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TOWN CLERK  
13 OCT -9 AM 9:39  
MILLBURY, MASS.

**Town of Millbury  
Sewer Commission Meeting**

**September 10, 2013**

Meeting called to order at 5:17 PM

**Present:** Members Happy Erickson and Jeff Murawski,  
DPW Director Rob McNeil, Secretary Cindy Allard, Absent Gary Nelson

**Jackson Ln.:** Dave Harris was into meeting regarding a 6" sewer line that was damaged some time ago when construction was being conducted, Chase Harris pulled permit to dig up and have sewer department inspect for damage as if it was a new line. Motion to approve permit for sewer was made by Jeff, 2<sup>nd</sup> by Happy, all in favor.

**Upton St.:** Lot was purchased as buildable lot and, upon construction located a pipe going thru lot. Discovered pipe was found to be nothing, but after further investigating it was noticed that no lateral was ever put in front of lot. There is a sewer line that comes from each end of the street but does not connect; engineered plans were submitted for review to make lot accessible to sewer from a manhole Sewer Commission will take plans under advisement.

**Autumn Gate Estates:** Steve Gallo and George Kursy from Gallo Builders into meeting at 5:20 to speak about starting construction at the subdivision. Gallo purchased this subdivision from foreclosure. After several years of issues, they want to start building and since there is a pump station built on site, they want to let the Sewer Department know of their intentions to move on with building 27 houses. Gallo advised they got a 2-year extension from the planning board to continue construction. Concern of Sewer Commissioners is the time lapse from 2008 until now for the pump station, stating that a lot can happen in 5 years. The Sewer Department needs to look at the pump station with a fine tooth comb to make sure it is working properly. Rob will formalize a letter to Gallo with things that should and need to be done to pump station. Steve Gallo advised that they had Bigelow Electric onsite, who went through the pump station and gave Gallo a list of recommendations to be completed for the pump station. Mr. Gallo advised the Commission that all but one item has been completed for the pump station to be working properly. Rob advised that the Town needs to find out form Sewer Staff on a cost to take over the pump station. Also need to check with Treasurer's Office to see if betterments were ever collected on this project. Also if no warrantee area left on the pump station, Sewer dept. would require a bond. Mr. Gallo and Mr. Kursy left meeting at 5:44 pm.

**Pump Station designs:**

Rob advised he checked references for the pump station proposal and they came back excellent. Rob will move forward to execute ad contact for the design of the 5 pump stations.

**Invoices:** Were signed.

**Rte. 146 project:** Rob advised the 25% design for the 146 project is scheduled on October 9<sup>th</sup> from 6:30p to 9:00p at the Town Hall.

**Casino** review was pulled and is no longer a topic.

**Sewer billing:** Warrant was signed for sewer billing in the amount of \$968,506.35, Happy made motion to accept sewer warrant for billing in the amount of \$968,506.35, 2<sup>nd</sup> by Jeff, all in favor.

**Sutton Billing:** Motion by Happy to accept the Sutton Billing in the amount of \$40,455.00, 2<sup>nd</sup> by Jeff, all in favor and warrant was signed.

**Sewer Connections:**

1 Rogers St, Teterault & Sons  
15 John St, Midstate  
219 Wheelock Ave, Midstate  
221 Wheelock Ave, Midstate

All connections were reviewed. Motion by Jeff to approve new sewer connections, 2<sup>nd</sup> by Happy, all in favor.

