Rapid Bioassessment in Wadeable Streams & Rivers by Volunteer Monitors

Annual Summary Report # 13

2011

State of Connecticut
Department of Energy and Environmental Protection
Bureau of Water Protection & Land Reuse

Executive Summary

The Rapid Bioassessment in Wadeable Streams and Rivers by Volunteer Monitors program (RBV) is a macroinvertebrate collection protocol developed by the Connecticut Department of Energy and Environmental Protection (DEEP), Bureau of Water Protection and Land Reuse, Ambient Monitoring Program (herein referred to as WPLR). The goal of RBV is to provide volunteer monitoring programs with a quick, efficient, and standardized methodology for the collection of macroinvertebrate community data from wadeable streams. This data can be used to screen for either very good or very poor water quality and augment monitoring conducted by WPLR. All support materials including a more detailed description of the program, the RBV methodology, data sheets, sorting guides, macroinvertebrate cards, informational brochure, and annual summary reports are available on the DEEP volunteer monitoring web page (www.ct.gov/dep/rbv). To obtain additional information about RBV or to become involved, please contact Mike Beauchene, volunteer monitoring coordinator, by phone (860) 424-4185 or email mike.beauchene@ct.gov

2011 PARTICIPATION STATISTICS:

Number of monitoring locations (Appendix A)	**117**
Number of samples collected	**120**
Number of waterbodies monitored	**68**
Number of fall samples > or = 4 "Most Wanted" types	**24**
Number of individual participants	**400+**
Number of groups participating in 2011	**21**
Number of groups participating for the first time	**5**

WPLR would like to thank all of the participants who collected RBV data under the sponsorship of the following groups and individuals (underline is a hyperlink to a web page):

Bolton Conservation Commission, Brunswick School, Colchester Boy Scouts, Connecticut Audubon Society at Pomfret Citizen Science Program, E.O. Smith Depot Road Campus, Farmington Alternative High School, Farmington Academy Montessori School, Farmington River Watershed Association, Housatonic Valley Association (Roxbury Conservation Commission & Shepaug River Association), Litchfield Montessori School Nature Conservancy-Devils Den, Pomperaug River Watershed Coalition, Quinebaug/Shetucket Heritage Corridor The Last Green Valley Water Quality Monitoring Program, Quinnipiac River Watershed Association, Salmon Brook Watershed Association, Salvatore DeCarli, Three Rivers Community Technical College, Trout Unlimited-Candlewood Valley Chapter, Washington Montessori School, and Woodstock Academy.

This report along with other documents produced by the monitoring and assessment program is available on the DEEP web page at the following link:

http://www.ct.gov/dep/cwp/view.asp?a=2719&q=487892&depNav_GID=1654

The RBV Program

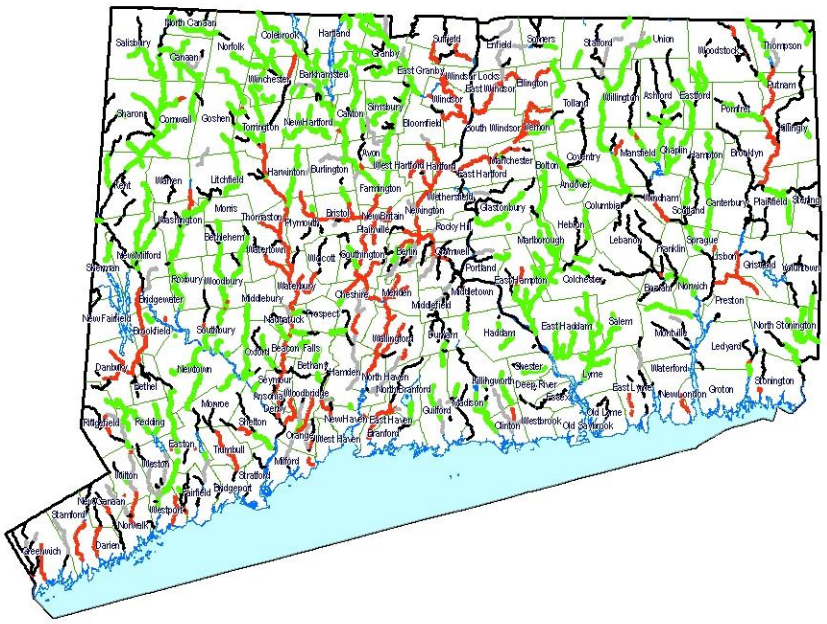
The RBV program includes 33 macroinvertebrate taxa, each with distinct shape, structure, color, or behavior (Appendix B). In order for an organism to be included in the RBV program each must meet 3 criteria; first the organism should have a statewide distribution, second the organism should provide key information about the river system, and third the organism has a unique behavior or morphological characteristic easily observed by first time participants. Each of these organisms has been placed into 1 of 4 categories ***most wanted*** (panels 1-8b) consists of macroinvertebrates typically found in streams characterized by outstanding water quality. ***Moderately wanted*** (panels 9-14) are those found in a range of conditions from outstanding to good water quality. ***Least wanted*** (panels 15a-g) consists of those found in all types of water quality conditions, from outstanding to poor. *Others* (no panels have been developed) represent organisms that can be very common or are very familiar to participants but do not meet the 3 criteria listed above. The "other" category of organisms was added to the RBV program starting in 2005 based on suggestions from RBV participants. Detailed information about each organism can be found on the field identification panels. The panels are available on the DEEP web page at (RBV Macroinvertebrate Cards). The name of each of the 3 qualitative categories is intended to characterize water quality and is not intended to imply that those in the least wanted category are harmful or result in nuisance conditions.

The RBV Method

The RBV method is based upon the Rapid Bioassessment Protocols developed by the US EPA and implemented by WPLR staff (Barbour et al 1999, Plafkin et al 1989). The RBV method requires that the participants sample the macroinvertebrate community from a stream riffle habitat and produce a voucher collection accompanied by a data sheet (Appendix B). A voucher collection is produced by placing at least one specimen of each type of organism collected into a leak-proof container with a descriptive label and isopropyl alcohol. The data sheet documents the different organisms present at the site as well as the relative abundance of each in the sample. Both the voucher sample and the data sheet are submitted to WPLR. The contents of the vial are verified against the field data sheet and then entered into a Microsoft Access database. It is important to note that the final data for the sample is based upon the voucher collection and not what has been recorded on the data sheet. If an organism is listed on the data sheet but not present in the voucher collection, it does not count.

The RBV method occurs annually in the fall and takes approximately 2 hours to complete at the monitoring site. Prior to collecting the macroinvertebrates most participants attended a 3-hour training session in which the WPLR volunteer monitoring coordinator describes the program and introduces the participants to the RBV method. WPLR has 15 sets of equipment available for short-term loan to participants. Those groups that have participated for at least 2 years and feel confident with the methodology may opt to forgo the official WPLR training session and simply borrow the equipment.

Biological data use: The primary use of macroinvertebrate data by WPLR is to compare the community structure to narrative biological criteria described in the current Water Quality Standards. This comparison can provide an assessment of the degree of impairment and therefore the degree to which water quality standards are supported. Data for each segment assessed can be found in the Integrated Water Quality Report to Congress. The figure below represents the aquatic life use support assessments reported in the 2010 integrated report. Green lines represent stream segments supporting aquatic life goals while red segments are the converse, not supporting aquatic life goals.



Data collected according to the RBV method can be used as a screening tool to identify stream sections with either very high or very low water quality. The documentation (voucher collection) of key indicator organisms (the most wanted) in a section of a stream provides a record of the benthic community present for a collection date and time. However, the absence of such indicators in any sample does not automatically mean the water quality is low, but rather further information may be required. In some situations current WPLR method may be necessary to definitively assess water quality. It is important to note that the "least wanted" are able to thrive in many environmental conditions while the "most wanted" thrive only under conditions of low environmental stress. Therefore the most definitive RBV data are the collections with good representation of organisms in the "most wanted" category.

For those samples with 4 or more types of organisms in the "most wanted" category WPLR's monitoring staff is confident the location fully supports the State Water Quality Standard for aquatic life. Samples with 3 or fewer types in the "most wanted" category do not definitively indicate impairment or water quality degradation. In these situations additional review is conducted by WPLR to determine the particular species present, land use characteristics upstream of the monitoring location, and the potential for sampling/methodology errors.

RBV limitations

The RBV method was developed to be a simple, non-technical, and educational method for use by citizens interested in evaluating the water quality of a local resource while concurrently generating useful information for WPLR. To date the program has been successful at meeting both objectives. However, to accomplish these, the RBV method requires the participant preserve at least one of each different type of organism present. The final list of organisms in a sample is based on WPLR review of the datasheet against the organisms present in the voucher collection. If the organism is not in the voucher but recorded on the datasheet, it is not counted as part of the sample, even if the organism was actually present. Successful implementation of the RBV method is dependent upon an adequate collection of a sample

from a riffle habitat, sorting organisms to find all of the different types present, and most importantly placing 1of each into a leak-proof container with alcohol and a label. It is not dependent upon accurate identification by the participant. Any variable (site selection, incomplete collection, high stream flow, inclement weather conditions, nuisance insects, rushed time constraints, or rotted/desiccated voucher specimens) that reduces the quality or completeness of any step in the RBV method may ultimately reduce the number of different types found. As a result, errors made will tend to underestimate the macroinvertebrate community present and may overestimate water quality degradation. To insure that each organism present at a site is documented, it is critical that at least one of each different type of organism is placed in the voucher collection. In most situations sampling by WPLR using the current WPLR protocol will be necessary to definitively assess water quality.

