

## Janet Facella

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**From:** Michael Tully  
**Sent:** Thursday, August 5, 2021 3:30 PM  
**To:** Janet Facella  
**Subject:** FW: North Hampton Water Quality Initiatives and Test Results and Sites  
**Attachments:** Draft-At a Glance Summary of Water Quality and Natural Resource Initiatives.pdf; 2018 Little River WQ Report - FINAL.pdf; Sample results Little River Marsh.pdf; sample results june 10 2019.pdf; May 2019- Seacoastonline- No. Hampton seeks help in identifying Little River pollution - News - seacoastonline.com - Portsmouth, NH.pdf

Michael J. Tully  
Town Administrator  
Town of North Hampton, NH  
(603) 964-8087

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**From:** Lisa J. Wilson [mailto:[lisajwilson@comcast.net](mailto:lisajwilson@comcast.net)]  
**Sent:** Wednesday, August 4, 2021 11:10 PM  
**To:** Michael Tully <[mtully@northhampton-nh.gov](mailto:mtully@northhampton-nh.gov)>  
**Subject:** North Hampton Water Quality Initiatives and Test Results and Sites

Mike,

Please find attached a summary of Town and Conservation Commission initiatives to protect water quality and natural resources which includes the 2010 and 2017 Little River Management Plan reports. The summary shows steps taken over the years to preserve wetlands which both prevents flooding and helps keep our waterways clean.

Due to high levels of rainfall this past July it is not unexpected that large amounts of run-off would contribute to higher levels of contamination from multiple sources.

After having completed extensive testing from 2010 to 2019, the town has identified and remedied sources of pollution along Route 1 and at the Fish Houses — the Shel Al manufactured housing park septic system was replaced and a new Fish House holding tank. With funds from 319 NH DES Water Quality grants culverts have been replaced at Little River on Woodland Road and North Road.

Although the attached 2019 NHDES report found no sources of abnormal bacteria, the Town might want to investigate via a dye test certain septic systems within the vicinity of Little River prior to a heavy rainfall.

The FB Environmental report includes a map with sites tested in 2019. The Commission does not see the need to retest these sites at present; it will be better able to **determine where septic**

systems are located in vulnerable areas upon the RPC's completion of the septic system database, which has been delayed due to Covid.

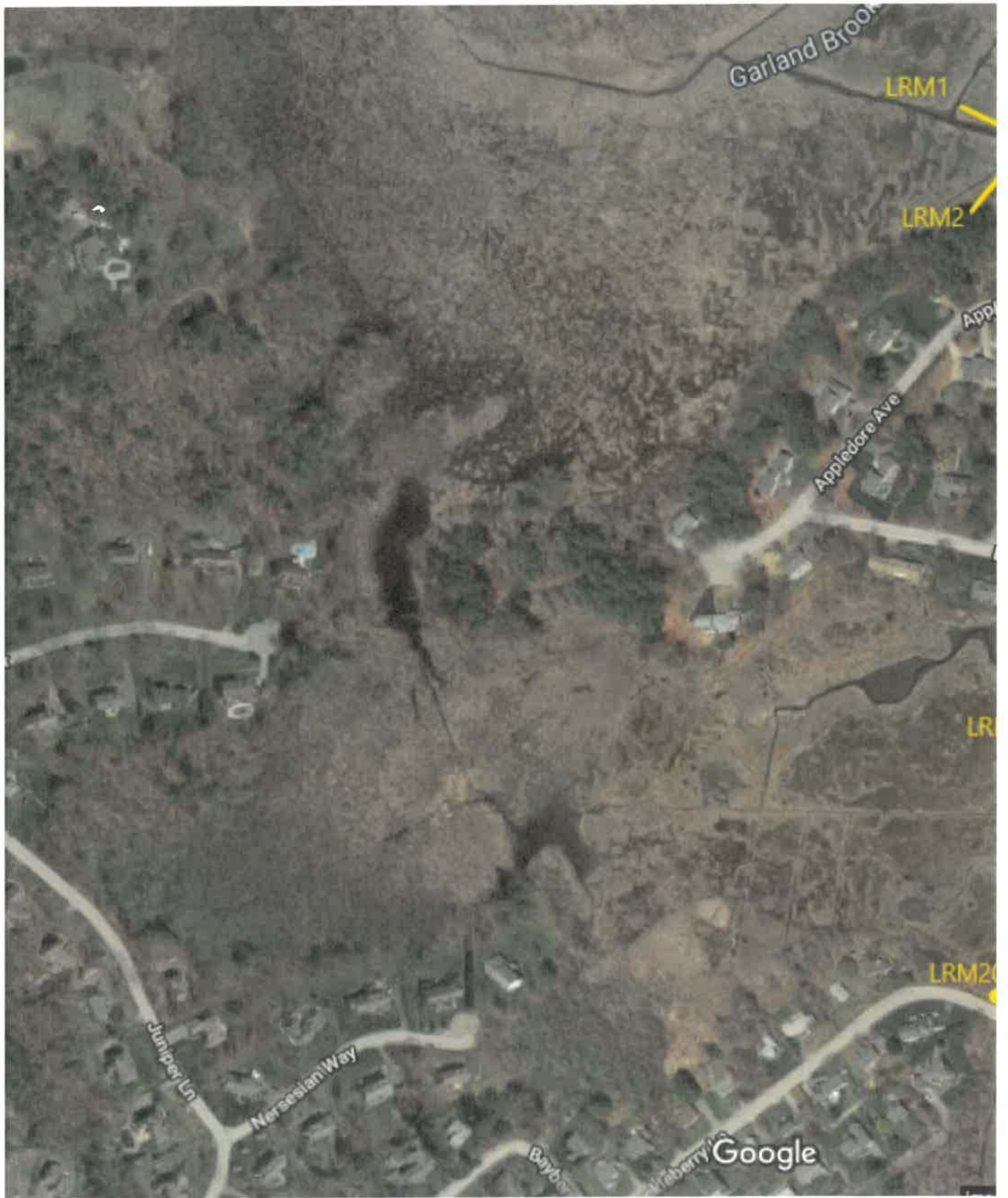
Please let me know if you need any other information.