**DPW Contract:** Update is to be finished.

**Note:** Upper Blackstone River Water Quality Study (see attached) was mailed out with sewer bills.

**Providence/Worcester Railroad:** See copy of letter attached regarding railroad liability exclusions.

**Meeting Minutes:** minutes from July 23 were approved as written by Happy, 2<sup>nd</sup> by Jeff, all in favor.

**Meeting Schedule:**

Regular meeting 9/24, 10/8, 10/22, 11/12, 11/26, 12/10

Meeting adjourned at 6:45pm

*Gary Nelson*

Gary Nelson

*Happy Erickson*

Happy Erickson

*Jeff Murawski*

Jeff Murawski



**Town of Millbury Department of Public Works**

MUNICIPAL OFFICE BUILDING • 127 ELM STREET • MILLBURY, MA 01527 Tel. 508 / 865-9143 • Fax: 508 / 865-0843

Robert D. McNeil, III, P.E. • Director  
rmcneil@townofmillbury.net

August 23, 2013

Providence and Worcester Railroad Company  
Attn: Wendy Lavelly, Paralegal  
75 Hammond Street  
Worcester, MA 01610

**RE: Millbury Sewer Contractors – Railroad Liability Exclusions**

Dear Ms. Lavelly:

This letter serves to address your concerns regarding Contractors hired by the Town to perform work within the Railroad Right-of-Way on sewer easements inside the Town of Millbury.

Any and all such Contractors and Subcontractors performing work on the sewer lines under the easement(s) shall be required to remove all railroad exclusions from their own insurance policies.

Confirmation of this effort in the form of a revised policy statement shall be forwarded to the Railroad for their records prior to scheduling work in these specific areas.

Please contact me if you have further questions regarding this information.

Very Truly Yours,

Robert D. McNeil III, P.E.  
Director of Public Works

cc: Sewer Commissioners  
Bob Spain, Town Manager  
Matt Stencel, DPW Operations Manager  
Stephen Perry, Braley & Wellington Insurance Agency Corp.

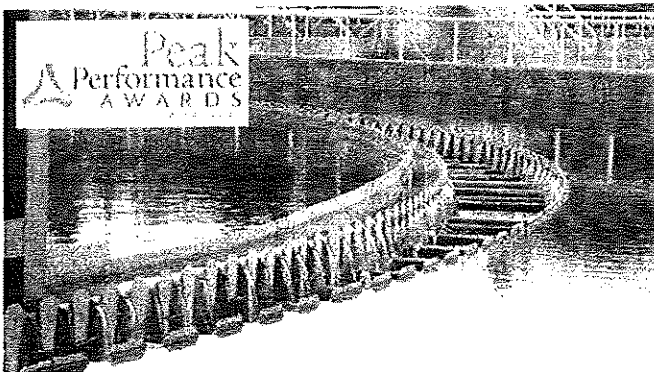
UPPER BLACKSTONE WATER POLLUTION ABATEMENT DISTRICT

# Blackstone River Water Quality Study: 2012 Update



The Upper Blackstone Water Pollution Abatement District (UBWPAD, the District) sponsors a monitoring program in the Blackstone River to track river quality and to study the impacts of the wastewater treatment plant on the river. In 2012, the University of Massachusetts and CDM Smith conducted a water quality monitoring program along the main stem of the Blackstone River. The objective of the program was to collect data to continue to assess the response of the river to reduced nutrient concentrations in the District's wastewater treatment plant effluent.

The District provides wastewater treatment to the City of Worcester and several surrounding communities with a total population served of about 230,000 people. The District's advanced biological nutrient removal (BNR) process, constructed as part of a \$180 million facility upgrade, produces a high quality effluent that has helped to improve the water quality of the Blackstone River. The BNR process at the facility reduces the amount of phosphorus in the District's discharge; excess phosphorus can contribute to excessive growth of algae in the river. The treatment process also provides nitrogen removal. Too much nitrogen can stimulate excessive algae growth in Narragansett Bay, the water body into which the Blackstone River ultimately flows.



*In recognition of its outstanding compliance record in 2012, the District was selected for the Silver Peak Performance Award by the National Association of Clean Water Agencies (NACWA).*

Since the BNR process became operational in late 2009, there have been dramatic decreases in the amounts of phosphorus and nitrogen that enter the Blackstone River

and Narragansett Bay from the District treatment facility. Calendar year 2012 data show that phosphorus has been reduced by 78% compared to previous levels (2006-2008) and nitrogen has been reduced by 62% (Figure 1). Additionally, the total nitrogen load to Narragansett Bay from the District and the seven largest wastewater treatment facilities (WWTFs) in Rhode Island has also been significantly reduced (Figure 2).

