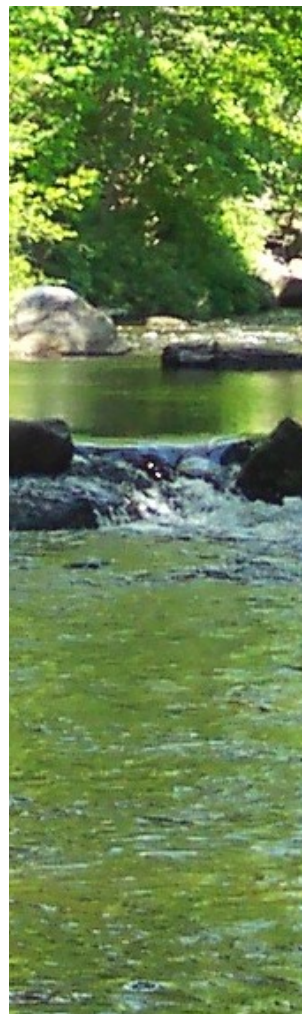




# Partnerships in Water Quality Monitoring

UConn/CLEAR  
CT MS4 Monitoring Workshop  
Milford City Hall  
June 20, 2019

Carol Haskins, Program Director



# Watershed Groups in Connecticut at a Glance

- Bantam Lake Protective Assoc.
- Branford River Project – Branford Land Trust
- Byram River Watershed Alliance
- Candlewood Lake Authority
- Clean Up Sound and Harbors Inc.
- Coginchaug River Greenway Committee
- Conservation Districts
- CT Federation of Lakes
- CT River Conservancy
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- Wood Pawcatuck Watershed Assn.

**[www.riversalliance.org/river\\_groups.php](http://www.riversalliance.org/river_groups.php)**



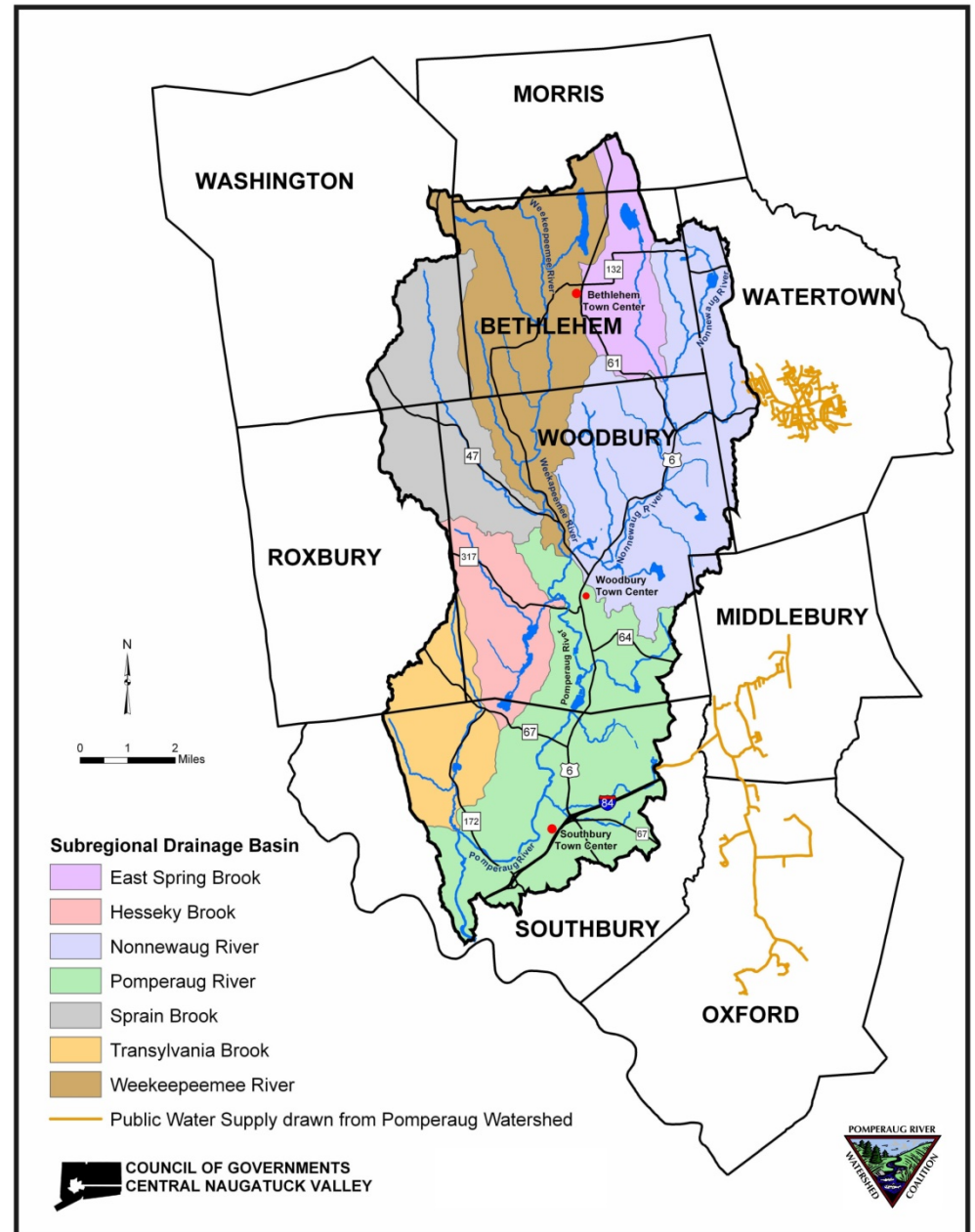
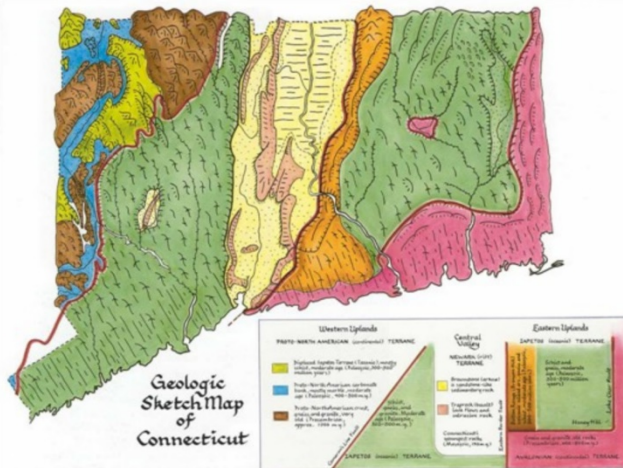
# PRWC Mission

Pomperaug River Watershed Coalition's mission is to ensure the availability of high quality water in the Pomperaug Watershed communities through the use of science and education. We share our knowledge and expertise with others committed to the protection of water resources for future generations.





