

WATER QUALITY TESTING JULY 27, 2021

“The drought is over” to quote one of today’s monitors. And all the monitors noted high water on their data sheets.

To give an idea of how high the water flow was on Tuesday, it was four times higher than what it’s supposed to be. The flow in Milford was 142 cubic feet per second and its historic average is 36. But that’s nothing! If we had sampled last week, the flow was 1000 – and that was coming down from 2000 just two days before. And to further compare – last month the Merrimack River flow was 800; the Souhegan last week was bigger than the Merrimack last month. Today the Merrimack was four times higher than it should be also. Confused? There was a lot of water in both rivers.

The other thing many noted was how gorgeous a morning to be sampling the river. Some took pictures.

Many thanks to several people who stepped in to cover for absentees this month. Especially to Michelle Decoteau, the MS4 coordinator for Wilton, and her intern from UNH, Samantha Beck, who not only covered a site but added one on Stony Brook at the new Riverwalk. Thanks also to Dixie, who was up and down Rte 31, which is being repaved and a big traffic tieup, and who covered three sites in Greenville. And others who also stepped up.

This was a perfect day to measure our understanding of pollution. My expectation for E. coli was that it would be fairly low. The three days preceding the test were relatively clear. And the many days of flood-like rains preceding the test should have washed all upland pollution into the rivers and through the system long before. That’s not what happened.

What happened was not what I expected. On the Souhegan all of the E. coli results in the headwaters down to Wilton were excellent. So far, so good. But E. coli counts increased to the 200s in Wilton and stayed high to Milford where they increased again and stayed high all the rest of the way to the Merrimack River. No site on either river met the 406 level that the state uses to indicate unacceptable pollution. But except for the headwaters clearly the E. coli counts, in the 200s level, were way above recommended levels for swimming. That the levels stayed high through Merrimack was unusual; normally they drop through this more rural stretch.

On the Merrimack again expectations were not met. Normally the river tests quite clean for bacteria. And this was true from Manchester till Merrimack. Here the E. coli counts increased into the 100s and stayed high to the Massachusetts border, the end of our testing range. If CSOs could be suspected for the high counts, they don’t show up in Manchester, nor in Nashua, both of which have certainly been releasing raw sewage to the river during the last month’s heavy rains – but it doesn’t show up here. The highest E. coli count, 387, was seen just above Nashua at the new Greeley Park boat ramp.

What happened? It must be the heavy rains for the last month.

My expectations for dissolved oxygen, however, was spot on. DO levels were excellent on both rivers. DO is the primary test for the true health of the river...and results are usually good, and today excellent.

A test for total phosphorus in Milford showed less than .05 mg/L, excellent.

pH tests for the Merrimack in Manchester were 7.0 to 7.2, excellent.

Once again these results are merely a snapshot in time.

What we need to see is a real effort to protect upland small brooks and wetlands from accumulating pollution. They need to provide a filtering effect, not be a source of pollution. Farmers, landowners, developers, dog walkers and others need to keep back from the stream corridor and not allow fertilizers, runoff, or other pollutants to get into the system. Keeping back from the water will allow filtration for naturally occurring pollutants and still allow the important visual pleasure of seeing the water for a longer time into the future. It's a fact not a criticism to say that people pollute. We all have to work on protecting our waters. We had one unexplained spike in E. coli just above the mill pond in Greenville that might have come from farming.

One of today's concerns is that the river water on both the Merrimack and Souhegan was tea colored, a general indication of sedimentation. This is not a surprise since the flow levels have been so high recently. Erosion would have been naturally occurring. Normally the water tests relatively clear.

One special surprise today was the spotting of a beaver in the middle of Milford between the two dams near the Swing Bridge. Flowers were out in abundance. Ducks and rowing shells were out on the Merrimack. And of course, a few people left their trash in the last month for monitors to pick up for them – thank you, all.

It's been a funny summer – two droughts then historical rain. The next test will be before Labor Day on August 31 to close out the season.

Here are the results of this week's test.

Flow on Upper Souhegan was 142 CFS. Expected flow for that date is 36
Flow on Lower Souhegan was 215 CFS. Historic flow for that date is 50
Flow on Merrimack was 6800 CFS. Historic flow for that date is 1780
RAINFALL: Sunday .16-.20"; otherwise clear
Temperature: Souhegan 20c Merrimack 22c

E-COLI MONITORING RESULTS FOR TESTS TAKEN ON JULY 27, 2021

E. coli levels less than 88 are good; 88-126 are marginal; 126-406 are unsatisfactory; above 406 is dangerous and should be avoided.