TO BECOME INVOLVED

If sampling the macroinvertebrate life is interesting to you we would love to have your participation. There are several ways to help DEEP assess water quality of rivers and streams. First if you are an individual or a family, please refer to the groups who already participate as shown in appendix A. If you live close to one of these organizations each would love to have additional hands to assist in their efforts. A second way to become involved is to organize a new group of volunteers. If you are able to assemble a team of 3-4 adults and would like to start a program of you own you should attend a "train the trainer" session.

Each year several "train the trainer" sessions will be held. These 1-day sessions are free of charge and target those people who will be team leaders or will be sponsoring an RBV day and as such responsible for training the various participants. To obtain a list of currently scheduled train the trainer sessions please contact Mike Beauchene by phone (860) 424-4185 or email at mike.beauchene@ct.gov

2011 RBV Summary:

2011 marked the 13th year citizen groups collected and submitted samples to WPLR under the RBV program. Approximately 400 participants collected 117 (105 fall and 15 spring) samples (Figure 1).

Twenty (21) citizen groups collected 120 samples from 117 locations on 68 different waterbodies during 2011 (Figure 2 and Appendix A).

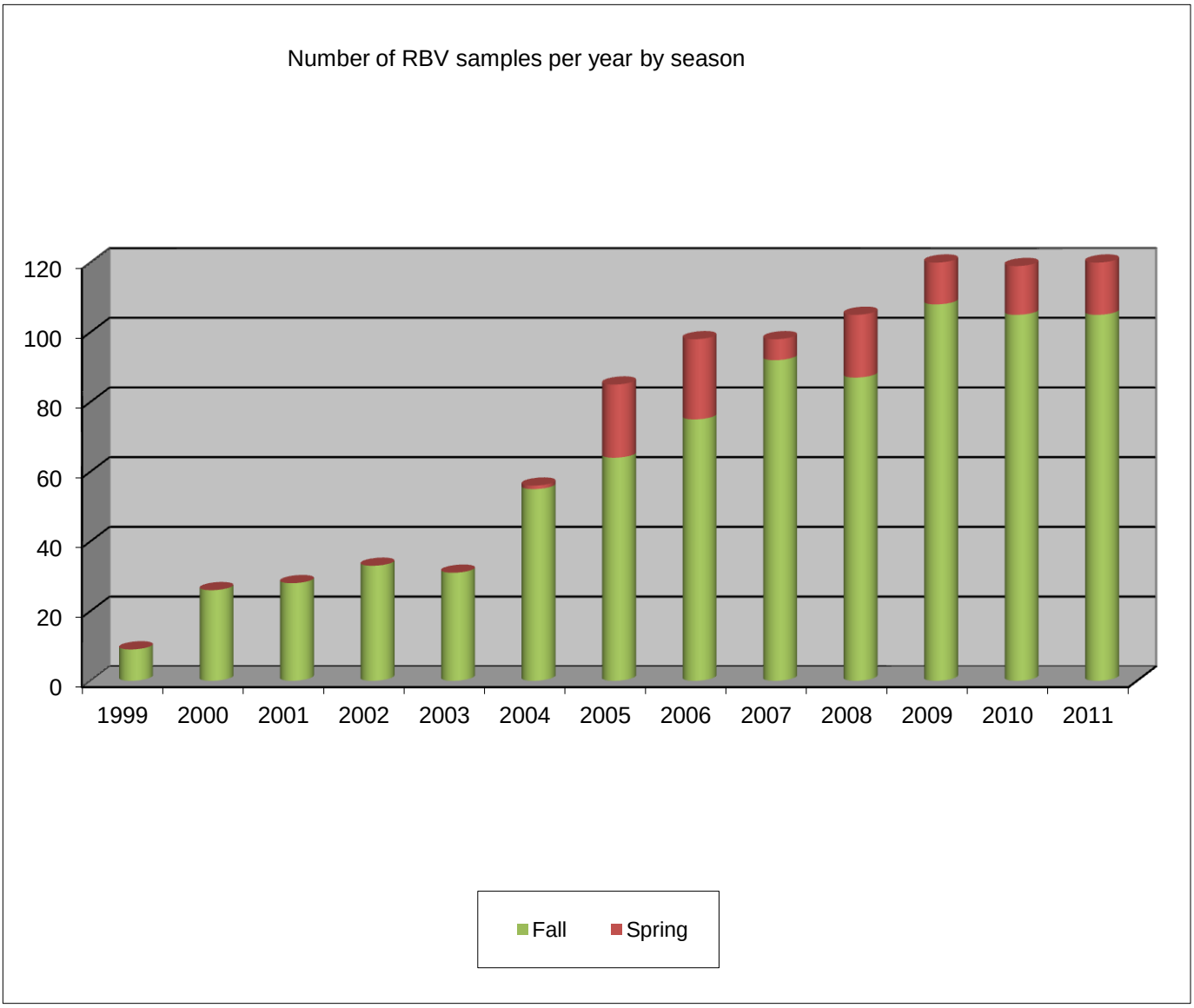


Figure 1. The number of RBV samples collected and submitted to WPLR by RBV participants. The number of fall samples has grown 5 fold since the program inception. Additionally, since 2005, some groups began sampling sites in spring as well. While the spring data is not used for an official DEEP assessment, it can provide useful information for the program collecting the information.

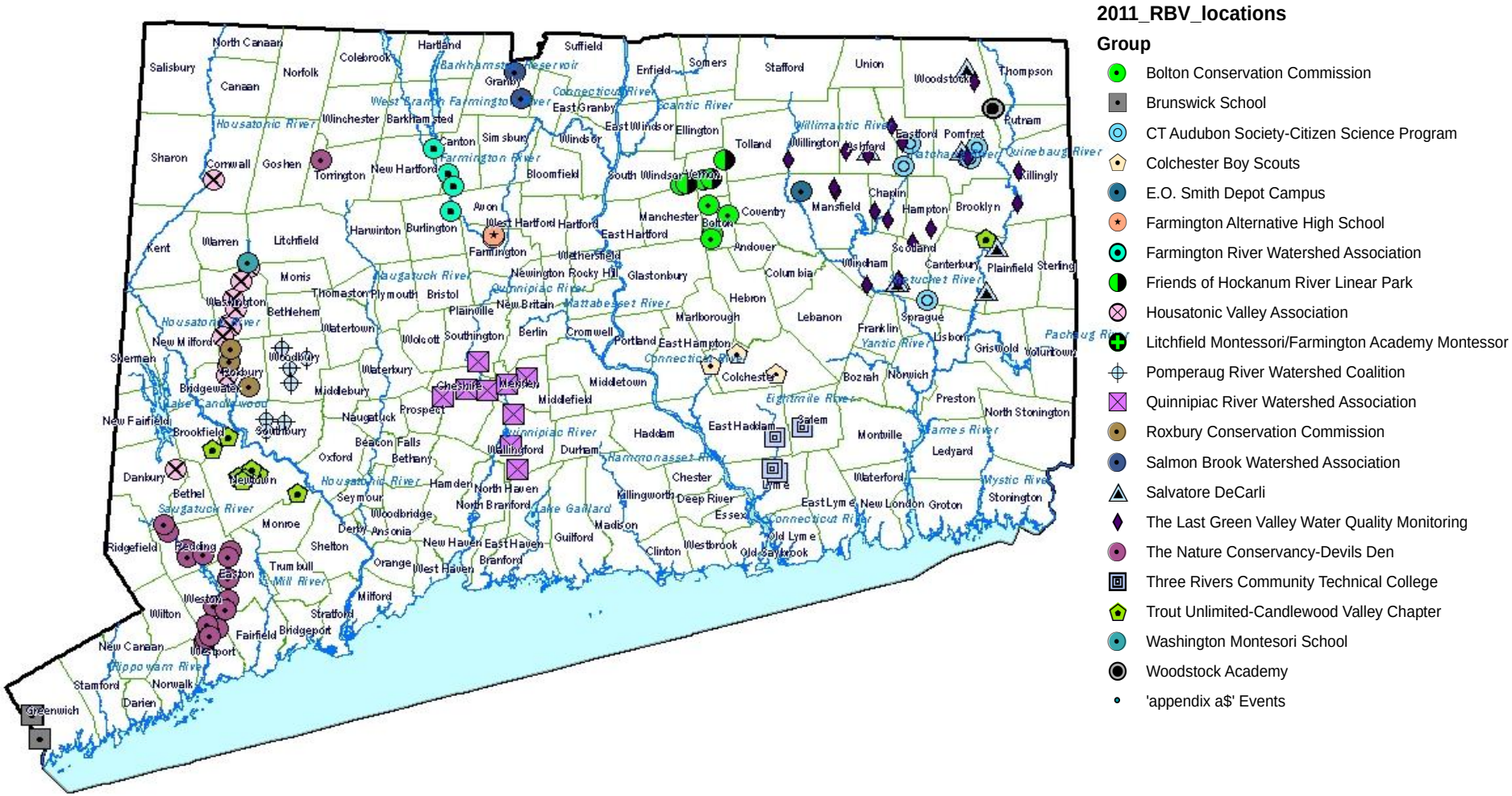


Figure 2. The 120 locations where and RBV sample was collected during 2011 and the entity responsible for each collection. A description of each of the locations can be found in Appendix A.