*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.*







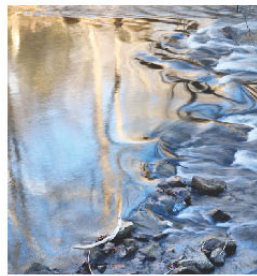
# PRWC Model

**Since its inception in 1999 the Pomperaug River Watershed Coalition has been a true coalition:**

- Municipalities
- Businesses
- Individuals
- Environmental Partners
- Foundations
- Federal/State Government

Maintaining this coalition is critical to PRWC's strategy

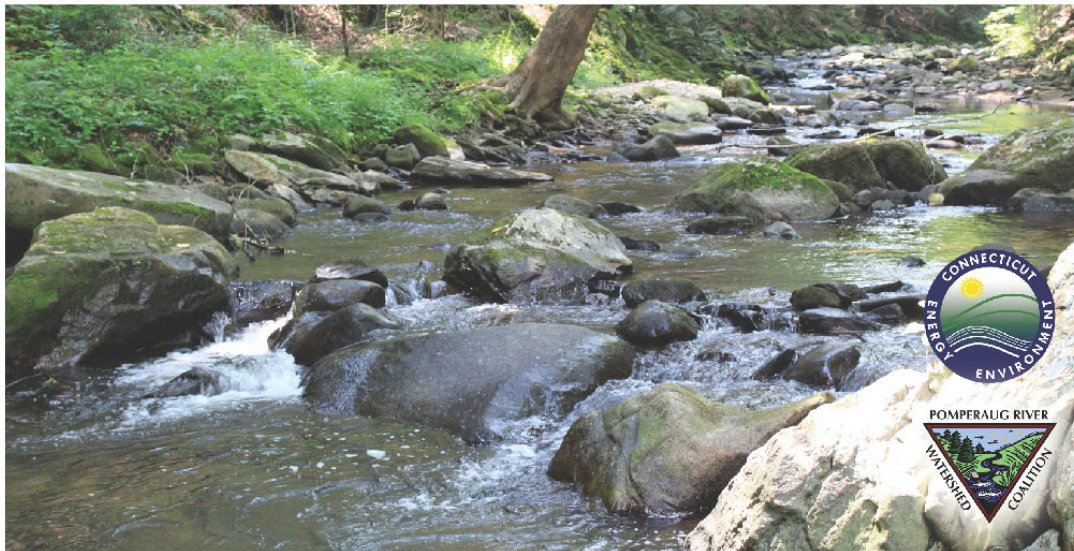




# Pomperaug River Watershed Based Plan

prepared by  **FUSS & O'NEILL**

SEPTEMBER 2018





Map Find Data Coordinates Draw Print/Export/Share

Home Full Extent Initial View Previous Extent Next Extent Pan Bookmarks Layer List

## Layers

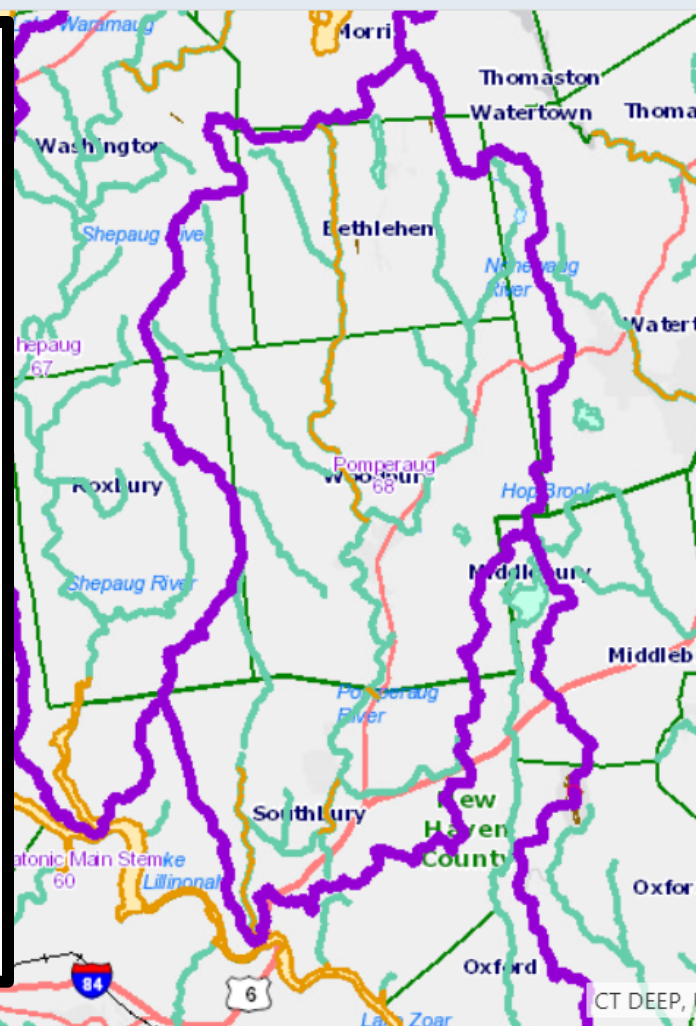
- ☐ DEEP Major Basins
- ☒ DEEP Regional Basins
- ☐ DEEP Subregional Basins
- ☐ DEEP Local Basins
- ☐ DEEP Basins
- ☐ WBD HUCs (Watershed Boundary Dataset Hydrologic Units)
- ☐ Bioscience
- ☐ Water Resources
- ☐ Open Space
- ☐ Coastal Resource Management
- ☐ Water Quality Classifications
- ☒ Water Quality
  - ☒ 2016 CT 305(b) Assessed Waterbodies
  - ☒ 2016 CT 303(d) Impaired Waterbodies
  - ☐ 2014 CT 305(b) Assessed Waterbodies
  - ☐ 2014 CT 303(d) Impaired Waterbodies
  - ☐ 2012 CT 305(b) Assessed Waterbody
  - ☐ 2012 CT 303(d) Impaired

