CT DEEP

# Riffle Bioassessment by Volunteers

Program

## 2015 RBV Program Annual Summary Report

(Report #17)

www.ct.gov/deep/rbv

# Table of Contents



## PHOTO CREDITS

### Cover Photos

**Top Left**: A 'Michelin Man' caddisfly, one of the RBV Program's Most Wanted macroinvertebrate types. (Photo courtesy of the Salmon River Watershed Partnership). **Center Left**: RBV macroinvertebrate vouchers and datasheets ready for submission. (Photo courtesy of the Salmon River Watershed Partnership). **Bottom Left**: Volunteers from the Connecticut Audubon Society work to sort an RBV sample. (Photo courtesy Connecticut Audubon Society). **Bottom Right:** Volunteers from the Vernon Conservation Commission work to sample Barrows Brook. (Photo courtesy Vernon Conservation Commission)

### Report Photos

Additional photographs in this report were provided by the group credited beneath the caption – thank you to everyone who contributed!

# Acknowledgements

Local leaders across the state deserve special recognition for ensuring that the RBV program is a success each year. These individuals put countless hours into organizing their programs, coordinating with DEEP staff, recruiting and training volunteers, and more. During the 2015 season, the following individuals coordinated local RBV programs - thank you!!

**Daniel Berheide** (Town of Greenwich Inland Wetlands & Watercourses Agency)
**James Biardi** (Fairfield University)
**Jane Brawerman** (CT River Coastal Conservation District)
**Chris Brittain** (WAMOGO High School)
**Doreen Carroll** (Town of Greenwich Inland Wetlands & Watercourses Agency)
**Paula Coughlin** (CT Audubon Society at Pomfret)
**Laurie Doss** (The Marvelwood School)
**Tom Fahsbender** (Washington Montessori School, Steep Rock Association)
**Carol Haskins** (Pomperaug River Watershed Coalition)
**Penny Howell** (East Lyme Conservation Commission)
**Diba Khan-Bureau** (Three Rivers Community College)
**Michael Jastremski** (Housatonic Valley Association)
**Connie Manes** (Kent Conservation Commission)
**Becky Martorelli** (Quinnipiac River Watershed Association)
**Gian Morresi** (Conservation Discovery Corps at Connecticut's Beardsley Zoo)
**Tom Ouellette** (Vernon Conservation Commission)
**Rod Parlee (**Bolton Conservation Commission)
**Alisa Phillips-Griggs** (Farmington River Watershed Association)
**Jean Pillo** (The Last Green Valley, Eastern Connecticut Conservation District)
**Judy Rondeau** (Niantic River Watershed Committee)
**Pat Young** (Salmon River Watershed Partnership; Eightmile River Watershed Wild & Scenic Partnership)

**The past several years of RBV have come and gone so quickly we haven't had a chance to properly acknowledge some impressive milestones:**

- 2015 marked the 10th anniversary of the **Pomperaug River Watershed Coalition's** local RBV program! Way to go PRWC volunteers!
- The **CT Audubon Society** and the **Bolton Conservation Commission** have completed thirteen amazing consecutive years of RBV monitoring – a huge congratulations and thank you to our two longest running programs!
- This season we were happy to welcome the return of two of the RBV program's founding organizations – the **Quinnipiac River Watershed Association** and the **CT River Coastal Conservation District** – welcome back old friends!


**And finally, the Riffle Bioassessment by Volunteers Program (RBV) would also not be possible without the dedication of the hundreds of volunteers that participate annually – thank you to each of you! We hope to see you again this fall!**

# RBV: The Treasure Hunt for CT's Healthiest Streams!

The CT DEEP Riffle Bioassessment by Volunteers or "RBV" Program is an annual fall 'treasure hunt' for Connecticut's healthiest streams. CT DEEP uses the data collected by RBV volunteers to expand its inventory of excellent small, high gradient Connecticut streams that have excellent water quality – our "Healthy Streams" list.

RBV volunteers examine the water quality of local stream segments by studying the aquatic benthic macroinvertebrate community present in rocky or 'riffle' areas of these streams. If volunteers can find four or more pollution sensitive or 'most wanted' macroinvertebrates, CT DEEP can use this data to assess that stream as fully supporting water quality standards for aquatic life use – documenting it as one of CT's healthiest streams! (Because it is a screening approach and not a more in-depth assessment methodology, RBV cannot provide a detailed water quality assessment nor can it be used to identify low or impaired water quality.)

**Examples of Connecticut's aquatic macroinvertebrates – commonly called 'stream bugs' by RBV volunteers.** *Photographs courtesy of The Marvelwood School*

## Get Involved with RBV Today!

As an RBV volunteer you collect valuable environmental data that will help ensure protection of the beautiful stream in your neighborhood or backyard. If this sounds interesting, DEEP and your local RBV group would love to have your participation! (New volunteers are required to attend training before they can monitor.) Contact the State RBV Program Coordinator to find the program nearest you today!

**To learn more contact:**

**Meghan Lally**
**State RBV Program Coordinator**
**Meghan.Lally@ct.gov**
**860-424-3061**
**or visit**
**www.ct.gov/deep/rbv**

No program in your area? Start a new program in 2016! If your group is interested in conducting RBV in a watershed or town not currently monitored, contact the State RBV Program Coordinator to discuss establishing a new program. CT DEEP is particularly interested in working with new groups to establish programs in the Medium to Highest priority areas noted in Figure 2 (page 7) of this report.

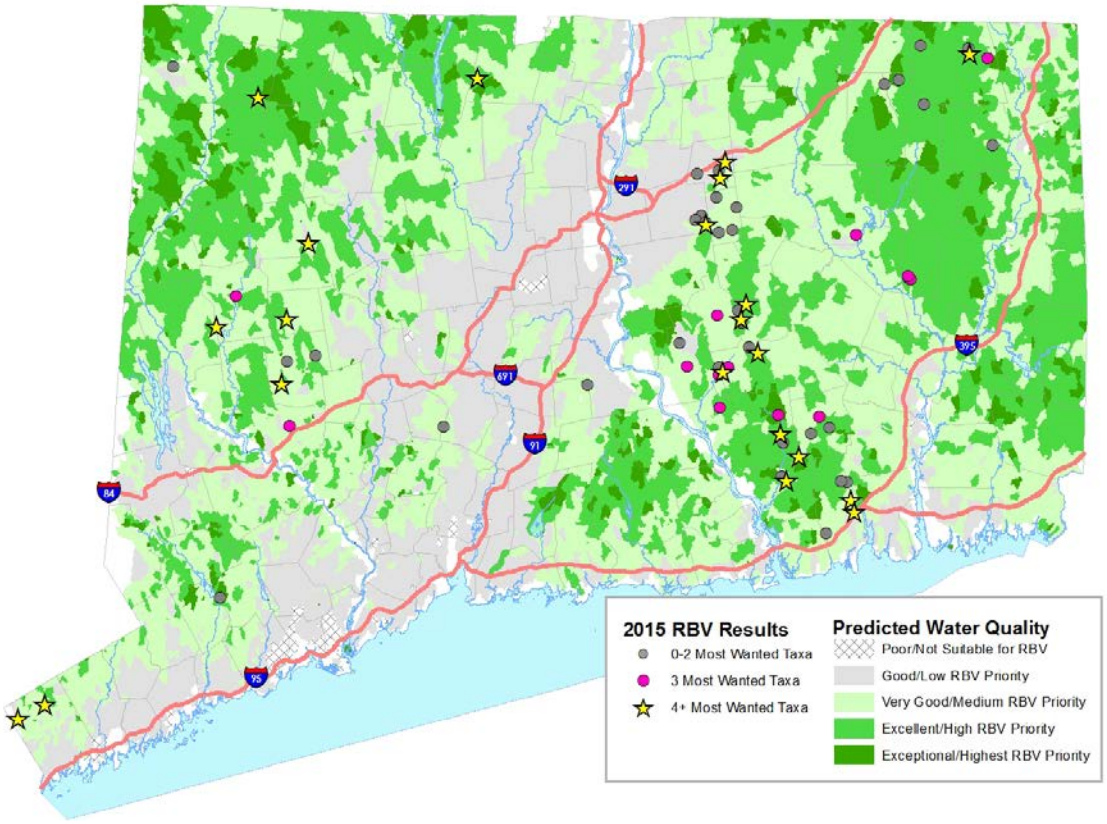
# 2015 Executive Summary

| | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|
| Total # of RBV Samples | 120 | 132 | 140 | **94** | **68** |
| # of '4 or More' Samples | 24 | 21 | 33 | **37** | **21** |
| % Total '4 or More' Samples | 20% | 16% | 24% | **39%** | **31%** |
| # Stations Monitored | 117 | 127 | 137 | **92** | **68** |
| # Waterbodies Monitored | 68 | 96 | 92 | **78** | **54** |

The bar for the 2015 RBV program was set very high as the 2014 RBV Program results were the best yet in the 15 year history of the program! Despite the low flows in many of CT's streams this past fall, in 2015, through hard work and dedication, RBV volunteers were once again able to expand upon the Connecticut's healthiest streams inventory!

- **68 vouchers** were collected; **21 of these vouchers (31%) contained 4 or more RBV 'most wanted' taxa**, indicating that these stream segments are among Connecticut's healthiest streams!
- **68 stations** were monitored, including **20 new stations** not previously monitored by DEEP. Stations spanned **68 waterbodies** located in **30 towns.**
- **17 Local RBV Programs coordinated programs in their area,** approximately **350 volunteers** from these groups and local partner organizations participated in the program.

2015 RBV volunteers represented watershed and conservation organizations, local commissions, scout troops, schools, and local businesses - **thank you to all of our 2015 CT DEEP RBV partners!**



# 2015 Participation Summary

**Table 1.** Annual RBV Program Participation Statistics 2010-2015

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| # Local RBV Programs* | 17 | 16 | 17 | 21 | 22 | 17 |
| # Groups/Organizations Total* | 22 | 21 | 22 | 30 | 45 | 31 |
| # Volunteers (estimated) | 400 | 400 | 400 | 565 | 450 | 350 |
| # Towns Represented | 41 | 44 | 56 | 51 | 39 | 30 |

**Local RBV Programs often consist of a partnership between several local groups in the town or watershed.*

**In 2015, seventeen (17) Local RBV Programs contributed date to the State (Table 1, Figure 1). Local RBV Programs consisted of partnerships between a variety of groups and organizations, including, river and watershed associations, local conservation commissions and agencies, environmental conservation groups, and educational institutions.**

*River and Watershed-Based Organizations:*

- Eightmile River Wild & Scenic Coordinating Committee
- Farmington River Watershed Association
- Housatonic Valley Association
- Niantic River Watershed Committee
- Pomperaug River Watershed Coalition
- Quinnipiac River Watershed Association
- Salmon River Watershed Partnership
- The Last Green Valley

*Environmental Conservation Groups:*

- Colchester Land Trust
- Connecticut Audubon Society Citizen Science Program
- Conservation Discovery Corps at Connecticut's Beardsley Zoo
- CT River Coastal Conservation District
- Eastern CT Conservation District
- The Nature Conservancy
- Trout Unlimited, Thames Valley Chapter

*Municipal Groups:*

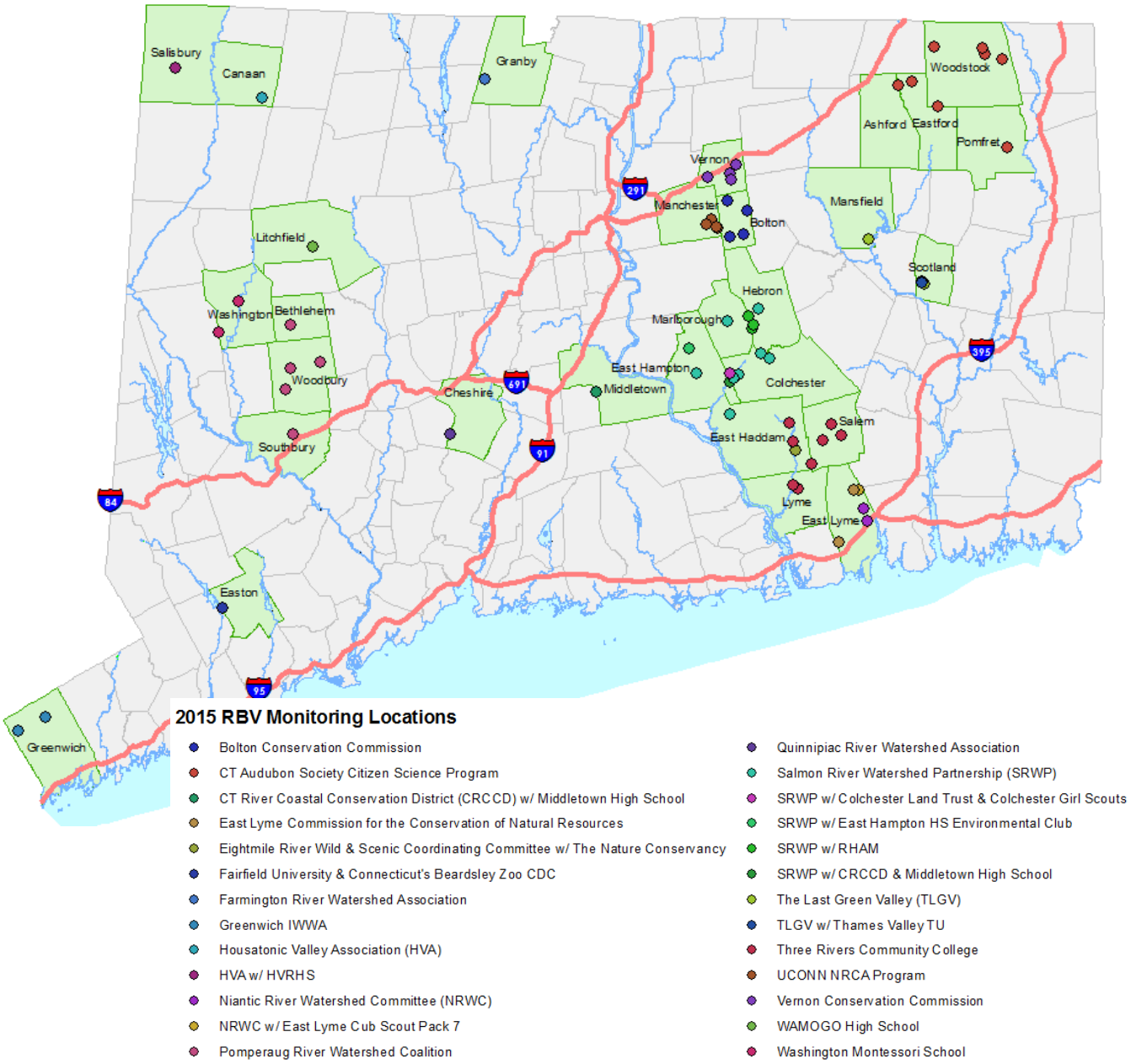
- Bolton Conservation Commission
- East Lyme Commission for the Conservation of Natural Resources
- Town of Greenwich Inland Wetlands & Watercourses Agency
- Vernon Conservation Commission