“4 or MORE”

WPLR use of the RBV data for aquatic life use support assessments = "4 or more types of the most wanted category":

The distribution of most wanted types in the 120 samples was 0 to 6 (Table 1 and Figure 3). Twenty-four (24) of the fall 2011 voucher samples had 4 or more types in the most wanted category and were considered to be in full support of aquatic life goals (Table 2) while 21 fall voucher samples just missed with three most wanted types present in the voucher sample (Table 3).

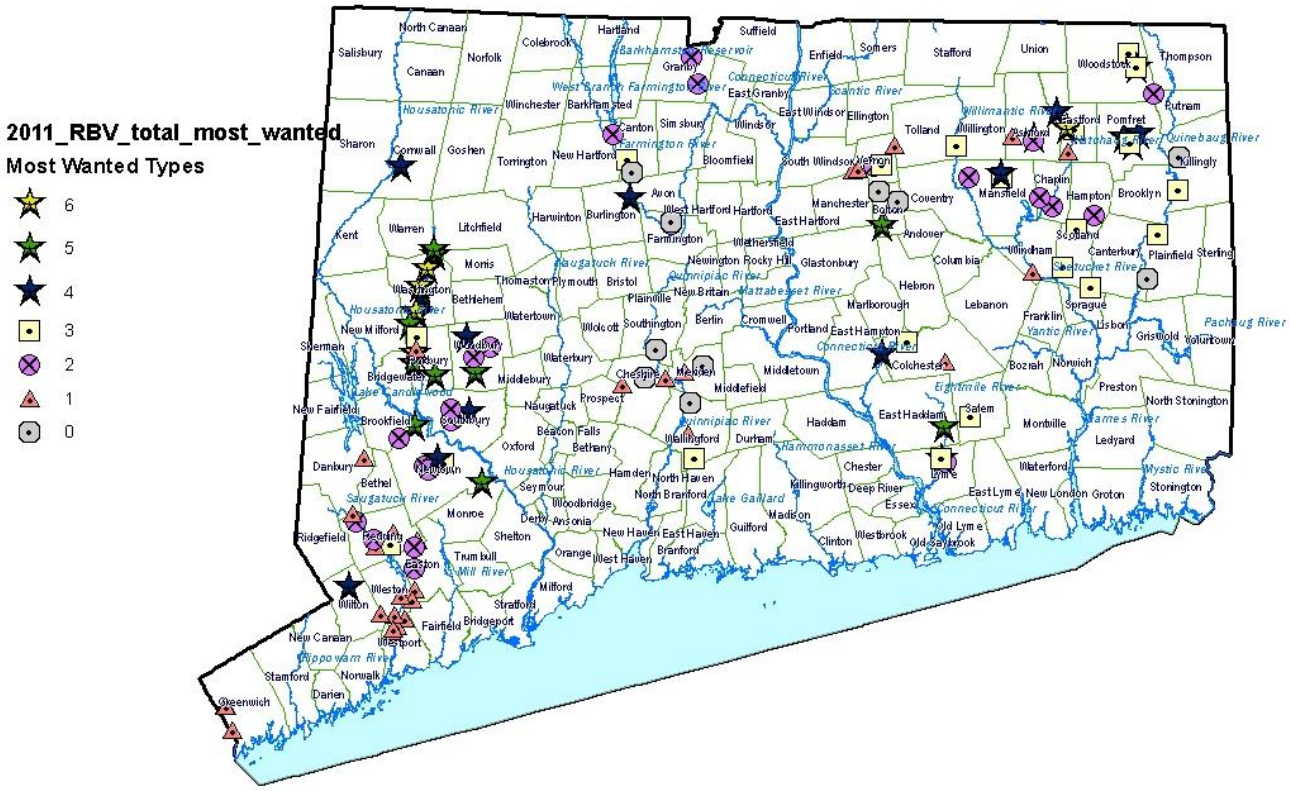


Figure 3. The number of most wanted types present in voucher samples submitted to WPLR collected in fall 2011. Fall samples with 4 or more indicate full support of aquatic life support goals.

Table 1. The organisms present in each of the 120 voucher collections submitted to WPLR during 2011. The samples are sorted alphabetically by collecting group's name, then stream name, and then descending by the greatest number of most wanted types present in a voucher. The panel number corresponds to the RBV datasheet, identification cards, and sorting guide. Of the 120 samples collected, only those with 4 or more total most wanted from a fall sample date (Blue background) are used to indicate full support of aquatic life use goals.

group	stream	ID	date	town	1	2	3	4	5A	5B	5C	6A	6B	7	8A	8B	total most	9	10	11	12	13A	13B	14	total mod	15A	15B	15C	15D	15E	15F	15G	total least
Bolton Conservation Commission	Blackledge River	1248	11/13/2011	Bolton					1								1	1	1						2		1						1
Bolton Conservation Commission	Bolton Pond Brook	2486	11/13/2011	Bolton														1		1					2								
Bolton Conservation Commission	French Brook	1534	11/13/2011	Bolton				1	1		1	1		1			5	1	1	1	1				4							1	1
Bolton Conservation Commission	Railroad Brook	6230	11/13/2011	Bolton														1		1					2								
Brunswick School	Byram River	25	12/2/2011	Greenwich							1						1									1					1	1	3
Brunswick School	Byram River	6683	12/8/2011	Greenwich							1						1	1		1					2	1	1						2
Brunswick School	East Branch Byram River	2349	11/10/2011	Greenwich		1											1		1	1	1				3	1	1						2
Colchester Boy Scouts	Dickinson Creek	6587	11/6/2011	Marlborough		1			1		1	1					4	1		1			1	1	4								
Colchester Boy Scouts	Jeremy River	135	11/19/2011	Colchester		1			1		1						3	1		1	1		1	1	5								
Colchester Boy Scouts	Nelkin Brook	6588	12/18/2011	Colchester										1			1	1					1		2		1						1
CT Audubon Society-Citizen Science Program	Little River	2795	10/15/2011	Canterbury		1			1			1					3	1		1			1	1	4				1				1
CT Audubon Society-Citizen Science Program	Mashamoquet Brook	1541	9/17/2011	Pomfret		1		1	1			1					4	1		1	1		1	1	5				1				1
CT Audubon Society-Citizen Science Program	Mashamoquet Brook	1164	9/17/2011	Pomfret					1								1	1			1		1		3								

CT Audubon Society-Citizen Science Program	Natchaug River	1319	9/23/2011	Eastford		1										1	1		1	1				3													
CT Audubon Society-Citizen Science Program	STILL RIVER	5641	10/28/2011	Eastford		1			1			1				3	1			1		1		3													
CT Audubon Society-Citizen Science Program	Wappoquia Brook	6248	10/21/2011	Pomfret		1			1		1	1				4	1	1	1	1		1	1	6													
E.O. Smith Depot Campus	Cedar Swamp Brook	1660	10/7/2011	Mansfield					1		1					2	1	1	1	1		1	1	6													
Farmington Alternative High School	Poplar Swamp Brook	5937	9/27/2011	Farmington								1		1		2	1	1						2													
Farmington Alternative High School	Poplar Swamp Brook	6580	9/27/2011	Farmington													1		1				1	3									1				1
Farmington River Watershed Association	Bunnell Brook	2266	10/16/2011	Burlington					1			1	1	1		4	1	1	1			1	1	5													
Farmington River Watershed Association	Cherry Brook	1513	9/17/2011	Canton		1	1		1							3	1	1	1				1	4				1			1					2
Farmington River Watershed Association	Ratlum Brook	1512	9/17/2011	New Hartford		1			1							2	1	1	1					3													
Farmington River Watershed Association	Rattlesnake Hill Brook	1514	9/17/2011	Canton													1	1				1	1	4													
Friends of Hockanum River Linear Park	Gages Brook	1240	10/1/2011	Tolland					1							1	1	1		1		1		4		1											1
Friends of Hockanum River Linear Park	Tankerhoosen River	1120	10/1/2011	Vernon					1	1				1		3	1	1	1			1		4													
Friends of Hockanum River Linear Park	Tankerhoosen River	345	10/1/2011	Vernon					1	1						2	1	1	1	1		1		5													
Friends of Hockanum River Linear Park	Tankerhoosen River	344	10/1/2011	Vernon								1				1	1	1		1				3		1											1
Friends of Hockanum River Linear Park	Tankerhoosen River	1121	10/1/2011	Vernon					1							1	1	1						2											1		1

