

# Connecticut River Watershed Council Volunteer Water Quality Monitoring Program Annual Report 2007



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For more information about participating in CRWC's volunteer water quality monitoring program, please go to our website at [www.ctriver.org](http://www.ctriver.org) or contact Christine Luis-Schultz at (413) 772-2020 x.201 and [cluis-schultz@ctriver.org](mailto:cluis-schultz@ctriver.org).

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## **Introduction**

### **About CRWC**

Founded in 1952, the Connecticut River Watershed Council (CRWC) works to protect critical natural resources, promote public support for and involvement in river conservation, and increase public understanding and enjoyment of the Connecticut River and its rich diversity of natural and cultural resources. As stewards of this heritage, we celebrate our four-state treasure and collaborate, educate, organize, restore, and intervene to preserve the health of the whole for generations to come. In particular, we are looking forward to the day when the entire length of the Connecticut River will be fishable and swimmable.

CRWC has a staff of four full-time employees, including an executive director and three river stewards who are advocates for the VT/NH, MA, and CT sections of the watershed. Four part-time employees cover membership, finance, and operation of our main office in Greenfield, MA. CRWC also has an active Board of Trustees who represent each state in the Connecticut River watershed.

### **The Water Quality Monitoring Program**

In 2006, the CRWC staff and board underwent a strategic planning exercise. During this process, CRWC decided that starting a volunteer-based water quality monitoring program was one of its highest priorities, both as a way to develop more data about the river and as a means of involving people in taking care of the river.

We initiated our first season using monitoring equipment we received as a result of an EPA Equipment Loan Grant. Our equipment included two YSI 85 meters and several clarity tubes. The YSI meters were chosen because they are used by the New Hampshire Department of Environmental Service's NH Volunteer River Assessment Program (VRAP), our staff had experience using them, and we knew these meters held up well in the field and worked well for volunteer use. The clarity tubes were chosen as a way of measuring something close to turbidity, as they are easy to use and we were interested in seeing how they worked in our program.

During the spring of 2007, we met with representatives from many different organizations and agencies and we received much valuable input. Several people recommended measuring temperature and dissolved oxygen levels because of their importance to fish and aquatic life. Another interest we have is being able to answer questions the public has about whether certain areas are safe for swimming. In the

future, we hope to measure bacteria as an indicator for pathogens that would be a threat to human health during primary and secondary recreational use.

### Existing Water Quality Conditions in the Connecticut River

The Connecticut River is New England’s longest river and contains its largest watershed. In the Massachusetts part of the watershed, the entire length of the Connecticut River is considered water quality “impaired” by the Massachusetts Department of Environmental Protection (MA DEP). The map below shows the types of impairments for each reach of the River. Fall River, where we also sampled, has not yet been assessed by the state and very little is known about water quality in this tributary.

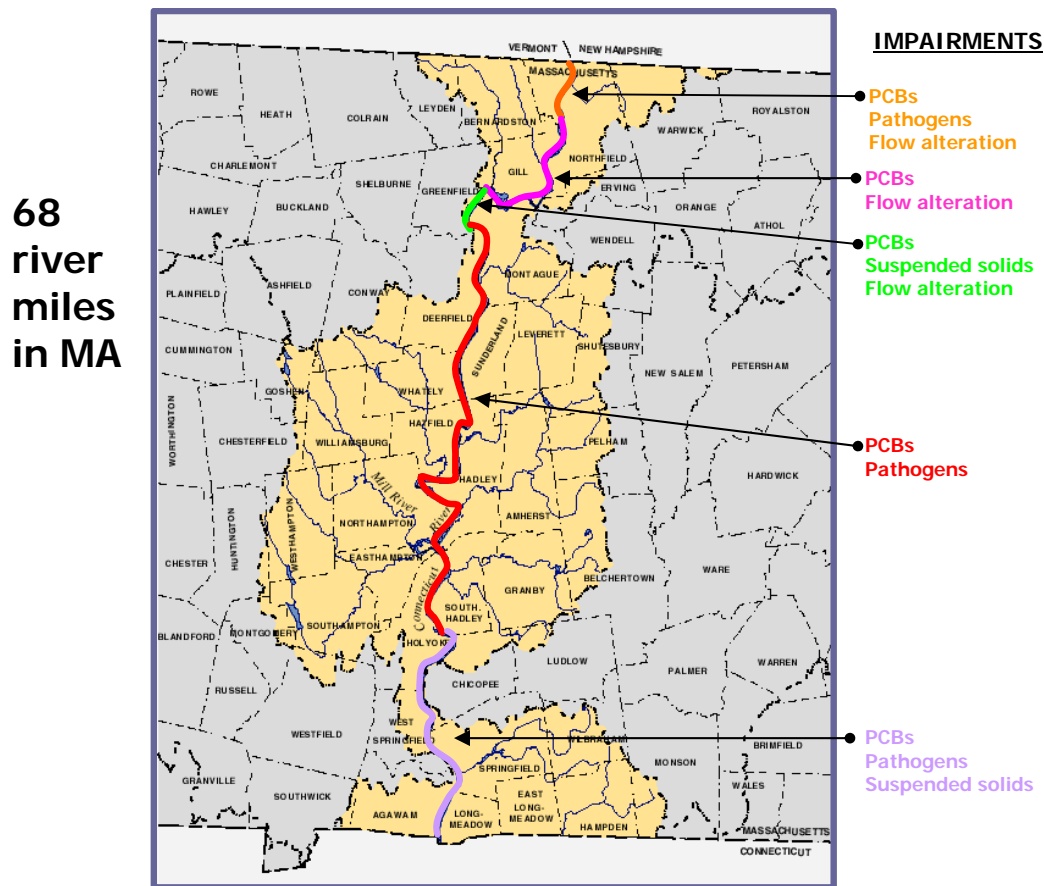


Figure 1. Connecticut River water quality impairments, according to the 2006 MassDEP Integrated List

These impairments can arise from a variety of factors. Some sources are shown below.