Regards,

Lisa

Attachments:

1. At a Glance: Summary of Town and Conservation Commission initiatives to protect water quality and natural resources.
2. 2018 FB Environmental Little River Investigative Report
3. 2019 NH DES Water Quality Results
4. Email from Rob Livingston with explanation of test results
5. Map of Test Sites
6. May 2019 Seacoast NH Article





## At a Glance — Conservation and Water Resource Protection Initiatives

- 1965: The North Hampton Conservation Commission was established pursuant to RSA 36-A for the proper utilization and protection of the natural resources and for the protection of watershed resources.
- 1974: Minimum lot size increased to 87,000 square feet.
- 1978: Establishment of Wetlands Conservation District Zoning Ordinance Section 501 (Updated from 1979-2020).
- 1981: Critical and Unique Regulations — Established to protect areas identified on the Natural Resource Map having severe limitations to development or that are unique to the Town of North Hampton or the State of New Hampshire; Zoning Ordinance Section 601.1.
- 1993: Natural Resource Inventory prepared by the Rockingham Planning Commission.
- 1999: *Little River Salt Marsh Restoration Plan and Environmental Assessment*, prepared by USDA — Natural Resources Conservation Service.
- 2000: Little River Salt Marsh Restoration Project: The first culvert to restore tidal flow to the marsh was installed in 1999 under Appledore Road, and the second culvert at the north end of the marsh was installed under Route 1A in 2000.
- 2001: North Hampton *forever* Subcommittee established with a \$4 million dollar bond initiative conserved 656 within the headwaters of the Winnicut River and Little River Water sheds.
- 2002: Creation of “*Saving Special Places*” *Community Funding for Land Conservation* by Brian Hart, Society for the Protection of New Hampshire Forests, and Dorothy Tripp Taylor, Center for Land Conservation Assistance - features the North Hampton *forever* “grassroots organizing” land conservation chapter.
- 2003: Buffer Zone Requirements Adjacent to Wetlands Zoning Ordinance Section 501.6 (Updated in 2005, 2017).
- 2005: Floodplain Development Ordinance Zoning Ordinance Section 504.3.
- 2006: Aquifer Protection District Ordinance Zoning Ordinance Section 503.1.

- 2006: Chapel Brook Special Study conducted by NH DES Beach Program.
- 2007: Conservation Audit and Stewardship Plan prepared by Christopher Kane.
- 2008: New Hampshire Estuaries Project: *A Citizen's Guide to Protecting North Hampton's Wetlands and Water Resources.*
- 2008: Conservation Subdivision Design  
Zoning Ordinance Section 603.
- 2009: Little River Salt Marsh Restoration Project Phase II: Improve drainage and tidal connectivity in western section of the marsh and Garland Brook.
- 2009: Conservation Land District  
Zoning Ordinance Section 201.1 (Updated in 2020).
- 2010: NH DES 319 Grant awards to improve culverts for streams located on North Road, Route 1A, and Little River on Woodland Road.
- 2011: Agriculture: Purpose of this section is to promote agricultural activities while ensuring they are sustainable for the connection in which they occur.  
Zoning Ordinance Section 602.1 (Updated 2019).
- 2011: Little River Watershed Based Plan, prepared by F.B. Environmental Associates.
- 2011: Water Quality Testing through 2019: This testing has resulted in work to replace culverts and failing septic systems.
- 2013: Governor Dale Farm Conservation Easement: Conserved 53 acres; funding sources include Farm and Ranch Land Protection Grant, North Hampton Conservation Commission, Southeast Land Trust, and Private donations from North Hampton residents and other donors.
- 2013: Conservation Land Trail Map Brochure posted on town website.
- 2015: Prohibited Uses in the Wetlands Conservation District  
Zoning Ordinance Section 501.
- 2015: Little River stormwater infiltration pad and restored stream buffer with native plantings with funding from a NH DES 319 Water Quality Grant.
- 2016: New Hampshire Coastal Risk and Hazards Commission: *Preparing New Hampshire for For Projected Storm Surge, Sea-Level Rise, and Extreme Precipitation.*
- 2017: Little River Watershed Based Management Plan (Updated).



- 2017: Management Plan for Forest Hills Farm.
- 2017: Winnicut River Watershed Restoration and Management Plan.
- 2017: North Hampton Conservation Land Database: This database is available for the public online on the town website Provides information for approximately 1793 acres of North Hampton conservation land (Updated in 2018, 2019, 2020).
- 2018: Philbrick Pond Saltmarsh Drainage Evaluation.
- 2018: Winnicut River Project proposed plans by the North Hampton Capital Improvements Plan Committee. Two culverts must be replaced and enlarged and riverbed work to improve water flow and prevent flooding.
- 2019: *Septic System Inventory and Database*, work has begun to provide the location and age of septic systems, will be taken into consideration when making recommendations and finalizing the *Coastal Hazards Adaptation Chapter of the Master Plan*.
- 2020: Phase I: Philbrick Pond Cobble Weir Replacement: This work will improve the health of the marsh by increasing the tidal range approximately 12-inches.
- 2020: *Coastal Hazards Adaptation Chapter of the Master Plan* (To be complete in 2021)
- 2021: Phase II: Proposal and plans to further restore Philbrick Pond Salt Marsh Winnicut River, New Hampshire Rivers Council 2016



