewald Park

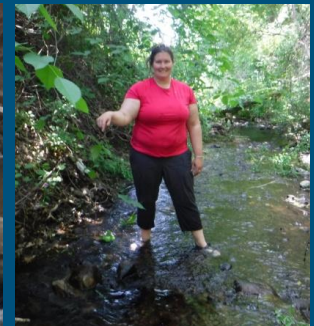
Water Temperature Data

Year ↕	June through August Mean (°C) ↕	July Mean (°C) ↕	Max Daily Mean (°C) ↕	Thermal Regime ↕
2019	17.47	18.63	18.63	COOL
2018	18.24	19.19	19.56	COLD
2017	17.25	18.18	20.01	COLD
2016	18.51	19.34	23.75	COOL
2015	17.45	18.07	23.69	COOL
2014	16.73	17.71	21.67	COLD



TABLE 3. The three stream temperature metrics ($^{\circ}\text{C}$) for classifying streams in Connecticut into thermal classes.

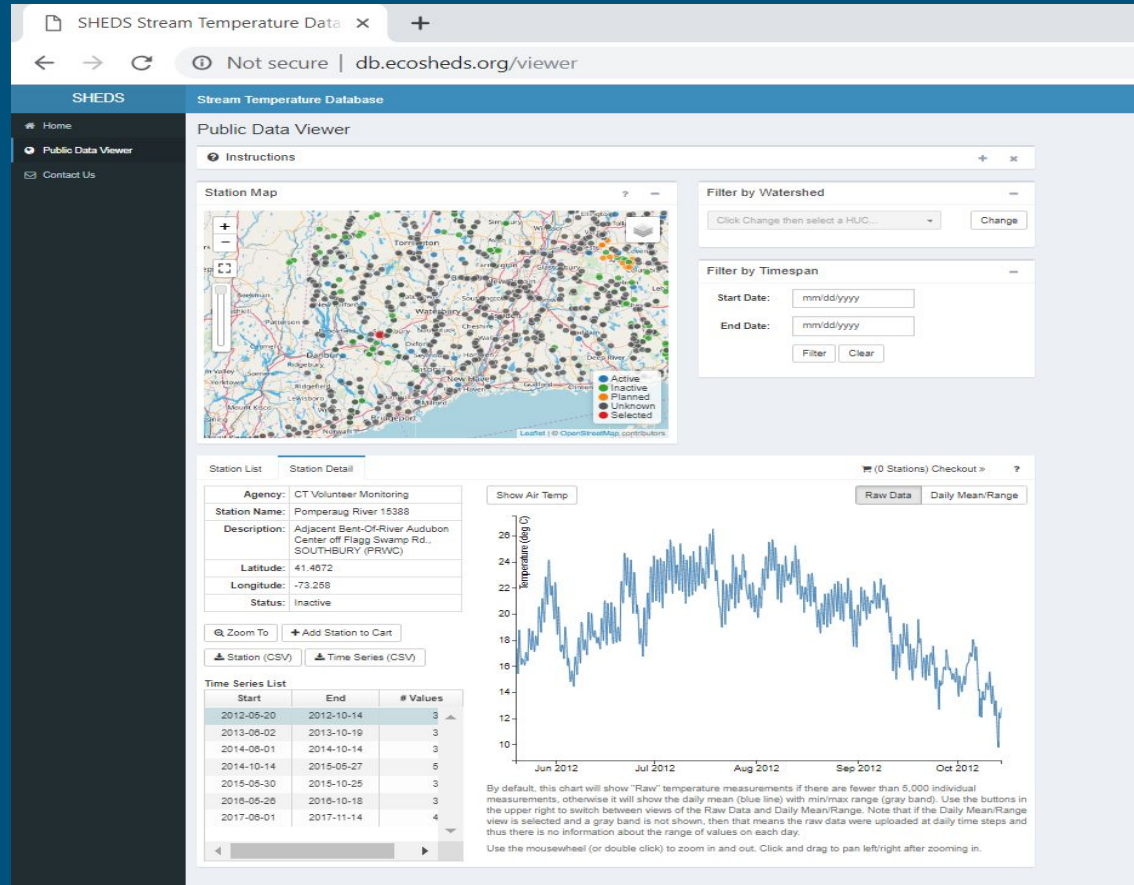
Thermal Class	Water temperature ($^{\circ}\text{C}$)		
	June–August mean	July mean	Maximum daily mean
Cold	<18.29	<18.45	<22.40
Cool	$18.29\text{--}21.70$	$18.45\text{--}22.30$	$22.40\text{--}26.30$
Warm	>21.70	>22.30	>26.30



Stream Temperature Monitoring Results

Data is uploaded by DEEP to Spatial Hydro-Ecological Decision System (SHEDS) stream temperature data viewer which is a publicly accessible data repository used by a number of research agencies to download data:

db.ecosheds.org/viewer



Stream Sampling and Field Assessments

- Continued / Enhanced Water Quality Monitoring
 - Stream Temperature
 - Bacteria, Nitrate, Conductivity
- Streamwalk Assessment Surveys
 - Riparian conditions and land uses
 - Opportunities for reducing stormwater runoff
- Culvert & Stream Crossing Assessments
 - Community Resiliency Planning