**Figure 1.**  
*Effluent loading of Total Phosphorus and Total Nitrogen have been reduced by 78% and 62% from previous levels (2006-2008), respectively.*

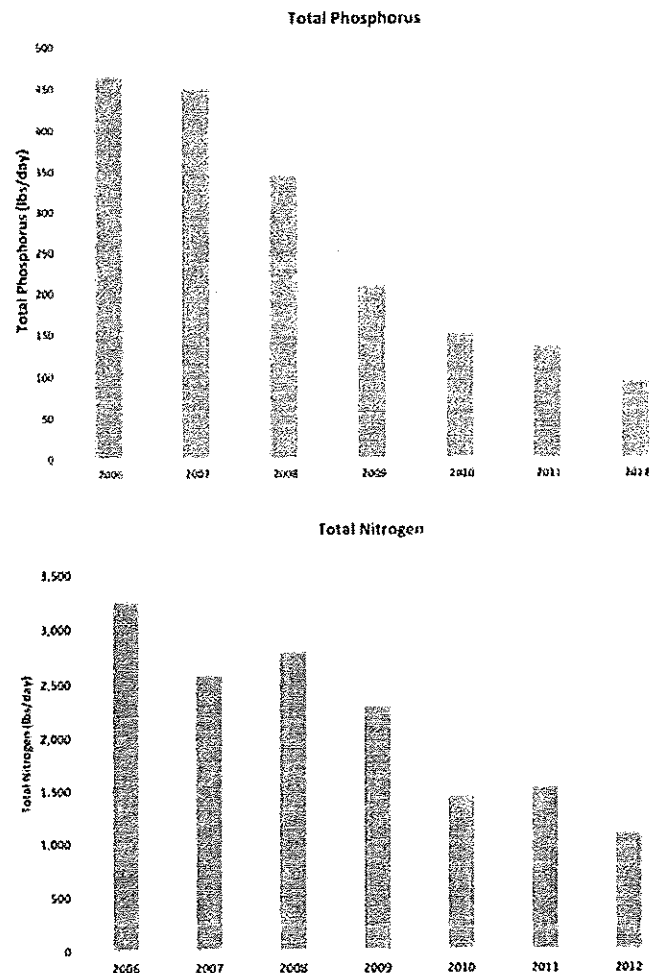
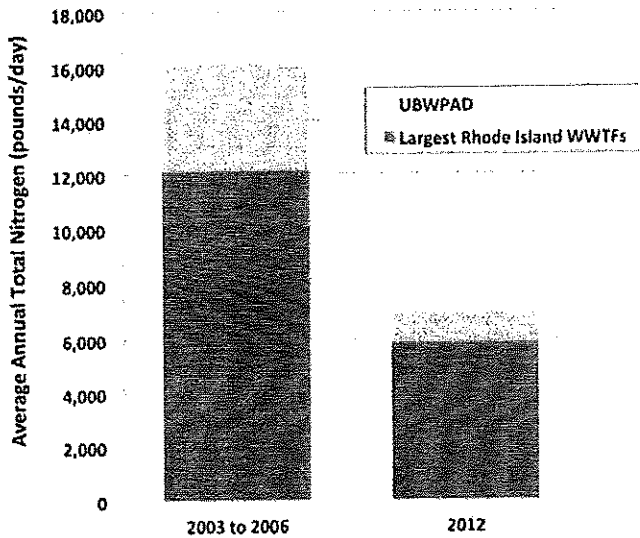


Figure 2.

Over the past 6 years, the total nitrogen load to Narragansett Bay from the largest WWTFs has been reduced by more than half.