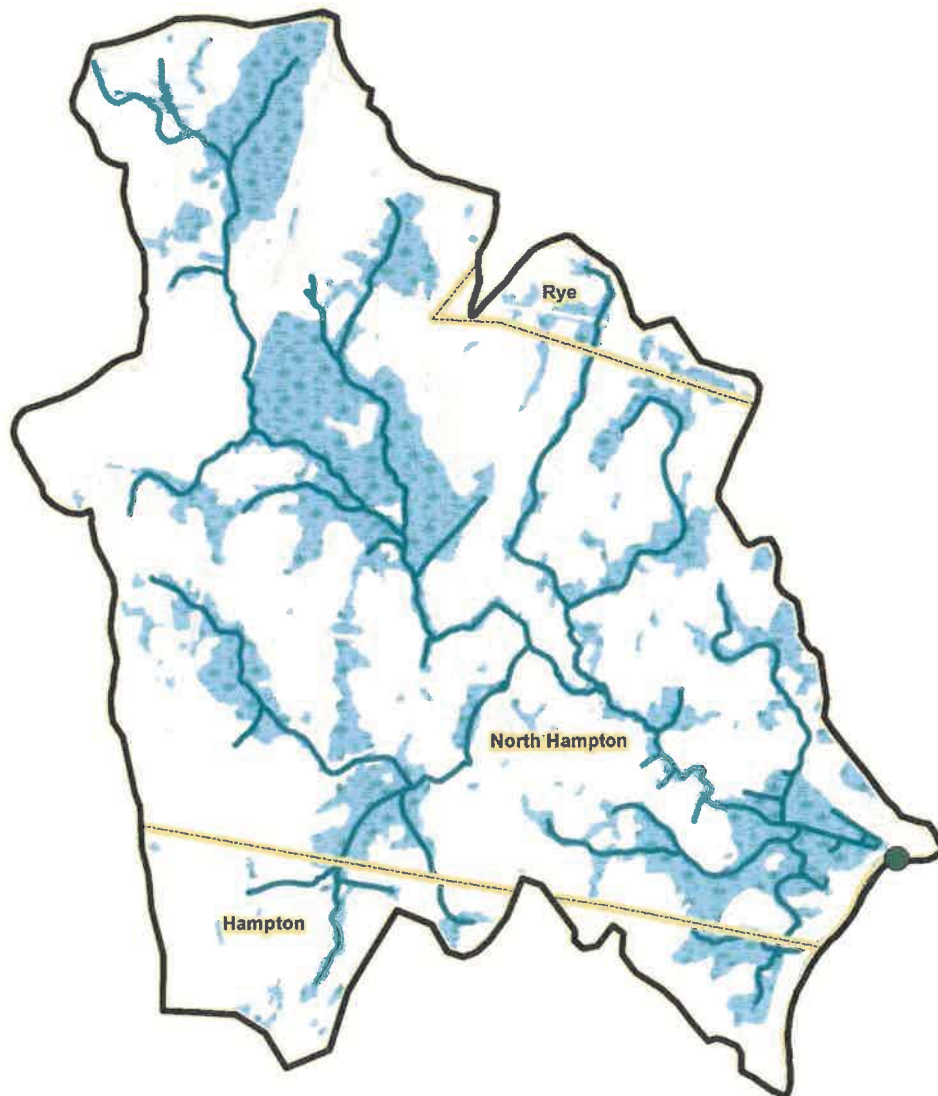
Winnicut River, New Hampshire Rivers Council 2016





# LITTLE RIVER

## 2018 INVESTIGATION REPORT



### PREPARED FOR



Town of North Hampton  
233 Atlantic Avenue  
North Hampton, NH 03862

### PREPARED BY



FB Environmental Associates  
170 West Rd, Suite 6  
Portsmouth, NH 03801

## BACKGROUND

The New Hampshire Department of Environmental Services (NHDES) lists the Little River in North Hampton, NH as impaired due to elevated concentrations of fecal indicator bacteria. This impairment is likely attributed to nonpoint source pollution in stormwater runoff and malfunctioning septic systems or leaky sewer lines within the watershed. In recent years, these high fecal indicator bacteria counts have led to occasional beach advisories at North Hampton State Beach. There were four beach swimming advisories at North Hampton State Beach in 2018 (6/29-7/3/18, 7/13-7/17/18, 8/15-8/17/18, and 8/23-8/25/18); two sites (BCHSTBNHMRT and BCHSTBNHMCR) measured 6,131 and 4,352 mpn/100mL, respectively, on 6/28/18; fecal contamination at the state beach was likely sourced from the Little River (but no outlet sample was collected that day to confirm).

The Town of North Hampton has been proactive in monitoring and tracking fecal contamination sources throughout the Little River watershed since 2010. Through these efforts, several fecal sources such as malfunctioning septic systems have been found and remediated, but much work remains. In 2017, FB Environmental Associates (FBE) conducted a groundwater testing study of the marsh area draining to BCH25, a known hotspot of fecal indicator bacteria located at the Appledore Ave marsh stream crossing. One site with possible human sewage contamination was identified along Huckleberry Ln in Hampton and another site was flagged for further investigation along Boulders Cove Ave in North Hampton. In 2018, FBE continued a groundwater testing study of the marsh from BCH25 to LR-OUT (Little River outlet) – resampling the flagged 2017 site and sampling along the marsh fringe on the north sides of Appledore Ave and Viano Island Way – to better pinpoint possible sources of human fecal contamination and provide next-step recommendations for remediation of identified fecal sources.



A tributary to the Little River in the marsh system on the north side of Appledore Ave (9/13/18). Photo Credit: FBE.

## METHODOLOGY

Surface and groundwater samples (40 total) were collected along the marsh fringe or stream channel along Boulters Cove Ave (9/12/18), along the north side of Appledore Ave (9/13/18), and along the north side of Viano Island Way (9/19/18) in North Hampton to bracket bordering homes and test for possible malfunctioning septic systems. Sites BCH25 and LR-OUT were sampled three times, one for each field day as a baseline comparison. Sample events occurred after two large storm events: 9/12-13/18 was preceded by 1.41 inches of rain within 72 hours and 9/19/18 was preceded by 4.32 inches of rain within 48 hours (KNHHAMPT45 weather station).

Samples were collected in whirl-packs (Enterococci), 60-mL HDPE bottles (nitrate and phosphate), and 50-mL falcon tubes wrapped in aluminum foil (optical brighteners and ammonia). All samples were stored on ice before being delivered to the lab, except optical brightener samples, which were kept at room temperature. Groundwater samples were extracted 1-2 feet below the marsh surface using a 36-inch MHE PushPoint ¼" diameter field investigation sampler, equipped with syringe assembly. The syringe and sampler were each rinsed three times with distilled water after each site.