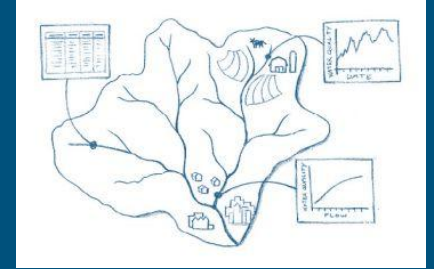


Stream Sampling and Field Assessments

Bacteria, Nitrate, Conductivity

Streamwalk Assessment Surveys

Culvert & Stream Crossing Assessments



Bacteria Sampling

CT DEEP Waterbody Assessments, Recreational Use Support

Map of Connecticut CT DEEP Waterbody Assessment Segments showing Recreational Use Support

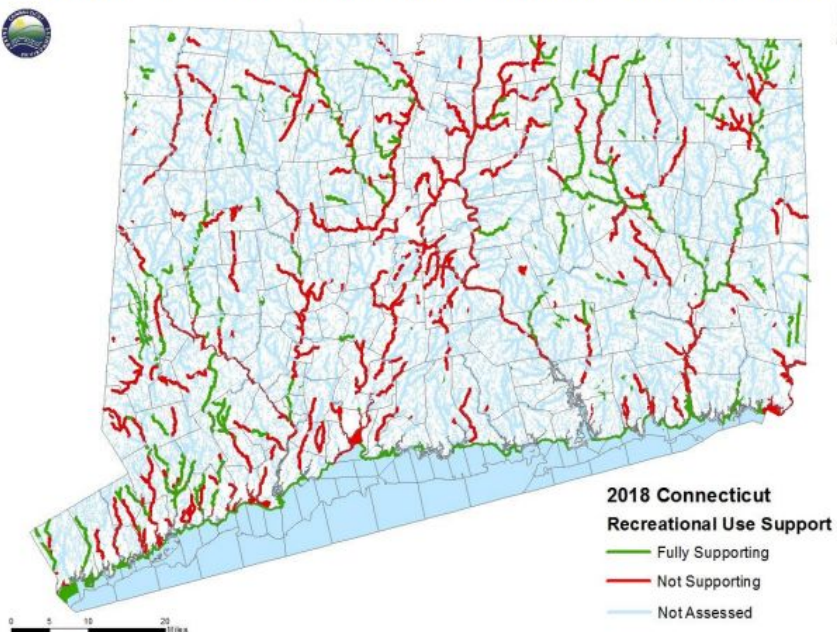
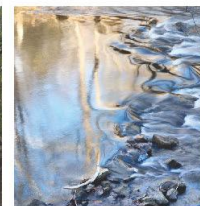


Figure 2-3. Waterbody segments assessed for Recreational Use Support



Pomperaug River Watershed Based Plan

prepared by  FUSS & O'NEILL

SEPTEMBER 2018





Pomperaug Watershed Stream Monitoring June 2019

LEGEND

Bacteria (MPN/100ml)

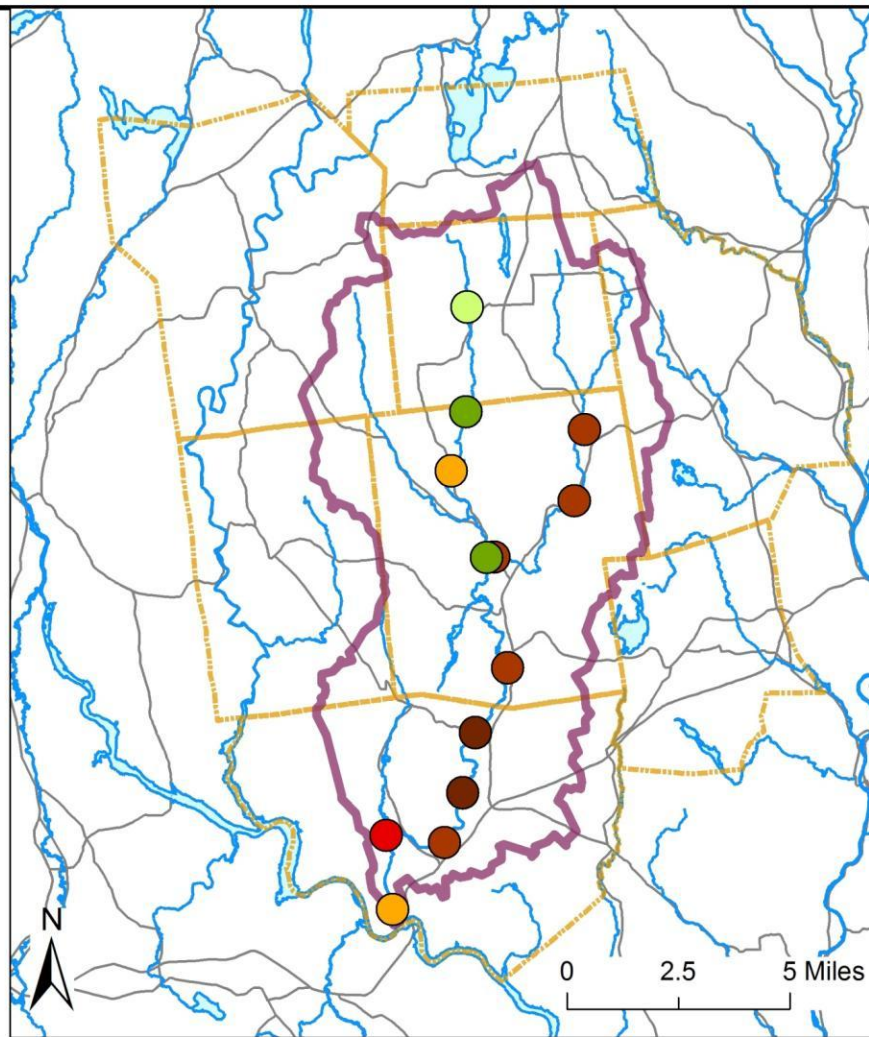
-  0 - 75
-  76 - 150
-  151 - 230
-  231 - 410
-  411 - 800
-  801 - 980

