

**THE RBV METHOD:** This method was developed specifically to facilitate the generation of volunteer water quality monitoring data by:

- 1.) Being an easy to use, non-technical method
- 2.) Eliminating the need for expensive equipment, resources & lengthy time commitment
- 3.) Providing usable water quality information for both the data collector and the CT DEEP Monitoring program

Participants collect macroinvertebrate community data once a year in the fall from a site(s) of their local interest. Data are submitted to CT DEEP for use in water quality

**RBV ORGANISMS:** Each of the RBV organisms were selected due to their statewide distribution, having a unique structure or behavior, and are key ecological indicators. The RBV data sheet below organizes the organisms into 1 of 3 categories based on how sensitive the organism is to environmental disturbance.

Most = very sensitive (blue)  
 Moderate = somewhat sensitive (yellow)  
 Least = not sensitive (red)

WATERBODY NAME:		COLLECTION DATE:		COLLECTION TIME:				
LOCATION DESCRIPTION:		COLLECTOR'S NAMES:						
FORM:		NOTES/COMMENTS:						
MOST	1 Stony head mayfly	2 Minnow mayfly	3 Lancehead mayfly	4A Rabbithead stonefly	4B Common stonefly	5A Great stonefly	5B Mud	5C Mud
	6A Saddle case caddis	6B Somerset case caddis	7 Michigan Man caddis	8A Mid-size plant case caddis	8B Microcrustacean	9 Common black fly	10 Fingered caddis	11 Flat head mayfly
12 Water penny	13A Dobsonfly	13B Fly	14 Dragonfly & damselfly	DATA INTERPRETATION				
				# OF TYPES OF THE "MOST"				
				5 OR MORE EXCEPTIONAL				
				3 TO 4 EXCELLENT				
				1 TO 2 VERY GOOD				
				0 MORE INFO NEEDED TO ASSESS				
MODERATE	9 Common black fly	10 Fingered caddis	11 Flat head mayfly	12 Water penny	13A Dobsonfly	13B Fly	14 Dragonfly & damselfly	
	15A Chironomid	15B Beetle	15C Leech	15D Hydra	15E Black fly	15F Worm	15G Worm	
16 Worm								
17 Worm								
18 Worm								
19 Worm								
20 Worm								
21 Worm								
22 Worm								
23 Worm								
24 Worm								
25 Worm								
26 Worm								
27 Worm								
28 Worm								
29 Worm								
30 Worm								

## WATER QUALITY MONITORING MATERIALS

### CT DEEP MONITORING PROGRAM

The Consolidated Assessment and Listing Methodology (CALM) is a document describing the methodology used for generating water quality assessments in preparation for the Water Resources Report To Congress [305(b) Report].  
[http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325612&epNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325612&epNav_GID=1654)

The Water Resources Report to Congress AKA The 305(b) Report contains the water quality assessments for the previous 2-year period.  
[http://www.ct.gov/dep/lib/dep/water/water\\_quality\\_management/305b/2006\\_305\(b\)fullplusapps.pdf](http://www.ct.gov/dep/lib/dep/water/water_quality_management/305b/2006_305(b)fullplusapps.pdf)

The Impaired Waters List AKA The 303(d) List, contains information related to all waterbody segments that were determined not to meet water quality standards for a designated use. This list is a subset of all water quality assessments found in the 305(b) Report.  
[http://www.ct.gov/dep/lib/dep/water/water\\_quality\\_management/305b/2006appendixc303d.pdf](http://www.ct.gov/dep/lib/dep/water/water_quality_management/305b/2006appendixc303d.pdf)

Water Quality Standards document contains the appropriate criteria for which monitoring data are compared.  
[http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325620&epNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325620&epNav_GID=1654)

### RBV PROGRAM MATERIALS

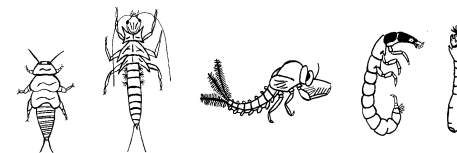
[http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325606&epNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325606&epNav_GID=1654)

- The above web page contains links for:
- Annual data summary reports
  - Background Material
  - Method Instructions
  - RBV datasheet
  - RBV sorting guide
  - RBV field identification cards
  - EPA approved Quality Assurance/Quality Control Project Plan