Housatonic Valley Association	Furnace Brook	1076	6/1/2011	Cornwall	1	1			1					1			4		1		1				2				1				1
Housatonic Valley Association	Kirby Brook	1038	10/26/2011	Washington				1	1		1	1		1			5	1	1						2							1	1
Housatonic Valley Association	MALLORY BROOK	5385	10/26/2011	Washington		1						1		1	1		4	1	1		1				3				1			1	2
Housatonic Valley Association	SHEPAUG RIVER	1037	7/13/2011	Washington		1	1		1			1		1	1		6	1		1	1				3				1				1
Housatonic Valley Association	SHEPAUG RIVER	2474	7/6/2011	Washington		1			1		1	1		1	1		6	1			1		1	1	4				1				1
Housatonic Valley Association	SHEPAUG RIVER	5599	7/14/2011	Roxbury		1	1		1		1	1			1		6	1		1	1			1	4				1				1
Housatonic Valley Association	SHEPAUG RIVER	6024	7/7/2011	Washington		1			1		1	1		1	1		6	1		1	1				3								
Housatonic Valley Association	SHEPAUG RIVER	6071	7/6/2011	Washington		1			1		1	1		1	1		6	1	1				1		3								
Housatonic Valley Association	SHEPAUG RIVER	325	7/14/2011	Roxbury		1			1			1		1	1		5	1		1	1	1			4								
Housatonic Valley Association	SHEPAUG RIVER	1839	7/7/2011	Washington		1			1		1	1		1			5	1		1		1			3								
Housatonic Valley Association	SHEPAUG RIVER	6023	7/13/2011	Washington		1			1			1		1	1		5	1		1	1				3				1				1
Housatonic Valley Association	STILL RIVER	1611	6/4/2011	Danbury		1											1	1	1	1					3	1						1	2
Litchfield Montessori/Farmington Academy Montessori	Nepaug River	6581	10/28/2011	New Hartford					1					1			2		1	1			1		3								
Pomperaug River Watershed Coalition	Nonewaug River	770	10/9/2011	Woodbury		1			1								2	1	1		1		1		4								
Pomperaug River Watershed Coalition	Pomperaug River	1990	10/23/2011	Woodbury		1					1	1	1	1			5		1	1	1		1	1	5	1		1				1	3
Pomperaug River Watershed Coalition	Pomperaug River	934	10/23/2011	Southbury		1	1				1		1				4	1	1	1	1				4							1	1
Pomperaug River Watershed Coalition	Pomperaug River	1313	10/9/2011	Southbury		1						1					2	1							1					1			1
Pomperaug River Watershed Coalition	Transylvania Brook	598	10/23/2011	Southbury					1		1						2	1	1	1					3				1	1		1	3
Pomperaug River Watershed Coalition	Weekeepeeme e Brook	1975	10/9/2011	Woodbury		1		1			1		1				4	1	1	1	1		1		5					1			1

Pomperaug River Watershed Coalition	Weekeepeeme e Brook	1468	10/14 /2011	Woodbury		1			1								2			1				1	2											
Quinnipiac River Watershed Association	Harbor Brook	1112	11/5/ 2011	Meriden														1	1	1	1				4	1										1
Quinnipiac River Watershed Association	Honeypot Brook	1106	10/22 /2011	Cheshire														1	1					1	3	1	1				1				3
Quinnipiac River Watershed Association	Meetinghouse Brook	2335	10/22 /2011	Wallingford														1	1						2							1			1
Quinnipiac River Watershed Association	Misery Brook	1808	10/22 /2011	Southington														1	1	1			1	1	5											
Quinnipiac River Watershed Association	Muddy River	1806	10/22 /2011	Wallingford		1			1			1					3	1		1			1	1	4	1										1
Quinnipiac River Watershed Association	Quinnipiac River	288	11/5/ 2011	Cheshire							1						1	1	1	1					3	1	1				1					3
Quinnipiac River Watershed Association	Sodom Brook	6586	11/5/ 2011	Meriden								1					1			1					1	1	1	1	1							4
Quinnipiac River Watershed Association	Tenmile River	6585	11/5/ 2011	Cheshire		1											1	1	1	1	1		1	1	6							1				1
Quinnipiac River Watershed Association	Wharton Brook	1113	11/5/ 2011	Wallingford								1					1	1	1						2				1			1				2
Roxbury Conservation Commission	Battle Swamp Brook, Tributary to	6584	10/22 /2011	Roxbury			1	1	1								3	1	1	1					3							1				1
Roxbury Conservation Commission	FENN BROOK	5215	10/22 /2011	Roxbury							1						1	1	1						2				1			1				2
Roxbury Conservation Commission	Jacks Brook	6330	10/22 /2011	Roxbury		1			1	1	1	1					5	1		1			1	1	4					1		1				2

Salmon Brook Watershed Association	East Branch Salmon Brook	2454	10/10 /2011	Granby		1			1								2		1	1				2													
Salmon Brook Watershed Association	West Branch Salmon Brook	1082	10/12 /2011	Granby		1				1							2	1		1	1			1	4							1	1
Salvatore DeCarli	Beaver Brook	1125	12/2/ 2011	Scotland					1		1						2	1	1	1	1		1		5				1					1
Salvatore DeCarli	Mashamoquet Brook	6243	11/1/ 2011	Pomfret		1			1					1	1		4	1		1	1				3									
Salvatore DeCarli	Merrick Brook	5396	12/1/ 2011	Scotland		1			1		1	1					4		1	1					2									
Salvatore DeCarli	Mill Brook	5404	10/25 /2011	Canterbury														1	1	1	1		1		5	1	1				1		3
Salvatore DeCarli	Moosup River	5430	12/3/ 2011	Plainfield					1		1	1					3	1	1	1	1	1			5			1					1
Salvatore DeCarli	Mount Hope River	1833	12/2/ 2011	Ashford		1			1		1			1			4	1	1	1			1		4								
Salvatore DeCarli	Muddy Brook	2432	12/2/ 2011	Woodstock		1			1		1						3	1	1	1					3								
The Last Green Valley Water Quality Monitoring	Beaver Brook	1125	11/7/ 2011	Scotland		1					1		1				3	1	1	1	1		1	1	6							1	1
The Last Green Valley Water Quality Monitoring	Bigelow Brook	6582	11/21 /2011	Eastford		1			1		1	1	1	1			6	1	1		1		1	1	5				1				1
The Last Green Valley Water Quality Monitoring	Bigelow Brook	6583	11/15 /2011	Ashford		1			1		1			1			4	1	1	1				1	4								
The Last Green Valley Water Quality Monitoring	BUTTONBALL BROOK	5107	11/15 /2011	Chaplin					1		1						2	1	1	1	1		1		5								
The Last Green Valley Water Quality Monitoring	Fenton River	1018	10/10 /2011	Mansfield		1	1		1			1			1		5	1	1		1			1	4							1	1
The Last Green Valley Water Quality Monitoring	Fenton River	1018	11/8/ 2011	Mansfield		1		1	1		1						4	1	1	1	1			1	5								
The Last Green Valley Water Quality Monitoring	Fenton River	1003	11/15 /2011	Mansfield		1			1		1						3	1		1	1		1		4				1			1	2

The Last Green Valley Water Quality Monitoring	FIVEMILE RIVER	5224	10/26 /2011	Killingly																				1	1	1			1									2
The Last Green Valley Water Quality Monitoring	Knowlton Brook	6237	10/10 /2011	Willington		1											1	1	1	1	1		1		5		1								1			2
The Last Green Valley Water Quality Monitoring	Little River	1656	10/18 /2011	Hampton		1			1								2	1	1				1	1	4													
The Last Green Valley Water Quality Monitoring	Mashamoquet Brook	1164	9/11/ 2011	Pomfret			1		1						1		3	1	1	1	1		1	1	6													
The Last Green Valley Water Quality Monitoring	Merrick Brook	5397	10/25 /2011	Hampton		1			1						1		3	1	1	1	1			1	5													
The Last Green Valley Water Quality Monitoring	Mount Hope River	2791	9/10/ 2011	Ashford		1					1						2	1	1	1	1	1	1		6													
The Last Green Valley Water Quality Monitoring	North Running Brook	909	10/17 /2011	Woodstock					1		1	1				1	4	1	1	1	1		1		5								1	1	1	3		
The Last Green Valley Water Quality Monitoring	North Running Brook	1223	10/17 /2011	Woodstock				1	1			1					3	1	1				1	1	4								1				1	
The Last Green Valley Water Quality Monitoring	Pigeon Swamp Brook	5527	9/21/ 2011	Windham					1								1	1	1	1			1	1	5													
The Last Green Valley Water Quality Monitoring	Quinebaug River	6579	10/30 /2011	Killingly			1				1				1		3									1	1	1	1		1	1	6					
The Last Green Valley Water Quality Monitoring	Stonehouse Brook	2331	9/28/ 2011	Chaplin		1			1								2		1	1	1		1	1	5								1	1			
The Last Green Valley Water Quality Monitoring	Willimantic River	1017	9/16/ 2011	Tolland		1			1					1			3	1	1	1	1			1	5													
The Nature Conservancy-Devils Den	Aspetuck River	2480	10/16 /2011	Easton		1			1								2	1	1		1		1	1	5													