 Pomperaug Watershed

 Town Boundary

 Hydrography Line

 State Roads





Pomperaug Watershed Stream Monitoring July 2019

LEGEND

Bacteria (MPN/100ml)

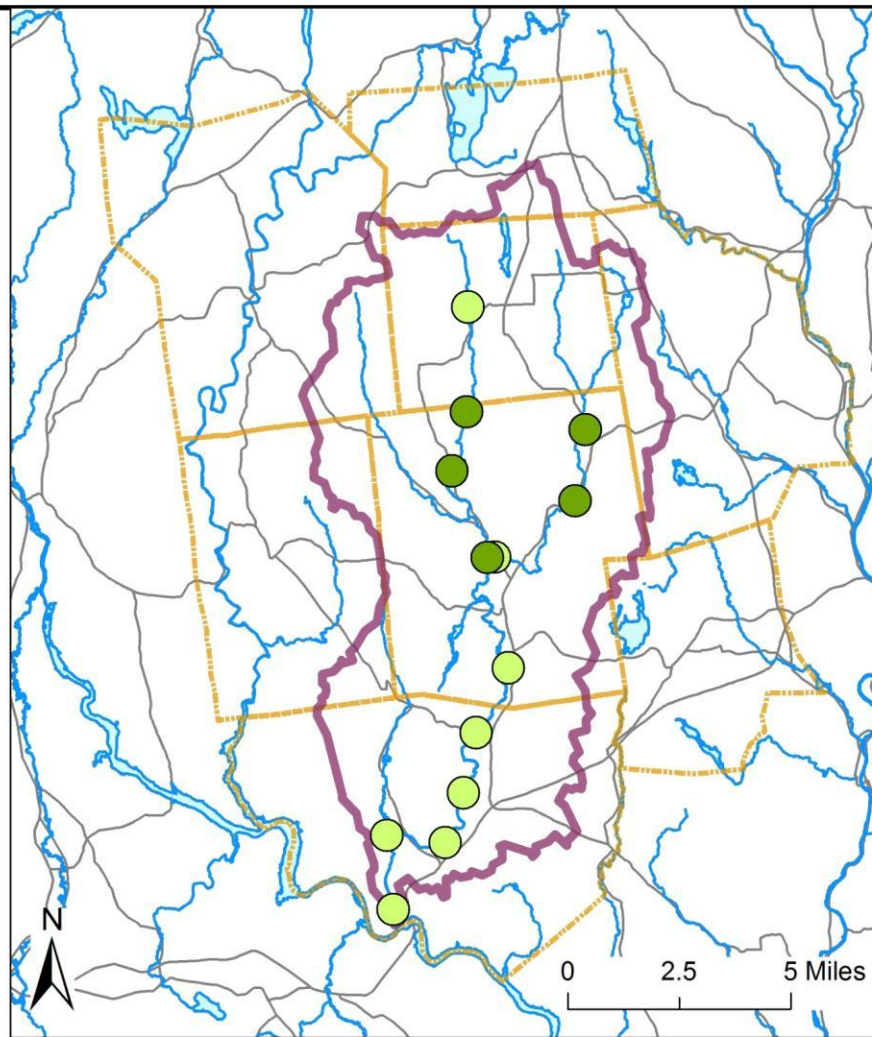
-  0 - 75
-  76 - 150
-  151 - 230
-  231 - 410
-  411 - 800
-  801 - 980

 Pomperaug Watershed

 Town Boundary

 Hydrography Line

 State Roads





Pomperaug Watershed Stream Monitoring June 2019

LEGEND

Nitrate (mg/L)