Source	Common Pollutants / Impacts
Cropland	Turbidity, total solids, nutrients, thermal impacts, pesticides
Grazing land	Fecal bacteria, turbidity, nutrients, thermal impacts
Forestry	Turbidity, total solids, thermal impacts
Mining	Alkalinity, pH, total dissolved solids
Industrial/commercial discharge	Turbidity, total solids, conductivity, pH, toxics
Sewage treatment plants	Dissolved oxygen/biochemical oxygen demand, turbidity, total solids, conductivity, nutrients, fecal bacteria, thermal impacts, pH
Construction	Turbidity, total solids, thermal impacts, dissolved oxygen/biochemical oxygen demand, toxics
Suburban/Urban runoff	Turbidity, nutrients, thermal impacts, conductivity, dissolved oxygen/biochemical oxygen demand, bacteria, metals, petroleum hydrocarbons
Lawns/golf courses	Nutrients, turbidity, total solids, bacteria, toxics
Septic systems	Fecal bacteria, nutrients, dissolved oxygen/biochemical oxygen demand, conductivity, thermal impacts
Marinas/boat usage	Nutrients, bacteria, toxics

USDA National Facilitation of CSREES Volunteer Monitoring Efforts Website <http://www.usawaterquality.org/Volunteer/>

## Monitoring Parameters

**Water temperature** is a critical parameter for aquatic life and has an impact on other water quality parameters such as dissolved oxygen concentrations and the activity of bacteria in the water. Water temperature controls the metabolic and reproductive processes of aquatic species and can determine which fish and macroinvertebrate species can survive in a given river or stream. A number of factors can have an impact on water temperature including the quantity and maturity of riparian vegetation along the shoreline, the rate of flow, the percent of impervious surfaces contributing stormwater, thermal discharges, impoundments, and the influence of groundwater. Class B Massachusetts Surface Water Quality Standards (all of our monitoring sites are Class B waters) state that temperature shall not exceed 68°F (20°C) based on a mean of the daily maximum temperature over a 7-day period in cold water fisheries, unless naturally occurring. Temperature shall not exceed 83°F (28.3°C) in warm water fisheries. The rise in temperature due to a discharge shall not exceed 3°F (1.7°C) in rivers and streams designated as cold water fisheries nor 5°F (2.8°C) in rivers and streams designated warm water fisheries (based on minimum expected flow for the month). Natural background conditions and natural variations shall be maintained.

**Dissolved oxygen** is a measure of the amount of oxygen in the water. Our instrument measures oxygen in two ways: it gives the concentration as a measure of the amount of oxygen in a volume of water, and a saturation level, which is a measurement of the amount of oxygen in the water compared to the amount of oxygen the water can actually hold at full saturation. DO levels fluctuate seasonally and over a 24-hour period. Aquatic plants and algae produce oxygen in the water during the day, but consume oxygen during the night. Bacteria utilize oxygen (day and night) as they process organic matter deposited in the river into smaller and smaller particles. Cold water holds more oxygen than warm water. Thermal discharges raise the temperature of water and lower its oxygen content. The presence of dissolved oxygen is vital to bottom-dwelling organisms as well as fish and amphibians. Massachusetts Surface Water Quality Standards state that dissolved oxygen shall not be less than 6.0 mg/L in cold water fisheries and not less than 5.0 mg/L in warm water fisheries. Where natural background conditions are lower, DO shall not be less than natural background conditions.

**Specific conductance** is the numerical expression of the ability of water to carry an electrical current at 25° C and is a measurement of free ion (charged particle) content in the water. Ions can come from natural sources such as bedrock, or human sources such as stormwater runoff. Specific conductance can be used to indicate the presence of chlorides, nitrates, sulfates, phosphates, sodium, magnesium, calcium, iron, and aluminum ions. Specific conductance readings are useful in locating potential pollution sources because they usually have higher specific conductance than unimpaired surface waters. High specific conductance values may indicate pollution from sources such as road salting, septic systems, wastewater treatment plants, or urban/agricultural runoff. Specific conductance can also be related to geology. In rivers and streams not impacted by pollutants, geology and the associated groundwater are the primary influences on specific conductance levels. Each river or stream tends to have a relatively constant range of conductivity that, once established, can be used as a baseline for comparison with regular conductivity measurements.

**Transparency** is an integrated measure of light scattering and absorption. It measures water clarity and is affected by the amount of algae, color, and particulate matter in a river. Dissolved chemicals, colloids, and suspended particles in water decrease the transparency; thus the “dirtier” the water, the lower the transparency. Nevertheless, the usefulness of transparency data is limited. It provides information on how much particulate matter are in a water sample, but does not reveal the nature of these particulates. Transparency values within a single body of water can be highly variable, especially in regard to recent rainfall and flow. Transparency is best when used for measurements over several years or longer, so that long term trends and typical background conditions can be determined for the particular water body. There is no numeric standard for transparency; however, transparency is related to solids and

turbidity, of which there are narrative standards. Solids: Waters shall be free from floating, suspended, and settleable solids in concentrations and combinations that would impair any use assigned to this class, that would cause aesthetically objectionable conditions, or that would impair the benthic biota or degrade the chemical composition of the bottom. Color and Turbidity: Waters shall be free from color and turbidity in concentrations or combinations that are aesthetically objectionable or would impair any use assigned to this class.

## Methods

### Volunteer Training

CRWC held a training session on August 23, 2007, during which all five volunteers were given instruction about the program, protocols, and sampling methods. Volunteers were trained to use the sampling equipment in the field at the Barton Cove public boat launch, following protocol described in the *Connecticut River Watershed Council Water Quality Monitoring Program Volunteer Handbook*.