The Nature Conservancy-Devils Den	Aspetuck River	1	10/15 /2011	Westport		1										1	1	1	1					3						1	1	2
The Nature Conservancy-Devils Den	Aspetuck River	1299	10/15 /2011	Westport		1										1	1	1	1	1		1		5								
The Nature Conservancy-Devils Den	Aspetuck River	1304	10/15 /2011	Easton		1										1	1		1			1	1	4		1			1		1	3
The Nature Conservancy-Devils Den	Aspetuck River	2479	10/15 /2011	Fairfield										1		1		1	1	1		1	1	5	1					1		2
The Nature Conservancy-Devils Den	Aspetuck River, Tributary to (LYONS SWAMP OUTFLOW)	6209	10/16 /2011	Redding		1			1							2	1	1				1		3								
The Nature Conservancy-Devils Den	Aspetuck River, Tributary to (LYONS SWAMP OUTFLOW)	5380	10/16 /2011	Redding					1							1	1	1		1		1		4								
The Nature Conservancy-Devils Den	Little River	5990	10/16 /2011	Redding					1		1			1		3	1		1	1				3							1	1
The Nature Conservancy-Devils Den	Little River	2769	10/16 /2011	Redding							1					1	1		1	1		1		4								
The Nature Conservancy-Devils Den	NOB CROOK BROOK	5477	10/16 /2011	Redding										1		1	1	1	1					3							1	1
The Nature Conservancy-Devils Den	Saugatuck River	2771	10/16 /2011	Redding		1			1							2	1	1	1		1			4							1	1
The Nature Conservancy-Devils Den	Saugatuck River	5245	10/16 /2011	Redding		1			1							2	1		1			1		3								
The Nature Conservancy-Devils Den	Saugatuck River	320	10/15 /2011	Westport		1										1	1	1	1				1	4	1							1

The Nature Conservancy-Devils Den	Saugatuck River	1294	10/15/2011	Weston		1										1	1	1	1	1			1	5						1		1
The Nature Conservancy-Devils Den	Saugatuck River	1296	10/15/2011	Weston		1										1	1	1	1			1		4							1	1
The Nature Conservancy-Devils Den	West Branch Saugatuck River	1288	10/15/2011	Westport		1										1	1	1	1					3	1	1			1			3
The Nature Conservancy-Devils Den	West Branch Saugatuck River	1999	10/15/2011	Weston		1										1	1	1	1					3								
The Nature Conservancy-Devils Den	West Redding Brook	5946	10/16/2011	Danbury					1							1	1		1	1				3								
Three Rivers Community Technical College	Beaver Brook	1236	10/29/2011	Lyme					1						1		2	1		1			1		3								
Three Rivers Community Technical College	Beaver Brook	1236	4/22/2011	Lyme					1					1			2				1		1	1	3	1			1		1		3
Three Rivers Community Technical College	Burnhams Brook	1239	10/29/2011	East Haddam				1	1		1			1		1	5	1	1	1			1	1	5								
Three Rivers Community Technical College	Burnhams Brook	1239	4/22/2011	East Haddam			1		1			1		1		1	5	1					1		2				1				1
Three Rivers Community Technical College	Eightmile River, tributary to (PV brook)	1238	10/29/2011	Lyme				1	1		1	1					4							1	1		1			1		2
Three Rivers Community Technical College	Eightmile River, tributary to (PV brook)	1238	4/22/2011	Lyme			1		1		1						3						1	1	2		1		1	1		1	4
Three Rivers Community Technical College	Harris Brook	1237	10/29/2011	Salem		1			1							1	3	1	1	1			1	1	5								
Three Rivers Community Technical College	Harris Brook	1237	4/22/2011	Salem				1	1					1			3		1			1		1	3					1			1

Trout Unlimited-Candlewood Valley Chapter	Deep Brook	1992	10/22/2011	Newtown		1			1								2	1	1	1	1		1		5		1		1								2
Trout Unlimited-Candlewood Valley Chapter	Deep Brook	1993	10/22/2011	Newtown								1		1			2	1	1	1					3												
Trout Unlimited-Candlewood Valley Chapter	Deep Brook	2473	10/22/2011	Newtown		1			1								2	1	1	1	1		1		5		1										1
Trout Unlimited-Candlewood Valley Chapter	Deep Brook	47	10/22/2011	Newtown		1											1	1	1	1					3				1				1				2
Trout Unlimited-Candlewood Valley Chapter	Halfway River	2762	10/22/2011	Newtown					1	1		1	1	1			5	1	1	1					3								1				1
Trout Unlimited-Candlewood Valley Chapter	Pond Brook	1523	10/22/2011	Newtown		1			1		1	1		1			5	1		1	1				3	1				1							2
Trout Unlimited-Candlewood Valley Chapter	Pond Brook	2766	10/22/2011	Newtown							1			1			2	1	1		1		1		4	1											1
Trout Unlimited-Candlewood Valley Chapter	Pootatuck River	1198	10/22/2011	Newtown		1			1			1		1			4	1	1	1	1		1		5												
Trout Unlimited-Candlewood Valley Chapter	Pootatuck River	281	10/22/2011	Newtown		1			1	1							3	1	1				1		3	1									1		2
Washington Montessori School	SHEPAUG RIVER	6071	6/2/2011	Washington	1	1			1			1		1			5	1	1	1			1		4												
Woodstock Academy	Little River	150	11/15/2011	Woodstock					1		1						2	1		1	1		1	1	5												

Table 2. Thirty-five (35) of the 2011 RBV voucher samples contained 4 or more "Most Wanted" types. Twenty-four were collected in the fall and 11 in the spring. The data are sorted alphabetically by decreasing total most wanted types, then stream name, and then collection date. ***Blue Italic font indicates a spring sample.***

Group	Stream	ID	Date	Town	Total Most Wanted
The Last Green Valley Water Quality Monitoring	Bigelow Brook	6582	11/21/2011	Eastford	6
Housatonic Valley Association	*SHEPAUG RIVER*	*2474*	*7/6/2011*	*Washington*	*6*
Housatonic Valley Association	*SHEPAUG RIVER*	*6071*	*7/6/2011*	*Washington*	*6*
Housatonic Valley Association	*SHEPAUG RIVER*	*6024*	*7/7/2011*	*Washington*	*6*
Housatonic Valley Association	*SHEPAUG RIVER*	*1037*	*7/13/2011*	*Washington*	*6*
Housatonic Valley Association	*SHEPAUG RIVER*	*5599*	*7/14/2011*	*Roxbury*	*6*
Three Rivers Community Technical College	*Burnhams Brook*	*1239*	*4/22/2011*	*East Haddam*	*5*
Three Rivers Community Technical College	Burnhams Brook	1239	10/29/2011	East Haddam	5
The Last Green Valley Water Quality Monitoring	Fenton River	1018	10/10/2011	Mansfield	5
Bolton Conservation Commission	French Brook	1534	11/13/2011	Bolton	5
Trout Unlimited-Candlewood Valley Chapter	Halfway River	2762	10/22/2011	Newtown	5
Roxbury Conservation Commission	Jacks Brook	6330	10/22/2011	Roxbury	5
Housatonic Valley Association	Kirby Brook	1038	10/26/2011	Washington	5
Pomperaug River Watershed Coalition	Pomperaug River	1990	10/23/2011	Woodbury	5
Trout Unlimited-Candlewood Valley Chapter	Pond Brook	1523	10/22/2011	Newtown	5
Washington Montessori School	*SHEPAUG RIVER*	*6071*	*6/2/2011*	*Washington*	*5*
Housatonic Valley Association	*SHEPAUG RIVER*	*1839*	*7/7/2011*	*Washington*	*5*
Housatonic Valley Association	*SHEPAUG RIVER*	*6023*	*7/13/2011*	*Washington*	*5*
Housatonic Valley Association	*SHEPAUG RIVER*	*325*	*7/14/2011*	*Roxbury*	*5*
Salvatore DeCarli	Merrick Brook	5396	12/1/2011	Scotland	4
The Last Green Valley Water Quality Monitoring	Bigelow Brook	6583	11/15/2011	Ashford	4
Farmington River Watershed Association	Bunnell Brook	2266	10/16/2011	Burlington	4
Colchester Boy Scouts	Dickinson Creek	6587	11/6/2011	Marlborough	4
Three Rivers Community Technical College	Eightmile River, tributary to (PV brook)	1238	10/29/2011	Lyme	4
The Last Green Valley Water Quality Monitoring	Fenton River	1018	11/8/2011	Mansfield	4
Housatonic Valley Association	*Furnace Brook*	*1076*	*6/1/2011*	*Cornwall*	*4*
Housatonic Valley Association	MALLORY BROOK	5385	10/26/2011	Washington	4
CT Audubon Society-Citizen Science Program	Mashamoquet Brook	1541	9/17/2011	Pomfret	4
Salvatore DeCarli	Mashamoquet Brook	6243	11/1/2011	Pomfret	4
Salvatore DeCarli	Mount Hope River	1833	12/2/2011	Ashford	4
The Last Green Valley Water Quality Monitoring	North Running Brook	909	10/17/2011	Woodstock	4
Pomperaug River Watershed Coalition	Pomperaug River	934	10/23/2011	Southbury	4
Trout Unlimited-Candlewood Valley Chapter	Pootatuck River	1198	10/22/2011	Newtown	4
CT Audubon Society-Citizen Science Program	Wappoquia Brook	6248	10/21/2011	Pomfret	4
Pomperaug River Watershed Coalition	Weekeepeemee Brook	1975	10/9/2011	Woodbury	4

Table 3. Twenty-one (21) of the 2011 RBV voucher samples contained 3 "Most Wanted" types. The data are sorted alphabetically by stream name and then collection date. ***Blue Italic font indicates a spring sample.***