*Education-Based Partners:*

- Colchester Girl Scouts
- Cub Scouts Pack 7 (East Lyme)
- East Hampton High School Environmental Science Club
- Fairfield University
- Housatonic Valley Regional High School
- Middletown High School
- RHAM High School
- The Marvelwood School
- Three Rivers Community College
- UConn NRCA Program
- WAMOGO High School
- Washington Montessori School

**Figure 1 (below).** RBV monitoring locations spanned a **total of 30 Connecticut towns** in 2015 including:

- Ashford
- Bethlehem
- Bolton
- Canaan
- Cheshire
- Colchester
- East Haddam
- East Hampton
- East Lyme
- Eastford
- Easton
- Granby
- Greenwich
- Hebron
- Litchfield
- Lyme
- Manchester
- Mansfield
- Marlborough
- Marlborough
- Middletown
- Pomfret
- Salem
- Salisbury
- Scotland
- Southbury
- Union
- Vernon
- Washington
- Woodbury
- Woodstock



# 2015 Monitoring Results

2015 marked the 17th year volunteer monitoring groups collected and submitted vouchers to DEEP under the RBV program. An estimated 350 volunteers representing seventeen (17) Local RBV Programs participated in the 2015 program. **Together, volunteers collected 68 vouchers from 68 unique locations on 54 different waterbodies (Table 2, Figure 2). The distribution of most wanted types in the samples ranged from 0 to 10, with total taxa types present in the vouchers ranging from 3 to 23.**

**Table 2.** Annual RBV Program Monitoring Location Statistics 2010-2015

| | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|
| RBV Samples Submitted | 119 | 120 | 132 | 140 | 94 | 68 |
| # Monitoring Stations (Appendix B) | 106 | 117 | 127 | 137 | 92 | 68 |
| # Streams Monitored | 76 | 68 | 96 | 92 | 78 | 54 |
| # Samples w/ 4+ "Most Wanted" Types | 18 (15%) | 24 (20%) | 21 (16%) | 33 (24%) | 37 (39%) | 21 (31%) |

**Twenty-one (21) of the 2015 monitoring sites had 4 or more types in the 'Most Wanted' category, indicating that these stream segments are among Connecticut's healthiest streams.** Table 3 below summarizes the range of 2015 results by taxa category (i.e. "most", "moderately" or "least" wanted/sensitive.). Detailed results for the 2015 RBV Program (i.e. voucher contents) are shown in Table 4.

**Table 3. Summary of 2015 RBV Voucher Contents by RBV Category**

| | Min | Max | Mean | Median |
|---|---|---|---|---|
| Most Sensitive (Most Wanted) Taxa | 0 | 10 | 2.9 | 3 |
| Moderately Sensitive Taxa | 1 | 8 | 4.6 | 5 |
| Least Sensitive Taxa | 0 | 4 | 1.2 | 1 |
| Other Taxa | 0 | 7 | 3.2 | 3 |
| Total Taxa Count | 3 | 23 | 11.9 | 12 |

*Above: A volunteer with the Thames Valley Chapter of Trout Unlimited monitors Beaver Brook in Scotland, Ct. Welcome to the RBV community Thames Valley TU!*

**Figure 2. 2015 RBV Results Map.** The number of 'Most Wanted' macroinvertebrate types present in 2015 RBV voucher samples. Sites are considered to be 'healthy' if 4 or more 'Most Wanted' macroinvertebrate taxa were present and can be considered for listing as fully supporting aquatic life use support in the Integrated Water Quality Report.

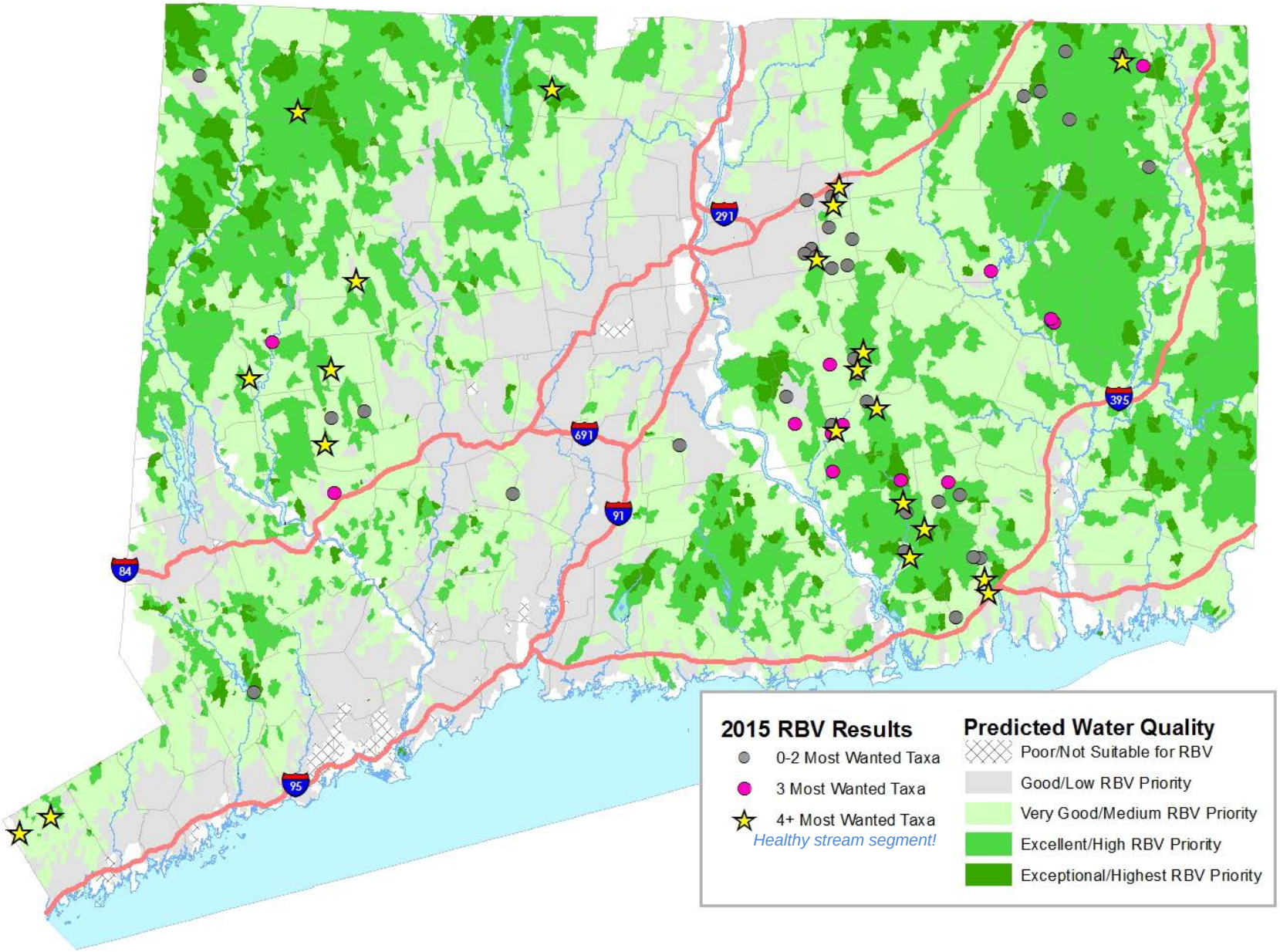


Table 4 shows the frequency with which RBV taxa types were identified in vouchers. Appendix D contains maps of the occurrence of most wanted types in 2015.

| ***Table 4. Frequency of RBV Types in 2015 Vouchers*** | | | #Vouchers with Taxa | %Vouchers with Taxa | Frequency Rank* |
|---|---|---|---|---|---|
| Most Wanted (Most Sensitive) Taxa | 1 | *Drunella sp.* | 0 | 0% | 35 |
| | 2 | *Isonychia sp.* | 29 | 43% | 8 |
| | 3 | *Epeorus sp.* | 5 | 7% | 26 |
| | 4 | Peltoperlidae (All genera) | 12 | 18% | 15 |
| | **5A** | **Perlidae (All genera)** | 54 | 79% | 1 |
| | 5B | *Pteronarycs sp.* | 5 | 7% | 25 |
| | 5C | Capniidae | 1 | 1% | 34 |
| | | Perlodidae | 3 | 4% | 32 |
| | | Leuctridae | 3 | 4% | 31 |
| | | Chloroperlidae | 4 | 6% | 28 |
| | | Nemouridae | 9 | 13% | 21 |
| | | Taeniopterygidae | 10 | 15% | 18 |
| | 6A | *Glossosoma sp.* | 21 | 31% | 12 |
| | 6B | *Apatania sp.* | 4 | 6% | 27 |
| | 7 | *Rhyacophila sp.* | 17 | 25% | 13 |
| | 8A | *Brachycentrus sp.* | 11 | 16% | 17 |
| | 8B | *Lepidostoma sp.* | 7 | 10% | 22 |
| Moderately Sensitive Taxa | **9** | **Hydropsychidae** | 52 | 76% | 3 |
| | **10** | **Philopotamidae** | 42 | 62% | 5 |
| | **11** | ***Maccafertium sp.*** | 45 | 66% | 4 |
| | 12 | *Psephenus sp.* | 40 | 59% | 6 |
| | 13A | *Corydalus sp.* | 9 | 13% | 20 |
| | **13B** | ***Nigronia sp.*** | 53 | 78% | 2 |
| | 14A | Gomphidae | 5 | 7% | 24 |
| | | Cordulegasteridae | 24 | 35% | 11 |
| | | Aeshnidae | 29 | 43% | 7 |
| | 14B | Calopterygidae | 3 | 4% | 30 |
| | | Coenagrionidae | 11 | 16% | 16 |
| Least Sensitive Taxa | 15A | Amphipoda | 9 | 13% | 19 |
| | 15B | Isopoda | 6 | 9% | 23 |
| | 15C | Leech | 2 | 3% | 33 |
| | 15D | Midge | 24 | 35% | 10 |
| | 15E | Simuliidae | 3 | 4% | 29 |
| | 15F | Snail | 12 | 18% | 14 |
| | 15G | Worm | 24 | 35% | 9 |

Similar to previous years, the 'top five' RBV taxa found in 2015 vouchers included the common stonefly (Perlidae), fishfly (*Nigronia sp.*), the common net-spinner caddisfly (Hydropsychidae), three-tailed mayfly (*Maccaffertium sp*. and *Stenonema sp*.), and the fingernet caddisfly (Philopotamidae). The five least common taxa in the 2015 vouchers included several families of miscellaneous stoneflies (Nemouridae, Capniidae, and Perlodidae), along with Coenagrionidae (dragonfly), and leech. No vouchers contained the 'body builder' mayfly (*Drunella sp.*).

**Table 5. Detailed 2015 RBV Station Results.** Table 3 provides a list of stations monitored with RBV in 2015 and the contents of the corresponding voucher submitted to DEEP for analysis. The samples are sorted by stream name and Station number. Column numbers corresponds to the RBV macroinvertebrate organism ID number (noted on the RBV program materials). Stations at which four or more 'Most Wanted' RBV taxa types were present in the voucher are emphasized in bold and italicized font. Additional station details can be found in Appendix B. (Note: all collection dates are for the year 2015.)

| Station # | Waterbody Name | Town | Date | Drunella 1 | Isonychia 2 | Epeorus 3 | Peltoperlidae 4 | Perlidae 5A | Pteronarycs 5B | Misc. Stonefly 5C | Glossosoma 6A | Apatania 6B | Rhyacophila 7 | Brachycentrus 8A | Lepidostoma 8 B | TOTAL Most Wanted | Hydropsychidae 9 | Philopotamidae 10 | Maccafertium 11 | Psephenus 12 | Corydalus 13A | Nigronia 13B | Dragonfly Families 14A | Damselfly Families 14B | TOTAL Moderately Wanted | Amphipoda 15A | Isopoda 15B | Leech 15C | Midge 15D | Simuliidae 15E | Snail 15F | Worm 15G | TOTAL Least Wanted | TOTAL Other Taxa Count | GRAND TOTAL Taxa Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 18821 | Baker Brook, Unnamed tributary to | BOLTON | 11/15 | | | | | | | | | | | | | 0 | X | | | | | | | 1 | | | | | | | X | 1 | 3 | 5 |
| ***15138*** | ***Bantam River*** | ***LITCHFIELD*** | ***11/9*** | | ***X*** | | | ***X*** | | ***X*** | | | ***X*** | | | ***4*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | | ***7*** | | | | ***X*** | | | | ***1*** | ***4*** | ***16*** |
| ***15594*** | ***Barrows Brook*** | ***VERNON*** | ***10/17*** | | | | ***X*** | | | ***X*** | | | | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | | | ***X*** | | | ***4*** | | | | | | | ***X*** | ***1*** | ***1*** | ***10*** |
| ***15312*** | ***Beaver Brook*** | ***LYME*** | ***10/17*** | | ***X*** | | | ***X*** | | ***X*** | | | | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | | | ***X*** | ***X*** | ***X*** | ***6*** | | | | | | | | ***0*** | ***3*** | ***13*** |
| 18996 | Beaver Brook | SCOTLAND | 10/14 | | X | | | X | | | X | | | | | 3 | | X | X | | | X | X | | 4 | | | | X | | | | 1 | 2 | 10 |
| 19000 | Beaver Brook | SCOTLAND | 10/4 | | | | | X | | | | | | | | 1 | | X | | X | | X | X | | 5 | | | | | | | | 0 | 4 | 10 |
| 15519 | Bee Brook | WASHINGTON | 10/23 | | X | | | X | X | | | | | | | 3 | X | | X | | | X | X | | 4 | | | | | | | X | 1 | 3 | 11 |
| 19001 | Bigelow Brook | ASHFORD | 9/18 | | X | | | X | | | | | | | | 2 | | X | X | X | X | X | X | | 6 | | | | | | | | 0 | 3 | 11 |
| 18963 | Birch Mountain Brook | MANCHESTER | 10/12 | | | | | | | | X | | | | X | 2 | X | | | | | | | X | 2 | | | X | | | X | X | 3 | 4 | 11 |
| 18964 | Birch Mountain Brook | MANCHESTER | 10/17 | | | | | | | | | | | | | 0 | X | X | X | X | | | X | X | 6 | X | X | | | | | | X | 3 | 4 | 13 |
| ***18965*** | ***Birch Mountain Brook*** | ***MANCHESTER*** | ***11/1*** | | | | | ***X*** | | ***X*** | ***X*** | ***X*** | | | | ***6*** | ***X*** | | ***X*** | | | ***X*** | ***X*** | | ***4*** | | ***X*** | ***X*** | | | | ***X*** | ***3*** | ***6*** | ***19*** |
| 18966 | Birch Mountain Brook | MANCHESTER | 11/22 | | | | | | | X | X | | | | | 3 | X | | | | | X | X | X | 4 | | | | X | | | X | 2 | 3 | 12 |
| 16266 | Bolton Pond Brook | BOLTON | 11/15 | | | | | | | X | | | | | | 2 | | | | X | | | | X | 2 | | X | | | X | X | X | 4 | 3 | 11 |
| 19010 | Branch Brook | EASTFORD | 10/2 | | | | | X | | | | | X | | | 2 | | X | X | | X | | X | X | 5 | | | | X | | | | 1 | 0 | 8 |
| ***16139*** | ***Brown Brook*** | ***CANAAN*** | ***10/19*** | | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | | | ***X*** | | | ***6*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | | | ***5*** | | | | | | | ***X*** | ***1*** | ***4*** | ***16*** |
| 16333 | Bullet Hill Brook | SOUTHBURY | 9/19 | | | | | X | | | X | | X | | | 3 | X | X | | | | | | | 2 | X | | | | | X | | 2 | 2 | 9 |
| 15315 | Burnhams Brook | EAST HADDAM | 10/20 | | | | | | | | | | | | X | 1 | | | | X | | X | X | | 3 | | | | | | | | 0 | 2 | 6 |
| 14523 | Burton Brook | SALISBURY | 10/22 | | | | | | X | | | | | | | 1 | | | X | | | | | | 1 | | | | | | X | | 1 | 0 | 3 |
| 16323 | Coginchaug River | MIDDLETOWN | 10/15 | | | | | X | | | | | X | | | 2 | X | X | | X | | X | | | 4 | X | | | X | | | | 2 | 4 | 12 |
| ***18971*** | ***Converse Pond Brook*** | ***GREENWICH*** | ***11/30*** | | ***X*** | | | ***X*** | | ***X*** | ***X*** | | | | | ***4*** | ***X*** | ***X*** | ***X*** | | | ***X*** | | | ***4*** | | | | | ***X*** | | ***X*** | ***2*** | ***2*** | ***12*** |