## Impaired Streams

Yellow shows "Impaired" for Recreation and/or Aquatic Life Support based on DEEP assessment (which includes results from volunteer monitoring programs – RBV & Thermal in particular)

These are also known as the 303d Water Quality Impairment listings in the State's Integrated Water Quality Report

(<https://www.ct.gov/deep/cw/p/view.asp?q=325610>)



Home Layers

1:500 0 2 4mi



**Layers**

- ☒ PRWCMonitoring2019
  - <all other values>
  - MACROINVER
    - ▲ Macros - Active
    - ▲ Macros - Historic
- ☒ PRWCMonitoring2019
  - <all other values>
  - USGS\_GAUGE
    - USGS Groundwater
    - USGS Streamflow
- ☒ PRWCMonitoring2019
  - <all other values>
  - BACTERIA\_P
    - Bacteria - High Priority
    - Bacteria - Low Priority
- ☒ PRWCMonitoring2019
  - <all other values>
  - THERMAL
    - Thermal Monitoring
- ☒ watershed basin
- ☒ hydro\_Clip selection
- ☒ majorstream\_wshd
- ☒ pomp\_hydro
- ☒ watershed\_roads
  - <all other values>
  - AV\_LEGEND
    - HWAY PRIM; HWAY SECON
- ☒ watershedpluoxford
- ☐ localbasins
- ☒ majorsub\_wshd

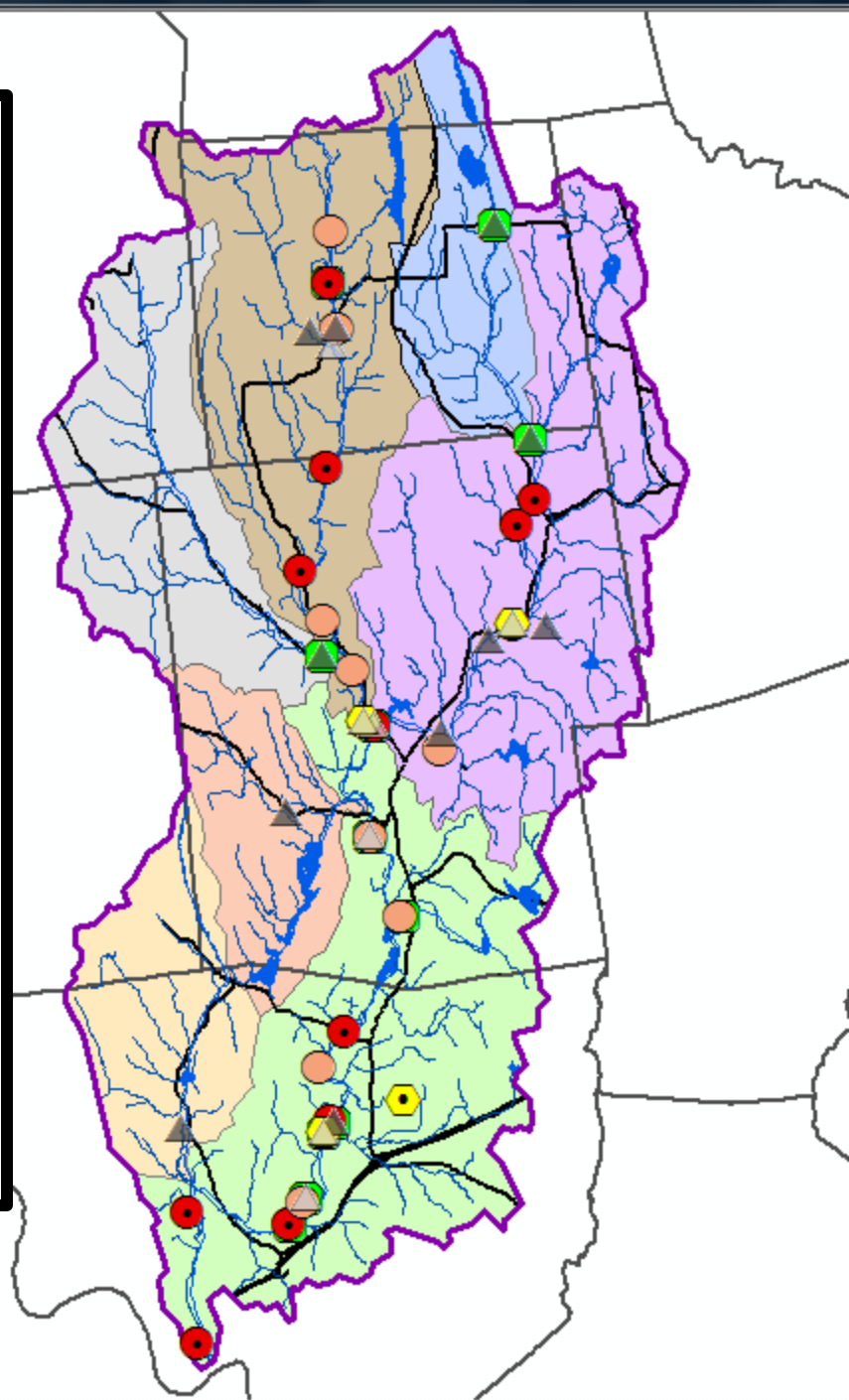
Display Source Selection

## Overview of PRWC Monitoring Sites

Historic  
Active  
Currently Planned  
Alternates

Does not include  
DEEP monitoring  
sites (fish  
assessment, marcos,  
water chemistry,  
etc)

Does not include  
Town sampling sites  
(IMS4 or otherwise)



# Overview of PRWC's Stream Monitoring Activities

- **Streamflow Gauges (USGS)**
- **Macroinvertebrate Sampling**
  - Protocols from and data submitted to CT DEEP Riffle Bioassessment by Volunteers (RBV) Program [www.ct.gov/deep/rbv](http://www.ct.gov/deep/rbv)
- **Stream Temperature Monitoring**
  - Protocols from and data submitted to CT DEEP Volunteer Stream Temperature Monitoring (VSTeM) Program [www.ct.gov/deep/vstemnetwork](http://www.ct.gov/deep/vstemnetwork)
- **Bacteria Assessment**
  - Analysis at state certified water testing laboratory; field protocols and data sheets in draft form; need to draft a QAQC plan
- **Other Parameters to Consider**