Group	Stream	ID	Date	Town	Total Most Wanted
Roxbury Conservation Commission	Battle Swamp Brook, Tributary to	6584	10/22/2011	Roxbury	3
The Last Green Valley Water Quality Monitoring	Beaver Brook	1125	11/7/2011	Scotland	3
Farmington River Watershed Association	Cherry Brook	1513	9/17/2011	Canton	3
Three Rivers Community Technical College	*Eightmile River, tributary to (PV brook)*	*1238*	*4/22/2011*	*Lyme*	*3*
The Last Green Valley Water Quality Monitoring	Fenton River	1003	11/15/2011	Mansfield	3
Three Rivers Community Technical College	*Harris Brook*	*1237*	*4/22/2011*	*Salem*	*3*
Three Rivers Community Technical College	Harris Brook	1237	10/29/2011	Salem	3
Colchester Boy Scouts	Jeremy River	135	11/19/2011	Colchester	3
CT Audubon Society-Citizen Science Program	Little River	2795	10/15/2011	Canterbury	3
The Nature Conservancy-Devils Den	Little River	5990	10/16/2011	Redding	3
The Last Green Valley Water Quality Monitoring	Mashamoquet Brook	1164	9/11/2011	Pomfret	3
The Last Green Valley Water Quality Monitoring	Merrick Brook	5397	10/25/2011	Hampton	3
Salvatore DeCarli	Moosup River	5430	12/3/2011	Plainfield	3
Salvatore DeCarli	Muddy Brook	2432	12/2/2011	Woodstock	3
Quinnipiac River Watershed Association	Muddy River	1806	10/22/2011	Wallingford	3
The Last Green Valley Water Quality Monitoring	North Running Brook	1223	10/17/2011	Woodstock	3
Trout Unlimited-Candlewood Valley Chapter	Pootatuck River	281	10/22/2011	Newtown	3
The Last Green Valley Water Quality Monitoring	Quinebaug River	6579	10/30/2011	Killingly	3
CT Audubon Society-Citizen Science Program	STILL RIVER	5641	10/28/2011	Eastford	3
Friends of Hockanum River Linear Park	Tankerhoosen River	1120	10/1/2011	Vernon	3
The Last Green Valley Water Quality Monitoring	Willimantic River	1017	9/16/2011	Tolland	3

References:

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Plafkin, J.L., M.T. Barbour, K.D. Porter, S.K. Gross, and R.M. Hughes. 1989. *Rapid Bioassessment Protocols for use in Streams and Rivers: Benthic Macroinvertebrates and Fish*. EPA/444/4-89-00. http://www.epa.gov/owow/monitoring/rbp/

Appendix A. The following provides a description of the location where an RBV sample was collected during 2011. Locations are sorted alphabetically by the collecting group and then by stream name.

Group	station id	Stream	basin	description		Town	latitude	longitude
Bolton Conservation Commission	1248	Blackledge River	4707	500 DS Downstream Deming Road Deming Road	Deming Road	Bolton	41.75184	-72.4454
Bolton Conservation Commission	1534	French Brook	4707	at French Road	French Road	Bolton	41.74422	-72.4485
Bolton Conservation Commission	2486	Bolton Pond Brook	3108-02-1	at Mark Anthony Lane	Mark Anthony Lane	Bolton	41.7784	-72.4167
Bolton Conservation Commission	6230	Railroad Brook	4503-04-1-L2	at RR trail crossing In Freja Park DS Bolton Notch Pond	In Freja Park DS Bolton Notch Pond	Bolton	41.7922	-72.453
Brunswick School	25	Byram River	7411	downstream Comley Avenue	Comley Avenue	Greenwich	41.02765	-73.6621
Brunswick School	2349	East Branch Byram River	7410	under Route 15 adjacent to Riverville Road	Route 15 adjacent to Riverville Road	Greenwich	41.0612	-73.6748
Brunswick School	6683	Byram River	7411	at Sherwood Ave	Sherwood Ave	Greenwich	41.0609	-73.6775
Colchester Boy Scouts	135	Jeremy River	4705	downstream Route 149	Route 149	Colchester	41.57992	-72.4028
Colchester Boy Scouts	6587	Dickinson Creek	4708	100 Meters DS airline trail and viaduct		Marlborough	41.56313	-72.4495
Colchester Boy Scouts	6588	Nelkin Brook	4703	at Nelkin Road	Nelkin Road	Colchester	41.55044	-72.3316
CT Audubon Society-Citizen Science Program	1164	Mashamoquet Brook	3710	500 meters DS Route 44 in State Park	Route 44 in State Park	Pomfret	41.8579	-71.9812
CT Audubon Society-Citizen Science Program	1319	Natchaug River	3200	at Route 198 entrance to Natchaug SF	Route 198 entrance to Natchaug SF	Eastford	41.84577	-72.0976
CT Audubon Society-Citizen Science Program	1541	Mashamoquet Brook	3710	end paved section of road in state park	paved section of road in state park	Pomfret	41.85614	-71.9758
CT Audubon Society-Citizen Science Program	2795	Little River	3805-00-3-L5	at old bridge fishing access off Little River lane	off Little River lane	Canterbury	41.65469	-72.0569
CT Audubon Society-Citizen Science	5641	Still River	3202	400 M US of rte 44 at sand and gravel facility	400 M US of rte 44 at sand and gravel	Eastford	41.87889	-72.085

Program					facility			
CT Audubon Society-Citizen Science Program	6248	Wappoquia Brook	3709	downstream Route 169	Route 169	Pomfret	41.87226	-71.9623
E.O. Smith Depot Campus	1660	Cedar Swamp Brook	3100	Upstream confluence with Nelson Brook	confluence with Nelson Brook	Mansfield	41.81104	-72.2841
Farmington Alternative High School	5937	Poplar Swamp Brook	4300-28-1-L2	at Trout Pond outlet Winding Trails	Winding Trails	Farmington	41.74647	-72.8446
Farmington Alternative High School	6580	Poplar Swamp Brook	4300	at outlet for Walton Pond on winding trails property	Walton Pond on winding trails property	Farmington	41.74875	-72.8455
Farmington River Watershed Association	1512	Ratlum Brook	4308	downstream Farmington River Turnpike at mouth	Farmington River Turnpike at mouth	New Hartford	41.87231	-72.9561
Farmington River Watershed Association	1513	Cherry Brook	4309	Upstream Route 44	Route 44	Canton	41.8365	-72.9295
Farmington River Watershed Association	1514	Rattlesnake Hill Brook	4300	Upstream 200 meters from Dyer Ave.	200 meters from Dyer Ave.	Canton	41.81853	-72.9182
Farmington River Watershed Association	2266	Bunnell Brook	4311	between Punch Brook confluence and Route 179	Punch Brook confluence and Route 179	Burlington	41.7833	-72.9247
Friends of Hockanum River Linear Park	344	Tankerhoosen River	4503	upstream 100 m mouth at golf land	mouth at golf land	Vernon	41.82009	-72.5033
Friends of Hockanum River Linear Park	345	Tankerhoosen River	4503	Upstream Tunnel Road	Tunnel Road	Vernon	41.8272	-72.464
Friends of Hockanum River Linear Park	1120	Tankerhoosen River	4503	DS Bolton Road	Bolton Road	Vernon	41.82944	-72.4482
Friends of Hockanum River Linear Park	1121	Tankerhoosen River	4503	US Small pond (below dobsonville pond)	Small pond (below dobsonville pond)	Vernon	41.82323	-72.4934
Friends of Hockanum River Linear Park	1240	Gages Brook	4503	at footbridge on Tolland Agricultural Center Property	footbridge on Tolland Agricultural Center Property	Tolland	41.85705	-72.4248
Housatonic Valley Association	325	Shepaug River	6700	downstream 100 meters Wellers Bridge Road (Route 67)	Wellers Bridge Road (Route 67)	Roxbury	41.54887	-73.3308
Housatonic Valley Association	1037	Shepaug River	6700	in Steep Rock park at river road bridge, tunnel road, or lower church	Steep Rock park at river road bridge, tunnel road, or	Washington	41.62202	-73.3255

				hill	lower church hill			
Housatonic Valley Association	1038	Kirby Brook	6700	At dirt road crossing 300 m us of confluence with	At dirt road crossing 300 m us of confluence with	Washington	41.61726	-73.3227
Housatonic Valley Association	1076	Furnace Brook	6010	at Picnic table pool adjacent to Route 4	Picnic table pool adjacent to Route 4	Cornwall	41.82738	-73.3553
Housatonic Valley Association	1611	Still River	6600	downstream side of Eagle Road Crossing	Eagle Road Crossing	Danbury	41.41303	-73.4217
Housatonic Valley Association	1839	Shepaug River	6700	500 meters Downstream Rte 202 adjacent to dirt road	Rte 202 adjacent to dirt road	Washington	41.7019	-73.2904
Housatonic Valley Association	2474	Shepaug River	6700	upstream route 47 adjacent to Bee Brook Confluence	adjacent to Bee Brook Confluence	Washington	41.6568	-73.318
Housatonic Valley Association	5385	MALLORY BROOK	6700	US of Wyant Rd	US of Wyant Rd	Washington	41.64278	-73.3144
Housatonic Valley Association	5599	Shepaug River	6700	At Hodge Park	At Hodge Park	Roxbury	41.56306	-73.3278
Housatonic Valley Association	6023	Shepaug River	6700-00-3-R9	at Dyer Plaque 1.11 miles US of Judds Bridge Rd at Steep Rock Preserve	1.11 miles US of Judds Bridge Rd at Steep Rock Preserve	Washington	41.60267	-73.338
Housatonic Valley Association	6024	Shepaug River	6700-00-3-R1	below Bantam river Confluence	below Bantam river Confluence	Washington	41.68301	-73.3057
Housatonic Valley Association	6071	Shepaug River	6700-00-2-R1	at Valley Road Pull off just upstream of Route 202	Valley Road Pull off just upstream of Route 202	Washington	41.70893	-73.2944
Litchfield Montessori/Farmington Academy Montessori	6581	Nepaug River	4310	behind 741 Steele Road private property	private property	New Hartford	71.83059	-72.9795
Pomperaug River Watershed Coalition	598	Transylvania Brook	6806	30 meters upstream Whale Road	Whale Road	Southbury	41.48396	-73.2584
Pomperaug River Watershed Coalition	770	Nonewaug River	6802	Upstream Minortown road adjacent to Mill Road	Minortown road adjacent to Mill Road	Woodbury	41.57284	-73.1844
Pomperaug River Watershed Coalition	934	Pomperaug River	6800	Upstream Poverty Road	Poverty Road	Southbury	41.48117	-73.2252