0.26 - 0.50

0.51 - 0.75

0.76 - 1.00

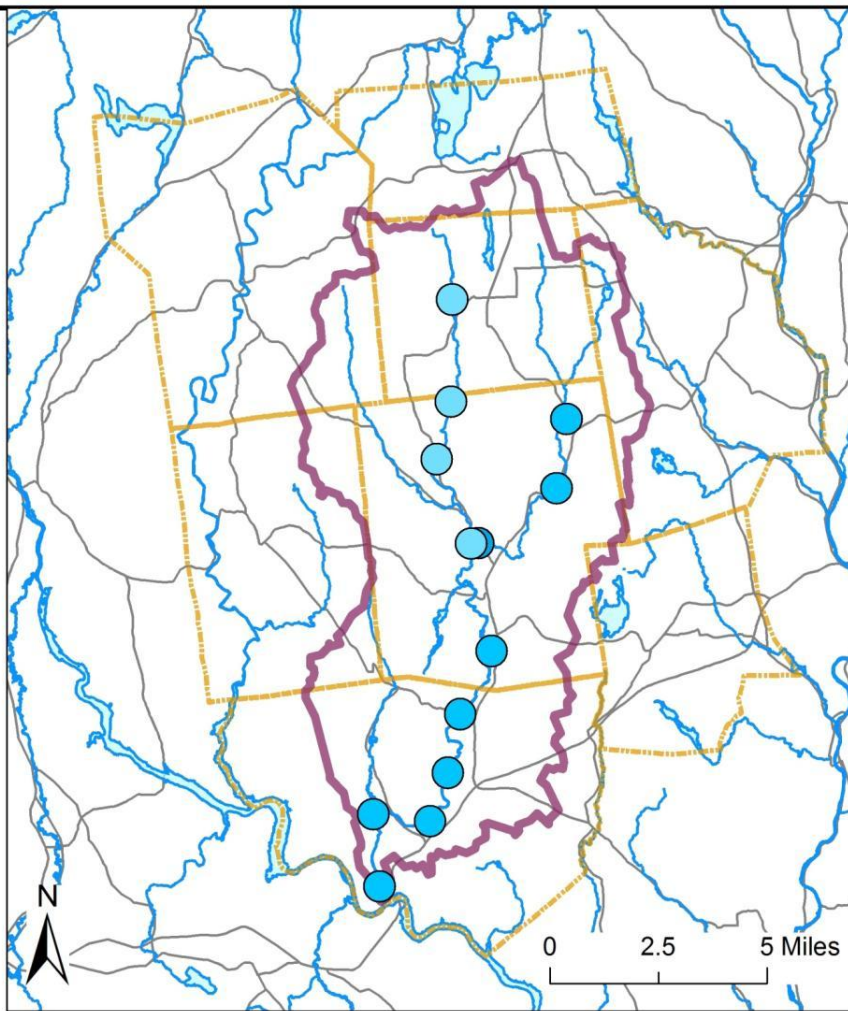
1.01 - 1.25

Pomperaug Watershed

Town Boundary

Hydrography Line

State Roads



BACTERIA & NITRATE MONITORING SITE

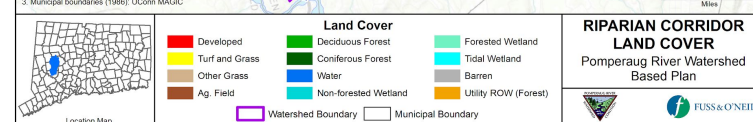
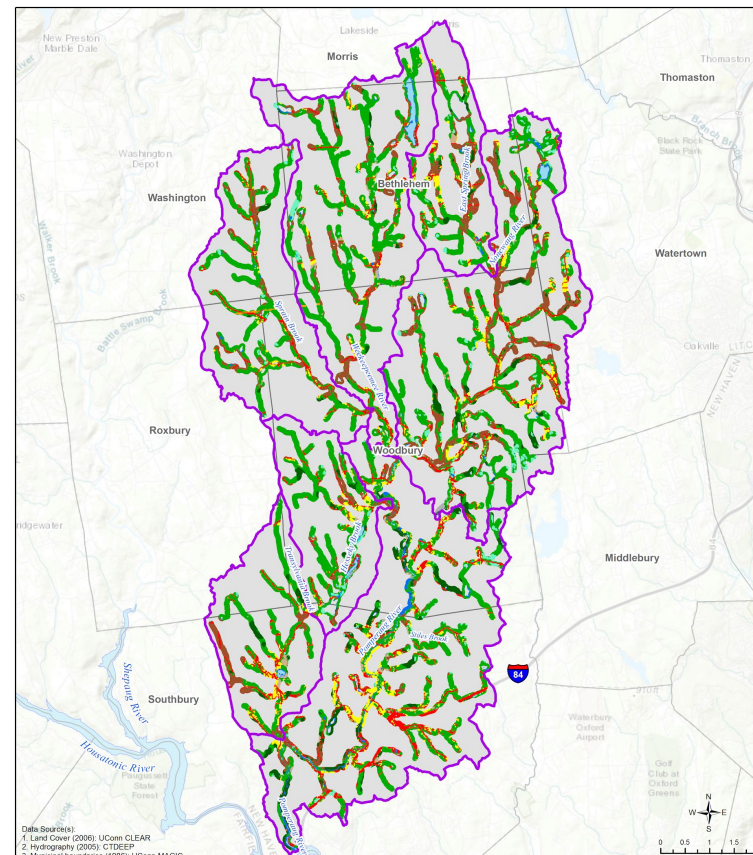
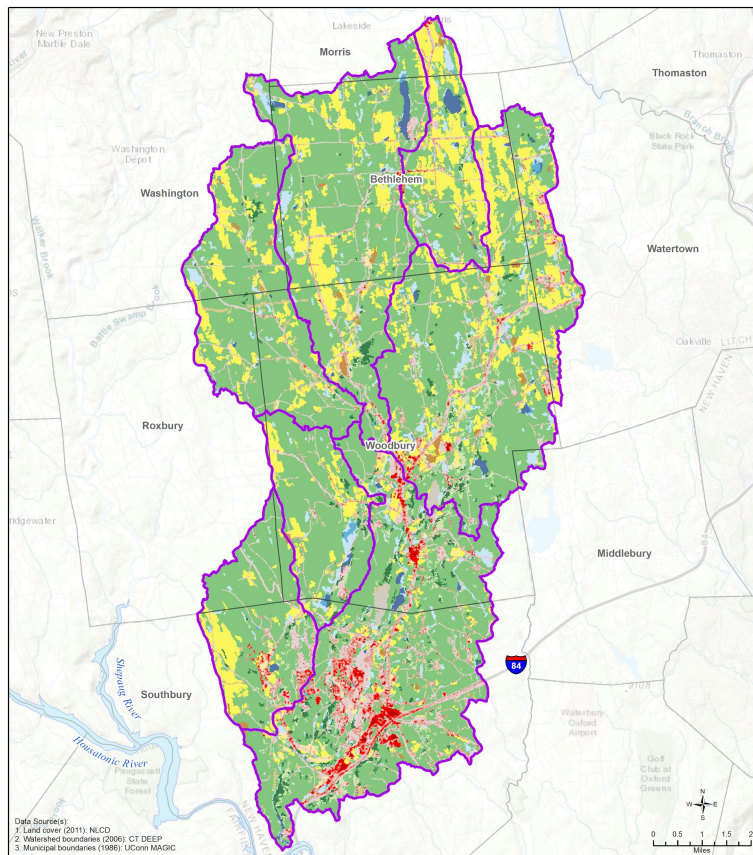
Weekeepeemee River, Brushy Hill Road, Woodbury (July 2019)