Map Find Data Coordinates Draw Print/Export/Share

Home Full Extent Initial View Previous Extent Next Extent Pan Bookmarks Layer List

## Layers

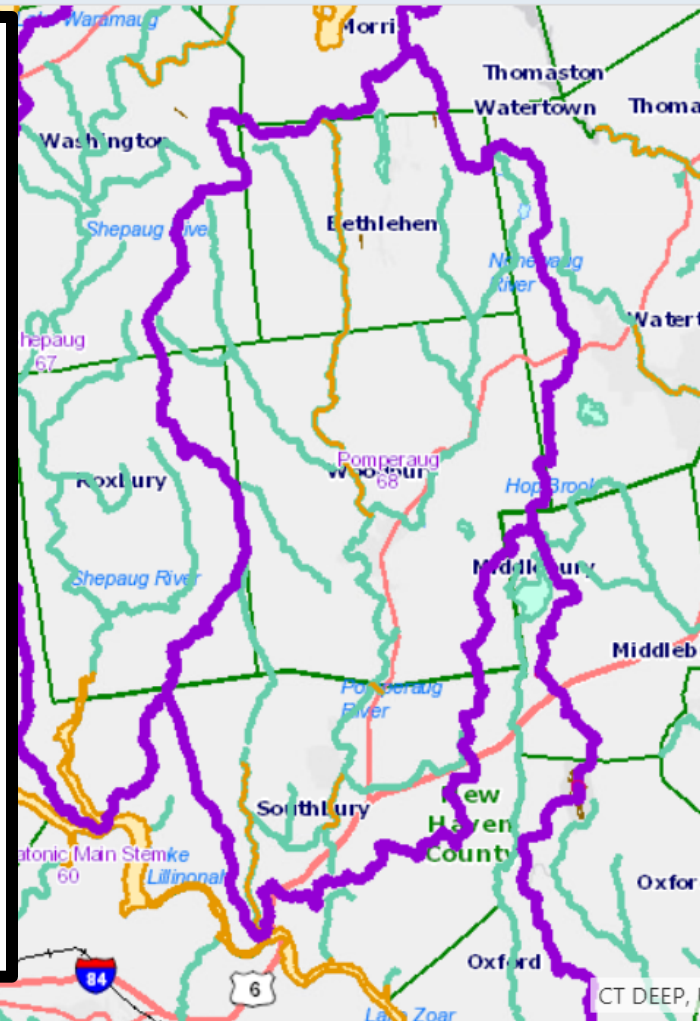
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## Impaired Streams

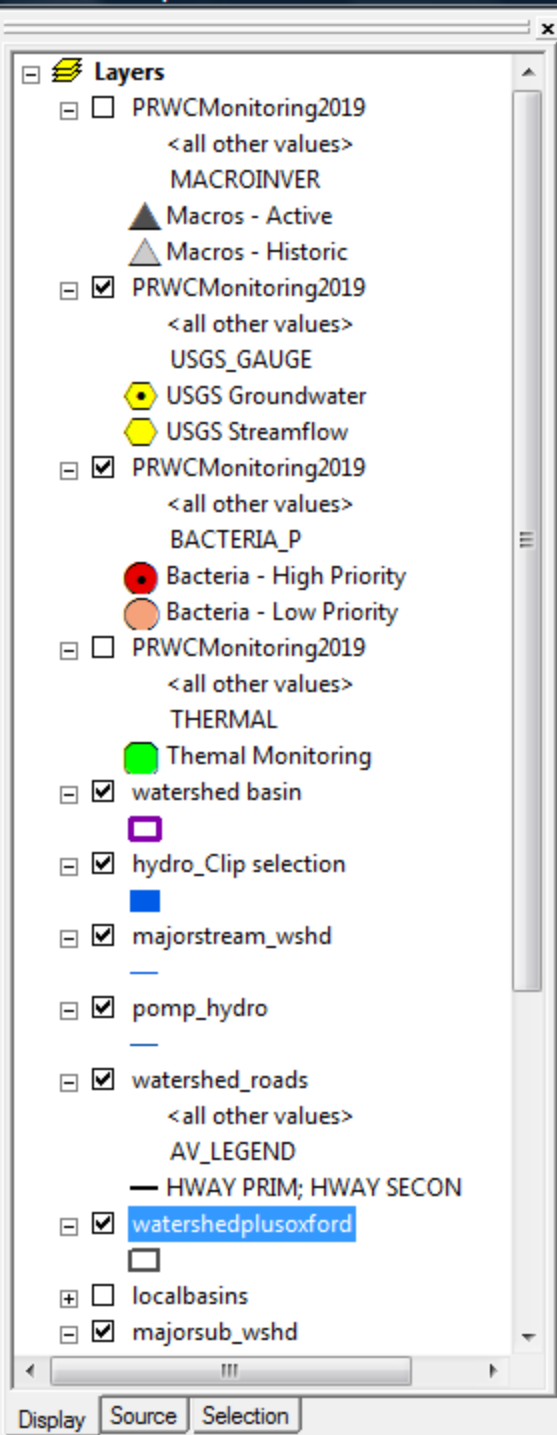
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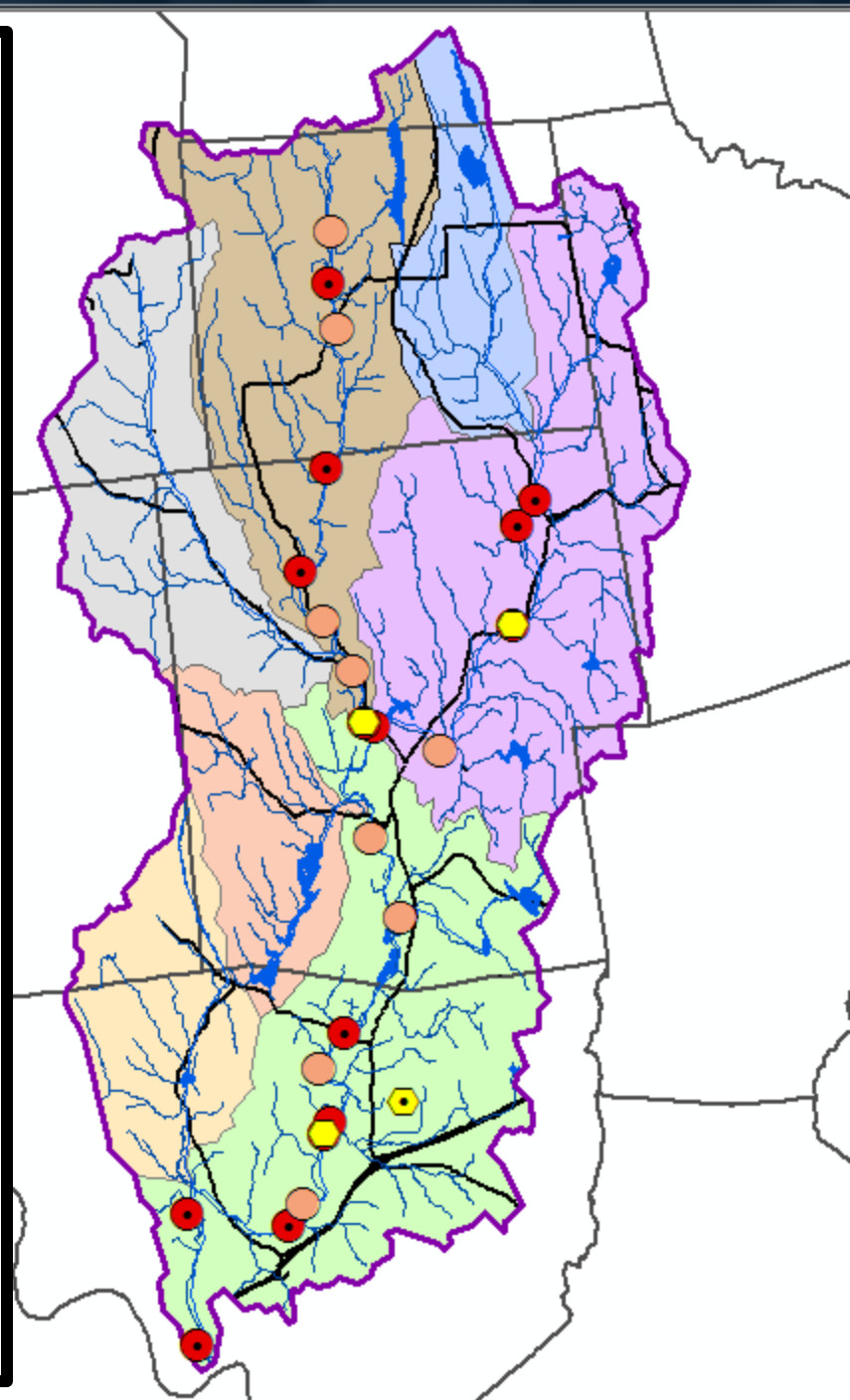
## BACTERIA ASSESSMENT