- Enterococci samples were analyzed at Nelson Analytical Laboratory in Kennebunk, ME.
- Nitrate and phosphate samples were analyzed by the University of New Hampshire Water Quality Analysis Laboratory (UNH WQAL) in Durham, NH.
- Optical brighteners were measured using a handheld Aquaflor fluorometer, based on methods described in SOP 3.4.1.4 Measuring Optic Brighteners in Ambient Water Samples Using a Fluorometer, by Erick Burres, dated March 2011.
- Ammonia was determined using HACH ammonia test strips.
- Salinity was measured using a calibrated refractometer.

While fecal indicator bacteria (Enterococci) should remain the primary testing parameter for fecal source tracking, it can be a difficult parameter to measure and interpret when determining possible human-derived fecal sources. Several other parameters have been successfully used as “co-indicators” to fecal indicator bacteria; the combination of these parameters can help determine whether the contamination source is likely sewage discharge from humans. Nutrients (nitrate and phosphate)



Shallow groundwater extraction from the Little River marsh in North Hampton on 9/19/18. Photo credit: FBE.



LR-OUT at low tide on 9/13/18. Photo credit: FBE.



can indicate human sewage if in extremely-high concentrations. Ammonia is used in illicit discharge detection screenings (refer to the 2004 IDDE Guidance manual by the Center for Watershed Protection). Optical brighteners are commonly used for wastewater detection.

It is important to note that applying IDDE parameters is particularly challenging in tidally-influenced systems. The high salt concentrations (i.e., salinity) impact fecal indicator bacteria survival. Elevated fecal indicator bacteria alone do not constitute a sewage contamination because fecal indicator bacteria can be sourced from wildlife or proliferate on certain substrates within the environment. Several dozen ducks, herons, cormorants, and egrets were observed on the marsh during each field investigation. Testing positive for optical brighteners in groundwater, however, definitively indicates the presence of greywater from leachfields; optical brighteners are not naturally-occurring and are typically added to laundry soaps, detergents, cleaning agents, and toilet papers to aid in the brightening of fabrics and/or surfaces.

## RESULTS

Due to the size of the study area and the short window around low tide, the investigation spanned three field days following two large storm events in September. Sites BCH25 and LR-OUT were sampled each field day as a baseline comparison when interpreting results for the entire study area. The second, larger storm event on 9/18/19 activated significantly more fecal sources from both surface and groundwater sources at both BCH25 and LR-OUT, as Enterococci more than doubled and nutrients were the same or higher on 9/19/18 compared to 9/12-13/18 (Table 1). More sites exceeded thresholds for fecal indicators on 9/19/18 than on 9/12-13/18, suggesting that the first, smaller storm event on 9/12-13/18 may not have been large enough to raise the water table and intercept leachfields to flush out fecal waste in groundwater, despite there being a spring tide during the first storm and a neap tide during the second storm.

One site along Boulters Cove Ave that was flagged for further investigation in 2017 was retested in 2018. In 2017, NH-GW-01 was found to have elevated levels of nitrate-nitrite, phosphate, and ammonia following 2.12 inches of rain within 48 hours. In 2018, further investigation of NH-GW-01 and surrounding sites NH-GW-01A, -01B, and -01C did not reveal similarly elevated nitrate-nitrite, phosphate, or ammonia following 1.41 inches of rain within 48 hours (Table 2). The smaller storm targeted in 2018 compared to 2017 may have resulted in less subsurface transport of pollutants. While this area can be considered low priority, it is recommended that the nearest septic system to NH-GW-01 be evaluated for proper functioning.



Though it looks suspicious, *Beggiatoa* sp. growth on the marsh surface is natural (9/19/18). Photo credit: FBE.



Groundwater pull near suspect area (9/19/18). Photo credit: FBE.

For the remaining 30 surface and groundwater sites sampled along the marsh fringe bordering the north sides of Appledore Ave and Viano Island Way, 13 sites exceeded the single-sample criterion for Enterococci (104 mpn/100mL), with 3 surface water sites (LR-2, LR-4, LR-5) and 1 groundwater site (NH-GW-28) exceeding 1,000 mpn/100mL (Table 3). Three (3) sites (LR-4, LR-5, NH-GW-34) had slightly elevated nitrate-nitrite or ammonia. One (1) site (NH-GW-28) had high phosphate at 1,178 ppb. One (1) site (NH-GW-25) tested positive for optical brighteners.

The results showed a possible human sewage contamination at NH-GW-28 and a possible greywater contamination at NH-GW-25 (both possible malfunctioning septic systems) (Figure 1). Field observations at NH-GW-28 behind a yellow house with red roof describe a putrid odor with white flecks emerging into the syringe on the first purge pull. Field observations at NH-GW-25 directly behind a grey house near the edge of a phragmites patch describe a putrid odor in the air when the samplers arrived at the site. Five (5) surface water sites with elevated Enterococci were flagged for further investigation, particularly LR-2, which had significantly higher Enterococci compared to the historic hotspot BCH25. Seven (7) properties were identified for septic system evaluation; 4 properties on the north side of Appledore Ave from NH-GW-14 to NH-GW-22 were flagged due to slightly elevated nutrients along the marsh fringe where homes are very close and nearly at-level with the marsh surface.



Marsh area where the flow channel splits between sites LR-2 and LR-4 (9/13/18). Photo Credit: FBE.