In 2012, sampling was conducted from April through November at multiple Blackstone River main stem sites located in Massachusetts and Rhode Island, as shown on the accompanying map. The study included monthly water quality sampling for nutrients, bi-weekly monitoring for chlorophyll-a, and a visual assessment of algal blooms and rooted plants, or macrophyte, growth in the river. The three Rhode Island sites were co-sampled with the Narragansett Bay Commission's (NBC) ongoing monitoring program

[\[snapshot.narrabay.com\]](http://snapshot.narrabay.com). The 2012 data were compared to historical river data collected as part of the District's study and other sampling programs.



In 2012, the District added periphyton sampling surveys to its monitoring program. Periphyton are algae that are attached to submerged rock and river bottom surfaces. While some periphyton growth is to be expected in natural water systems, and can form a part of a healthy ecosystem, too much periphyton growth is not desirable for aesthetic reasons and because it could be an indication of river impairment. The objective of the 2012 periphyton survey was to provide more comprehensive

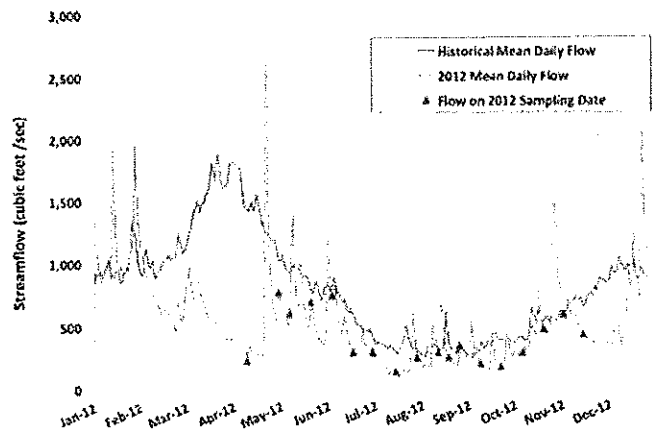
monitoring of river biological conditions. The 2012 periphyton surveys added to a very limited set of data collected by Massachusetts Department of Environmental Protection (MassDEP) in 2008, and will serve as a basis for future periphyton surveys and monitoring in the river.

## 2012 River Sampling Results

In 2012, Blackstone River streamflow was lower than historical average conditions, driven in large part by the relatively mild and dry 2011-2012 winter, followed by a dry spring. Precipitation in July 2012 was also below average, contributing to the low streamflow conditions. Figure 3 compares 2012 and historical mean daily streamflow in the Blackstone River at the United States Geological Survey (USGS) gage in Woonsocket, RI.

Figure 3.

2012 Mean Daily Streamflows at USGS Blackstone River Gage, Woonsocket, RI were lower than historical stream flows.

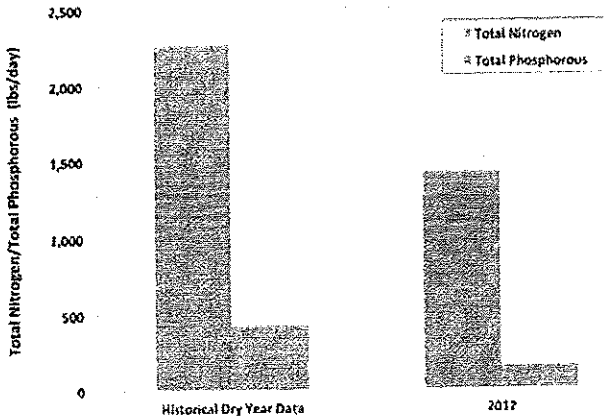


During the relatively dry 2012 summer, stormwater run-off impacts on river water quality were expected to be reduced because of reduced rainfall, and impacts from wastewater treatment facilities were expected to potentially be more pronounced because of less dilution by high river flows.

## Phosphorous and Nitrogen

The 2012 river sampling results were compared with historical data collected during similar conditions prior to 2009 to evaluate the changes in river water quality following the District's facility upgrades. The historical data set was comprised of data collected between 1997 and 2008 by the District, Massachusetts Department of Environmental Protection, the United States Geological Survey (USGS), the Army Corps of Engineers (ACOE), Rhode Island Department of Environmental Management (RIDEM) and others. The comparison shows that phosphorous and nitrogen loads in the river, were 66% and 38% lower, respectively, in 2012 than in previous dry years (Figure 4).