### Field protocols

Volunteers were trained to conduct measurements according to *Connecticut River Watershed Council Water Quality Monitoring Program Volunteer Handbook*. These protocols include the following:

1. CRWC staff members Christine Luis-Schultz, Andrea Donlon, and Chelsea Gwyther accompanied the volunteer monitoring teams on sampling days. Sampling teams met at 8:00 AM and each team monitored three sites. Monitoring at roughly the same time each date helps provide a “snapshot” of the river or stream at this time and allows for data results to be more consistent than if they were collected during different times of the day. Monitoring early in the day (perhaps even earlier than we did) is preferable, because dissolved oxygen is lowest before plants start photosynthesizing when the sun rises.
2. Measurements were made on August 30, September 20, and October 23.
3. Sampling locations are shown below in Figure 2. Measurements were taken on the Connecticut River at Barton Cove in Gill, Sportsman’s Marina in Hadley, Jones Ferry in Holyoke, and the Pioneer Valley Yacht Club in Longmeadow. Measurements were taken off of boat docks. However, as fall progressed, a few of our sampling site boat docks were removed and alternative sampling locations were found. At Barton Cove, Team 1 received permission to use the Franklin County Boat Club’s docks (100 feet downstream) during September and October. At Sportsman’s Marina, Team 2 used a smaller dock 100 yards downstream in October. At Pioneer Valley Yacht Club, Team 2 had to use a canoe in October to approximate the normal sampling site.
4. Measurements were taken on the Fall River under the Route 2 bridge (just upstream) in Greenfield and a little bit downstream of Hoeshop Road in Gill. Teams waded in the stream and measured upstream of where they had walked.
5. Teams each used a YSI Model 85 multiparameter probe to measure dissolved oxygen, water temperature, air temperature, and specific conductance. Teams

made 4 measurements at 2-minute increments at each site. This was done to assess the amount of variability in instrument measurement. Provided the measurements were consistent, the last reading at each site was used for data analysis.



**Figure 2. 2007 Sampling locations**

6. Teams each used a 120-cm long transparency tube to measure water clarity. Readings were taken in the shade, noting weather conditions and cloud cover.
7. Each team took one replicate set of measurements each monitoring day. The site at which the replicate measurements were taken rotated each monitoring day.
8. In 2007, a new invasive species was found in the Connecticut River watershed far upstream of our sampling sites (northern NH and the White River in VT). *Didymosphenia geminata*, commonly referred to as "didymo", is a freshwater microscopic diatom. Because of concern that the diatoms could be present in the water column without our knowledge, Massachusetts Department of Environmental Protection recommended that we decontaminate sampling equipment between sites. Both teams used a bucket of 5% detergent solution in warm water and a brush to rinse and scrub the YSI probe (rinse only), clarity tube, funnel, and bucket between each sampling site. Each item was decontaminated for 1 minute in the soapy solution. Team 1 also decontaminated rubber boots between the two Fall River sites. Team 2 used only docks, and did not have clothing that got wet in between sites.
9. After each field date, CRWC noted USGS river gage data for sampling time and weather conditions (rainfall, maximum temperature, and minimum temperature) for the three days prior to sampling. River flow data is to be used as a general

sense of comparative river conditions at the time of sampling. On most days, river flow increased during the morning because of hydropower use of the river. River flow data was obtained online at <http://waterdata.usgs.gov/ma/nwis/current/?type=flow>. Weather data was obtained online through <http://www7.ncdc.noaa.gov/IPS/getcoopstates.html> (select MA and then select site) The following table indicates which stations were used for each sampling location.

**Table 1. River gage data and weather data used for each sampling location**

<b>Sampling location</b>	<b>USGS gage station</b>	<b>NOAA coop weather station</b>
CT River at Barton Cove	Connecticut River at Montague City, 01170500	Greenfield Water Pollution Control Plant
Fall River at Route 2	Connecticut River at Montague City, 01170500	Greenfield Water Pollution Control Plant
Fall River at Hoeshop Rd	Connecticut River at Montague City, 01170500	Greenfield Water Pollution Control Plant
CT River at Sportsman's Marina	Connecticut River at I-391 Bridge in Holyoke, 01172010	Amherst Wastewater Treatment Facility
CT River at Jones Ferry	Connecticut River at I-391 Bridge in Holyoke, 01172010	Westfield Water Treatment Facility
CT River at Pioneer Valley Yacht Club	Connecticut River at I-391 Bridge in Holyoke, 01172010	Westfield Water Treatment Facility

### **Data input and analysis**

The Project Coordinator, Christine Luis-Schultz, transcribed data from the volunteer data sheets onto an Excel spreadsheet. All numbers were reviewed and checked for accuracy by the Project QA Officer, Andrea Donlon.

Our data from September 20 was submitted to Water Environment Federation as part of World Water Monitoring Day, which takes place annually between September 18 and October 18. Massachusetts had the fourth highest number of participants in the US. A summary report for the year is online at [www.WorldWaterMonitoringDay.org](http://www.WorldWaterMonitoringDay.org).

### **Quality Assurance**

CRWC made an effort to follow all quality assurance procedures as stated in the Quality Assurance Program Plan (QAPP). The Project QA Officer completed Quality Assurance/Quality Check (QA/QC) tasks as described below.

### Instrument Drift or “Bouncing”

As noted above in #5, teams recorded four measurements with the YSI 85 at each site, at two-minute intervals. Though only the final reading was entered into our data spreadsheet, CRWC calculated the range of values recorded and noted if the range fell within program goals for each parameter. For dissolved oxygen, our goal was to have maximum and minimum % saturation readings within 5% points of each other, and for the concentration range to be within 0.5 mg/L. We aimed to have water temperatures fall within a range of 0.5°C. For specific conductance, our goal was to have readings under 300  $\mu\text{S}$  within a range of 5  $\mu\text{S}$ , and for values over 300 $\mu\text{S}$ , the goal was a range of 30  $\mu\text{S}$ . Our specific conductance goals fell within two ranges because we noticed that readings above 300  $\mu\text{S}$  had much higher variability.

Almost all readings did not drift beyond our stated goals. The only problems noted were on August 30, when the dissolved oxygen saturation reading at Barton Cove varied by 7.1% points, which was above the goal of 5. At the Fall River at Route 2 site, conductivity readings were high and our meters experienced an unacceptable level of drift. On September 20, specific conductance readings at this site varied by 50  $\mu\text{S}$ , and on October 23, the readings varied by 60  $\mu\text{S}$  and then 108.3  $\mu\text{S}$  for the replicate measurement. While it is possible the values are questionable, the conductivity readings at the next site (Fall River at Hoeshop Road) experienced very little drift. While we have uncertainty as to the accuracy of the specific conductance level at the site on those two dates, we are confident that the values were high – most likely, above 300 $\mu\text{S}$ .