Pomperaug River Watershed Coalition	1313	Pomperaug River	6800	adjacent Bent-Of-River Audubon Center off Flagg Swamp Road	off Flagg Swamp Road	Southbury	41.46723	-73.258
Pomperaug River Watershed Coalition	1468	Weekeepeemee Brook	6804	downstream Jacks Bridge Road at USGS gage	Jacks Bridge Road at USGS gage	Woodbury	41.55753	-73.2155
Pomperaug River Watershed Coalition	1975	Weekeepeemee Brook	6804	Upstream Route 132	Route 132	Woodbury	41.58564	-73.2292
Pomperaug River Watershed Coalition	1990	Pomperaug River	6800	at town park (the Hollow) off Rte 317	town park (the Hollow) off Rte 317	Woodbury	41.53649	-73.2136
Quinnipiac River Watershed Association	288	Quinnipiac River	5200	downstream small dam behind water company building on Syndall Street	behind water company building on Syndall Street	Cheshire	41.52747	-72.856
Quinnipiac River Watershed Association	1106	Honeypot Brook	5200	downstream Creamery Road	Creamery Road	Cheshire	41.53007	-72.8948
Quinnipiac River Watershed Association	1112	Harbor Brook	5206	Upstream upper footbridge in Brookside Park	upper footbridge in Brookside Park	Meriden	41.54558	-72.7854
Quinnipiac River Watershed Association	1113	Wharton Brook	5207	Upstream footbridge in Doolittle Park	footbridge in Doolittle Park	Wallingford	41.44913	-72.8145
Quinnipiac River Watershed Association	1806	Muddy River	5208	downstream route 150 (woodhouse ave) in town park	route 150 (woodhouse ave) in town park	Wallingford	41.41505	-72.8012
Quinnipiac River Watershed Association	1808	Misery Brook	5203	at South End Road crossing (house # 475-482)	South End Road crossing (house # 475-482)	Southington	41.56986	-72.8733
Quinnipiac River Watershed Association	2335	Meetinghouse Brook	5200-10	DS Route 5	Route 5	Wallingford	41.4941	-72.8096
Quinnipiac River Watershed Association	6585	Tenmile River	5202	at Notch Road	Notch Road	Cheshire	41.51831	-72.9377
Quinnipiac River Watershed Association	6586	Sodom Brook	5205	at end of Carl Street	end of Carl Street	Meriden	41.53715	-72.8207
Roxbury Conservation Commission	5215	FENN BROOK	6700	US Rte 67	US Rte 67	Roxbury	41.56694	-73.3255
Roxbury Conservation Commission	6330	Jacks Brook	6706	in Tierney Preserve off of Squire lane near apply lane between rte 67 and South street	near apply lane between rte 67 and South street	Roxbury	41.53157	-73.2901

Roxbury Conservation Commission	6584	Battle Swamp Brook, Tributary to	6700	downstream route 199 near wakelee road	near wakelee road	Roxbury	41.58595	-73.3222
Salmon Brook Watershed Association	1082	West Branch Salmon Brook	4319	adjacent Salmon Brook Park	Salmon Brook Park	Granby	41.94378	-72.7957
Salmon Brook Watershed Association	2454	East Branch Salmon Brook	4320	ds Wells Road Bridge	Wells Road Bridge	Granby	41.98127	-72.8066
Salvatore DeCarli	1125	Beaver Brook	3802	US Gager Hill Road	Gager Hill Road	Scotland	41.68406	-72.1092
Salvatore DeCarli	1833	Mount Hope River	3206	first Route 89 crossing North of Route 44/89 intersection	North of Route 44/89 intersection	Ashford	41.86847	-72.1608
Salvatore DeCarli	2432	Muddy Brook	3708-01	at Woodstock Rd	Woodstock Rd	Woodstock	41.9841	-71.9806
Salvatore DeCarli	5396	Merrick Brook	3803	DS Beaver Brook	In WTMA	Scotland	41.6791	-72.1099
Salvatore DeCarli	5430	Moosup River	3500	Upstream Quinebaug R.	In Fly Only area	Plainfield	41.7288	-71.9280
Salvatore DeCarli	5404	Mill Brook	3700	50 m DS Packers Road	50 m DS Packers Road	Canterbury	41.66639	-71.95
Salvatore DeCarli	6243	Mashamoquet Brook	3710	at Covell Road	Covell Road	Pomfret	41.86735	-71.9928
The Last Green Valley Water Quality Monitoring	909	North Running Brook	3708	Upstream dirt road farm rd below child hill farm property	dirt road farm rd below child hill farm property	Woodstock	41.96452	-71.9657
The Last Green Valley Water Quality Monitoring	1003	Fenton River	3207	Upstream Stone Mill Road	Stone Mill Road	Mansfield	41.81075	-72.2208
The Last Green Valley Water Quality Monitoring	1017	Willimantic River	3100	Heron Cove Park	Heron Cove Park	Tolland	41.85639	-72.3072
The Last Green Valley Water Quality Monitoring	1018	Fenton River	3207	upstream Gurleville Road adjacent to blue trail	Gurleville Road adjacent to blue trail	Mansfield	41.81639	-72.2253
The Last Green Valley Water Quality Monitoring	1125	Beaver Brook	3802	US Gager Hill Road	Gager Hill Road	Scotland	41.68406	-72.1092
The Last Green Valley Water Quality Monitoring	1164	Mashamoquet Brook	3710	500 meters DS Route 44 in State Park	Route 44 in State Park	Pomfret	41.8579	-71.9812
The Last Green Valley Water Quality	1223	North Running Brook	3708	Upstream farm runoff/drainage swale	farm runoff/drainage	Woodstock	41.96448	-71.9666

Monitoring				child hill farm	swale child hill farm			
The Last Green Valley Water Quality Monitoring	1656	Little River	3805	adjacent to sand hill road at No Name Tributary	sand hill road at No Name Tributary	Hampton	41.75612	-72.0473
The Last Green Valley Water Quality Monitoring	2331	Stonehouse Brook	3204	off old trail downstream Palmer Road	downstream Palmer Road	Chaplin	41.7812	-72.1509
The Last Green Valley Water Quality Monitoring	2791	Mount Hope River	3206-00-3-R4	250 feet downstream Route 44	Route 44	Ashford	41.8633	-72.1612
The Last Green Valley Water Quality Monitoring	5107	BUTTONBALL BROOK	3200	US of rte 6	US of rte 6	Chaplin	41.76944	-72.1275
The Last Green Valley Water Quality Monitoring	5224	FIVEMILE RIVER	3400	50 M ds of RR bridge 700 m US Dayville Brook	50 M ds of RR bridge 700 m US Dayville Brook	killingly	41.83722	-71.8864
The Last Green Valley Water Quality Monitoring	5397	Merrick Brook	3803	Parallel to brook rd extension	Parallel to brook rd extension	Hampton	41.73778	-72.0828
The Last Green Valley Water Quality Monitoring	5527	Pigeon Swamp Brook	3800	DS of rte 32	DS of rte 32	Windham	41.6775	-72.1667
The Last Green Valley Water Quality Monitoring	6237	Knowlton Brook	3205-01	200 feet upstream Route 74	Route 74	Willington	41.86891	-72.2029
The Last Green Valley Water Quality Monitoring	6579	Quinebaug River	3700	at canoe launch behind baseball fields upstream cady lane	behind baseball fields upstream cady lane	killingly	41.79163	-71.8898
The Last Green Valley Water Quality Monitoring	6582	Bigelow Brook	3203	Upstream Route 44	Route 44	Eastford	41.87932	-72.0999
The Last Green Valley Water Quality Monitoring	6583	Bigelow Brook	3203	at Ashford Road	Ashford Road	Ashford	41.90376	-72.1185
The Nature Conservancy-Devils Den	1	Aspetuck River	7202	Upstream Bayberry Lane	Bayberry Lane	Westport	41.18643	-73.3429
The Nature Conservancy-Devils	320	Saugatuck River	7200	at DS end of Fly Fishing Only Area (1 Ford Rd)	DS end of Fly Fishing Only Area	Westport	41.16932	-73.367