Begins 2019. High and Low Priority Sites w/ alternate locations based on access

~14 sites to be sampled on a monthly basis from April to October using an SOP (QAQC in dev.)

Analysis by local, state-certified water lab

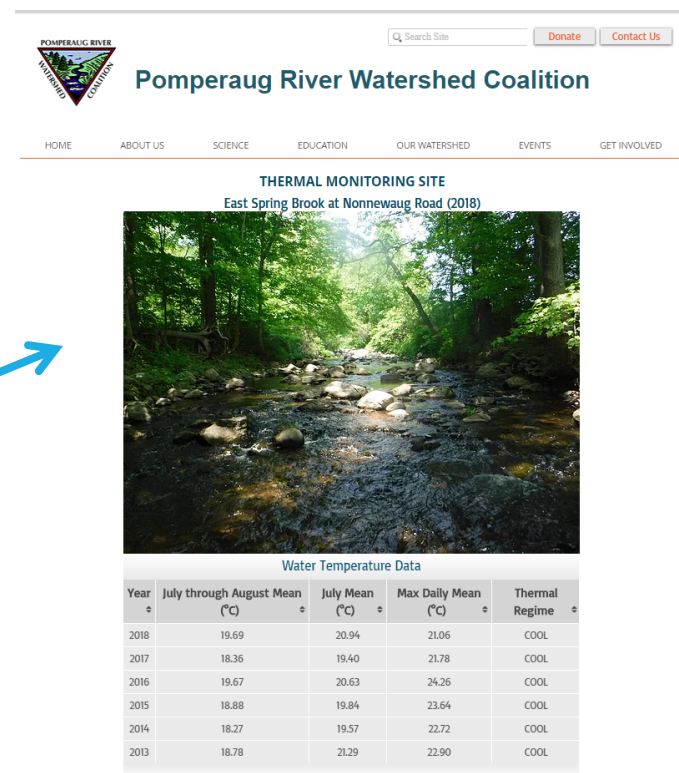
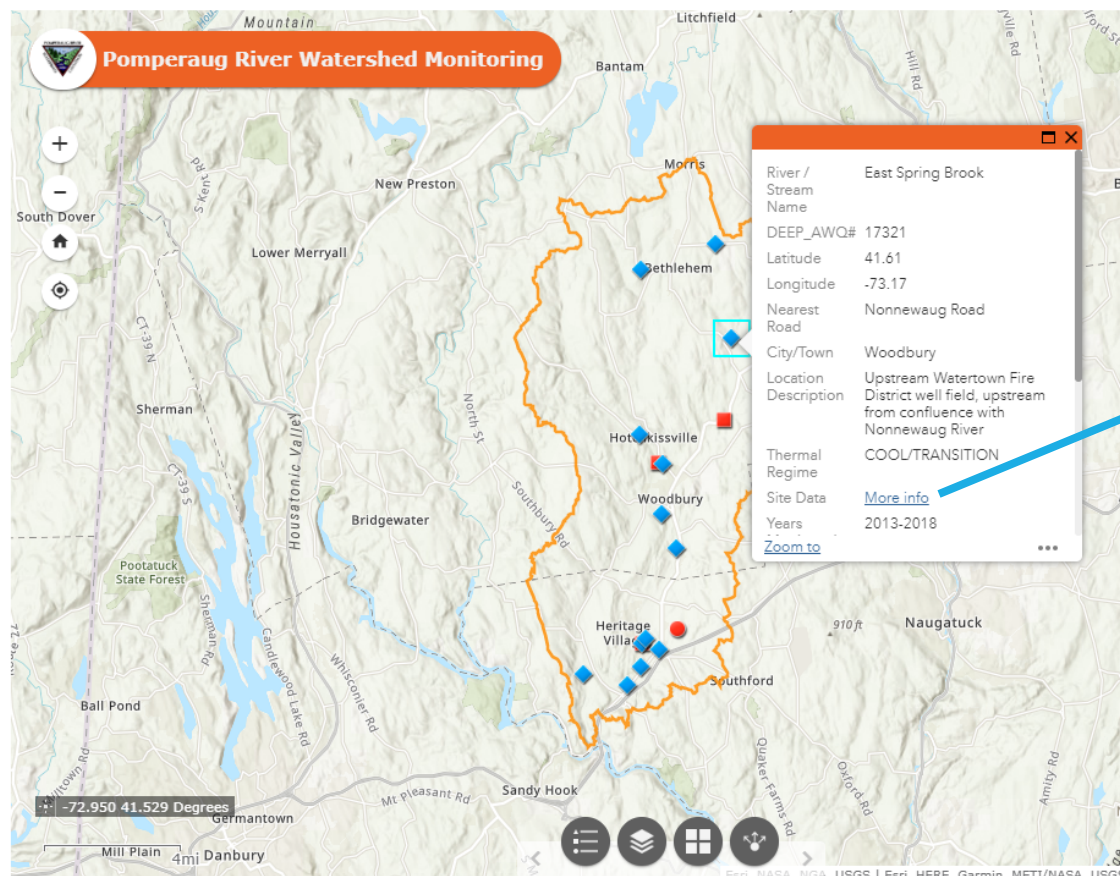
Goal: Collect more info related to 303d Water Quality Impairment listings. bracketing to better prioritize implementation of BMPs included in Watershed Based Plan