| | | | | Drunella | Isonychia | Epeorus | Peltoperlidae | Perlidae | Pteronarycs | Misc. Stonefly | Glossosoma | Apatania | Rhyacophila | Brachycentrus | Lepidostoma | TOTAL Most Wanted | Hydropsychidae | Philopotamidae | Maccafertium | Psephenus | Corydalus | Nigronia | Dragonfly Families | Damselfly Families | TOTAL Moderately Wanted | Amphipoda | Isopoda | Leech | Midge | Simuliidae | Snail | Worm | TOTAL Least Wanted | TOTAL Other Taxa Count | GRAND TOTAL Taxa Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Station # | Waterbody Name | Town | Date | 1 | 2 | 3 | 4 | 5A | 5B | 5C | 6A | 6B | 7 | 8A | 8 B | | 9 | 10 | 11 | 12 | 13A | 13B | 14A | 14B | | 15A | 15B | 15C | 15D | 15E | 15F | 15G | | | |
| 18499 | Cranberry Meadow Brook | EAST LYME | 10/19 | | | | | X | | | | | | | | 1 | | X | X | X | | X | X | | 6 | | | | | | | | 0 | 3 | 10 |
| 16119 | Day Pond Brook | COLCHESTER | 11/21 | | | | X | X | | X | | | | | | 3 | X | | X | | | X | X | | 4 | | | | X | | | | 1 | 2 | 10 |
| ***16324*** | ***Dickinson Creek*** | ***COLCHESTER*** | ***9/12*** | | ***X*** | | | ***X*** | | | | | ***X*** | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***7*** | | | | | | ***X*** | | ***1*** | ***0*** | ***12*** |
| 17765 | Dickinson Creek | COLCHESTER | 10/18 | | | | | X | | | | | | X | | 2 | X | | | X | | X | X | | 4 | | | | | | | | 0 | 2 | 8 |
| ***18962*** | ***E. Branch Eightmile River*** | ***SALEM*** | ***10/31*** | | ***X*** | | | ***X*** | | ***X*** | | | | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | | ***6*** | | | | | | | | ***0*** | ***5*** | ***15*** |
| 16122 | Early Brook | EAST HADDAM | 10/31 | | | | X | X | | | | | | | X | 3 | | X | | | | X | | X | 3 | | | | X | | | | 1 | 2 | 9 |
| ***18518*** | ***Eightmile River*** | ***EAST HADDAM*** | ***10/17*** | | ***X*** | | | ***X*** | | | ***X*** | | | ***X*** | ***X*** | ***5*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | | ***7*** | | | | | | | | ***0*** | ***5*** | ***17*** |
| 18936 | Eightmile River | LYME | 10/17 | | X | | | X | | | | | | | | 2 | X | X | X | X | X | X | X | | 7 | | | | X | | | | 1 | 3 | 13 |
| ***18979*** | ***Enders Brook*** | ***GRANBY*** | ***10/6*** | | ***X*** | | ***X*** | ***X*** | | ***X*** | ***X*** | | ***X*** | | | ***6*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | | | ***5*** | | ***X*** | | ***X*** | | | | ***2*** | ***7*** | ***20*** |
| 18998 | English Neighborhood Brook | WOODSTOCK | 10/9 | | X | | | X | | | | | | | | 2 | | | X | X | X | X | X | X | 6 | | | | X | | X | | 2 | 2 | 12 |
| ***16440*** | ***Fawn Brook*** | ***HEBRON*** | ***11/14*** | | | | ***X*** | ***X*** | | ***X*** | | ***X*** | | | | ***4*** | ***X*** | ***X*** | | ***X*** | | ***X*** | ***X*** | | ***5*** | | | | | | | | ***0*** | ***6*** | ***15*** |
| 18433 | Fawn Brook | MARLBOROUGH | 10/15 | | X | | | X | | | | | | | | 2 | X | X | X | X | | X | X | | 7 | | | | X | | | | 1 | 4 | 14 |
| ***18846*** | ***Fawn Brook*** | ***HEBRON*** | ***10/15*** | | ***X*** | | | ***X*** | | | ***X*** | | ***X*** | | | ***4*** | ***X*** | ***X*** | | ***X*** | | ***X*** | ***X*** | | ***5*** | | | | ***X*** | | | | ***1*** | ***2*** | ***12*** |
| 15888 | Fawn Brook, W. Branch | MARLBOROUGH | 10/15 | | X | | | X | | | | | | | | 2 | X | | | X | | X | X | | 4 | | | | | | | X | 1 | 6 | 13 |
| 17322 | Fourmile River | EAST LYME | 11/21 | | | | | | | X | | | | | | 2 | | | | | | X | | X | 2 | X | | | X | | X | | 3 | 3 | 10 |
| 18961 | Fraser Brook | SALEM | 10/31 | | | | | X | | | | | | | | 1 | X | | | X | | X | | | 3 | | X | | | | | | 1 | 1 | 6 |
| 15592 | French Brook | BOLTON | 11/15 | | | | | | | | | | X | | | 1 | X | | | | | X | X | X | 4 | | | | | | | X | 1 | 1 | 7 |
| ***16696*** | ***GOODHILL BROOK*** | ***WOODBURY*** | ***9/19*** | | | | ***X*** | ***X*** | | ***X*** | ***X*** | | | | | ***4*** | ***X*** | ***X*** | ***X*** | | | ***X*** | | | ***4*** | | | | ***X*** | | | ***X*** | ***2*** | ***5*** | ***15*** |
| ***16699*** | ***GRAVELLY BROOK*** | ***WOODSTOCK*** | ***10/31*** | | | | ***X*** | ***X*** | | ***X*** | | | | | ***X*** | ***4*** | | | ***X*** | ***X*** | | | | | ***2*** | | | | | | | | ***0*** | ***5*** | ***11*** |
| 15313 | Harris Brook | SALEM | 10/17 | | X | | | X | | | | | | | | 2 | X | | X | | | X | X | | 5 | | | | X | | | | 1 | 3 | 11 |
| 18729 | Harris Brook | SALEM | 10/31 | | X | | | X | | X | | | | | | 3 | X | X | X | | X | X | X | X | 8 | | | | | | | | 0 | 3 | 14 |
| 18817 | Hawleys Brook | EASTON | 10/10 | | | | | X | | X | | | | | | 2 | | | X | | | X | X | | 4 | | | | X | | | | 1 | 3 | 10 |
| 16167 | Jeremy River | COLCHESTER | 9/12 | | | | | X | | | | | | X | | 2 | X | | X | | X | X | X | | 5 | | | | X | | | | 1 | 5 | 13 |
| 17324 | Latimer Brook | EAST LYME | 11/14 | | | | | X | | | X | | | | | 2 | X | X | X | X | | | X | | 5 | X | | | | | X | | 2 | 2 | 11 |
| ***18413*** | ***Latimer Brook*** | ***EAST LYME*** | ***10/15*** | | ***X*** | | | ***X*** | | ***X*** | | | | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | ***X*** | ***8*** | ***X*** | | | | | ***X*** | ***X*** | ***3*** | ***1*** | ***16*** |
| ***18495*** | ***Latimer Brook*** | ***EAST LYME*** | ***10/15*** | | | | | ***X*** | | ***X*** | | | | ***X*** | | ***4*** | ***X*** | ***X*** | | ***X*** | | | ***X*** | | ***5*** | ***X*** | ***X*** | | | | | ***X*** | ***3*** | ***6*** | ***18*** |
| 16088 | Lebanon Brook | WOODSTOCK | 9/11 | | | | | X | | | | | | | | 1 | X | X | X | | | X | X | | 5 | | | | | | | | 0 | 0 | 6 |
| 18981 | Lyman Brook | MARLBOROUGH | 10/24 | | | | X | X | | | X | | | | | 3 | X | X | | | | X | X | | 4 | | | | | | | | 0 | 7 | 14 |

| Station # | Waterbody Name | Town | Date | Drunella | Isonychia | Epeorus | Peltoperlidae | Perlidae | Pteronarycs | Misc. Stonefly | Glossosoma | Apatania | Rhyacophilia | Brachycentrus | Lepidostoma | TOTAL Most Wanted | Hydropsychidae | Philopotamidae | Maccafertium | Psephenus | Corydalus | Nigronia | Dragonfly Families | Damselfly Families | TOTAL Moderately Wanted | Amphipoda | Isopoda | Leech | Midge | Simuliidae | Snail | Worm | TOTAL Least Wanted | TOTAL Other Taxa Count | GRAND TOTAL Taxa Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 1 | 2 | 3 | 4 | 5A | 5B | 5C | 6A | 6B | 7 | 8A | 8 B | | 9 | 10 | 11 | 12 | 13A | 13B | 14A | 14B | | 15A | 15B | 15C | 15D | 15E | 15F | 15G | | | |
| ***18982*** | ***Meadow Brook*** | ***COLCHESTER*** | ***9/28*** | | ***X*** | | | ***X*** | | | | | ***X*** | ***X*** | | ***4*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | | ***6*** | | | | | | | | ***0*** | ***4*** | ***14*** |
| 15211 | Merrick Brook | SCOTLAND | 10/31 | | X | X | | X | | | | | | | | 3 | | X | X | | | X | X | | 4 | | | | X | | | | 1 | 5 | 13 |
| 18871 | Moodus River | EAST HADDAM | 9/19 | | | | | X | | | X | | | | X | 3 | X | | X | X | X | X | X | X | 7 | | | | | X | | X | 2 | 2 | 14 |
| 16335 | Nonewaug River | WOODBURY | 9/19 | | X | | | X | | | | | | | | 2 | X | X | X | X | | X | X | | 6 | | | | X | | | | 1 | 2 | 12 |
| ***17923*** | ***Peckham Brook*** | ***WOODSTOCK*** | ***10/24*** | | | | ***X*** | ***X*** | | | ***X*** | | ***X*** | | | ***4*** | ***X*** | ***X*** | ***X*** | | | ***X*** | ***X*** | | ***5*** | ***X*** | | | | | | | ***1*** | ***4*** | ***14*** |
| 18983 | Pocotopaug Creek | EAST HAMPTON | 10/10 | | | | | X | | | X | | X | | | 3 | X | X | | X | | X | X | | 5 | X | | | | | | | 1 | 2 | 11 |
| 16995 | Railroad Brook | VERNON | 10/17 | | | | | X | | | | | | | | 1 | X | X | | X | | | X | | 4 | | | | | | | X | 1 | 2 | 8 |
| ***17703*** | ***Railroad Brook*** | ***VERNON*** | ***10/17*** | | | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | | | ***7*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***X*** | | ***6*** | | | | | | | ***X*** | ***1*** | ***3*** | ***17*** |
| 17971 | Railroad Brook | BOLTON | 11/15 | | | | | X | | | | | | | | 1 | X | X | X | X | | | X | | 6 | | | | X | | X | X | 3 | 3 | 13 |
| 18980 | Roaring Brook | CHESHIRE | 9/27 | | | | | X | | X | | | | | | 2 | | | | X | | X | | | 2 | | | | | | | | 0 | 1 | 5 |
| 14440 | Salmon River | EAST HAMPTON | 9/12 | | X | | | X | | | | | | X | | 3 | X | | X | X | X | X | X | | 6 | | | | X | | | X | 2 | 6 | 17 |
| 15007 | Sawmill Brook | MANSFIELD | 10/23 | | X | | | X | | | X | | | | | 3 | X | | | X | | X | | | 3 | | | | | | | | 0 | 2 | 8 |
| 16431 | Sprain Brook | WOODBURY | 9/19 | | X | | | | | | | | | | | 1 | X | X | X | X | | X | | | 5 | | | | X | | | X | 2 | 5 | 13 |
| 15713 | Still River | WOODSTOCK | 9/25 | | X | | | X | | | X | | | | | 3 | | | X | X | | X | X | | 4 | | | | X | | | | 1 | 1 | 9 |
| ***18967*** | ***Sutton's Brook*** | ***GREENWICH*** | ***11/20*** | | ***X*** | | | | | ***X*** | | | ***X*** | | | ***4*** | ***X*** | | ***X*** | | | | | | ***2*** | | | | ***X*** | | | | ***1*** | ***4*** | ***11*** |
| 18823 | Tucker Brook | VERNON | 10/17 | | | | | X | | | | | | | | 1 | X | X | | | | | X | | 3 | | | | | | | X | 1 | 1 | 6 |
| ***18958*** | ***Walker Brook*** | ***WASHINGTON*** | ***10/26*** | | | ***X*** | | | ***X*** | | | ***X*** | ***X*** | | | ***4*** | ***X*** | | ***X*** | ***X*** | | | | | ***3*** | | | | | | | | ***0*** | ***5*** | ***12*** |
| 17593 | Wappoquia Brook | POMFRET | 10/10 | | X | | | X | | | X | | | | | 3 | X | X | X | X | | X | X | | 6 | | | | | | | | 0 | 2 | 11 |
| 18984 | Willeys Brook (Christopher Brook) | EAST HAMPTON | 11/13 | | | | | | | | X | | X | | | 2 | X | X | X | | | X | X | | 5 | | | | | | X | X | 2 | 3 | 12 |
| ***17333*** | ***Wood Creek*** | ***BETHLEHEM*** | ***9/19*** | | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | ***10*** | ***X*** | ***X*** | ***X*** | ***X*** | | ***X*** | | | ***5*** | | | | | | | ***X*** | ***1*** | ***7*** | ***23*** |

# Interpreting Your Results

**2015 RBV monitoring locations that supported four of more 'Most Wanted' macroinvertebrate types, are considered to be characterized by excellent water quality conditions.** DEEP will integrate these '4 or more' results into the biennial water quality assessment process, noting them as one of Connecticut's healthy waters.