**Figure 4.**  
**Total phosphorus and total nitrogen load in the River in Millbury, MA downstream of District's discharge has decreased 66% and 38%, respectively.**

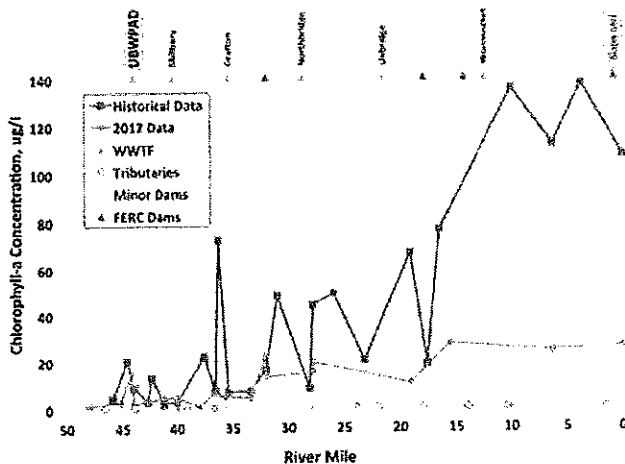


### Chlorophyll-a

Nutrients in the river, from both point and non-point sources, can contribute to increased algal growth, which is expressed in chlorophyll-a concentrations. Point sources are discharges from wastewater treatment facilities. Non-point sources are pollutant loads from stormwater that find their way into rivers and streams. The rate of river flow is an important factor influencing algal growth. On the Blackstone River, increased algal growth tends to occur in stagnant or low flowing stretches of the river, frequently located behind old industrial era dams.

Chlorophyll-a measurements collected in 2012 were compared with historical chlorophyll-a concentrations collected during low river flow conditions to evaluate whether there is evidence of less algal growth in the river. Figure 5 shows maximum chlorophyll-a concentrations measured in 2012