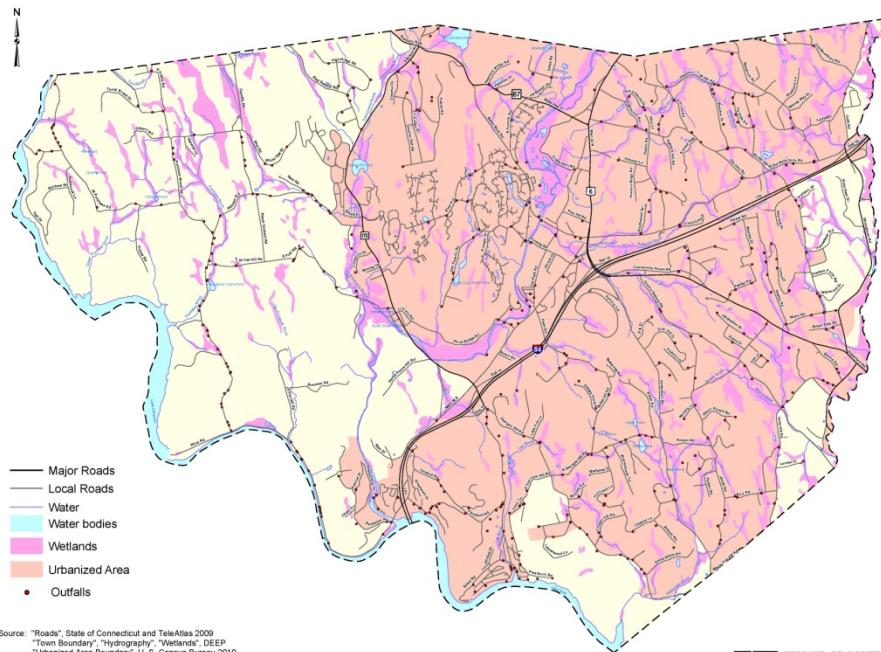
# PRWC Stream Temperature Monitoring Results

## Interactive Map (supported by NVCOG) on PRWC's Monitoring webpage: [www.pomperaug.org/monitoring](http://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*