Table 6 provides guidance for how to interpret your RBV results. Table 6 is intended to serve as general guidance; Local RBV Program Coordinators are encouraged to contact the State RBV Coordinator to discuss follow-up actions for specific monitoring locations as needed.

Above: Students from RHAM High School proudly display their RBV voucher for the West Branch of Fawn Brook in Marlborough, CT. RHAM is a returning RBV participant, monitoring under the supervision of the Salmon River Watershed Partnership's local RBV program.

**Table 6.** Interpretation of RBV Results by Most Wanted Count.

| # 'Most Wanted' Organisms | What Does it Tell Us? |
|---|---|
| **0-1** | ***Drop this site from future monitoring efforts…***<br>More information is needed to determine why Most Wanted types were rare or absent in the sample. Reasons may include poor water quality, but it could also be that this just isn't the right type of site for RBV. If there are no concerns regarding the volunteer sampling effort, follow-up RBV monitoring is not suggested for this site.<br>**DEEP Assessment Decision**: No Assessment Made<br>**Recommended Volunteer Follow-Up Action**: Do not revisit this site with RBV. |
| **2** | ***Double check whether this is a good spot to be using the RBV method…***<br>More information is needed to determine why Most Wanted types were limited in the sample. Reasons may include less than excellent water quality or unusual flow conditions (i.e. very high or very low) during the monitoring season; however, it could also be that this site does not have adequate riffle habitat or that your volunteers may need additional, targeted training.<br>**DEEP Assessment Decision**: No Assessment Made<br>**Recommended Volunteer Follow-Up Action**:<br>Volunteers should cease using RBV to monitor this site if:<br>• The site does not meet the RBV site requirements (i.e. no riffle habitat or watershed area >15 mi2);<br>• The MMI model score prediction is less than 48 (see Appendix B); or<br>• The site was previously monitored using RBV and less than 4 most wanted were found during the last monitoring event.<br>If this is a first time monitoring location, and none of the above bullets are true, assign the site a low to medium priority for follow-up monitoring. Volunteers may also need additional targeted training to insure that they are collecting their sample from riffle habitat, checking for organisms attached to cobbles, and able to distinguish between organism types when sorting.<br>***(Continued on next page)*** |

| # 'Most Wanted' Organisms | What Does it Tell Us? |
|---|---|
| **3** | ***A <u>Very Good Sign</u> – Keep this Site on Your Radar!***<br>Three Most Wanted or very sensitive macroinvertebrate types in a sample is a strong signal of good to excellent water quality. Although three most wanted is not statistically enough data for DEEP to list the site as 'fully supporting' State water quality standards without additional monitoring, particularly if this is the first piece of data we have at this site, this is a great find!<br><br>**DEEP Assessment Decision**: No Assessment Made… but consider trying again!<br><br>**Recommended Volunteer Follow-Up Action**: If this was the first time the site was monitored with RBV, and the site's water quality is predicted to be high (e.g. high MMI score) this site should be a high priority candidate for re-monitoring next RBV season. Pay careful attention to net placement within riffle habitat, avoiding the edges of the stream. Instruct volunteers to also give extra attention to rock scrubbing/substrate kicking during the 2015 monitoring effort. A second look at that cobble before you toss it might be all it takes to get that 4th Most Wanted type in your sample!<br><br>If however this site was previously monitored with RBV and 3 or fewer most wanted types were found, this site should be assigned a lower priority than those sites in your region that have not yet been monitored with RBV and that are predicted to have a water quality/MMI score greater than 48. |
| **4+** | ***Excellent!! Lots of very sensitive macroinvertebrate types were present – you found the treasure!***<br>This is a very clear signal of excellent water quality as the 'Most Wanted' types cannot survive in degraded streams or otherwise low water quality conditions.<br><br>**DEEP Assessment Decision**: Considered for 'Fully Supporting' State aquatic life use standards. Fully supporting sites will be listed in next Integrated Water Quality Report and submitted to EPA and Congress<br><br>**Recommended Volunteer Follow-Up Action**: Revisit every 2 to 5 years to continue documenting the excellent health of this stream. |

# Appendix A: 2015 Local RBV Program Contact Information

| | | |
|---|---|---|
| Bolton Conservation Commission | Rod Parlee | captundra@aol.com |
| CT Audubon Society - Pomfret Center Citizen Science Program | Paula Coughlin | paulacoughlin@charter.net |
| East Lyme Conservation Commission | Penny Howell | Penny.howell@ct.gov |
| Eightmile River Wild & Scenic Coordinating Committee & | Pat Young | pyoung@eightmileriver.org |
| Three Rivers Community College | Diba Khan-Bureau | dkhan-bureau@trcc.commnet.edu |
| Fairfield University &<br>Connecticut's Beardsley Zoo CDC | Jim Biardi<br>Gian Morresi | jbiardi@fairfield.edu<br>cdc@beardsleyzoo.org |
| Farmington River Watershed Association | Alisa Phillips-Griggs | aphillipsgriggs@frwa.org |
| Housatonic Valley Association | Mike Jastremski | Mj.hva@outlook.com |
| Niantic River Watershed Committee | Judy Rondeau | judy.rondeau@comcast.net |
| Pomperaug River Watershed Coalition | Carol Haskins | chaskins@pomperaug.org |
| Quinnipiac River Watershed Association | Becky Martorelli | beckym06451@yahoo.com |
| Salmon River Watershed Partnership | Pat Young | salmonriverct@att.net |
| The Last Green Valley | Jean Pillo | jean.pillo@conservect.org |
| Town of Greenwich IWWA | Doreen Carroll-Andrews | dcarroll@greenwichct.org |
| Vernon Conservation Commission | Tom Ouellette<br>Jane Seymour | tom.r.ouellette@gmail.com<br>jane.seymour@ct.gov |
| WAMOGO High School | Chris Brittain | cbrittain@rsd6.org |
| Washington Montessori School | Tom Fahsbender | tfahsbender@washingtonmontessori.org |

# Appendix B: 2015 RBV Monitoring Station Description & Details

The following provides a description of the official CT DEEP monitoring station to which 2015 RBV samples were assigned. Note that the actual RBV monitoring location may have been slightly upstream or downstream of the official DEEP station.

Locations are sorted by DEEP Station ID number. The number of most wanted types found during 2015 monitoring, the associated upstream watershed area and the predicted water quality score (i.e. Macroinvertebrate Multimetric Index or MMI score) are shown at the far right.

*Organization Abbreviation Key:*

| Code | Local RBV Program Name |
|---|---|
| BCC | Bolton Conservation Commission |
| CAS | CT Audubon Society - Pomfret Center |
| CRCCD | CT River Coastal Conservation District |
| ELCC | East Lyme Conservation Commission |
| FRWA | Farmington River Watershed Association |
| FFLDU/ZOO | Fairfield University & Connecticut's Beardsley Zoo CDC |
| GIWWA | Town of Greenwich IWWA |

| Code | Local RBV Program Name |
|---|---|
| HVA | Housatonic Valley Association |
| NRWC | Niantic River Watershed Committee |
| PRWC | Pomperaug River Watershed Coalition |
| QRWA | Quinnipiac River Watershed Association |
| SRWP | Salmon River Watershed Partnership |
| TLGV | The Last Green Valley |
| TRCC | Three Rivers Community College |

| Code | Local RBV Program Name |
|---|---|
| NRCA | UConn Natural Resources Conservation Academy Program |
| VCC | Vernon Conservation Commission |
| WHS | WAMOGO High School |
| WMS | Washington Montessori School |
| 8MILE | Eightmile River Wild & Scenic Coordinating Committee |
| | |
| | |

| Station # | Stream Name | Volunteer Location Description | Town | Latitude | Longitude | Upstream Area (mi2) | Predicted Water Quality Score (0-100) | Local RBV Program | Date | Most Wanted Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 14440 | Salmon River | at Salmon River State Forest picnic area | EAST HAMPTON | 41.55260 | -72.44960 | 101.9 | 67 | SRWP | 9/12/15 | 3 |
| 14523 | Burton Brook | 200ft upstream, 15 ft. of Walton Road Bridge | SALISBURY | 41.96670 | -73.43410 | 3.7 | 64 | HVA | 10/22/15 | 1 |
| 15007 | Sawmill Brook | 100 ft. upstream of culvert on Conantville Rd | MANSFIELD | 41.73980 | -72.20170 | 3.7 | 61 | TLGV | 10/23/15 | 3 |
| 15138 | Bantam River | Route 63 | LITCHFIELD | 41.73050 | -73.18680 | 21.6 | 58 | WHS | 11/9/15 | 4 |
| 15211 | Merrick Brook | 100 ft. upstream of Bass Rd | SCOTLAND | 41.68000 | -72.10480 | 11.5 | 68 | TLGV | 11/2/15 | 3 |
| 15312 | Beaver Brook | 350m from Beaver Brook Rd, 36m down river from wood bridge | LYME | 41.40995 | -72.32906 | 8.6 | 76 | TRCC | 10/17/15 | 4 |
| 15313 | Harris Brook | Walden Preserve | SALEM | 41.47330 | -72.28510 | 6.2 | 67 | TRCC | 10/17/15 | 2 |
| 15315 | Burnham's Brook | mouth | EAST HADDAM | 41.46030 | -72.33430 | 5.4 | 68 | 8MILE | 10/20/15 | 0 |
| 15519 | Bee Brook | 100m upstream of Shepaug Confluence | WASHINGTON | 41.65710 | -73.31810 | 4.8 | 63 | WMS | 10/23/15 | 3 |
| 15592 | French Brook | 126 French Road (downstream) | BOLTON | 41.74420 | -72.44850 | 0.8 | 60 | BCC | 11/15/15 | 1 |
| 15594 | Barrows Brook | 50 ft. upstream from Tankerhoosen River confluence | VERNON | 41.84020 | -72.43650 | 0.6 | 47 | VCC | 10/17/15 | 4 |
| 15713 | Still River | at Rte. 198 - south of Eastford/Woodstock line | WOODSTOCK | 41.91580 | -72.07740 | 7.8 | 70 | CAS | 9/25/15 | 2 |