Table 1. 2018 water quality results for BCH25 and LR-OUT (used as baseline comparison among sample dates).

| Date      | Precip <24 hours (in) | Precip <48 hours (in) | Precip <96 hours (in) | Site ID                | Salinity (ppt) | Nitrate-Nitrite (ppb) | Phosphate (ppb) | Ammonia (ppm) | Enterococci (mpn/100mL) | Optical Brighteners |
|-----------|-----------------------|-----------------------|-----------------------|------------------------|----------------|-----------------------|-----------------|---------------|-------------------------|---------------------|
|           |                       |                       |                       | <b>Threshold Limit</b> | <b>100</b>     | <b>1,000</b>          | <b>0.5</b>      | <b>104</b>    | <b>Positive</b>         |                     |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | BCH25                  | 25             | 30                    | 28              | 0             | 650                     | Negative            |
|           |                       |                       |                       | LR-OUT                 | 29             | 41                    | 23              | 0             | 644                     | Negative            |
| 9/13/2018 | 0.00                  | 0.08                  | 1.41                  | BCH25                  | 24             | 29                    | 33              | 0             | 350                     | Negative            |
|           |                       |                       |                       | LR-OUT                 | 24             | 47                    | 34              | 0             | 327                     | Negative            |
| 9/19/2018 | 0.09                  | 4.32                  | 4.32                  | BCH25                  | 9              | 99                    | 72              | 0             | 1,616                   | Negative            |
|           |                       |                       |                       | LR-OUT                 | 5              | 83                    | 32              | 0.25          | 2,909                   | Negative            |

Table 2. 2017 (blue highlight) and 2018 water quality results for BCH25 and NH-GW-01, 01A, 01B, and 01C (follow-up investigation).

| Date      | Precip <24 hours (in) | Precip <48 hours (in) | Precip <96 hours (in) | Site ID   | Type                   | Salinity (ppt) | Nitrate-Nitrite (ppb) | Phosphate (ppb) | Ammonia (ppm) | Enterococci (mpn/100mL) | Optical Brighteners |
|-----------|-----------------------|-----------------------|-----------------------|-----------|------------------------|----------------|-----------------------|-----------------|---------------|-------------------------|---------------------|
|           |                       |                       |                       |           | <b>Threshold Limit</b> | <b>100</b>     | <b>1,000</b>          | <b>0.5</b>      | <b>104</b>    | <b>Positive</b>         |                     |
| 7/18/2017 | 0                     | 0                     | 0                     | NH-GW-01  | Ground                 | 22             | --                    | --              | 1             | <10                     | Negative            |
| 9/7/2017  | 2.12                  | 2.12                  | 3.27                  | NH-GW-01  | Ground                 | 20             | 140                   | 1,752           | 0.5           | <10                     | Negative            |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | NH-GW-01  | Ground                 | 27             | 36                    | 138             | 0             | 81                      | Negative            |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | NH-GW-01A | Ground                 | 30             | 22                    | 189             | 0             | 104                     | Negative            |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | NH-GW-01B | Ground                 | 26             | 44                    | 189             | 0             | 133                     | Negative            |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | NH-GW-01C | Ground                 | 24             | 29                    | 229             | 0             | 60                      | Negative            |
| 9/7/2017  | 2.12                  | 2.12                  | 3.27                  | BCH25     | Surface                | 11             | 4                     | 40              | 0.25          | 5,172                   | Negative            |
| 9/12/2018 | 0.08                  | 1.41                  | 1.41                  | BCH25     | Surface                | 25             | 30                    | 28              | 0             | 650                     | Negative            |



Table 3. 2018 water quality investigation results. Sites are ordered by day of collection and were sampled from south to north on the marsh or from upstream to downstream. Red bold text indicates an exceedance of a threshold or limit that indicates possible fecal contamination. Multiple exceedances for several parameters are needed for a human fecal contamination determination.

| Date      | Type      | Site ID  | Salinity (ppt)         | Nitrate-Nitrite (ppb) | Phosphate (ppb) | Ammonia (ppm) | Enterococci (mpn/100mL) | Optical Brighteners | Result                                  |  |
|-----------|-----------|----------|------------------------|-----------------------|-----------------|---------------|-------------------------|---------------------|---|--|
| 9/13/2018 |           |          | <b>Threshold Limit</b> | <b>100</b>            | <b>1,000</b>    | <b>0.5</b>    | <b>104</b>              | <b>Positive</b>     |   |  |
|           |           | NH-GW-14 | 35                     | 36                    | 161             | 0             | 30                      | Negative            |   |  |
|           |           | NH-GW-15 | 37                     | 41                    | 218             | 0             | 10                      | Negative            |   |  |
|           |           | NH-GW-16 | 32                     | 30                    | 77              | 0             | <b>107</b>              | Negative            |   |  |
|           |           | NH-GW-17 | 27                     | 43                    | 148             | 0             | 10                      | Negative            |   |  |
|           |           | NH-GW-18 | 28                     | 40                    | 685             | 0             | 5                       | Negative            |   |  |
|           |           | NH-GW-19 | 32                     | 28                    | 136             | 0.25          | 31                      | Negative            |   |  |
|           |           | NH-GW-20 | 31                     | 32                    | 90              | 0             | 31                      | Negative            |   |  |
|           |           | NH-GW-21 | 31                     | 65                    | 222             | 0.25          | 98                      | Negative            |   |  |
|           |           | NH-GW-22 | 32                     | 34                    | 89              | 0.25          | <b>107</b>              | Negative            |   |  |
|           |           | NH-GW-23 | 34                     | 36                    | 300             | 0             | 10                      | Negative            |   |  |
|           |           | NH-GW-24 | 31                     | 22                    | 287             | 0.25          | 84                      | Negative            |   |  |
|           |           | NH-GW-25 | 31                     | 35                    | 157             | 0             | <b>298</b>              | <b>Positive</b>     | <b>Possible greywater contamination</b> |  |
|           |           | NH-GW-26 | 31                     | 33                    | 83              | 0.25          | 20                      | Negative            |   |  |
|           |           | NH-GW-27 | 26                     | 24                    | 179             | 0.25          | 5                       | Negative            |   |  |
|           |           | Surface  | LR-1                   | 24                    | 44              | 30            | 0                       | <b>309</b>          | Negative                                | Further investigation suggested            |
|           |           |          | LR-2                   | 24                    | 25              | 19            | 0                       | <b>1,130</b>        | Negative                                |  |
|           |           |          | LR-3                   | 27                    | 22              | 12            | 0                       | <b>231</b>          | Negative                                |  |
|           | 9/19/2018 |          | NH-GW-28               | 28                    | 15              | <b>1,178</b>  | 0                       | <b>24,200</b>       | Negative                                | <b>Possible human sewage contamination</b> |
|           |           |          | NH-GW-29               | 35                    | 7               | 113           | 0                       | <b>563</b>          | Negative                                |  |
|           |           |          | NH-GW-30               | 26                    | 3               | 52            | 0                       | <b>109</b>          | Negative                                |  |
|           |           |          | NH-GW-31               | 30                    | 8               | 118           | 0                       | <b>488</b>          | Negative                                |  |
|           |           |          | NH-GW-32               | 30                    | 13              | 122           | 0                       | 96                  | Negative                                |  |
|           |           |          | NH-GW-33               | 35                    | 29              | 223           | 0                       | 5                   | Negative                                |  |
|           |           |          | NH-GW-34               | 36                    | 7               | 391           | <b>0.5</b>              | 5                   | Negative                                |  |
|           |           |          | NH-GW-35               | 33                    | 2               | 338           | 0.25                    | 10                  | Negative                                |  |
|           |           |          | NH-GW-36               | 34                    | 0               | 391           | 0.25                    | 10                  | Negative                                |  |
|           |           | NH-GW-37 | 32                     | 6                     | 100             | 0             | 20                      | Negative            |   |  |
|           |           | Surface  | LR-6                   | 18                    | 9               | 52            | 0.25                    | <b>591</b>          | Negative                                | Further investigation suggested            |
|           |           |          | LR-5                   | 12                    | <b>116</b>      | 105           | 0                       | <b>2,382</b>        | Negative                                | Further investigation suggested            |
|           |           |          | LR-4                   | 8                     | <b>118</b>      | 66            | 0                       | <b>2,382</b>        | Negative                                | Further investigation suggested            |