Bacteria & Nitrate Data

Sample Date ↕	Bacteria Result (MPN/100ml) ↕	Nitrate Result (mg/L) ↕
5/15/2019	91	0.14
6/12/2019	155	0.33
7/10/2019	138	0.33
8/14/2019	101	0.36



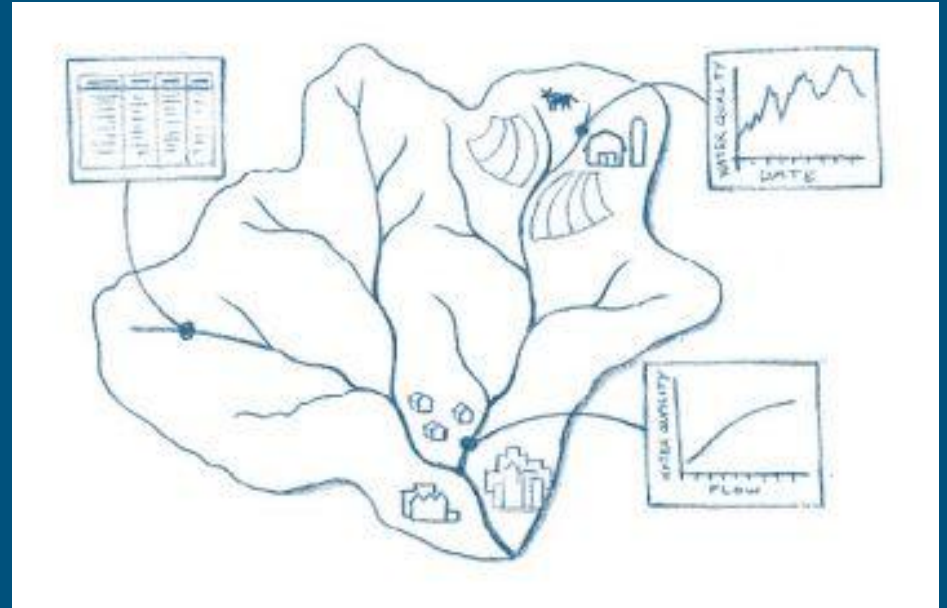


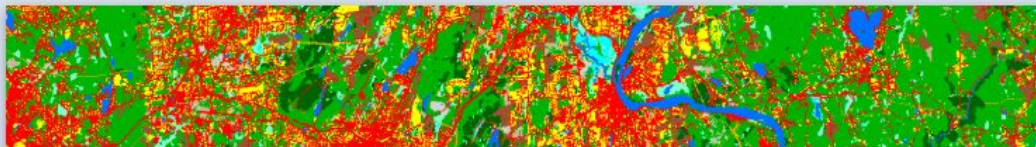
Other Tools for Monitoring

Land Cover data

Fish survey data

Infrastructure data





Changing Landscape

Connecticut and Long Island Sound Land Cover and Change - 1985 to 2015

[Home](#) [About](#) [Data](#) [Connecticut](#) [Long Island Sound Watershed](#)

Changing Landscape is a remote sensing-based land cover study that charts landscape changes in Connecticut and portions of New York. It covers the 30-year period from 1985 to 2015 (with in-between dates of 1990, 1995, 2002, 2006 and 2010). It includes information on basic land cover, as well as subsidiary analyses of riparian corridor land cover, impervious cover and forest fragmentation analysis.

Version 2.3 New land cover

A new set of land cover is being added including a 2015 date and some minor modifications to earlier dates.