| Station # | Stream Name | Volunteer Location Description | Town | Latitude | Longitude | Upstream Area (mi2) | Predicted Water Quality Score (0-100) | Local RBV Program | Date | Most Wanted Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 15888 | Fawn Brook, W. Branch | 75ft above confluence with east branch | MARLBOROUGH | 41.63920 | -72.41550 | 4.2 | 72 | SRWP | 10/15/15 | 2 |
| 16088 | Lebanon Brook | at culvert crossing Rte. 198/Eastford Rd - downstream of Griggs Pond | WOODSTOCK | 41.99450 | -72.08360 | 2.1 | 79 | CAS | 9/11/15 | 1 |
| 16119 | Day Pond Brook | 15 upstream confluence with Salmon River | COLCHESTER | 41.56230 | -72.43380 | 1.1 | 61 | SRWP | 11/21/15 | 3 |
| 16122 | Early Brook | 24m upstream of Haywardville Rd | EAST HADDAM | 41.49780 | -72.34350 | 2.3 | 81 | TRCC | 10/31/15 | 3 |
| 16139 | Brown Brook | 50m upstream of Rte. 63 crossing | CANAAN | 41.92670 | -73.27990 | 5.7 | 94 | HVA | 10/19/15 | 6 |
| 16167 | Jeremy River | 0.25 mi downstream Rte. 149 and Rte. 2 | COLCHESTER | 41.58940 | -72.39480 | 35.8 | 62 | SRWP | 9/12/15 | 2 |
| 16266 | Bolton Pond Brook | 634 Hop River Rd, Upstream of bridge | BOLTON | 41.77840 | -72.41670 | 5.1 | 57 | BCC | 11/15/15 | 2 |
| 16323 | Coginchaug River | 50 ft. upstream of Rte. 157 crossing | MIDDLETOWN | 41.53940 | -72.68580 | 33.3 | 55 | CRCCD | 10/15/15 | 2 |
| 16324 | Dickinson Creek | 50 yds. downstream of Comstock Bridge Rd | COLCHESTER | 41.55750 | -72.44200 | 15.1 | 64 | SRWP | 9/12/15 | 4 |
| 16333 | Bullet Hill Brook | Ewald Park, approx. 300 ft. US confluence with Pomperaug River | SOUTHBURY | 41.48260 | -73.22050 | 3.6 | 44 | PRWC | 9/19/15 | 3 |
| 16335 | Nonewaug River | Adjacent to the USGS streamflow gage, access from Mill Road | WOODBURY | 41.57830 | -73.17450 | 16.3 | 54 | PRWC | 9/19/15 | 2 |
| 16431 | Sprain Brook | DS Route 47 adjacent to Papermill Road | WOODBURY | 41.56960 | -73.22590 | 11.0 | 62 | PRWC | 9/19/15 | 1 |
| 16440 | Fawn Brook | 100 ft. downstream from Rte. 66 intersection | HEBRON | 41.64830 | -72.39930 | 6.2 | 73 | SRWP | 11/14/15 | 4 |
| 16696 | Goodhill Brook | Grassy Hill Road, DS from bridge crossing | WOODBURY | 41.54080 | -73.23420 | 1.9 | 63 | PRWC | 9/19/15 | 4 |
| 16699 | GRAVELLY BROOK | Intersection of County rd. and Rte. 169 | WOODSTOCK | 41.98390 | -71.99390 | 1.7 | 72 | CAS | 10/31/15 | 4 |
| 16995 | Railroad Brook | Within Belding WMA, off Bread & Milk Road | VERNON | 41.82772 | -72.44828 | 2.9 | 61 | VCC | 10/17/15 | 1 |
| 17322 | Fourmile River | Spring Rock Rd | EAST LYME | 41.33900 | -72.25920 | 5.4 | 61 | ELCC | 11/21/15 | 2 |
| 17324 | Latimer Brook | 100 m US of St Mathias Church, RT 161 | EAST LYME | 41.40730 | -72.22170 | 11.6 | 61 | NRWC | 11/14/15 | 2 |
| 17333 | Wood Creek | UP Arch Bridge Road | BETHLEHEM | 41.62750 | -73.22570 | 3.4 | 68 | PRWC | 9/19/15 | 9 |
| 17593 | Wappoquia Brook | Downstream of Rte 169 | POMFRET | 41.87225 | -71.96232 | 5.8 | 65 | CAS | 10/10/15 | 2 |
| 17703 | Railroad Brook | 500 ft. upstream of Valley Falls Pond | VERNON | 41.81913 | -72.44547 | 1.9 | 58 | VCC | 10/17/15 | 7 |
| 17765 | Dickinson Creek | 100ft downstream viaducts, airline trail | COLCHESTER | 41.56313 | -72.44951 | 14.8 | 64 | SRWP | 10/18/15 | 2 |
| 17923 | Peckham Brook | 100 Paine District Rd | WOODSTOCK | 41.97708 | -71.96292 | 1.2 | 69 | CAS | 10/24/15 | 3 |
| 17971 | Railroad Brook | 1/4 mile north of Tunnel parking area | BOLTON | 41.79220 | -72.45299 | 0.5 | 58 | BCC | 11/15/15 | 1 |
| 18413 | Latimer Brook | 100 yds. US Colony Road | EAST LYME | 41.38397 | -72.21429 | 16.2 | 54 | NRWC | 10/15/15 | 4 |
| 18433 | Fawn Brook | 150 ft. below confluence of east and west branches | MARLBOROUGH | 41.62235 | -72.40910 | 12.8 | 73 | SRWP | 10/15/15 | 2 |
| 18495 | Latimer Brook | East of Flanders IGA Plaza, US of RT 1 | EAST LYME | 41.36726 | -72.20808 | 17.2 | 54 | NRWC | 10/15/15 | 4 |
| 18499 | Cranberry Meadow Brook | upper, off Walnut Hill Rd | EAST LYME | 41.40869 | -72.23103 | 2.2 | 65 | ELCC | 10/19/15 | 1 |
| 18518 | Eightmile River | Devil's Hopyard Road, first parking lot on right from 2 | EAST HADDAM | 41.47300 | -72.33900 | 13.8 | 79 | TRCC | 10/17/15 | 5 |
| 18729 | Harris Brook | 0.25 mile upstream Music Vale Rd | SALEM | 41.49502 | -72.26955 | 2.0 | 66 | TRCC | 10/31/15 | 3 |
| 18817 | Hawley's Brook | Within Trout Brook Preserve, Paul Busch Trail, ~1km north of parking lot | EASTON | 41.25111 | -73.34250 | 0.5 | 100 | FFLDU/ ZOO | 10/10/15 | 2 |

| Station # | Stream Name | Volunteer Location Description | Town | Latitude | Longitude | Upstream Area (mi2) | Predicted Water Quality Score (0-100) | Local RBV Program | Date | Most Wanted Count |
|---|---|---|---|---|---|---|---|---|---|---|
| 18821 | Baker Brook, tributary to | School Rd near Hebron Rd, downstream from two culverts | BOLTON | 41.74794 | -72.42410 | 0.6 | 59 | BCC | 11/15/15 | 0 |
| 18823 | Tankerhoosen River, tributary to ("Tucker Brook") | 100 ft. upstream of Tankerhoosen Confluence | VERNON | 41.82364 | -72.48720 | 1.5 | 46 | VCC | 10/17/15 | 1 |
| 18846 | Fawn Brook | 75 ft. above confluence with west branch | HEBRON | 41.62790 | -72.40813 | 6.4 | 73 | SRWP | 10/15/15 | 4 |
| 18871 | Moodus River | upstream Gristmill Rd crossing | EAST HADDAM | 41.50859 | -72.44826 | 12.1 | 68 | SRWP | 9/19/15 | 3 |
| 18936 | Eightmile River | Lyme Land Conservation Trust Pleasant Valley Preserve | LYME | 41.41528 | -72.33762 | 45.8 | 63 | TRCC | 10/17/15 | 2 |
| 18958 | Walker Brook | Just downstream from intersection of Walker Brook Rd and Chapin Rd | WASHINGTON | 41.61645 | -73.35282 | 1.9 | 63 | WMS | 10/26/15 | 4 |
| 18961 | Fraser Brook | Salem Community Park | SALEM | 41.48108 | -72.25275 | 0.3 | 78 | TRCC | 10/31/15 | 1 |
| 18962 | East Branch Eightmile River | 100m downstream of Darling Road culvert/bridge | SALEM | 41.44221 | -72.30620 | 19.9 | 65 | TRCC | 10/31/15 | 4 |
| 18963 | Birch Mountain Brook | at Case Pond lot | MANCHESTER | 41.76683 | -72.48109 | 1.5 | 48 | NRCA | 10/12/15 | 2 |
| 18964 | Birch Mountain Brook | at Spring Street | MANCHESTER | 41.76130 | -72.49036 | 1.7 | 47 | NRCA | 10/17/15 | 0 |
| 18965 | Birch Mountain Brook | at Birch Mountain Rd pull off, upstream Blue Ridge Dr. | MANCHESTER | 41.75563 | -72.47113 | 0.4 | 48 | NRCA | 11/1/15 | 6 |
| 18966 | Birch Mountain Brook | Downstream Blue Ridge Drive | MANCHESTER | 41.75752 | -72.47293 | 0.6 | 48 | NRCA | 11/22/15 | 2 |
| 18967 | Byram River, Tributary to ("Sutton's Brook") | 900ft Southeast of Audubon Lane cul-de-sac | GREENWICH | 41.08603 | -73.70111 | 0.1 | 53 | GIWWA | 11/20/15 | 4 |
| 18971 | Converse Pond Brook | 100m downstream of Lake Avenue | GREENWICH | 41.10526 | -73.65308 | 2.3 | 52 | GIWWA | 11/30/15 | 4 |
| 18979 | Enders Brook | 50m upstream Rte. 219, within Enders State Forest | GRANBY | 41.95346 | -72.88381 | 3.0 | 71 | FRWA | 10/6/15 | 7 |
| 18980 | Roaring Brook | 300m west of Roaring Brook Rd, within Roaring Brook Park | CHESHIRE | 41.48306 | -72.94417 | 0.7 | 56 | QRWA | 9/27/15 | 2 |
| 18981 | Lyman Brook | 400 ft. downstream of Glenwood Drive cul-de-sac | MARLBOROUGH | 41.63271 | -72.45228 | 0.6 | 57 | SRWP | 10/24/15 | 3 |
| 18982 | Meadow Brook | 200 ft. downstream Prospect Hill Rd crossing | COLCHESTER | 41.58306 | -72.37972 | 10.9 | 54 | SRWP | 9/28/15 | 4 |
| 18983 | Pocotopaug Creek | downstream Rte. 16 crossing | EAST HAMPTON | 41.56424 | -72.50734 | 5.5 | 51 | SRWP | 10/10/15 | 3 |
| 18984 | Wiley's Brook ("Christopher Brook") | 47 Clark Hill Rd | EAST HAMPTON | 41.59571 | -72.52038 | 0.2 | 41 | SRWP | 11/13/15 | 2 |
| 18996 | Beaver Brook | 200 ft. upstream of Bass Rd | SCOTLAND | 41.68417 | -72.10924 | 7.7 | 74 | TLGV | 10/14/15 | 3 |
| 18998 | English Neighborhood Brook | crosses Rte. 169 | WOODSTOCK | 41.99117 | -71.99663 | 4.6 | 73 | CAS | 10/9/15 | 2 |
| 19000 | Beaver Brook | 500 ft. downstream of Bass Rd | SCOTLAND | 41.68217 | -72.10880 | 7.8 | 74 | TLGV | 10/4/15 | 1 |
| 19001 | Bigelow Brook | DS of bridge at Boston Hollow Rd | ASHFORD | 41.94347 | -72.14836 | 15.7 | 62 | CAS | 9/18/15 | 2 |
| 19010 | Branch Brook | Upstream Center turnpike within Yale Forest | EASTFORD | 41.94825 | -72.12365 | 2.1 | 93 | CAS | 10/2/15 | 2 |

# Appendix C: 2015 RBV Monitoring Location Photographs

**Yellow stars indicate sites for which a 2015 voucher containing four or more 'most wanted' taxa was submitted to DEEP*

*Station 18821 – Unnamed tributary to Baker Brook*
*Monitored on 11/15/2015 by the Bolton Conservation Commission.*
*Result – 0 Most Wanted types*

*Station 15312 – Beaver Brook*
*Monitored on 10/17/2015 by Three Rivers Community College*
*Result – 4 Most Wanted types*

*Station 15138 – Bantam River*
*Monitored 11/09/2015 by WAMOGO High School*
*Result – 4 Most Wanted types*

*Station 15594 - Barrows Brook*
*Monitored on 10/17/2015 by the Vernon Conservation Commission*
*Result – 4 Most Wanted types*


*Station 19001 - Bigelow Brook*
*Monitored on 09/18/2015 by CT Audubon Society's Citizen Science Program*
*Results – 2 Most Wanted types*

*Station 18996 – Beaver Brook*
*Monitored on 10/14/2015 by The Last Green Valley*
*Result – 3 Most Wanted types*

*Station 19000 – Beaver Brook*
*Monitored on 10/05/2015 by The Last Green Valley and Trout Unlimited (Thames Valley Chapter)*
*Result – 1 Most Wanted taxa*

*Station 18963 - Birch Mountain Brook*
*Monitored on 10/12/2015 by Jen Lee (UConn NRCA Program)*
*Result – 2 Most Wanted types*

*Station 15519 – Bee Brook*
*Monitored on 10/23/2015 by the Washington Montessori School*
*Result – 3 Most Wanted types*

*Station 18964 – Birch Mountain Brook*
*Monitored on 10/17/2015 by Jen Lee (UConn NRCA Program)*
*Result – 0 Most Wanted types*

*Station 18965 – Birch Mountain Brook*
*Monitored on 11/01/2015 by Jen Lee (UConn NRCA Program)*
*Result – 6 Most Wanted types*

*Station 18966 – Birch Mountain Brook*
*Monitored on 11/22/2015 by Jen Lee (UConn NRCA Program)*
*Result – 2 Most Wanted types*

*Station 16266 - Bolton Pond*
*Monitored on 11/15/2015 by Bolton Conservation Commission*
*Result – 2 Most Wanted types*

*Station 19010 – Branch Brook*
*Monitored on 10/02/2015 by CT Audubon Society's Citizen Science Program*
*Result – 2 Most Wanted types*

*Station 16139 – Brown Brook*
*Monitored on 10/19/2015 by the Housatonic Valley Association*
*Result – 6 Most Wanted types*

*Station 16333 – Bullet Hill Brook*
*Monitored on 09/21/2015 by the Pomperaug River Watershed Coalition*
*Result – 3 Most Wanted types*

*Station 15315 – Burnham Brook*
*Monitored on 10/20/2015 by the Eightmile River Wild & Scenic Coordinating Committee w/ The Nature Conservancy*
*Result – 0 Most Wanted types*


*Station 18967 – "Sutton Brook"*
*Monitored on 11/20/2015 by the Greenwich IWWA*
*Result – 4 Most Wanted types*

*Station 14523 – Burton Brook*
*Monitored on 10/22/2015 by the Housatonic Valley Association w/ Housatonic Valley Regional High School*
*Result – 1 Most Wanted type*

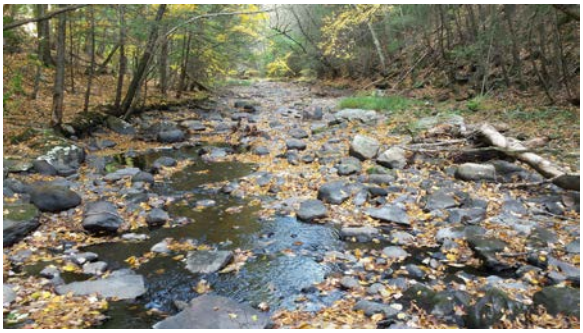
*Station 16323 – Coginchaug River*
*Monitored on 10/15/2015 by CRCCD & Middletown HS*
*Result – 2 Most Wanted types*

*Station 18971 – Converse Pond Brook*
*Monitored on 11/30/2015 by the Greenwich IWWA*
*Result – 4 Most Wanted types*

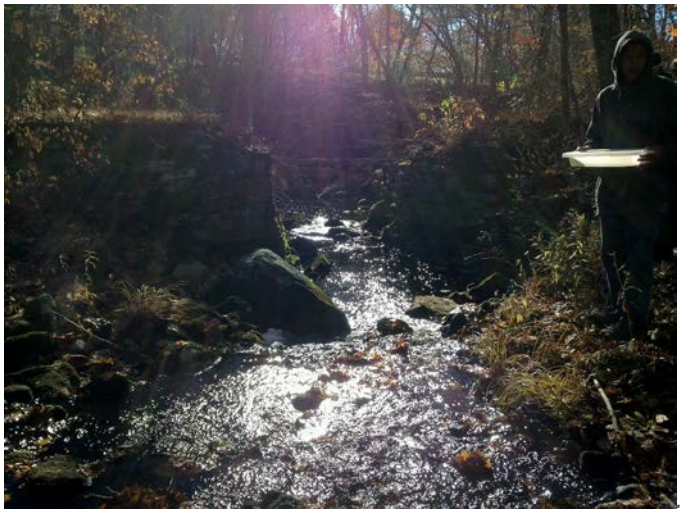
*Station 18499 – Cranberry Meadow Brook*
*Monitored on 10/19/2015 by the East Lyme Commission for the Conservation of Natural Resources*
*Result – 1 Most Wanted type*

*Station 16119 – Day Pond Brook*
*Monitored on 11/21/2015 by the Salmon River Watershed Partnership*
*Result – 3 Most Wanted types*

*Station 16324 – Dickinson Creek*
*Monitored on 09/12/2015 by the Salmon River Watershed Partnership*
*Result – 4 Most Wanted types*