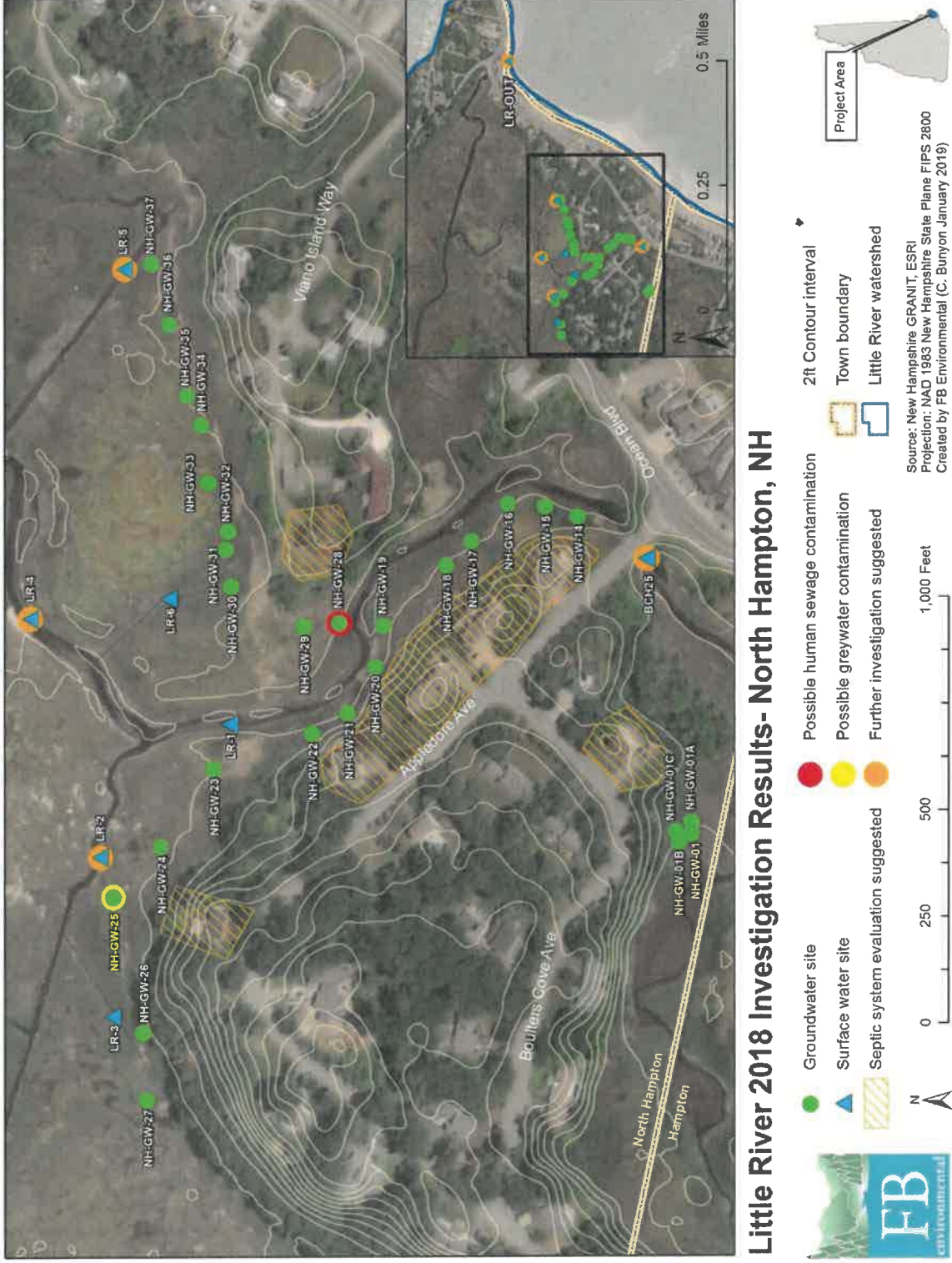


Figure 1. Map of the 2018 investigation sites and results.