Connecticut's Changing Landscape

1985-2015 with a focus on Connecticut towns



Long Island Sound Watershed

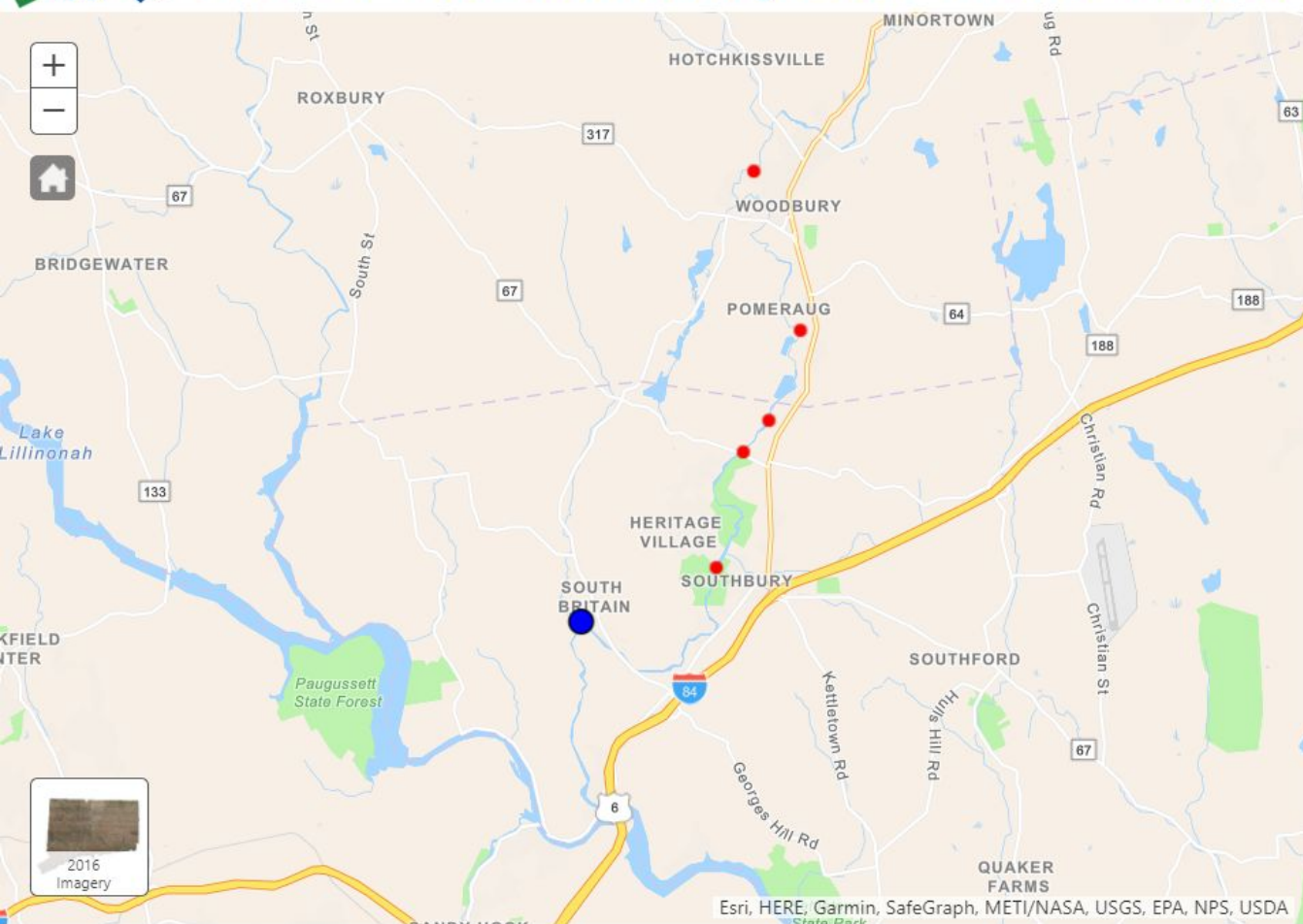
1985-2015 with a focus on HUC12 watersheds

Previous versions of land cover

Previous land cover projects covered both Connecticut and the Long Island Sound watershed and included land cover, land cover change as well as riparian analysis, impervious surface analysis, forest fragmentation and land cover over agricultural soils. Previous versions and analyses are no longer available on the CLEAR website.