SOUHEGAN RIVER SITES:

mpn/100mL

1. Billy Ward Pond, Ashburnham #1 13.4; #2 18.5
2. SoR 333 Water Loom Pond, New Ipswich 8.1
3. SoR 320 Highbridge, New Ipswich 13.5
4. SoR 309 Above Greenville Mill Pond, Greenville 290.9
5. SoR 296 Downtown Greenville upstream of WWTP 30.1
6. SoR 291 Green Bridge off Rte 31 below Greenville WWTP 51.2
7. SoR 218 Horseshoe, Wilton 55.4
8. Riverwalk, Stony Brook, Wilton 113.7
9. SoR 210 Downtown Wilton lost in the lab
10. SoR 201 Pine Valley Mill, West Milford 261.3
11. SoR 170 Behind Hayward Field, West Milford 178.9
12. SoR 155 Souhegan Valley Boys and Girls Club, Milford 193.5
13. SoR 146 Swing Bridge, Milford 275.5
14. SoR 133 Riverside Cemetery, Milford 248.1
15. SoR 130 Behind Lorden Plaza, Milford
16. SoR 122 Amherst Country Club 248.9
17. SoR 116 Amherst Conservation land Fairway Road, Amherst
18. SoR 095 Boston Post Road Canoeport, Amherst 290.9
19. SoR 070 Seaverns Bridge, Merrimack 214.3
20. SoR 057 Indian Ledges, Merrimack
21. SoR 034 Turkey Hill Bridge, Merrimack 214.3
22. SoR 015 Wildcat Falls, Merrimack

MERRIMACK RIVER SITES:

1. Mer 600 Above Amoskeag Dam, Manchester 24.3
2. Mer 590 Arms Park, Manchester 29.5
3. Mer 580 Upstream of Piscataquog River, Manchester
4. Mer 570 Goffs Falls, Litchfield 56.3
5. Mer 560 Depot Street, Merrimack 135.4
6. Mer 550 Upstream of Souhegan River, Merrimack
7. Mer 540 Thorntons Ferry, Merrimack
8. Mer 530 Greeley Park, Nashua 387.3
9. Mer 520 Taylors Falls Bridge, Nashua 118.7
10. Mer 510 Sagamore Bridge, Hudson 172.3
11. Mer 500 Pheasant Lane Mall, Hudson
12. Mer 490 Upstream of Tyngsboro Bridge 145.0

DO MONITORING RESULTS FOR TESTS TAKEN ON JULY 27, 2021

Dissolved oxygen levels between 5 and 10 are acceptable. The higher the better. Levels below 5 are acidic and bad for the fish and wildlife

SOUHEGAN RIVER SITES:

1. Billy Ward Pond, Ashburnham #1 8.18 ; #2 8.14
2. SoR 333 Water Loom Pond, New Ipswich 7.26
3. SoR 320 Highbridge, New Ipswich 8.46
4. SoR 309 Above Greenville Mill Pond, Greenville 8.33
5. SoR 296 Downtown Greenville upstream of WWTP 8.44
6. SoR 291 Green Bridge off Rte 31 below Greenville WWTP 8.43
7. SoR 218 Horseshoe, Wilton 9.16
8. Riverwalk, Stony Brook, Wilton 9.05
9. SoR 210 Downtown Wilton 9.23
10. SoR 201 Pine Valley Mill, West Milford 8.78
11. SoR 170 Behind Hayward Field, West Milford 8.32
12. SoR 155 Souhegan Valley Boys and Girls Club, Milford 8.04
13. SoR 146 Swing Bridge, Milford 8.37
14. SoR 133 Riverside Cemetery, Milford 8.69
15. SoR 130 Behind Lorden Plaza, Milford
16. SoR 122 Amherst Country Club 8.41
17. SoR 116 Amherst Conservation land Fairway Road, Amherst
18. SoR 095 Boston Post Road Canoeport, Amherst 7.79
19. SoR 070 Seaverns Bridge, Merrimack 7.72
20. SoR 057 Indian Ledges, Merrimack
21. SoR 034 Turkey Hill Bridge, Merrimack 8.16
22. SoR 015 Wildcat Falls, Merrimack

MERRIMACK RIVER SITES:

1. Mer 600 Above Amoskeag Dam, Manchester 7.94
2. Mer 590 Arms Park, Manchester 8.24
3. Mer 580 Upstream of Piscataquog River, Manchester
4. Mer 570 Goffs Falls, Litchfield 8.09
5. Mer 560 Depot Street, Merrimack 8.15
6. Mer 550 Upstream of Souhegan River, Merrimack
7. Mer 540 Thorntons Ferry, Merrimack
8. Mer 530 Greeley Park, Nashua 8.42
9. Mer 520 Taylors Falls Bridge, Nashua 7.54
10. Mer 510 Sagamore Bridge, Hudson 7.75
11. Mer 500 Pheasant Lane Mall, Hudson
12. Mer 490 Upstream of Tyngsboro Bridge