## RECOMMENDATIONS

- **Follow-up on NH-GW-28 immediately (identified as possible human sewage contamination site).** The Town of North Hampton should contact the homeowners of the property adjacent to NH-GW-28 on Viano Island Way and evaluate the condition of their septic system.
- **Follow-up on NH-GW-25 (identified as possible greywater contamination site).** The Town of North Hampton should contact the homeowners of the property adjacent to NH-GW-25 on Appledore Ave and evaluate the condition of their septic system.
- **Consider evaluating septic systems for 4 properties on Appledore Ave and 1 property on Boulters Cove Ave.** These properties were noted as vulnerable to possible septic system malfunctioning.
- **Conduct investigation in the areas draining to LR-2 and LR-5.** The Town of North Hampton should investigate and monitor the areas around LR-2 and LR-5 to rule out possible human sewage contamination.
- **Resample 2017 and 2018 investigation areas.** 2017 and 2018 sites sampled on 1 to 3 days only provide a snapshot in time and may not reflect year-round contamination sources or new sources of fecal contamination.
- **Restart monitoring program for 2019.** Maintaining a long-term monitoring record will help track and assess trends in water quality parameters, particularly if continued efforts are made in the watershed to remediate contaminant sources.



**From:** Livingston, Rob Robert.Livingston@des.nh.gov  
**Subject:** Sample results Little River Marsh  
**Date:** June 21, 2019 at 2:09 PM  
**To:** Lisa J. Wilson lisajwilson@comcast.net, Soule, Sally Sally.Soule@des.nh.gov  
**Cc:** Kathy Grant kathy@thegrants.com, Tim Roache, RPC troache@rpc-nh.org, Jennifer Rowden jrowden@rpc-nh.org

Little River marsh sampling  
Here are preliminary results final report out next week

All sites have low ecoli cts, all fit into naturally occurring marsh bacteria levels.  
LRM20 was basically a mud puddle and at 220cts is low for a tidal perimeter wet pocket

- Ecoli cts
- LRM1=54
- LRM2=56
- LRM3=65
- LRM6=65
- LRM10=2
- LRM11=120
- LRM12=170
- LRM14=130
- LRM15=100
- LRM20=220
- LRM25=110

**From:** Livingston, Rob  
**Sent:** Friday, June 21, 2019 1:54 PM  
**To:** 'Lisa J. Wilson' <lisajwilson@comcast.net>; Soule, Sally <Sally.Soule@des.nh.gov>  
**Cc:** 'Kathy Grant' <kathy@thegrants.com>; 'Tim Roache, RPC' <troache@rpc-nh.org>; 'Jennifer Rowden' <jrowden@rpc-nh.org>  
**Subject:** RE: Little River: grant opportunities

Little River marsh sampling  
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- LRM12=170
- LRM14=130
- LRM15=100

LRM15=100  
LRM20=220  
LRM25=110

**From:** Livingston, Rob  
**Sent:** Thursday, June 20, 2019 3:14 PM  
**To:** 'Lisa J. Wilson' <[lisajwilson@comcast.net](mailto:lisajwilson@comcast.net)>; Soule, Sally <[Sally.Soule@des.nh.gov](mailto:Sally.Soule@des.nh.gov)>  
**Cc:** 'Kathy Grant' <[kathy@thegrants.com](mailto:kathy@thegrants.com)>; 'Tim Roache, RPC' <[troache@rpc-nh.org](mailto:troache@rpc-nh.org)>; 'Jennifer Rowden' <[jrowden@rpc-nh.org](mailto:jrowden@rpc-nh.org)>  
**Subject:** RE: Little River: grant opportunities

Slight delay in bacteria results

We had a dbase change over here

The results are done just not finalized

Hopefully they will be reported tomorrow

**From:** Livingston, Rob  
**Sent:** Friday, June 14, 2019 3:28 PM  
**To:** 'Lisa J. Wilson' <[lisajwilson@comcast.net](mailto:lisajwilson@comcast.net)>; Soule, Sally <[Sally.Soule@des.nh.gov](mailto:Sally.Soule@des.nh.gov)>  
**Cc:** Kathy Grant <[kathy@thegrants.com](mailto:kathy@thegrants.com)>; Tim Roache, RPC <[troache@rpc-nh.org](mailto:troache@rpc-nh.org)>; Jennifer Rowden <[jrowden@rpc-nh.org](mailto:jrowden@rpc-nh.org)>  
**Subject:** RE: Little River: grant opportunities

I should have the results of sampling next week and will email them to everyone

**From:** Lisa J. Wilson <[lisajwilson@comcast.net](mailto:lisajwilson@comcast.net)>  
**Sent:** Friday, June 14, 2019 3:26 PM  
**To:** Soule, Sally <[Sally.Soule@des.nh.gov](mailto:Sally.Soule@des.nh.gov)>  
**Cc:** Livingston, Rob <[Robert.Livingston@des.nh.gov](mailto:Robert.Livingston@des.nh.gov)>; Kathy Grant <[kathy@thegrants.com](mailto:kathy@thegrants.com)>; Tim Roache, RPC <[troache@rpc-nh.org](mailto:troache@rpc-nh.org)>; Jennifer Rowden <[jrowden@rpc-nh.org](mailto:jrowden@rpc-nh.org)>  
**Subject:** Re: Little River: grant opportunities

**ATTENTION:** This email has originated from outside of the organization. Do not open attachments or click on links unless you recognize the sender and know the content is safe.

Sally,

Thank you so much for providing the information below. I will pass the information to the various boards and commissions.

And on behalf of the Conservation Commission and Town, I thank you and Rob Livingston for conducting Little River Salt Marsh water quality testing on June 10.

Would it be ok to wait until the Conservation Commission meets again on July 9 for the Commission to discuss the grant opportunities? Is it possible to be considered for the 319 Grant if the town was not selected for the 604b grant?

The 604b grant appears to quite comprehensive. North Hampton might be a good candidate for the 604b grant given that the Town has recently contracted with the RPC to conduct a new Natural Resource Inventory to include recommendations for climate change resiliency and to protect the Town's water resources. The RPC will also be preparing a coastal hazards master plan chapter for the Planning Board.

Thank you again and have a good weekend. Lisa

On Jun 14, 2019, at 2:04 PM, Soule, Sally <[Sally.Soule@des.nh.gov](mailto:Sally.Soule@des.nh.gov)> wrote:

Hello Lisa,

We have released two grant application requests. Either one would be good sources of funding for the Little River projects we've discussed. I've provided a summary of each grant program below with a link to the funding announcement.