<http://clear.uconn.edu/projects/landscape/index.htm>

CT ECO CT DEEP Fish Community Data - Inland Waters



Filter Sample Locations

Site Detail

Freshwater Fish Counts ☒

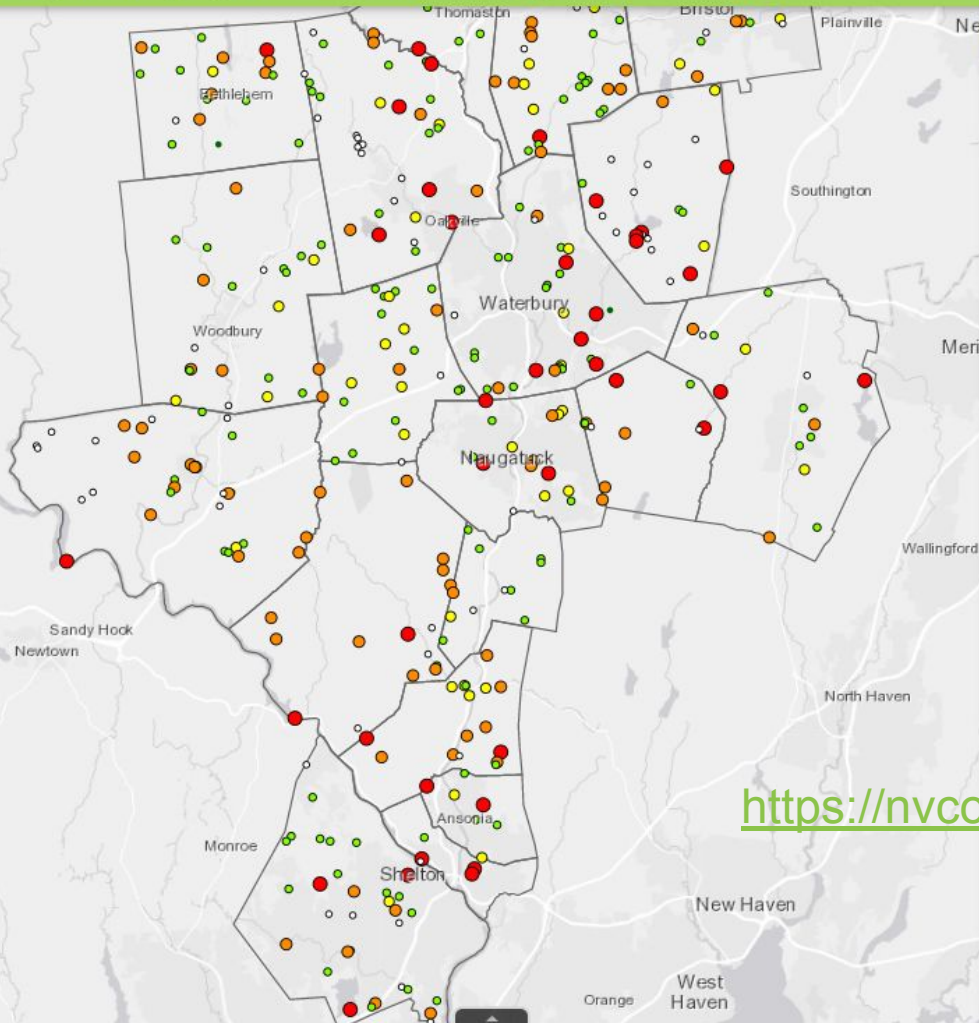
Download Results

2006 2008 2011 2013 2015

Sample Year	2013
Sample ID	144042013
American Eel	3
Bluegill Sunfish	30
Brook Trout - Stocked	1
Blacknose Dace	10
Brown Trout - Stocked	2
Common Carp	1
Cutlips Minnow	5
Creek Chub	2
Common Shiner	5
Fallfish	57
Green Sunfish	4
Longnose Dace	4
Largemouth Bass	4
Rock Bass	9
Rainbow Trout - Stocked	1
Slimy Sculpin	10
Smallmouth Bass	12
Tessellated Darter	10
White Sucker	24

Macroinvertebrates ☒





Legend

Naugatuck Valley Region Dams

- C - High Hazard Potential
- B - Significant Hazard Potential
- BB - Moderate Hazard Potential
- A - Low Hazard Potential
- AA - Negligible Hazard Potential
- Unclassed

<https://nvcogct.gov/maps-data/>

SO WHATS

YOUR POINT?

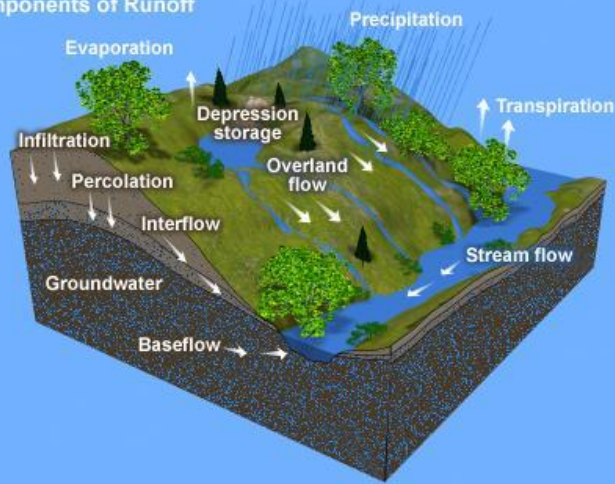
DATA



**DATA
EVERYWHERE**

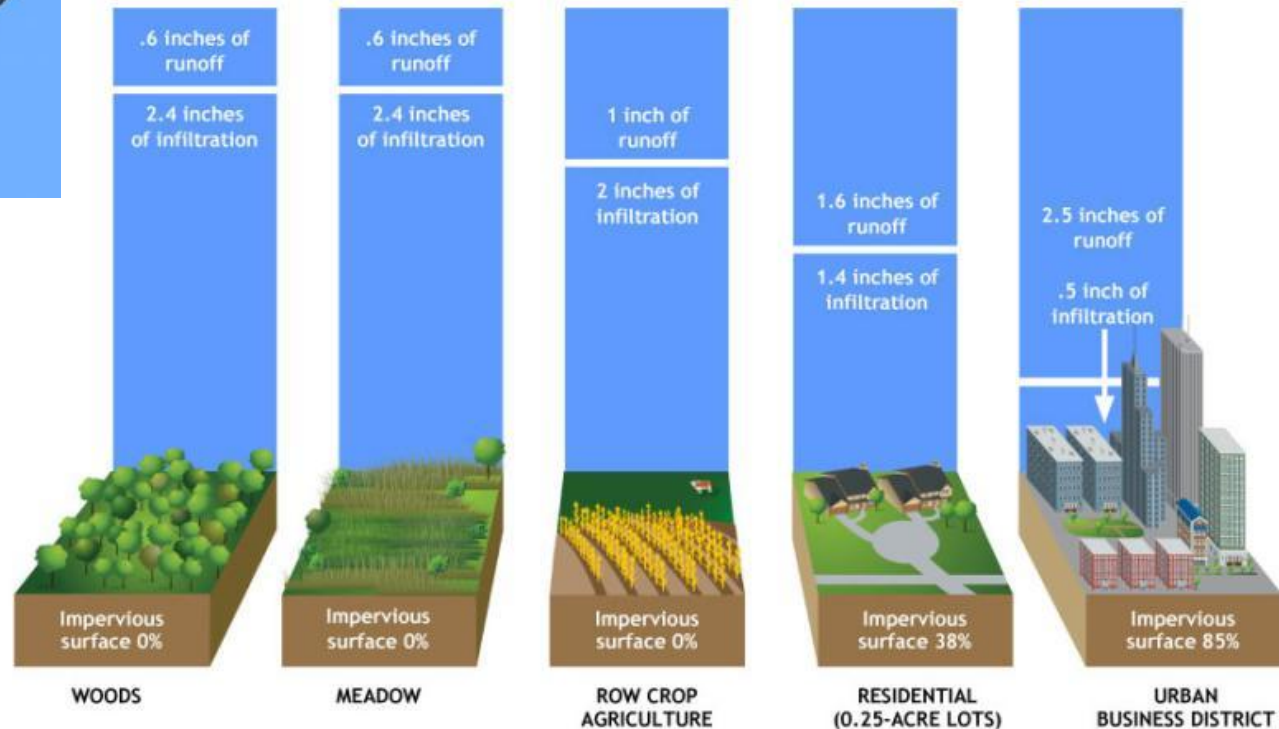


Components of Runoff



Impervious surfaces increase pollution in stormwater runoff!