### Accuracy

CRWC generated accuracy statistics for calibration checks on dissolved oxygen and conductivity. Each team calibrated dissolved oxygen before taking readings at each site. Calibration readings were compared against the ideal 100% reading, and also against readings on that instrument for that day. Ideally, we wanted calibration readings to fall within 2% of 100 and not drift more than 3% during the day. All readings met QC goals.

Conductivity was measured against a standard solution of 447  $\mu\text{S}$  at the beginning and end of the day (Team 2 mistakenly did a calibration reading at each site on August 30). CRWC’s goal was to have readings within 10% (or 44  $\mu\text{S}$  of the standard solution’s known value. Conductivity was also measured against distilled water (theoretically 0  $\mu\text{S}$ ) at the end of the day, and our goal was to have reading within 5  $\mu\text{S}$  of 0. All readings met QC goals, except for Team 1’s end of the day check on September 20. This team’s end of day measurement of distilled water fell within limits. Team 1’s final conductivity value for that day does not need to be discarded, but should be flagged. Results are shown in Table 2 below.

Although we had intended to use a NIST-certified thermometer at the University of Massachusetts environmental analysis laboratory to check on the accuracy of our YSI thermometers, lab services there were suspended for several months. We will aim to accomplish that test in 2008.

**Table 2. Calibration QA/QC check**

Calibration QC Check	QC goal	Team 1	Team 2
<b>Dissolved oxygen</b>			
Max different from 100%			
30-Aug	±2%	1.1%	0.4%
20-Sep	±2%	1.1%	0.4%
23-Oct	±2%	1.2%	0.4%
Drift during the day			
30-Aug	±3%	0.4%	-0.4%
20-Sep	±3%	0.4%	-0.4%
23-Oct	±3%	0.4%	-0.4%
<b>Conductivity</b>			
Initial check against 447 µS standard			
30-Aug	±44 µS	-0.4	10, 41, 28
20-Sep	±44 µS	-9.5	19.3
23-Oct	±44 µS	5.5	-11.0
End of day check against 447 µS standard			
30-Aug	±44 µS	43.0	31.0
20-Sep	±44 µS	52.3	38.0
23-Oct	±44 µS	12.1	-3.0
End of day check against distilled water			
30-Aug	5 µS	1.9	2.0
20-Sep	5 µS	2.1	2.0
23-Oct	5 µS	2.1	2.1

Precision

CRWC ran a QA/QC to compare replicate measurements against original measurements of air temperature, water temperature, dissolved oxygen, and specific conductance. No comparison was made for clarity tube readings because all measurements were the same all season (>120 cm). All readings except for Team 2's air temperature reading on August 30 met precision goals. Since we only use air temperature as a secondary data set to accompany our water quality readings, this is not a large concern. In general, both of our YSI instruments were fairly consistent. Table 3 below summarizes the results.

Table 3. QA/QC comparison of replicate readings

Replicate QC check	QC goal Difference	Team 1		Team 2	
		Difference	RPD (%)	Difference	RPD (%)
<b>Air Temperature</b>					
30-Aug	±1.5°C	0.40	1.85	2.50	9.17
20-Sep	±1.5°C	0.00	0.00	0.70	4.33
23-Oct	±1.5°C	0.50	2.93	0.20	0.96
average		0.30	1.59	1.13	4.82
<b>Water Temperature</b>					
30-Aug	±1.0°C	0.40	2.09	0.00	0.00
20-Sep	±1.0°C	0.00	0.00	0.00	0.00
23-Oct	±1.0°C	0.10	0.72	0.10	0.58
average		0.17	0.94	0.03	0.19
<b>DO (%sat)</b>					
30-Aug	±9%	0.90	0.99	0.70	0.82
20-Sep	±9%	0.30	0.38	3.50	4.33
23-Oct	±9%	2.60	3.11	2.20	2.40
average		1.27	1.49	2.13	2.52
<b>DO (mg/L)</b>					
30-Aug	±0.5 mg/L	0.18	2.16	0.32	4.66
20-Sep	±0.5 mg/L	0.18	2.49	0.21	2.84
23-Oct	±0.5 mg/L	0.22	2.55	0.29	3.29
average		0.19	2.40	0.27	3.60
<b>Specific Conductance</b>					
30-Aug	±15 µS	1.10	0.41	0.00	0.00
20-Sep	±15 µS	0.10	0.07	0.70	0.49
23-Oct	±15 µS	9.00	1.59	0.10	0.07
average		3.40	0.69	0.27	0.19

Note: RPD = Relative Percent Difference

## 2007 Results

In this section we summarize the results for monitoring in 2007. In general, the summer and fall of 2007 experienced below normal rainfall and a mild drought. Antecedent rainfall for three days prior to our sampling dates was zero on all but the last sampling round, which had rain on the third day prior to the sampling date.

### Water Temperature

#### Fall River sites

The Fall River is a Class B Cold Water Fishery. The Fall River sampling sites ranged in temperature between 12.2°C (54°F) and 18.9°C (66°); the highest temperature readings fell on August 30, and the lowest temperature readings fell on September 20. All temperatures met the Massachusetts Water Quality Standard for cold water fisheries, which states that water temperature shall not exceed 20°C (68°F). Water temperature at the Route 2 site (downstream) was consistently lower than at Hoeshop Road (upstream). Possible reasons for this are that the Fall River upstream of Hoeshop Road has minimal tree cover and is fairly exposed. Also, a tributary that starts at the Crumpin Fox golf course empties into the Fall River a bit upstream of the sampling site. Between Hoeshop Road and Route 2, there is more tree cover, and the sampling site is located just downstream of where Fall Brook (also a cold water stream) discharges into the Fall River.

#### Connecticut River sites

The Connecticut River is a Class B Warm Water Fishery. As expected, the Connecticut River sites had consistently higher water temperatures compared to the Fall River sites. Water temperature declined between August and September, and again September to October. Water temperature was roughly consistent across all four Connecticut River sites. It is somewhat surprising that water temperature at Barton Cove wasn't higher than the other Connecticut River sites, because it lies behind an impoundment. All temperatures met Massachusetts Water Quality Standard for warm water fisheries, which states that water temperature shall not exceed 28.3°C (83°F).