*Station 17765 – Dickinson Creek*
*Monitored on 10/18/2015 by the Salmon River Watershed Partnership, the Colchester Land Trust & the Colchester Girl Scouts*
*Result – 2 Most Wanted types*



*Station 16122 – Early Brook*
*Monitored on 10/31/2015 by Three Rivers CC*
*Result – 3 Most Wanted types*

*Station 18962 – East Branch Eightmile River*
*Monitored on 10/31/2015 by Three Rivers Community College*
*Result – 4 Most Wanted types*

*Station 18979 –Enders Brook*
*Monitored on 10/06/2015 by the Farmington River Watershed Association*
*Result – 7 Most Wanted types*

*Station 18518 –Eightmile River*
*Monitored on 10/17/2015 by Three Rivers Community College*
*Result – 5 Most Wanted types*

*Station 18998 – English Neighborhood Brook*
*Monitored on 10/09/2015 by the CT Audubon Society Citizen Science Program*
*Result – 2 Most Wanted types*

*Station 18936 –Eightmile River*
*Monitored on 10/17/2015 by Three Rivers Community College*
*Result – 2 Most Wanted types*

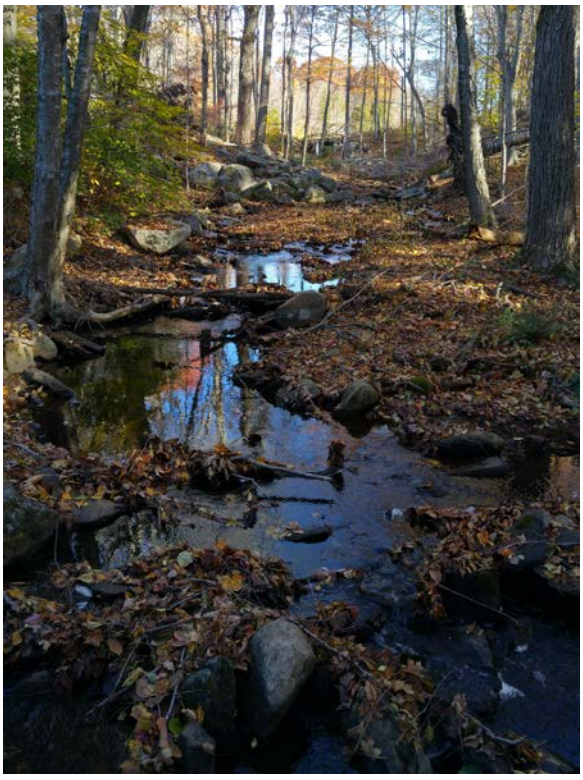
*Station 16440 – Fawn Brook, East Branch*
*Monitored on 10/14/2015 by the Salmon River Watershed Partnership*
*Result – 4 Most Wanted types*

*Station 18433 – Fawn Brook*
*Monitored on 10/15/2015 by the Salmon River Watershed Partnership w/ RHAM High School*
*Result – 2 Most Wanted types*

*Station 18846 – Fawn Brook, East Branch*
*Monitored on 10/15/2015 by the Salmon River Watershed Partnership w/ RHAM High School*
*Result – 4 Most Wanted types*

*Station 15888 – Fawn Brook, West Branch*
*Monitored on 10/15/2015 by the Salmon River Watershed Partnership w/ RHAM High School*
*Result – 2 Most Wanted types*

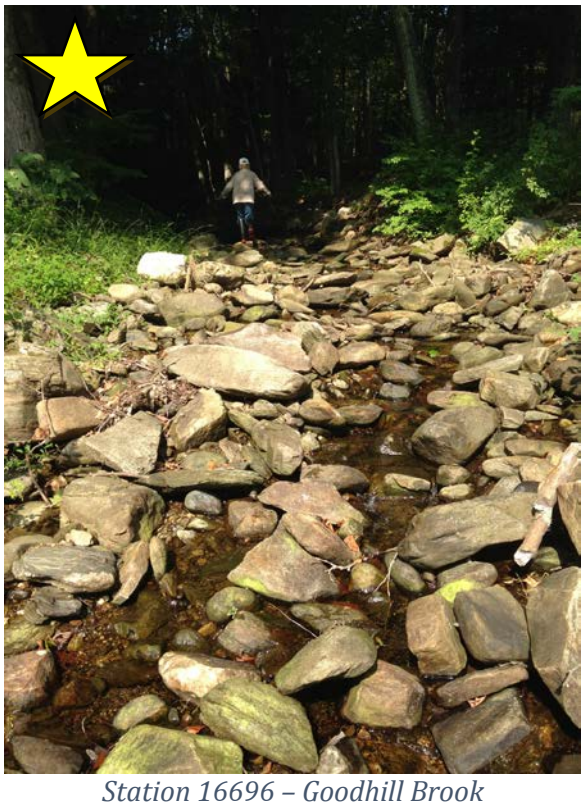
*Station 17322 – Fourmile River*
*Monitored on 11/21/2015 by the East Lyme Commission for the Conservation of Natural Resources*
*Result – 2 Most Wanted types*



*Station 18961 – Fraser Brook*
*Monitored on 10/31/2015 by Three Rivers Community College*
*Result – 1 Most Wanted types*

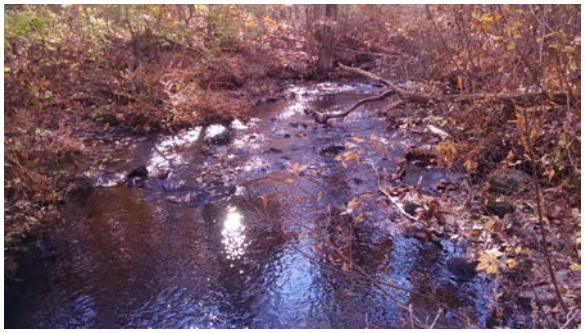
*Station 15592 – French Brook*
*Monitored on 11/15/2015 by the Bolton Conservation Commission*
*Result – 1 Most Wanted type*


*Station 16699 – Gravelly Brook*
*Monitored on 10/31/2015 by the CT Audubon Society Citizen Science Program*
*Result – 4 Most Wanted types*

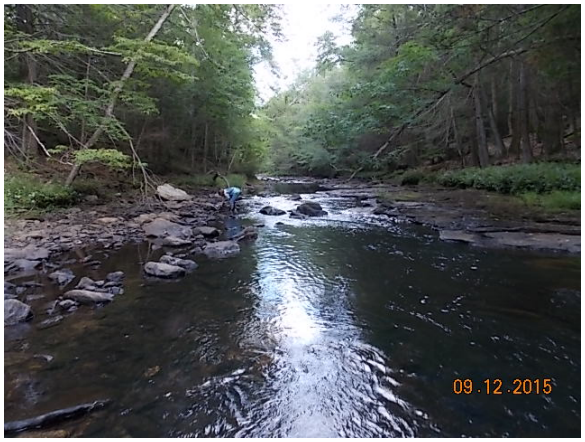


*Station 16696 – Goodhill Brook*
*Monitored on 09/19/2015 by the Pomperaug River Watershed Coalition*
*Result – 4 Most Wanted types*

*Station 15313 – Harris Brook*
*Monitored on 10/17/2015 by Three Rivers Community College*
*Result – 2 Most Wanted types*



*Station 18729 – Harris Brook*
*Monitored on 10/31/2015 by Three Rivers Community College*
*Result – 3 Most Wanted types*




*Station 16167 – Jeremy River*
*Monitored on 09/12/2015 by the Salmon River Watershed Partnership*
*Result – 2 Most Wanted types*

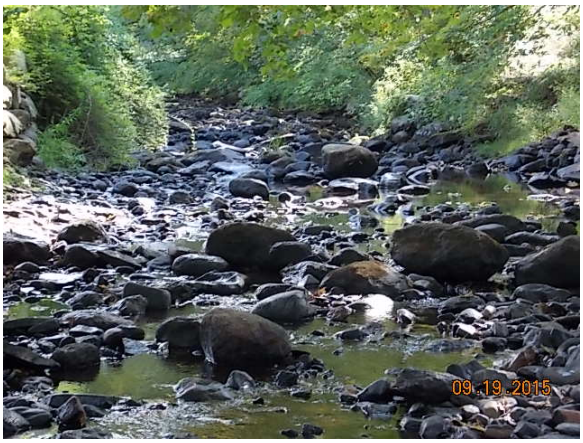
*Station 17324 – Latimer Brook*
*Monitored on 11/14/2015 by the Niantic River Watershed Committee & East Lyme Cub Scout Pack 7*
*Result – 2 Most Wanted types*

*Station 18413 – Latimer Brook*
*Monitored on 10/15/2015 by the Niantic River Watershed Committee*
*Result – 4 Most Wanted types*

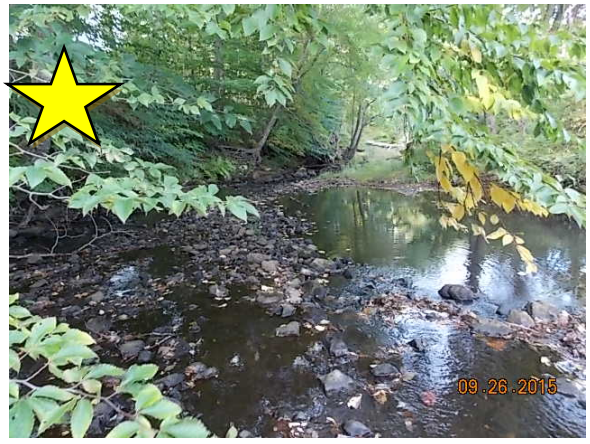
*Station 18495 – Latimer Brook*
*Monitored on 10/15/2015 by the Niantic River Watershed Committee*
*Result – 4 Most Wanted types*

*Station 16088 – Lebanon Brook*
*Monitored on 09/11/2015 by the CT Audubon Society Citizen Science Program*
*Result – 1 Most Wanted type*

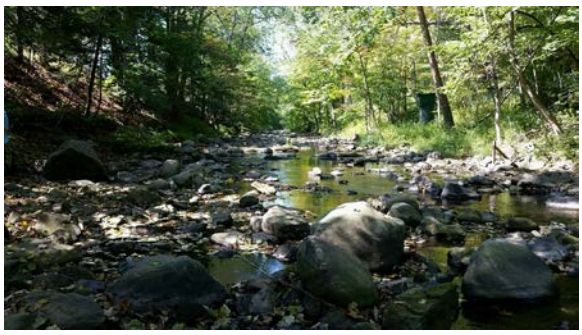
*Station 18981 – Lyman Brook*
*Monitored on 10/24/2015 by the Salmon River Watershed Partnership*
*Result – 3 Most Wanted types*




*Station 18871 – Moodus River*
*Monitored on 09/19/2015 by the Salmon River Watershed Partnership*
*Result – 3 Most Wanted types*




*Station 18982 – Meadow Brook*
*Monitored on 09/28/2015 by the Salmon River Watershed Partnership*
*Result – 4 Most Wanted types*



*Station 16335 – Nonewaug River*
*Monitored on 09/19/2015 by the Pomperaug River Watershed Coalition*
*Result – 2 Most Wanted types*

*Station 15211 – Merrick Brook*
*Monitored on 11/02/2015 by The Last Green Valley*
*Result – 3 Most Wanted types*


*Station 17923 – Peckham Brook*
*Monitored on 10/24/2015 by the CT Audubon Society Citizen Science Program*
*Result – 3 Most Wanted types*

*Station 18983 – Pocotopaug Creek*
*Monitored on 10/10/2015 by the Salmon River Watershed Partnership*
*Result – 3 Most Wanted types*

*Station 16995 – Railroad Brook*
*Monitored on 10/17/2015 by the Vernon Conservation Commission*
*Result – 1 Most Wanted type*

*Station 17703 – Railroad Brook*
*Monitored on 10/17/2015 by the Vernon Conservation Commission*
*Result – 7 Most Wanted types*

*Station 17971 – Railroad Brook*
*Monitored on 11/15/2015 by the Vernon Conservation Commission*
*Result – 1 Most Wanted type*

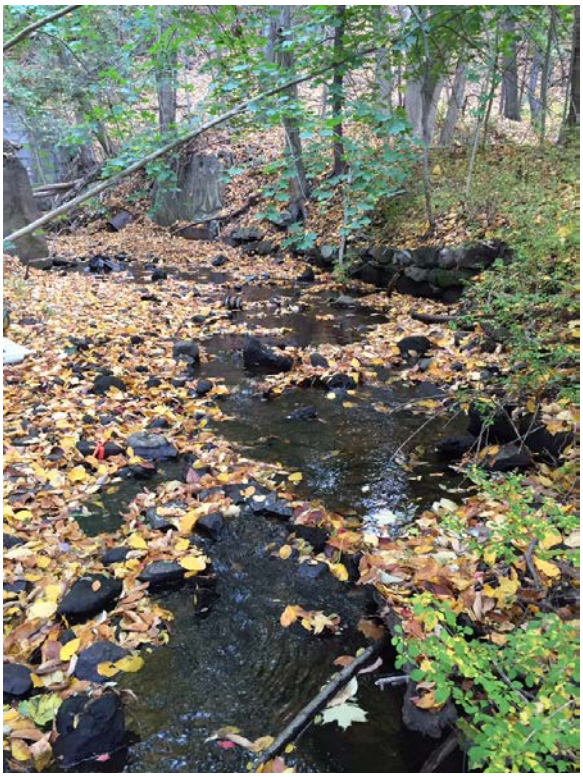
*Station 18980 – Roaring Brook*
*Monitored on 09/27/2015 by the Quinnipiac River Watershed Association*
*Result – 2 Most Wanted types*

*Station 14440 – Salmon River*
*Monitored on 09/12/2015 by the Salmon River Watershed Partnership w/ the CT River Coastal Conservation District & Middletown High School*
*Result – 3 Most Wanted types*

*Station 15007 – Sawmill Brook*
*Monitored on 10/23/2015 by The Last Green Valley Water Quality Monitoring Program*
*Result – 3 Most Wanted types*

*Station 16431 – Sprain Brook*
*Monitored on 09/19/2015 by the Pomperaug River Watershed Coalition*
*Result – 1 Most Wanted type*


*Station 15713 – Still River*
*Monitored on 09/25/2015 by the CT Audubon Society Citizen Science Program*
*Result – 2 Most Wanted types*



*Station 18823 – "Tucker Brook" (Unnamed tributary to the Tankerhoosen River)*
*Monitored on 10/17/2015 by the Vernon Conservation Commission*
*Result – 1 Most Wanted type*