Land Use Impacts on Water Quality



Develop a Water Quality Report Card for the Pomperaug Watershed

Raritan Headwaters
REGIONAL WATER QUALITY REPORT

GOOD
WATER QUALITY RATING
BASED ON HGM!

2017 Stream Monitoring Sites

- Excellent
- Good
- Fair
- Poor
- No Data

Average Water Quality Rating by Major Watershed

- Good
- Fair

SUMMARY OF OTHER REGIONAL INDICATORS

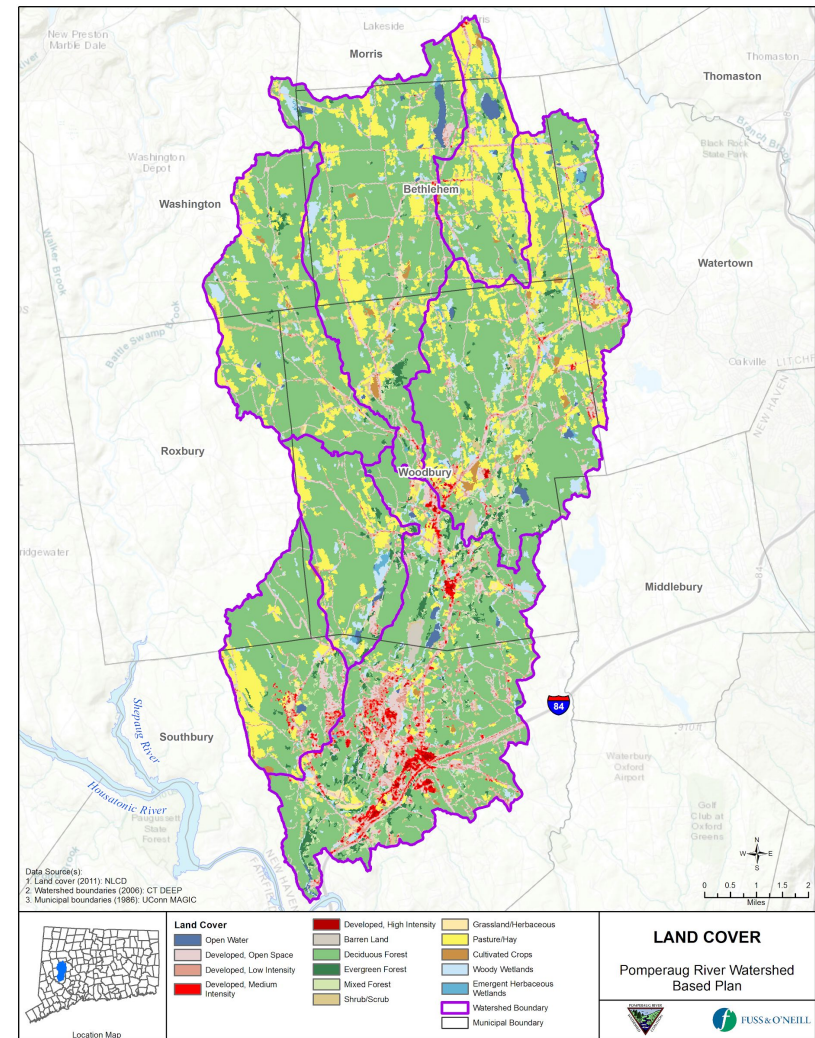
ADDITIONAL Indicators measuring stream health

WETLANDS: C
WATER QUALITY: D
WATER QUALITY: A
WATER QUALITY: A
WATER QUALITY: A
WATER QUALITY: A
WATER QUALITY: A

Grading Percent: 0-20%

Do your part - Be RiverSmart!

We all have a roll to play in helping maintain high quality streams to restore those with impairments!



Do your part - Be RiverSmart



- use non-toxic cleaners and “green” building materials in my home.
- recycle plastic and paper, dispose of household and pet waste safely, and maintain septic systems.
- dispose of prescription and over-the-counter medications in the trash or at a pharmaceutical collection event.
- fix leaky faucets and toilets, and only buy water-efficient appliances and fixtures.
- Build a rain garden to naturally soak up and treat runoff

Take the pledge today!

www.riversmartct.org

Going green keeps water clean.

- | | |
|--|---|
| <input type="checkbox"/> Install Rain Gardens | <input type="checkbox"/> Use Fewer Chemicals |
| <input type="checkbox"/> Plant Riverside Buffers | <input type="checkbox"/> Use Water-Efficient Fixtures |
| <input type="checkbox"/> Grow Native Plants | <input type="checkbox"/> Compost and Recycle More |
| <input type="checkbox"/> Reduce Lawn Area | <input type="checkbox"/> Put Pet Waste in Trash |
| <input type="checkbox"/> Mow High - Let it Lie | <input type="checkbox"/> Use Carwash |
| <input type="checkbox"/> Reduce Hard Surfaces | <input type="checkbox"/> Don't Flush Medications |



How can you help report unusual conditions?

Volunteer!

If you notice something out of the ordinary contact us with:

- Description
- Location
- Photograph

Depending on the severity, also report to the town, Health Department, or DEEP

Email us at info@pomperaug.org



Support Pomperaug River Watershed Coalition

**All donations received for PRWC through Give Local will be
matched up to \$10,000**

<https://www.givelocalccf.org/organizations/pomperaug-river-watershed-coalition>

Thank you! Questions?

For more information visit www.pomperaug.org or email us
at outreach@pomperaug.org