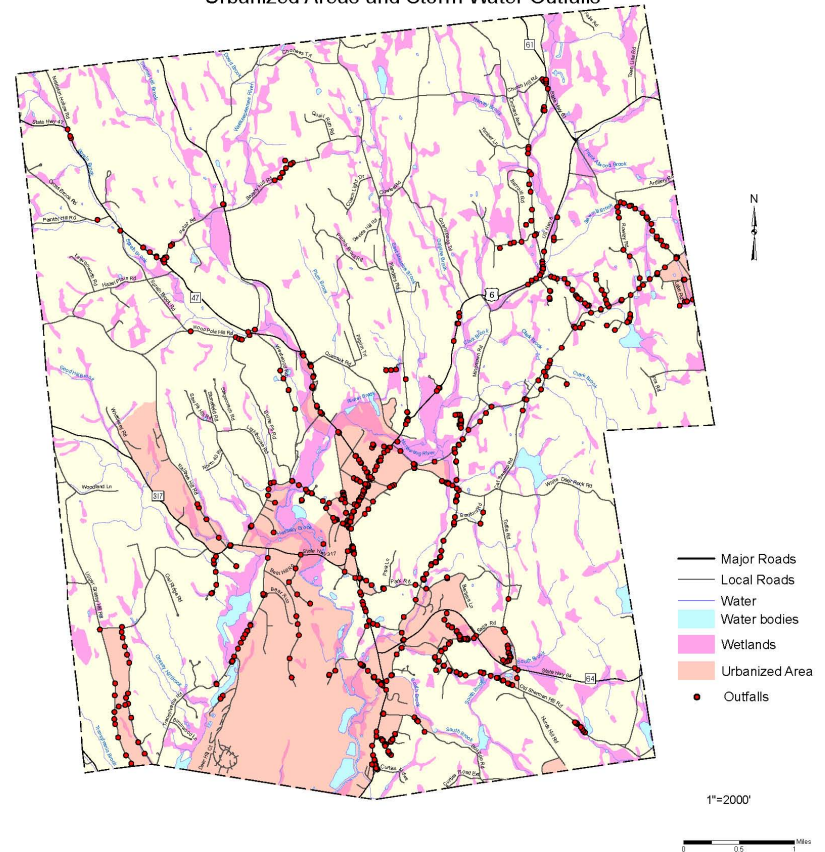


## Southbury Storm Water Outfalls



## Woodbury

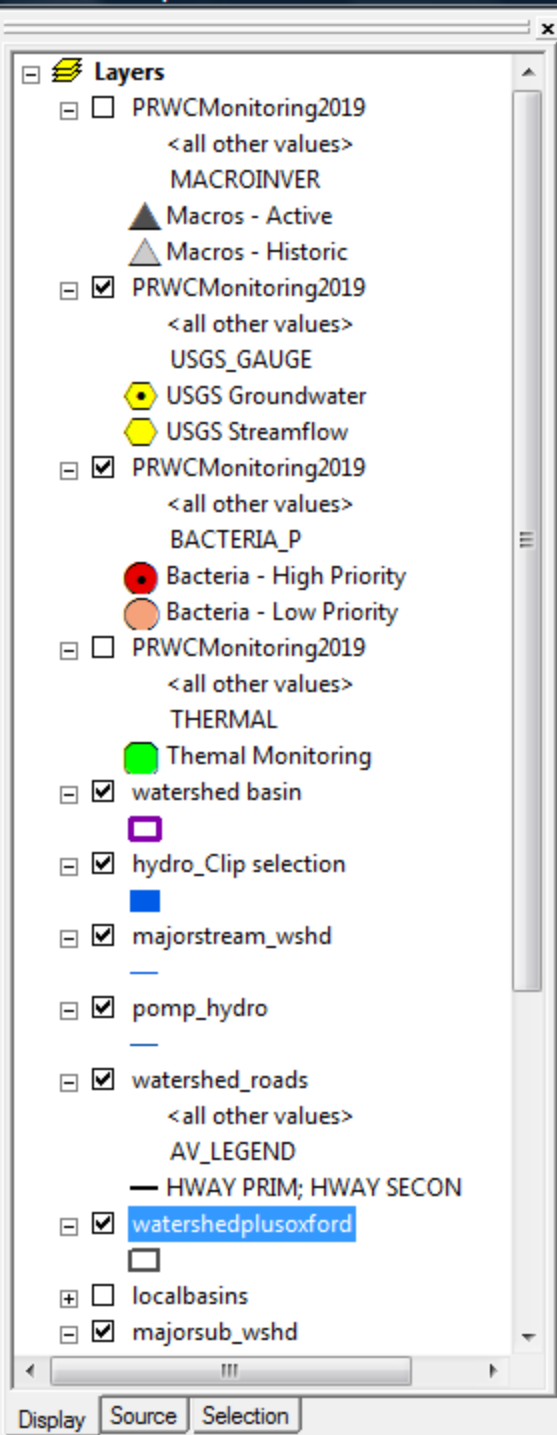
### Urbanized Areas and Storm Water Outfalls



Source: "Roads", GDT  
 "Town Boundary", "Hydrography", "Wetlands", DEP  
 "Urbanized Area Boundary", 2010 U. S. Census Bureau  
 "Outfalls", Collected by Town

For general planning purposes only. Delineations may not be exact.  
 December 2012





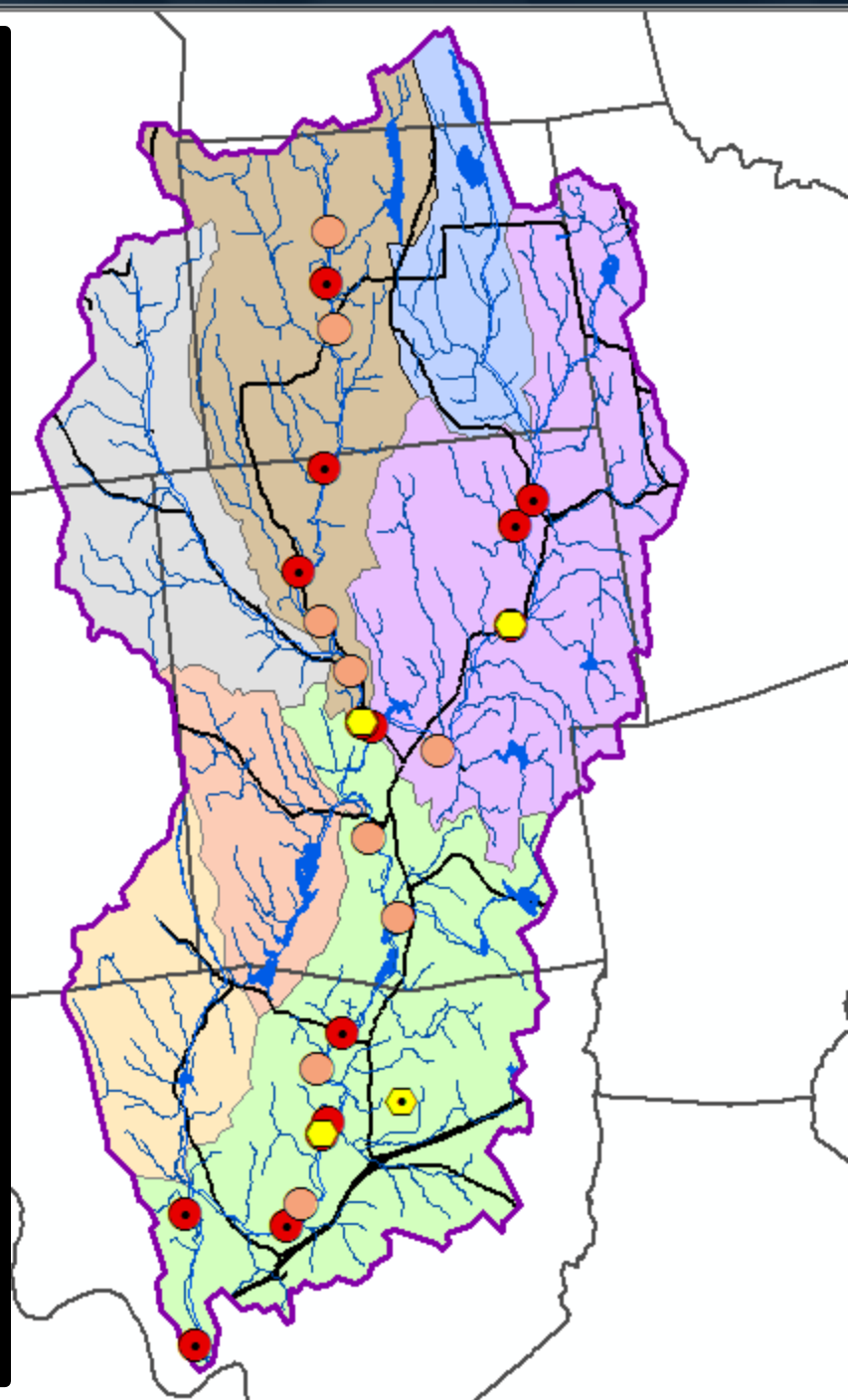
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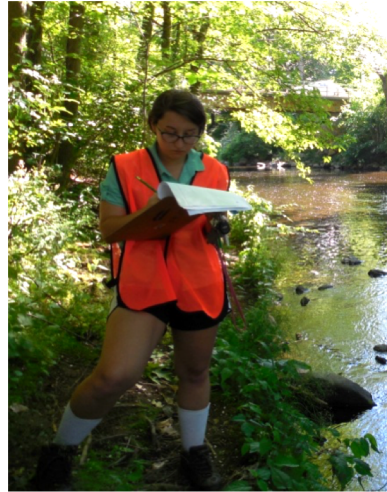
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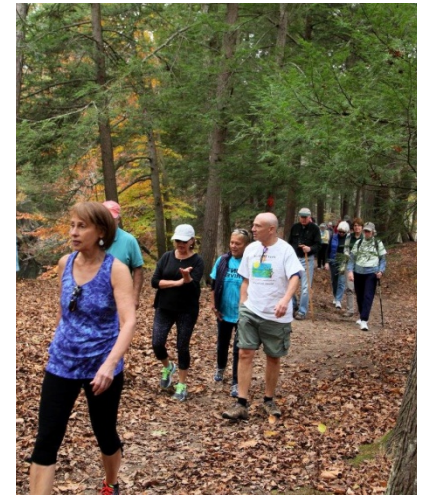
# Monitoring, Restoration, Stewardship, & Education