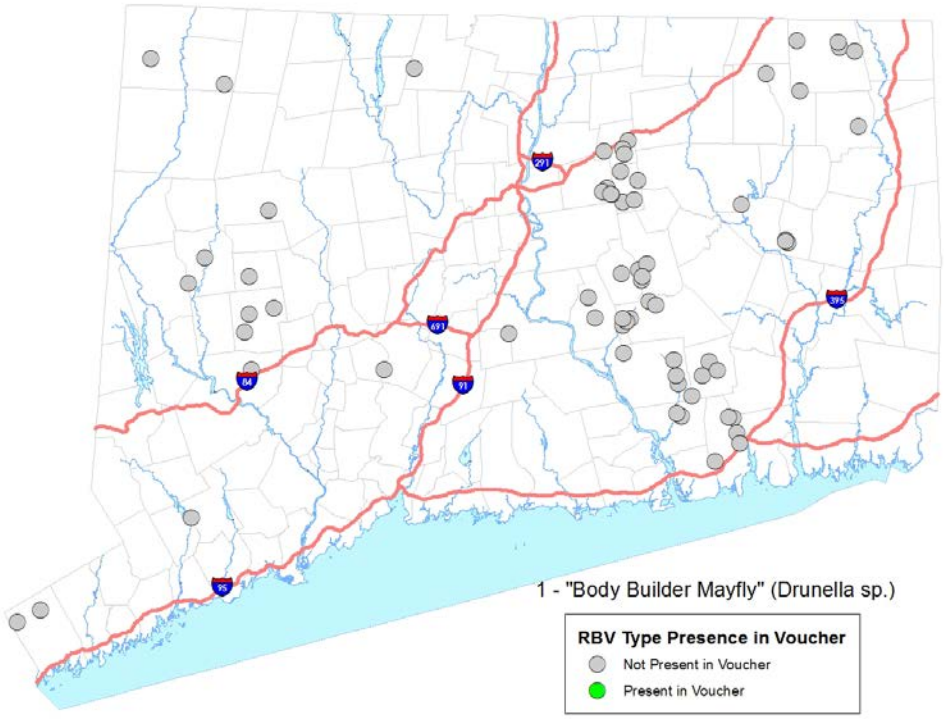
*Station 18958 – Walker Brook*
*Monitored on 10/26/2015 by the Washington Montessori School*
*Result – 4 Most Wanted types*

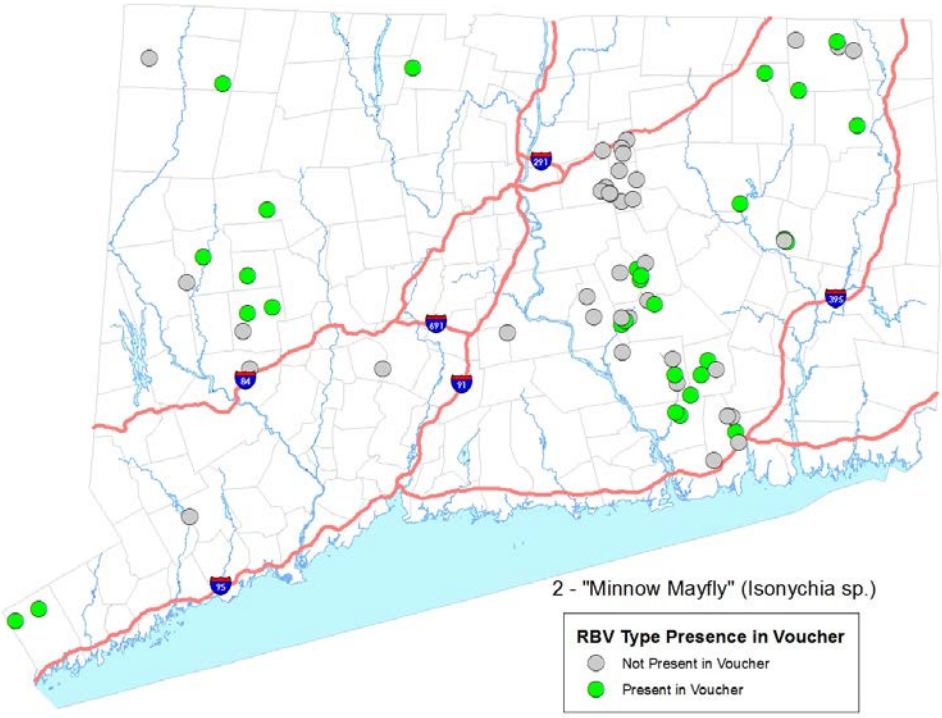
*Station 18984 – Willeys Brook**
*(*Also referred to locally as "Christopher Brook)*
*Monitored on 11/13/2015 by the Salmon River Watershed Partnership w/ the East Hampton HS Environmental Club*
*Result – 2 Most Wanted types*

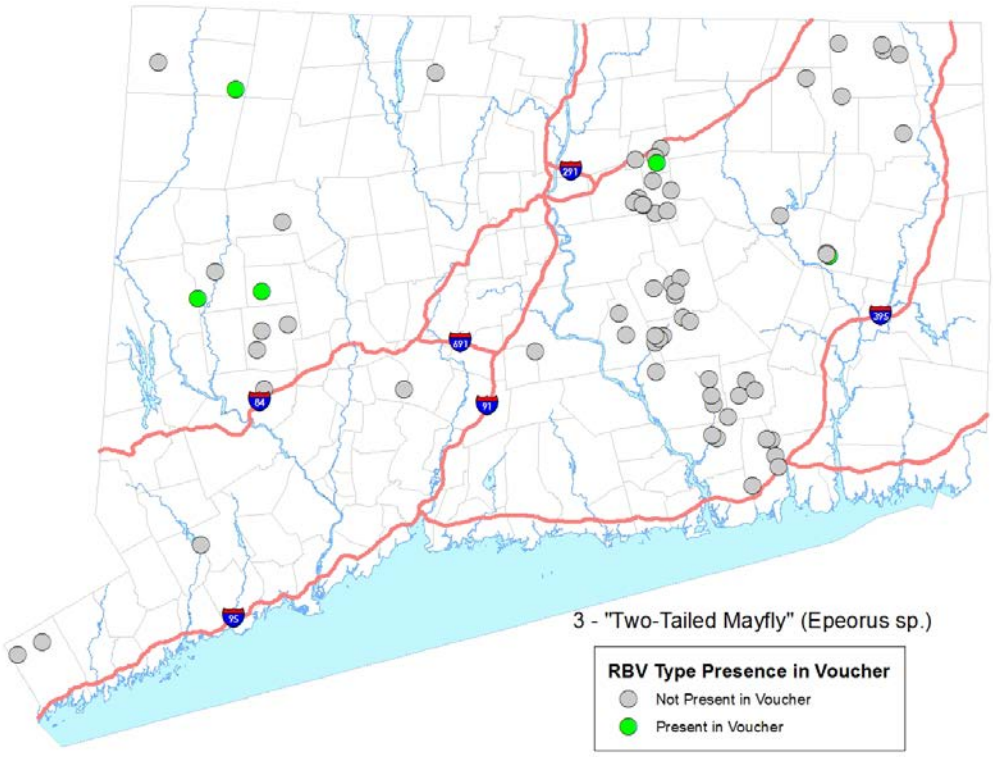

*Station 17593 – Wappoquia Brook*
*Monitored on 10/10/2015 by the CT Audubon Society Citizen Science Program*
*Result – 2 Most Wanted types*

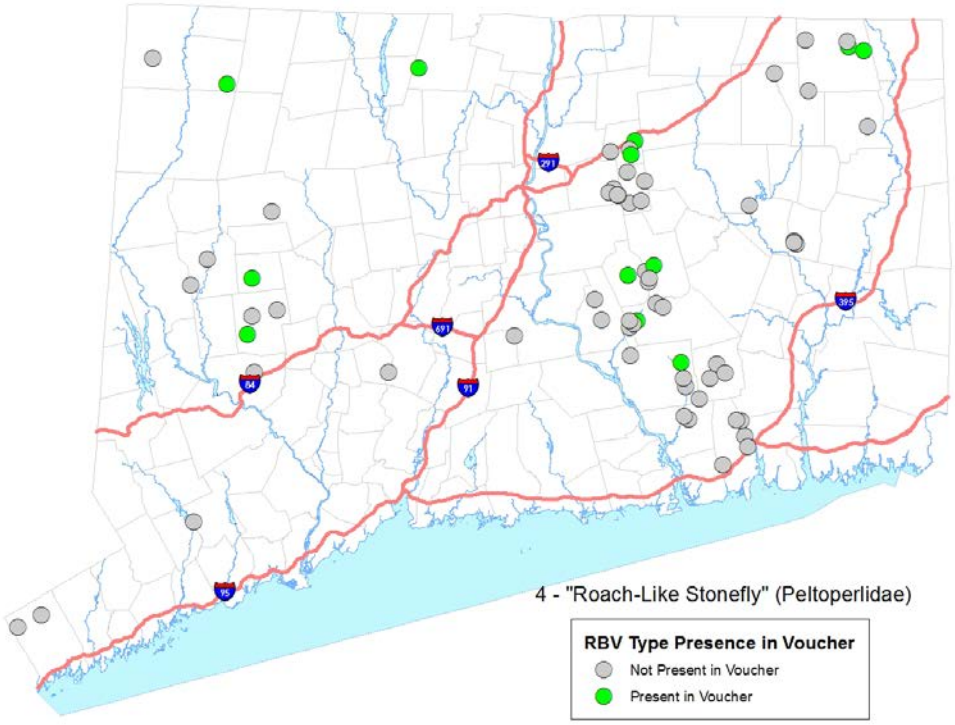
*Station 17333 – Wood Creek*
*Monitored on 09/19/2015 by the Pomperaug River Watershed Coalition*
*Result – 9 Most Wanted types*

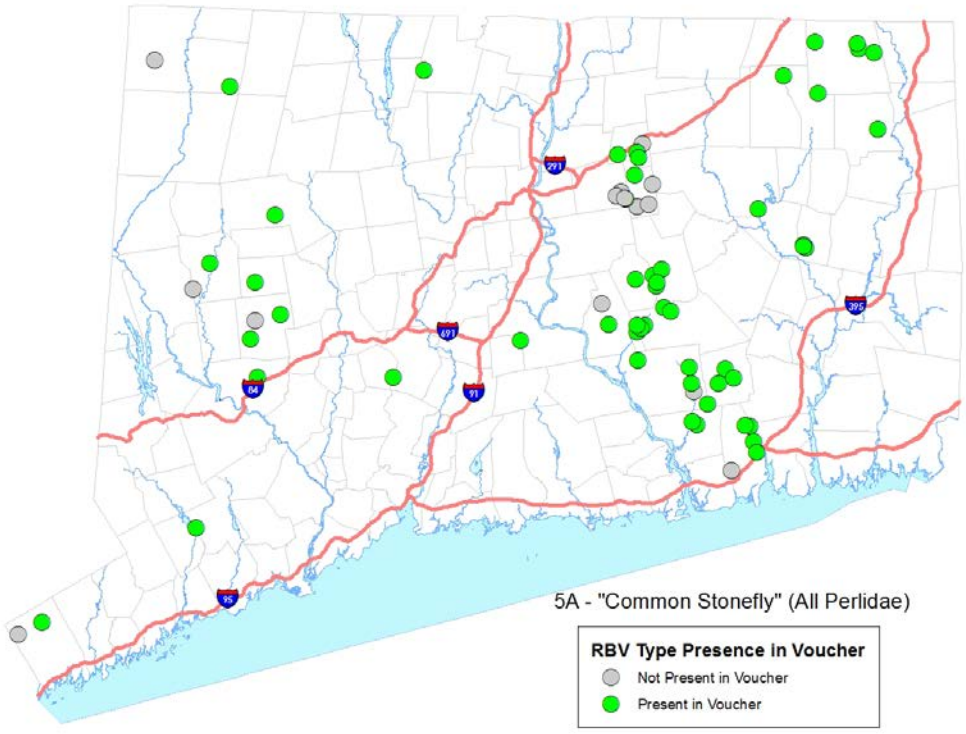
# Appendix D:
# 2015 RBV 'Most Wanted' Types Occurrence Maps



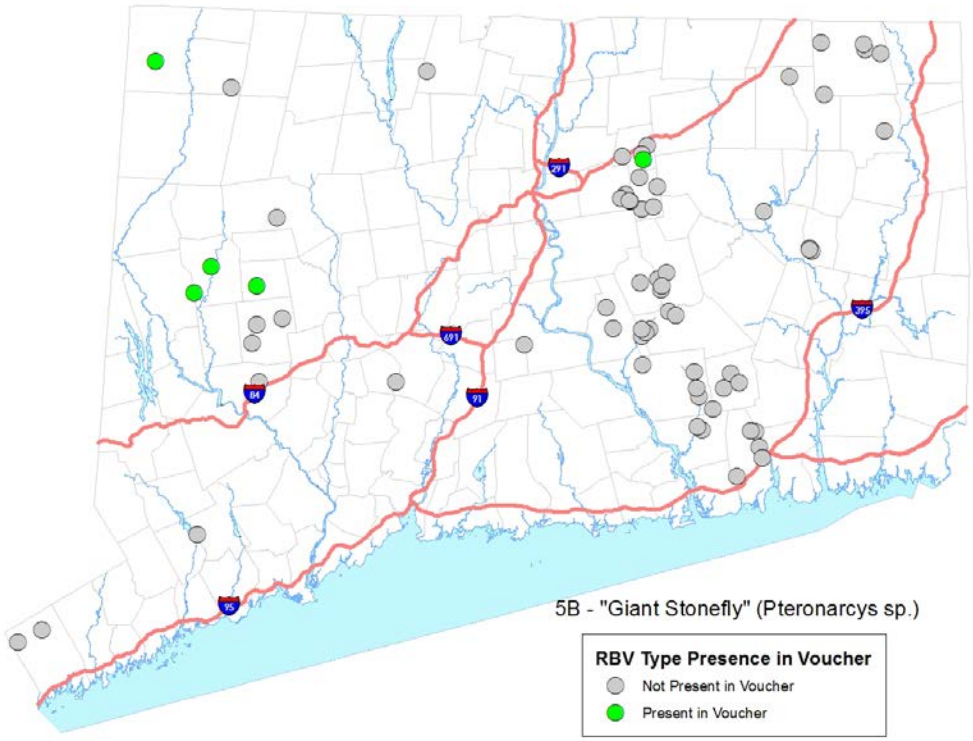




291
691
84
91
395
95
3 - "Two-Tailed Mayfly" (Epeorus sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher