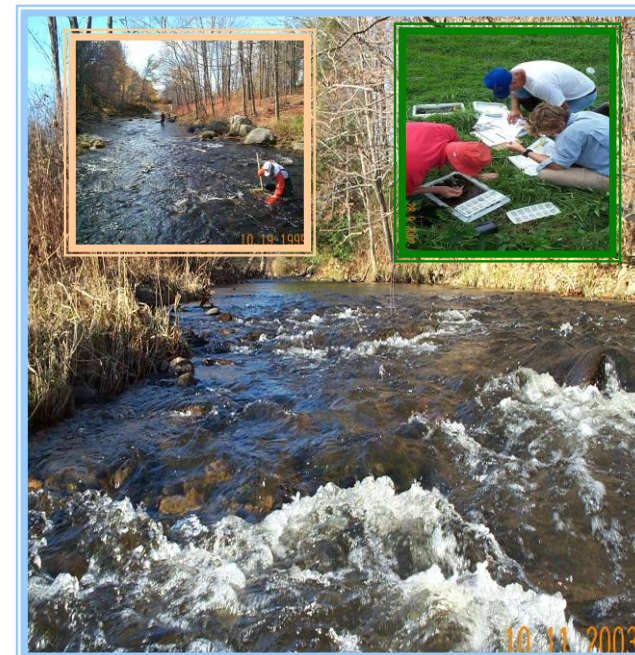
### RBV Program Coordinator

CT DEEP / Water Protection and Land Reuse  
 79 Elm St.  
 Hartford, CT 06106  
 860-424-3735

## RAPID BIOASSESSMENT IN WADEABLE STREAMS & RIVERS BY VOLUNTEER MONITORS (RBV)



The Ambient Monitoring Program within the CT DEEP Bureau of Water Protection and Land Reuse is actively recruiting citizens that are interested in collecting water quality data from streams and rivers in their community. This brochure provides information about the program, Internet access to program materials, and contact information if you would like to become involved.



## **WATER QUALITY MONITORING OF WADEABLE STREAMS AND RIVERS:**

Connecticut's approximately 5,800 miles of rivers and streams are monitored and assessed by staff assigned to the Bureau of Water Management, Planning and Standards Division. The monitoring and reporting of water quality assessments completed by these staff are required under state and federal regulations. These summary reports as well as the assessment methodology used to generate the reports are on the CT DEEP web page (links are provided on the rear panel of this brochure).

A major component of water quality assessment is a determination of the ecological condition of a particular waterbody. These assessments are primarily based on biological community data that reflect the degree to which the waterbody supports a wide variety of indigenous organisms sensitive to environmental disturbance. Invertebrate community structure is used as the primary indicator of water quality impairment. Sites are compared to an ideal reference community. The level of impairment is based on increasing degree of deviation from the reference condition.

The primary tool for these types of assessments is the riffle-dwelling benthic macro-invertebrate community. These organisms have several advantages for use including: ease of capture, they inhabit a wide range of water quality conditions, and assessment methodology is well established.

**RBV RATIONALE:** The RBV program capitalizes on these advantages. Specifically the RBV program requires participants to collect and document specific organisms. These organisms are divided into 3 categories (Most, Moderate, and Least) depending upon the sensitivity to environmental degradation. The most useful RBV data are those sites that have at least 5 representatives in the "Most Wanted" category.

**RBV TRAINING:** A daylong training/data collection workshop can be held for your organization free of charge\*. The workshop is structured around instructional power-point presentations in the morning and data collection in the afternoon.

The data collection process is completed on site at a riffle (fast flowing rocky bottom). Participants wade into the water, dislodge the organisms into a net by scrubbing the rocks, sort and identify the different organisms present, and preserve a representative set of organisms for verification. At the completion of the session the data is submitted to the CT DEEP for incorporation into water quality assessments.

RBV workshops are scheduled on a first come first serve basis with priority for first time programs. Since the data collection occurs in the fall and there are a fixed number of weekend days, it is better to schedule well in advance. Every attempt will be made to accommodate each workshop request. The CT DEEP will provide all of the necessary equipment except for waders, hip boots or other waterproof foot ware.

### **TO BECOME INVOLVED\*:**

The prerequisites to sponsor a workshop are to:

- 1.) Assemble a group of at least 6 adults
  - 2.) Reserve a meeting room centrally located to the potential monitoring stations. The room must have electricity and be capable of holding all of the participants.
  - 3.) Contact DEEP to schedule a workshop date by phone (860) 424-3735.
- \*Individuals not associated with a monitoring program can be linked with a program in their local area.

### **RBV WEB PAGE:**

[http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325606&depNav\\_GID=1654](http://www.ct.gov/dep/cwp/view.asp?a=2719&q=325606&depNav_GID=1654)