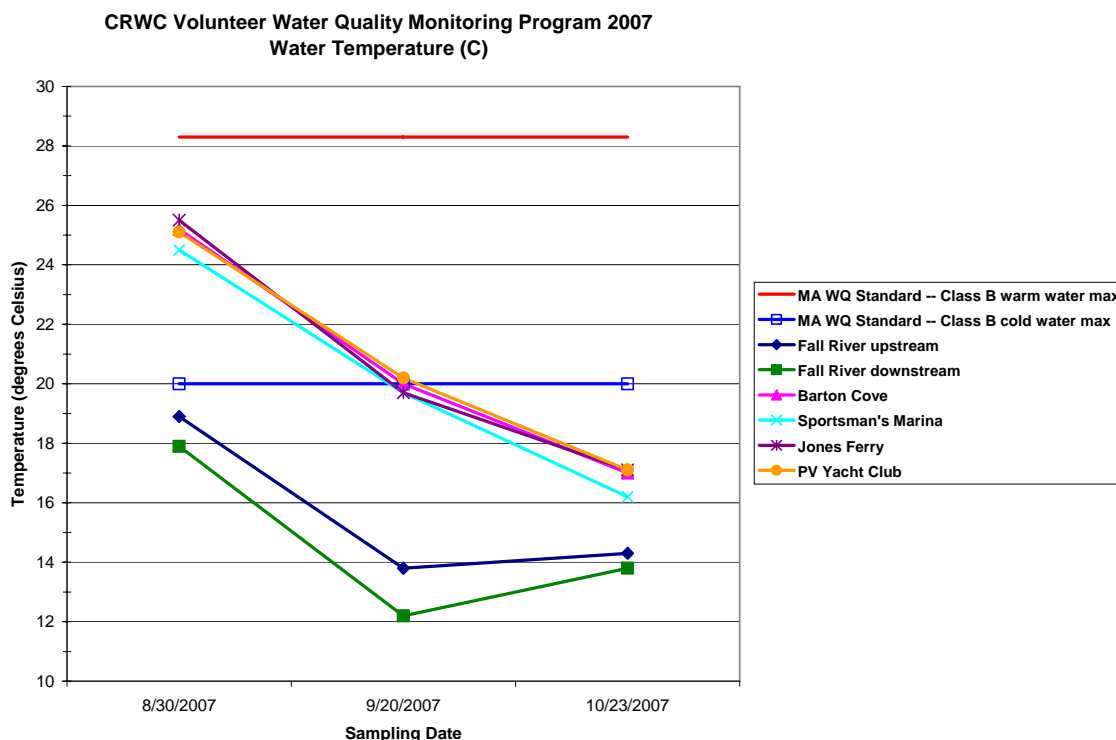
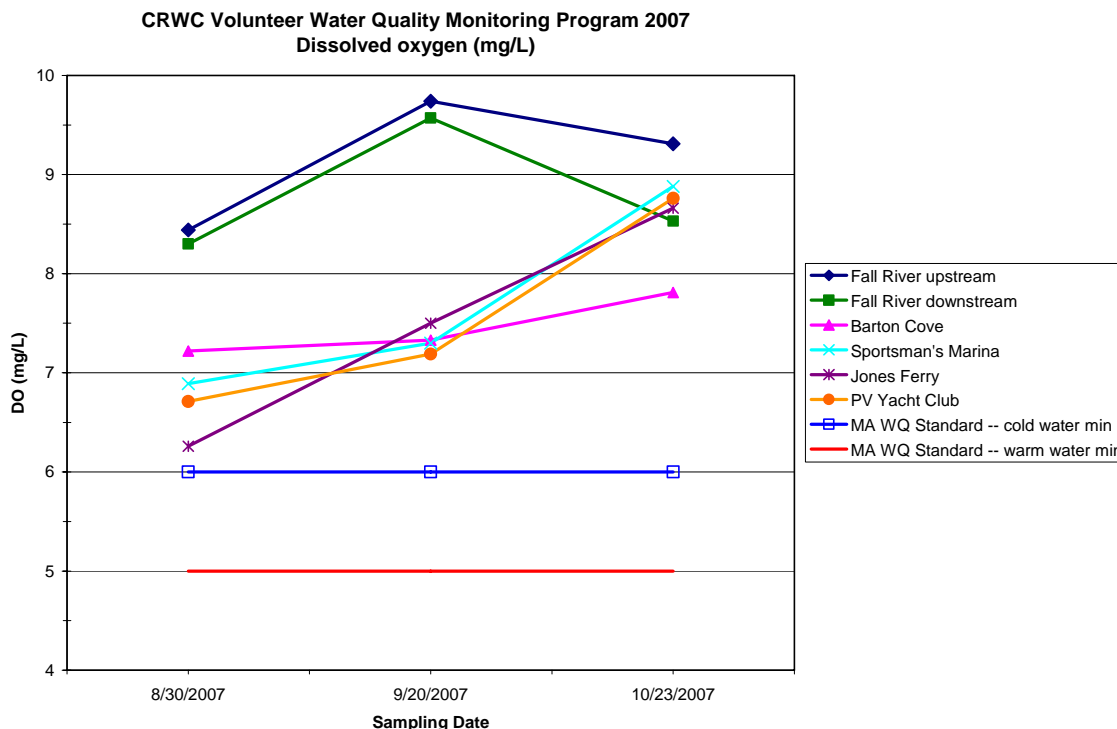


Figure 3. Water temperature readings for 2007

## Dissolved Oxygen

### Fall River sites

The Fall River sampling sites ranged from 8.3 mg/L to 9.57 mg/L, all of which met Massachusetts Water Quality Standards for cold water fisheries, which states that dissolved oxygen should not be lower than 6 mg/L. The pattern of dissolved oxygen mimicked the temperature pattern, that is, the date of the lowest temperature readings (September 20) was the date of the highest dissolved oxygen readings. Lower water temperatures allow more gases to be dissolved in water. Even though temperatures at the Route 2 site were lower than Hoeshop Road, Hoeshop Road had higher dissolved oxygen readings. The Hoeshop Road sampling site is directly downstream from a small riffle in the river, but then again, the Route 2 sampling site also has some riffles but the water is typically shallower.