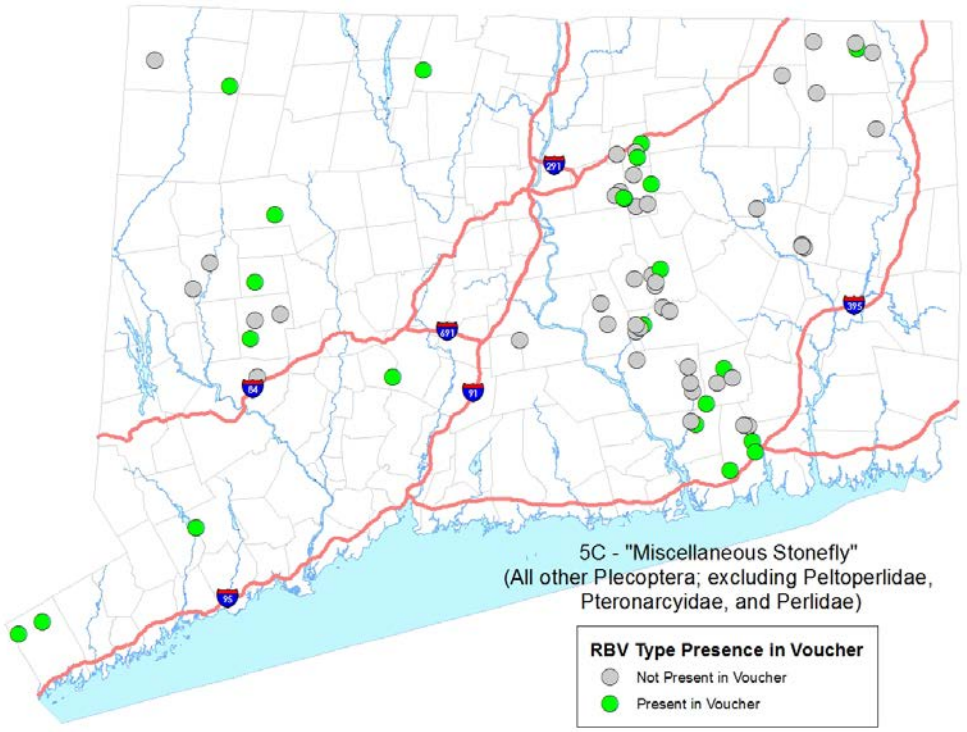

291
691
84
91
395
95
4 - "Roach-Like Stonefly" (Peltoperlidae)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher

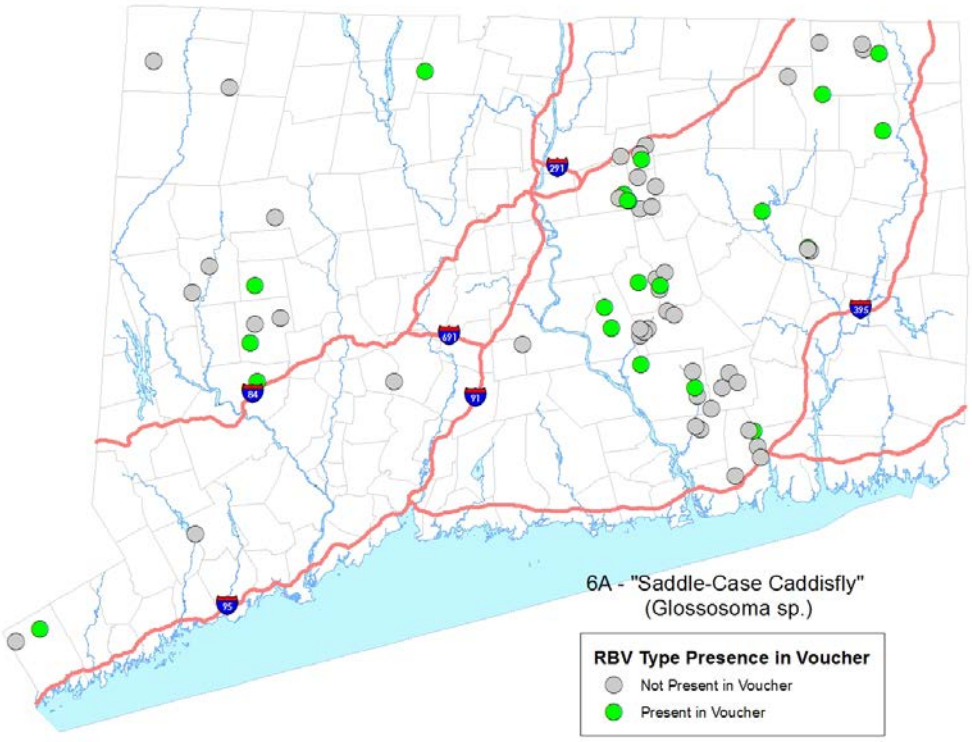


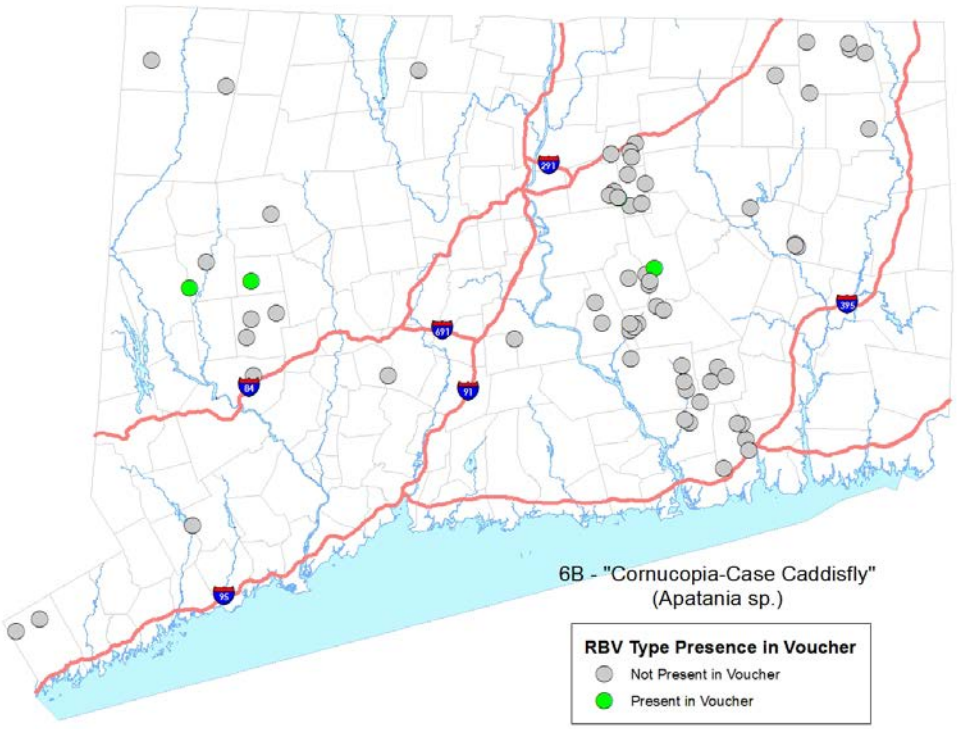

5A - "Common Stonefly" (All Perlidae)

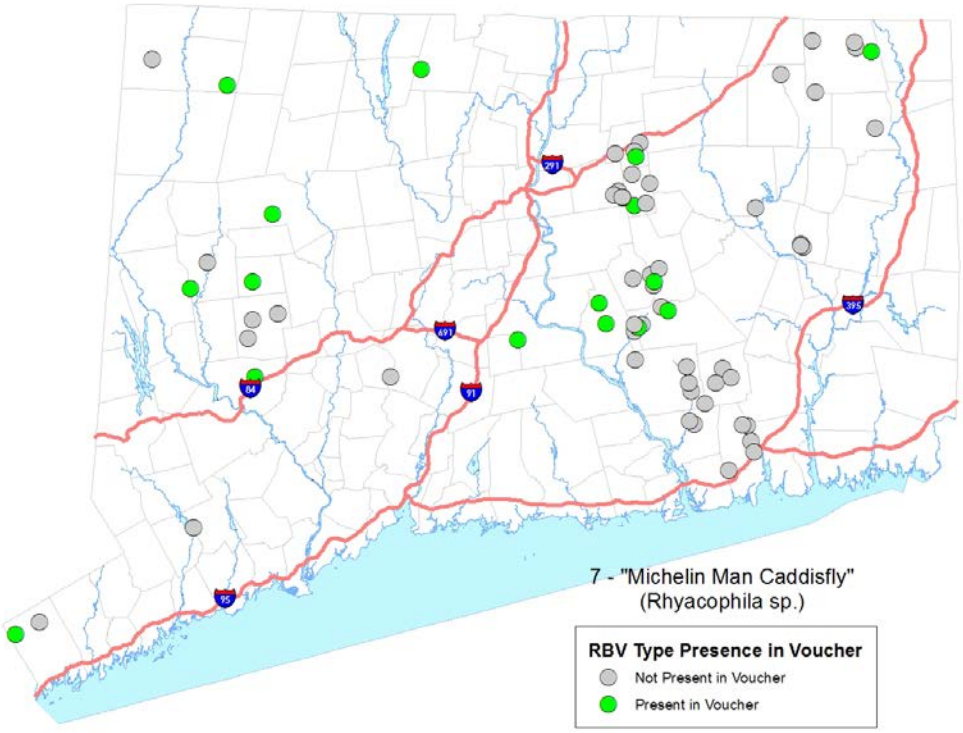


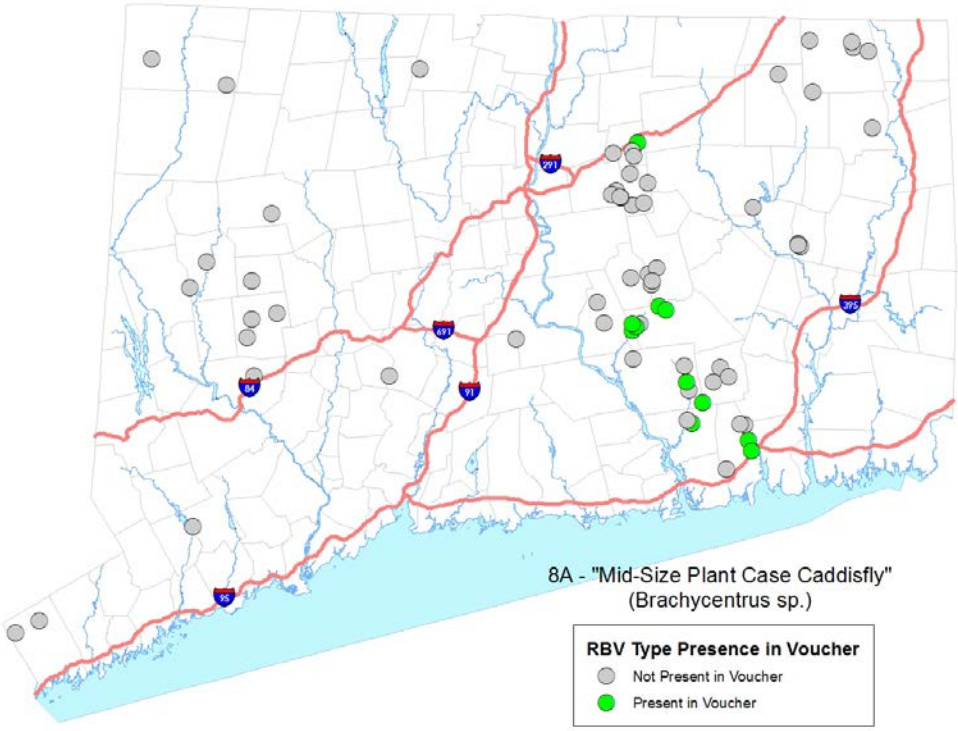

5B - "Giant Stonefly" (Pteronarcys sp.)

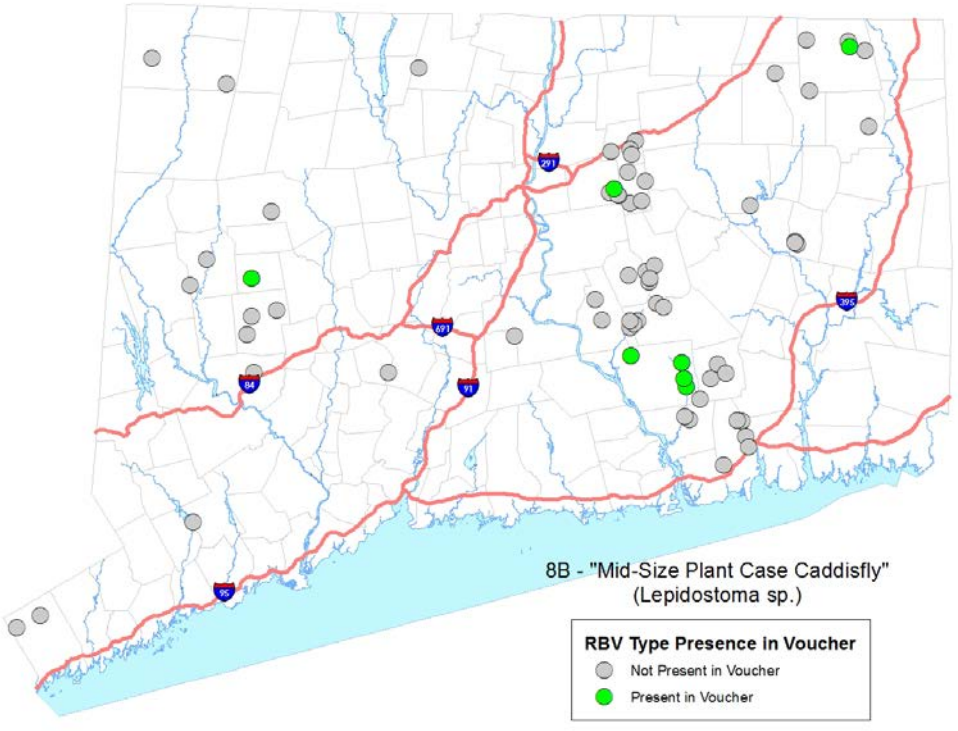

5C - "Miscellaneous Stonefly"
(All other Plecoptera; excluding Peltoperlidae, Pteronarcyidae, and Perlidae)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher


6A - "Saddle-Case Caddisfly"
(Glossosoma sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher


6B - "Cornucopia-Case Caddisfly"
(Apatania sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher


7 - "Michelin Man Caddisfly"
(Rhyacophila sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher


8A - "Mid-Size Plant Case Caddisfly"
(Brachycentrus sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher


8B - "Mid-Size Plant Case Caddisfly"
(Lepidostoma sp.)
RBV Type Presence in Voucher
Not Present in Voucher
Present in Voucher