Den					(1 Ford Rd)			
The Nature Conservancy-Devils Den	1288	West Branch Saugatuck River	7203	at mouth Glendenning Parking Lot	Glendenning Parking Lot	Westport	41.17179	-73.3643
The Nature Conservancy-Devils Den	1294	Saugatuck River	7200	at Keene Park Parking Lot	Keene Park Parking Lot	Weston	41.19267	-73.3617
The Nature Conservancy-Devils Den	1296	Saugatuck River	7200	at Lyons Plain Road at Fire Station	Lyons Plain Road at Fire Station	Weston	41.21988	-73.3499
The Nature Conservancy-Devils Den	1299	Aspetuck River	7202	Upstream Confluence with Saugatuck River at Lyons Plain Rd	Confluence with Saugatuck River at Lyons Plain Rd	Westport	41.17686	-73.3579
The Nature Conservancy-Devils Den	1304	Aspetuck River	7202	at Wells Hill Road	Wells Hill Road	Easton	41.22871	-73.3241
The Nature Conservancy-Devils Den	1994	Deep Brook	6019	at Deep Brook Road	Deep Brook Road	Newtown	41.4007	-73.3034
The Nature Conservancy-Devils Den	2479	Aspetuck River	7202	at Judges Hollow Road	Judges Hollow Road	Fairfield	41.2132	-73.3291
The Nature Conservancy-Devils Den	2480	Aspetuck River	7202	at Silver Hill Road	Silver Hill Road	Easton	41.2589	-73.3247
The Nature Conservancy-Devils Den	2679	West Branch Naugatuck River	6904	Adjacent to Rte 272 upstream Drakville Trailer Park	Adjacent to Rte 272 upstream Drakville Trailer Park	Torrington	41.85607	-73.1602
The Nature Conservancy-Devils Den	2771	Saugatuck River	7200-00-3-R2	behind Mark Twain Library downstream Diamond Hill Road and Rte 53	downstream Diamond Hill Road and Rte 53	Redding	41.29943	-73.4016
The Nature Conservancy-Devils Den	5245	Saugatuck River	7200	upstream RR crossing upstream Simpaug Turnpike	upstream Simpaug Turnpike	Redding	41.32465	-73.4355
The Nature Conservancy-Devils Den	5380	Aspetuck River, Tributary to (LYONS SWAMP	7202	US Sport Hill Rd	US Sport Hill Rd	Redding	41.29778	-73.3206

		OUTFLOW)						
The Nature Conservancy-Devils Den	5477	NOB CROOK BROOK	7200	Above Rte 107	Above Rte 107	Redding	41.28778	-73.3978
The Nature Conservancy-Devils Den	5946	West Redding Brook	7200-05	behind West Redding Library off Long Ridge Road	West Redding Library off Long Ridge Road	Danbury	41.33432	-73.4428
The Nature Conservancy-Devils Den	5990	Little River	7201-00-2-R3	In front of Greenbush Rd. bridge	In front of Greenbush Rd. bridge	Redding	41.29191	-73.3692
The Nature Conservancy-Devils Den	6209	Aspetuck River, Tributary to (LYONS SWAMP OUTFLOW)	7202	DS Rockhouse Road just past Ledgeway road	Rockhouse Road just past Ledgeway road	Redding	41.28906	-73.3244
Three Rivers Community Technical College	1236	Beaver Brook	4803	downstream bridge at 55-123 Beaver Brook Road	bridge at 55-123 Beaver Brook Road	Lyme	41.41005	-72.3289
Three Rivers Community Technical College	1237	Harris Brook	4801	at Mouth	Mouth	Salem	41.47329	-72.2851
Three Rivers Community Technical College	1238	Eightmile River, tributary to (PV brook)	4800	at trail crossing off MacIntosh Road	trail crossing off MacIntosh Road	Lyme	41.4155	-72.3396
Three Rivers Community Technical College	1239	Burnhams Brook	4800	at Mouth	Mouth	East Haddam	41.46031	-72.3343
Trout Unlimited-Candlewood Valley Chapter	281	Pootatuck River	6020	downstream Wasserman Way on Game Club Property (Mile Hill Rd)	Wasserman Way on Game Club Property (Mile Hill Rd)	Newtown	41.40637	-73.272
Trout Unlimited-Candlewood Valley Chapter	478	Blackwell Brook	3711	Upstream Wauregan Road	Wauregan Road	Canterbury	41.74067	-71.9488
Trout Unlimited-Candlewood Valley Chapter	1198	Pootatuck River	6020	adjacent Tom's Brook Confluence (DS STP outfall)	Tom's Brook Confluence (DS STP outfall)	Newtown	41.41486	-73.2827
Trout Unlimited-Candlewood Valley Chapter	1523	Pond Brook	6018	at Bridge at State Boat Launch	Bridge at State Boat Launch	Newtown	41.45969	-73.3275

Trout Unlimited-Candlewood Valley Chapter	1992	Deep Brook	6019	at Baldwin Road	Baldwin Road	Newtown	41.40292	-73.3079
Trout Unlimited-Candlewood Valley Chapter	1993	Deep Brook	6019	DS old bridge crossing DS Wassermann way	old bridge crossing DS Wassermann way	Newtown	41.40229	-73.2947
Trout Unlimited-Candlewood Valley Chapter	2473	Deep Brook	6019-00-2-R3	Upstream Bushy Hill Road in Dickenson park	Bushy Hill Road in Dickenson park	Newtown	41.3976	-73.3006
Trout Unlimited-Candlewood Valley Chapter	2762	Halfway River	6022-00-3-R3	at Jordan Hill Road	Jordan Hill Road	Newtown	41.38106	-73.201
Trout Unlimited-Candlewood Valley Chapter	2766	Pond Brook	6018-00-3-R3	300 meters downstream Intersection of Pond Brook Rd and Obtuse Rd	Intersection of Pond Brook Rd and Obtuse Rd	Newtown	41.44325	-73.3545
Washington Montessori School	6071	Shepaug River	6700-00-2-R1	at Valley Road Pull off just upstream of Route 202	Valley Road Pull off just upstream of Route 202	Washington	41.70893	-73.2944
Woodstock Academy	150	Little River	3708	Upstream Peake Brook Road	Peake Brook Road	Woodstock	41.92797	-71.9331

Appendix B: The RBV Datasheet.

RAPID BIOASSESSMENT IN WADEABLE STREAMS AND RIVERS BY VOLUNTEER MONITORS
FIELD DATA SHEET

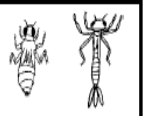
SUBMIT DATA TO: MIKE BEAUCHENE (mike.Beauchene@po.state.ct.us)
PHONE (860) 424-4185

WATERBODY NAME:		COLLECTION DATE:	COLLECTION TIME:
LOCATION DESCRIPTION:		COLLECTORS NAMES:	
TOWN:	NOTES/COMMENTS:		

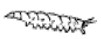
	1	2	3	4	5A	5 B	5 C
MOST	Body builder mayfly Drunella	Minnow mayfly Isonychia	2-tailed flat head mayfly Epeorus	Roach-like stonefly Peltoperlidae	Common stonefly Perlidae	Giant stonefly Pteronarcys	Misc Stonefly
							
Locs 1&2							
Locs 3&4							
Locs 5&6							

	6A	6 B	7	8A	8 B
MOST	Saddle-Case caddis Glossosoma	Cornucopia Case caddis Apatania	Michelin Man caddis Rhyacophila	Mid-size plant case caddis Brachycentrus	 Lepidostoma
					
Locs 1&2					
Locs 3&4					
Locs 5&6					

DATA INTERPRETATION	
# OF TYPES OF THE "MOST"	WATER QUALITY
5 OR MORE	EXCEPTIONAL
3 TO 4	EXCELLENT
1 TO 3	VERY GOOD
0	MORE INFO NEEDED TO ASSESS

	9	10	11	12	13 A	13 B	14
MODERATE	Common net-spinner Hydropsychidae	Fingernet Caddis Chimarra	Flat Head mayfly Stenonema	Water Penny Psephenus	Dobsonfly Corydalus	Fishfly Nigronia	Dragonfly & Damselfly Odonata
							
Locs 1&2							
Locs 3&4							
Locs 5&6							

	15 A	15 B	15 C	15 D	15 E	15 F	15 G
LEAST	Amphipod	Isopod	Leech	Midge	Black fly	Snail	Worm
							
Locs 1&2							
Locs 3&4							
Locs 5&6							

	OTHER COMMONLY COLLECTED RIFFLE-DWELLING MACROINVERTEBRATES						
OTHERS	Crayfish	Crane fly larvae	Riffle Beetle adult/larva	Small minnow mayfly	Water snipe fly	Planaria	Fingernail clam/ mussel
							
Present							

ALL RBV MATERIALS ARE AVAILABLE AT: http://dep.state.ct.us/wtr/volunmon/volopp.htm

PLEASE NOTE: BE SURE TO INCLUDE AT LEAST 1 OR 2 OF EACH ORGANISM IN YOUR VOUCHER COLLECTION!! INCLUDE A SPECIMEN FROM EVERY TYPE YOU THINK IS A DIFFERENT, EVEN IF IT IS NOT PICTURED ON THIS DATASHEET. **IF AN ORGANISM IS NOT INCLUDED IN THE VOUCHER COLLECTION IT WILL NOT BE INCLUDED IN THE FINAL DATA ASSESSMENT!!**