**Figure 4. Dissolved oxygen readings for 2007**

### Connecticut River sites

Dissolved oxygen at the Connecticut River sampling sites ranged from 6.26 mg/L to 8.88 mg/L, all of which met Massachusetts Water Quality Standards for warm water fisheries, which states that dissolved oxygen should not be lower than 5 mg/L. The pattern of dissolved oxygen mimicked the temperature pattern, that is, dissolved oxygen increased month to month as the season progressed. On August 30 and September 20, dissolved oxygen levels in the Connecticut River were quite a bit lower than the Fall River sites, which is not surprising. By October 23, dissolved oxygen in the Connecticut River fell between the two Fall River readings, except at Barton Cove which still had lower dissolved oxygen levels.

### **Specific Conductance**

#### Fall River sites

There are no state standards for specific conductance. Readings at the Hoeshop Road site were relatively stable throughout the sampling period, varying between 259.6  $\mu$ S and 289.2  $\mu$ S. Route 2 readings were quite a bit higher, ranging from 309  $\mu$ S to 561  $\mu$ S. As mentioned in the previous section, the specific conductance readings at Route 2 experienced an unacceptable level of “drift” or “bounce” on September 20 and October 23. Though we may not be certain of the exact specific conductance level at the site on those two dates, we are fairly confident that the high readings do represent actual high

conductance at the site on those two dates. We will keep an eye on that site next year, and may need to think about possible sources that might cause increases in specific conductance readings there.

### Connecticut River sites

Specific conductance readings at the Connecticut River sites were very similar site to site and on sampling date to sampling date, ranging from 134.8 $\mu$ S to 159.6  $\mu$ S.

### Clarity

Because of such little precipitation this season, our clarity readings at every site and each sampling day were all the same: >120cm. Water was very clear. One comparison reading of 31.2 cm was made on the Connecticut River in Putney, VT on July 22. During that week, the entire river from the confluence with the White River down to Springfield MA was visibly turbid, due to a “super cell” thunderstorm in Randolph VT the week prior.

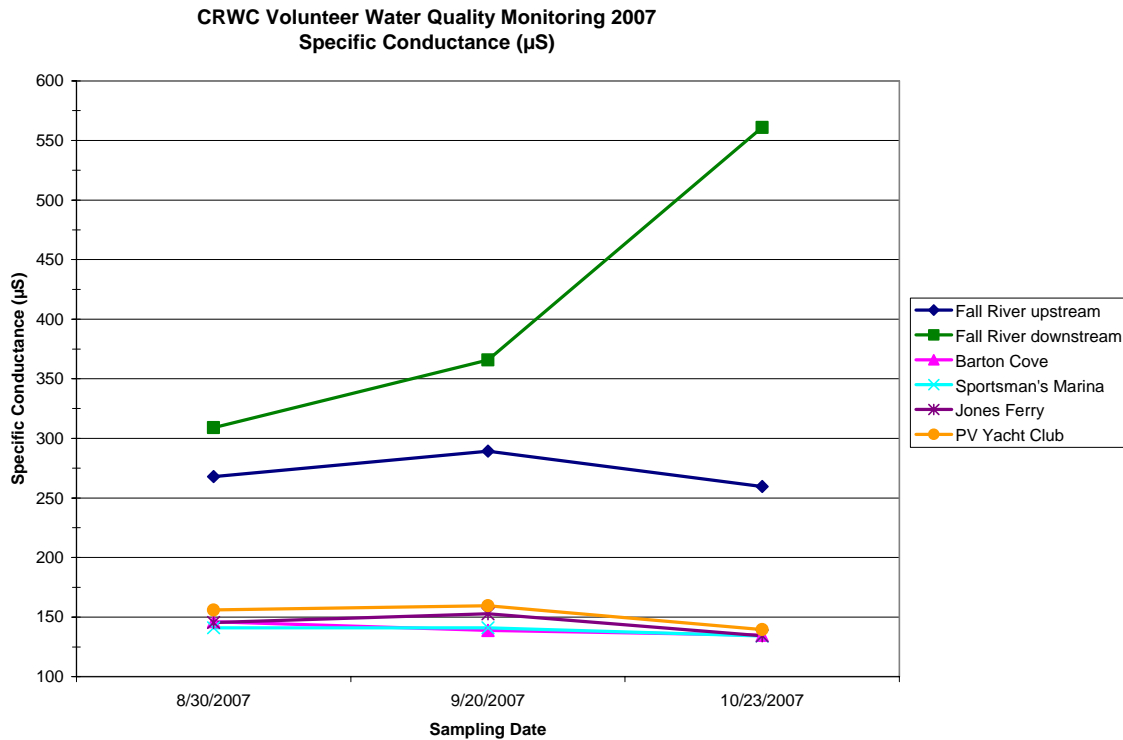


Figure 5. Specific conductance readings for 2007

## Conclusions

Our first year of water quality monitoring was successful and went smoothly for the most part. Because of the low rainfall during the months we sampled – August, September, and November – our measurements represent dry weather conditions. We found that all sites met state water quality standards for water temperature and dissolved oxygen on the days we measured. One site on the Fall River had high specific conductance readings, and this may be indicative of a pollution source upstream.

Next year we will aim to conduct water quality monitoring from June to October, and in order to avoid the dock removal problem we encountered in 2007, we will ensure all sites have consistent access throughout the season.

## **Appendix: 2007 Data Spreadsheet**

Table showing the complete data set from 2007.