# Watershed Education Programs














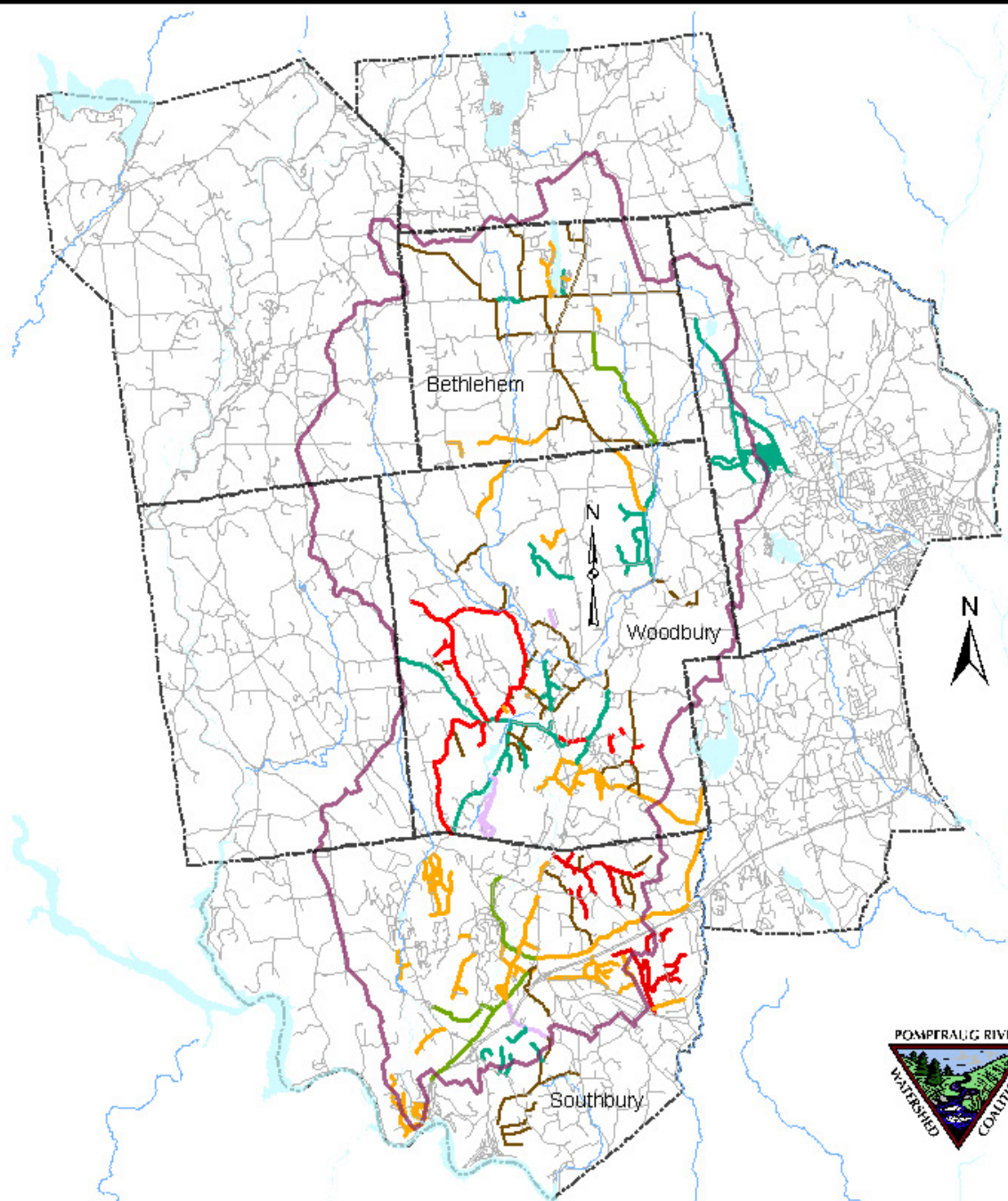


# Stormdrain Marker Installations Pomperaug River Watershed Area



## Legend

-  Stream/River
-  Town Boundary
-  Pomperaug Watershed
-  Roads - Stormdrain Marker Status
-  2014 Installations
-  2015 Installations
-  2016 Installations
-  2017 Installations
-  Unmarked Drains
-  Marker Installation In Progress
-  Markers to Be Installed



# Find a Watershed Group in Your Community!

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# PRWC Update



Thank You!  
Questions?