**Figure 5.**  
**Sharp reductions in chlorophyll-a, an indicator of algal growth, have been observed in the River.**

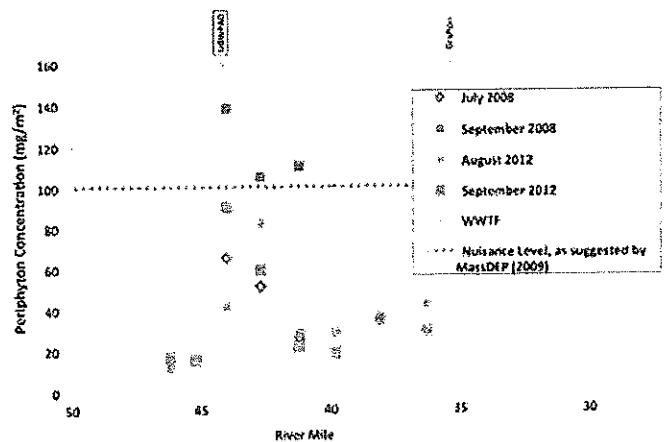


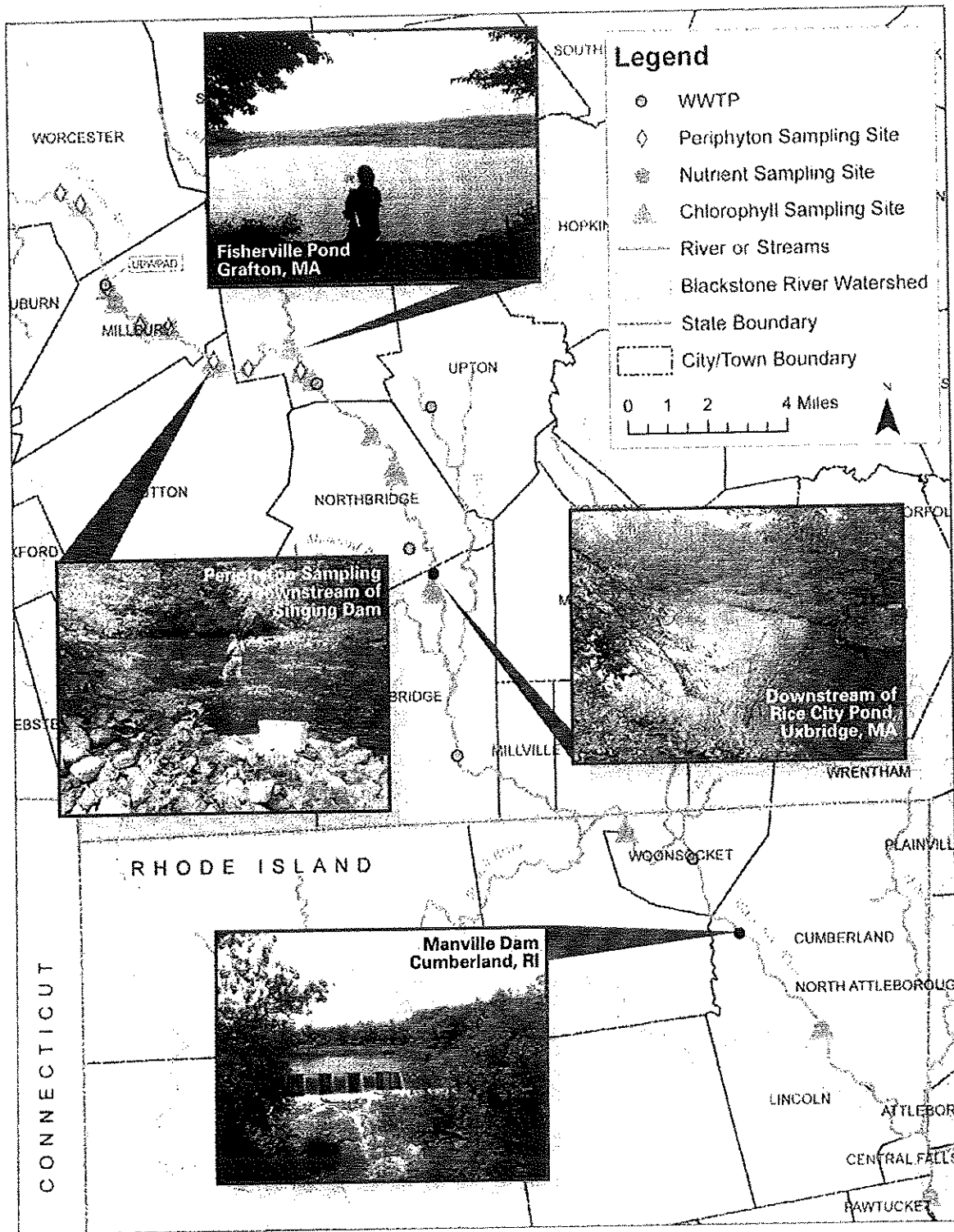
and historically along the river from upstream of the District in Millbury, MA (left side of graph) to the river outlet at Slater Mill in Pawtucket, RI (right side of graph). This comparison indicates that maximum algal growth in portions of the river has decreased. Visual surveys of algal growth over the past few years suggest that there was also less macrophyte growth (rooted plants) in the river in 2012 than in previous years.