**Connecticut River Watershed Council  
Volunteer Water Quality Program 2007**

Site Location Description	Town	State	Latitude	Longitude	Waterbody Name	Waterbody Type	Team	Activity Start Date	Activity Start Time	Activity Start Time Zone	Depth to Activity	Depth to Activity Units	Equipment Name	Characteristic Name	Result Measure Value	Measure Unit Code	QC note	Comments
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	86.1	(% sat)	Readings varied by 7.1	Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	7.22	(mg/L)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	H2O Temp	25.2	(°C)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Air Temp	22.9	(°C)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	446.6	(447 µS)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:33	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	146.2	(µS)		Clear water, low water level, no boats on river
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	08/30/07	8:45	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Clear water, low water level, no boats on river
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.2	(% sat)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	88.7	(% sat)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	8.3	(mg/L)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	H2O Temp	17.9	(°C)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Air Temp	20.2	(°C)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	446.6	(447 µS)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:39	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	309	(µS)		Sampling site is shaded by trees
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	08/30/07	9:51	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Sampling site is shaded by trees
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	98.9	(% sat)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	91	(% sat)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	8.44	(mg/L)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	H2O Temp	18.9	(°C)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Air Temp	21.4	(°C)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	446.6	(447 µS)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:41	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	267.9	(µS)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	11:18	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Conductivity reading end of day when out of chamber was 0.0 & out of distilled water bottle ?
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	98.9	(% sat)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	90.1	(% sat)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	8.26	(mg/L)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	H2O Temp	19.3	(°C)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Air Temp	21.8	(°C)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	446.6	(447 µS)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	10:54	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	269	(µS)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	08/30/07	11:18	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	99.6	(% sat)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	83.5	(% sat)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	6.89	(mg/L)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	H2O Temp	24.5	(°C)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Air Temp	23.8	(°C)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	457	(447 µS)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	9:03	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	141	(µS)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	08/30/07	13:08	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Level-Medium high, Odor-none,Color-Tea (green-brown), Use-low. Current is obvious, some weeds in water
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	77.5	(% sat)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	6.26	(mg/L)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	H2O Temp	25.5	(°C)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Air Temp	27.1	(°C)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	488	(447 µS)		Some grass in water. Little current. Pale green in color.

**Connecticut River Watershed Council  
Volunteer Water Quality Program 2007**

Site Location Description	Town	State	Latitude	Longitude	Waterbody Name	Waterbody Type	Team	Activity Start Date	Activity Start Time	Activity Start Time Zone	Depth to Activity	Depth to Activity Units	Equipment Name	Characteristic Name	Result Measure Value	Measure Unit Code	QC note	Comments
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:13	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	145.0	(µS)		Some grass in water. Little current. Pale green in color.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	08/30/07	10:25	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Some grass in water. Little current. Pale green in color.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	85.5	(% sat)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	6.71	(mg/L)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	H2O Temp	25.1	(°C)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Air Temp	28.5	(°C)	Readings for replicate differed by 2.5	Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	475	(447 µS)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:27	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	156	(µS)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:34	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Clear very slight green tint, no obvious odor. Water level exposes bank. Slight current visible.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	84.8	(% sat)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	7.03	(mg/L)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	H2O Temp	25.1	(°C)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Air Temp	26	(°C)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	475	(447 µS)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:47	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	156	(µS)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	08/30/07	11:34	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	78.7	(% sat)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	7.33	(mg/L)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	H2O Temp	20	(°C)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Air Temp	16.7	(°C)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	437.5	(447 µS)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:32	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	138.7	(µS)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	9:02	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Clear water, slightly yellowish
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	79	(% sat)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	7.15	(mg/L)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	H2O Temp	20	(°C)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Air Temp	16.7	(°C)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	437.5	(447 µS)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	8:49	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	138.8	(µS)		Replicate measurement
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	09/20/07	9:02	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	89.6	(% sat)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	9.57	(mg/L)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	H2O Temp	12.2	(°C)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Air Temp	13	(°C)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	437.5	(447 µS)		Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	9:52	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	365.7	(µS)	Readings varied by 50 uS	Water is low, very clear-no discoloration, no odor.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	09/20/07	10:00	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Water is low, very clear-no discoloration, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	98.9	(% sat)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	94	(% sat)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	9.74	(mg/L)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	H2O Temp	13.8	(°C)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Air Temp	14.2	(°C)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	437.5	(447 µS)		Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	10:53	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	289.2	(µS)	End of day varied from standard by 52.3 uS	Sunny, clear water - no color, no odor.
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	09/20/07	11:10	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Sunny, clear water - no color, no odor.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	99.6	(% sat)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	79	(% sat)		Pale green color, medium height, no odor, no boats.

**Connecticut River Watershed Council  
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Site Location Description	Town	State	Latitude	Longitude	Waterbody Name	Waterbody Type	Team	Activity Start Date	Activity Start Time	Activity Start Time Zone	Depth to Activity	Depth to Activity Units	Equipment Name	Characteristic Name	Result Measure Value	Measure Unit Code	QC note	Comments
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	7.3	(mg/L)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	H2O Temp	19.7	(°C)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Air Temp	15.8	(°C)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	466.3	(447 µS)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	141.1	(µS)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:30	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Pale green color, medium height, no odor, no boats.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	99.6	(% sat)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:10	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	82.5	(% sat)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:26	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	7.51	(mg/L)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:26	EDT	12	inch	YSI 85 Meter #2	H2O Temp	19.7	(°C)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:26	EDT	12	inch	YSI 85 Meter #2	Air Temp	16.5	(°C)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:26	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	466.3	(447 µS)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:26	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	141.8	(µS)		Replicate measurement
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	09/20/07	9:30	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	83	(% sat)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	7.5	(mg/L)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	H2O Temp	19.7	(°C)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Air Temp	19	(°C)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	466.3	(447 µS)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:23	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	152.7	(µS)		Water calm, no odor, slight green color but very clear.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	09/20/07	10:29	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Water calm, no odor, slight green color but very clear.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	79.5	(% sat)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	7.19	(mg/L)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	H2O Temp	20.2	(°C)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Air Temp	21.5	(°C)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	466.3	(447 µS)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:23	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	159.6	(µS)		Water low, light green color, no odor. Little usage.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	09/20/07	11:20	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Water low, light green color, no odor. Little usage.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	82	(% sat)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	7.81	(mg/L)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	H2O Temp	17	(°C)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Air Temp	17.5	(°C)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	452.5	(447 µS)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:33	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	134.8	(µS)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Barton Cove	Gill	MA	42.6076	72.541775	Connecticut River	Riverine Impoundment	Team 1	10/23/07	8:40	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Sampling done from Franklin County Boat Club dock. Contains slight tannin color from leaves.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	82.4	(% sat)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	8.53	(mg/L)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	H2O Temp	13.8	(°C)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Air Temp	16.8	(°C)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	452.5	(447 µS)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	561	(µS)	Readings varied by 60 µS	Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:53	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Clean water with brown tint from leaf debris.
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	99.3	(% sat)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	85	(% sat)		Replicate measurement

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Site Location Description	Town	State	Latitude	Longitude	Waterbody Name	Waterbody Type	Team	Activity Start Date	Activity Start Time	Activity Start Time Zone	Depth to Activity	Depth to Activity Units	Equipment Name	Characteristic Name	Result Measure Value	Measure Unit Code	QC note	Comments
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	8.75	(mg/L)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	H2O Temp	13.9	(°C)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Air Temp	17.3	(°C)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	452.5	(447 µS)		Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:27	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	570	(µS)	Readings varied by 108.3 uS	Replicate measurement
Fall River-Rte 2	Greenfield	MA	42.61543	72.551747	Fall River	River/Stream Perennial	Team 1	10/23/07	9:53	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Replicate measurement
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen Calibration Value	98.8	(% sat)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	90.6	(% sat)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Dissolved Oxygen	9.31	(mg/L)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	H2O Temp	14.3	(°C)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Air Temp	18	(°C)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Initial Conductivity Meter Check Value	452.5	(447 µS)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:40	EDT	12	inch	YSI 85 Meter #1	Specific Conductance	259.6	(µS)		Very clear water! No tannins
Fall River-Hoeshop Rd	Gill	MA	42.65624	72.540589	Fall River	River/Stream Perennial	Team 1	10/23/07	10:54	EDT	12	inch	Globe Transparency Tube #1	Transparency	>120	(cm)		Very clear water! No tannins
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	99.6	(% sat)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	89.2	(% sat)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	8.88	(mg/L)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	H2O Temp	16.2	(°C)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Air Temp	19.3	(°C)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	436	(447 µS)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:19	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	134.1	(µS)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Sportsman's Marina	Hadley	MA	42.33676	72.615947	Connecticut River	River/Stream Perennial	Team 2	10/23/07	9:20	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Windy. Regular dock removed for the season; measurements taken from rowing dock, ~100yds downstream of standard, slightly closer to shore. Water is weak green tea color, level good.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	90.7	(% sat)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	8.66	(mg/L)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	H2O Temp	17.1	(°C)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Air Temp	20.8	(°C)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	436	(447 µS)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:22	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	134.3	(µS)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:15	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Windy. Good level, weak tea color (brwn / green/ yellow). Water wavy. Decon omitted between 1st and 2nd sampling sites-data not affected.
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Replicate measurement

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Site Location Description	Town	State	Latitude	Longitude	Waterbody Name	Waterbody Type	Team	Activity Start Date	Activity Start Time	Activity Start Time Zone	Depth to Activity	Depth to Activity Units	Equipment Name	Characteristic Name	Result Measure Value	Measure Unit Code	QC note	Comments
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	92.9	(% sat)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	8.95	(mg/L)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	H2O Temp	17.2	(°C)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Air Temp	21	(°C)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	436	(447 µS)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	11:05	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	134.4	(µS)		Replicate measurement
Jones Ferry	Holyoke	MA	42.17214	72.629972	Connecticut River	River/Stream Perennial	Team 2	10/23/07	10:15	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Replicate measurement
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen Calibration Value	100	(% sat)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	91.7	(% sat)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Dissolved Oxygen	8.76	(mg/L)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	H2O Temp	17.1	(°C)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Air Temp	20.6	(°C)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Initial Conductivity Meter Check Value	436	(447 µS)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:04	EDT	12	inch	YSI 85 Meter #2	Specific Conductance	139.6	(µS)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.
Pioneer Valley Yacht Club	Longmeadow	MA	42.06377	72.593111	Connecticut River	River/Stream Perennial	Team 2	10/23/07	12:28	EDT	12	inch	Globe Transparency Tube #2	Transparency	>120	(cm)		Very windy, water very wavy. Regular dock removed for the season. Measurements taken from stationary canoe, 40-50 yds south / 10-15' further offshore of normal dock position. Water color light green/brwn.







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Site Location Description	Cloud Cover	Current Weather Conditions	rainfall 1 day ago (in)	rainfall 2 days ago (in)	rainfall 3 days ago (in)	min temp F 1 day ago	max temp F 1 day ago	min temp F 2 days ago	max temp F 2 days ago	min temp F 3 days ago	max temp F 3 days ago	Weather Station ID	Gage Location	Gage Reading Time	Stream Flow (ft 3/s)
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Rte 2	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 9:30	10568
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Fall River-Hoeshop Rd	Overcast	Cloudy	0	0	1.25	43	76	49	71	51	71	Greenfield WPCF/NOAA Station#19-3229-2	Ct River at Montague City, MA	10/23/07 10:45	10537
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Sportsman's Marina	Broken Clouds	Cloudy	0	0.08	1.52	44	74	44	71	58	72	Amherst WWTF/NOAA Station#19-0120-2	Ct River at I-391 Bridge Holyoke, MA	10/23/07 9:15	8583
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528

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Site Location Description	Cloud Cover	Current Weather Conditions	rainfall 1 day ago (in)	rainfall 2 days ago (in)	rainfall 3 days ago (in)	min temp F 1 day ago	max temp F 1 day ago	min temp F 2 days ago	max temp F 2 days ago	min temp F 3 days ago	max temp F 3 days ago	Weather Station ID	Gage Location	Gage Reading Time	Stream Flow (ft <sup>3</sup> /s)
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Jones Ferry	Scattered Clouds	Clear	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 10:30	9528
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964
Pioneer Valley Yacht Club	Overcast	Cloudy	0	0	1.2	46	77	45	75	46	75	Westfield WTF/NOAA Station#19-9193	Ct River at I-391 Bridge Holyoke, MA	10/23/07 12:15	9964