### Periphyton

The periphyton-sampling program conducted in 2012 included visual assessments of periphyton cover and actual periphyton sample collection at eight river locations including three sites sampled by MassDEP in 2008. Periphyton sampling did not extend downstream of river mile 35, because south of this location the river generally becomes deeper, resulting in less light penetration and conditions that are not favorable for periphyton growth. In 2012, periphyton was detected at all the sampling locations, including those upstream of the confluence of the District's effluent channel. Sampling program results indicate increased periphyton growth downstream of the District compared to conditions upstream of the treatment facility discharge; however, concentrations were below 100 mg/m<sup>2</sup>, what MassDEP has described as "nuisance levels" (MassDEP, 2009) based on a literature review. The 2012 periphyton chlorophyll-a concentrations suggest a potential decrease in periphyton at the locations sampled earlier by MassDEP, Figure 6, but more data are needed to confirm these results.

**Figure 6.**  
**2012 Periphyton concentrations are below nuisance levels and decrease sharply 3 miles downstream of UBWPAD.**





## Next Steps

The District plans to continue annual water quality monitoring of the Blackstone River to maintain a basis for evaluating changes in river quality and to continue to refine the scientific understanding of river conditions. In support of making data available to all interested parties, UMass has submitted the Blackstone River data collected from 2010 through 2012 to the Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI) database, which is sponsored by the National Science Foundation ([www.cuahsi.org](http://www.cuahsi.org)). CUAHSI will be publishing these data this summer, and the data will be publicly available for download through the CUAHSI Hydrologic Information System (HIS) databases and servers ([this.cuahsi.org](http://his.cuahsi.org)).

See [www.uhwpad.org](http://www.uhwpad.org) for the detailed results of 2012 sampling program described in Blackstone River Water Quality Monitoring Program Report – 2012 Field Season (UMass, 2013).



Millbury Sewer Pump Station  
 131 Providence Street  
 Millbury, MA 01527

Annual/Monthly Sewer Flow Data Report  
 August 2013

Day	Total Flow (MG)	Sutton Flow (MG)	Millbury Flow (MG)	Temp. (°F)	Precipitation (inches)
1	1.065	0.141	0.924	62	0
2	1.081	0.136	0.945	68	0.68
3	1.079	0.133	0.946	68	0.02
4	1.057	0.133	0.924	61	0.16
5	1.008	0.137	0.871	66	0
6	1.001	0.135	0.866	59	0
7	0.985	0.134	0.851	59	0.18
8	1.034	0.138	0.896	68	0.03
9	1.225	0.162	1.063	73	1.64
10	1.099	0.132	0.967	77	0.02
11	1.072	0.131	0.941	64	0
12	1.051	0.137	0.914	63	0
13	1.073	0.136	0.937	66	0.03
14	1.043	0.135	0.908	69	0
15	0.981	0.131	0.850	66	0
16	1.004	0.135	0.869	59	0
17	0.929	0.131	0.798	64	0
18	0.975	0.139	0.836	64	0
19	0.981	0.147	0.834	64	0
20	0.904	0.133	0.771	67	0
21	0.951	0.135	0.816	66	0
22	0.978	0.132	0.846	69	0
23	0.918	0.129	0.789	71	0
24	0.905	0.125	0.780	62	0
25	0.936	0.131	0.805	59	0
26	0.967	0.131	0.836	68	0.46
27	0.968	0.135	0.833	70	0
28	0.929	0.131	0.798	69	0
29	0.975	0.133	0.842	67	0
30	0.978	0.128	0.850	64	0
31	0.965	0.126	0.839	72	0.36

Day	Total Flow (MG)	Sutton Flow (MG)	Millbury Flow (MG)	Temp. (°F)	Precipitation (inches)
<b>Total =</b>	<b>31.117</b>	<b>4.172</b>	<b>26.945</b>	<b>2044</b>	<b>3.58</b>
<b>Average Daily =</b>	<b>1.004</b>	<b>0.135</b>	<b>0.869</b>	<b>65.935</b>	<b>0.115</b>
<b>High =</b>	<b>1.225</b>	<b>0.162</b>	<b>1.063</b>	<b>77</b>	<b>1.64</b>
<b>Low =</b>	<b>0.904</b>	<b>0.125</b>	<b>0.771</b>	<b>59</b>	<b>0</b>

Note: All data readings taken by staff at 7:00 AM daily