- 1.) 604b water quality grants: these grants are offered only to regional planning commissions for water quality projects. However, the town could partner with Rockingham Planning Commission (RPC) on a proposal to: 1. develop a septic database and prioritize systems for evaluation, 2. develop septic system regulations, and 3. continue water quality monitoring efforts. RPC is capable of conducting these tasks. RPC would have to be the applicant – you would partner with them on the project. You would need to reach out to Jenn Rowden to see if they are interested.

Pros: no match is required for this grant; can be used for MS4 permit compliance. Cons: funds are limited and competitive – only \$64,000 available statewide.

- 2.) Section 319 Watershed Restoration Grants: these grants have broader

eligibility – eligibility is not limited to regional planning commissions. The town could apply on its own to do the tasks listed above and more. The grant would provide funding for the town to hire consultants, interns, etc. to provide services to complete tasks.

Pros: it's a bigger pot of money - we have ~\$400K available to fund projects statewide. Cons: Match is required (in-kind and cash match are eligible); cannot be used for MS4 compliance.

Link to 2020 604b and 319 grant requests for funding – applications and information: <https://www4.des.state.nh.us/blogs/watershed/?p=4245>

If you are interested in the grants, I would be happy to meet with you to discuss ideas. Proposals for both grants are due Sept. 20, but we should probably meet soon to determine which funding source you'd like to apply to and then get the ball rolling.

Thanks, Sally

Sally Soule | Coastal Watershed Supervisor  
*Watershed Assistance Section / NPS Program*  
Watershed Management Bureau  
Water Division, NH Department of Environmental Services  
Pease District Office  
222 International Drive, Suite 175  
Portsmouth, NH 03801

(603) 559-0032  
[sally.soule@des.nh.gov](mailto:sally.soule@des.nh.gov)





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## DATA QUALIFIER DESCRIPTIONS

Workorder: B903828 - COMPLAIN

Project ID: 05-0022560 - NON-POINT SOURCE

The following are a list of some column headers and abbreviations with their meanings as used throughout the analysis report. Referring to them will assist you in interpreting your report.

**RDL=** The lowest value the laboratory calibrates its instrumentation for this parameter. Any instrumental estimate of results below the Report Limit is reported as Not Detected (ND).

**DF=** For some heavily contaminated samples, the laboratory must dilute samples to keep the final number within its calibration scale. This is referred to as the Dilution Factor. Final results and reporting limits are adjusted relative to the DF used.

**QUAL=** Indicates that the result has been qualified. Refer to the Analytical Report Comments and Qualifiers page for details.

**LIMIT=** Reflects the Maximum Contamination Level (MCL), if one exists, a secondary or recommended level or another State or Federal action level.

**Surrogates =** For some analyses, the laboratory adds a number of compounds to monitor analytical performance. These results are provided for your information.

> = Greater than

< = Less than

mg/L = milligrams per Liter

ug/L = micrograms per Liter

mg/kg = milligrams per kilogram

ug/kg = micrograms per kilogram

P-A = Present/Absent

CTS/100 mL = Counts per 100 milliliters

CFU = Colony forming unit

MPN = Most Probable Number

pCi/L = picoCuries per Liter

**J =** Estimated value; analyte detected at less than the Reporting Limit but greater than the laboratory's Method Detection Limit.

**B =** Analyte detected in the method blank for the batch of samples. Its presence in the sample may be suspect.

**E =** Estimated value; result exceeded the upper calibration level for the parameter.

Radiological results are expressed as a number + an uncertainty factor. Uncertainty is a calculated measure of the precision around the reported value.

All results for pH and residual chlorine samples analyzed more than 15 minutes after time of collection shall be considered QUALIFIED.

For assistance in interpreting your lab results and obtaining information regarding water treatment; go to [www.des.nh.gov](http://www.des.nh.gov) and search "Be Well Informed." Or go to <http://xml2.des.state.nh.us/DWITool/>.

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**SAMPLE SUMMARY**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022580 - NON-POINT SOURCE

| Lab ID     | Sample ID | Ref ID | Matrix | Date Collected  | Date Received | Misc Info |
|------------|-----------|--------|--------|-----------------|---------------|-----------|
| B903828001 | LRM1      |        | WATER  | 6/10/2019 10:21 | 6/10/2019     |           |
| B903828002 | LRM2      |        | WATER  | 6/10/2019 10:22 | 6/10/2019     |           |
| B903828003 | LRM3      |        | WATER  | 6/10/2019 10:26 | 6/10/2019     |           |
| B903828004 | LRM6      |        | WATER  | 6/10/2019 10:27 | 6/10/2019     |           |
| B903828005 | LRM10     |        | WATER  | 6/10/2019 10:43 | 6/10/2019     |           |
| B903828006 | LRM11     |        | WATER  | 6/10/2019 10:44 | 6/10/2019     |           |
| B903828007 | LRM12     |        | WATER  | 6/10/2019 10:45 | 6/10/2019     |           |
| B903828008 | LRM14     |        | WATER  | 6/10/2019 10:55 | 6/10/2019     |           |
| B903828009 | LRM15     |        | WATER  | 6/10/2019 10:56 | 6/10/2019     |           |
| B903828010 | LRM20     |        | WATER  | 6/10/2019 11:11 | 6/10/2019     |           |
| B903828011 | LRM25     |        | WATER  | 6/10/2019 11:30 | 6/10/2019     |           |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828001** Matrix: WATER  
 Sample ID: **LRM1** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 54      | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:53 |       |      |

Date: 06/20/2019

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828002** Matrix: WATER  
 Sample ID: **LRM2** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 56      | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:53 |       |      |





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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828003** Matrix: WATER  
 Sample ID: **LRM3** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 65      | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:53 |       |      |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

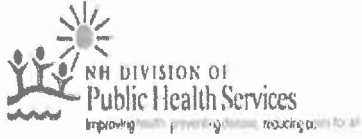
Lab ID: **B903828004** Matrix: WATER  
 Sample ID: **LRM6** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 2       | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:53 |       |      |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828005** Matrix: WATER  
 Sample ID: **LRM10** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 120     | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:58 |       |      |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828006** Matrix: WATER  
 Sample ID: **LRM11** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 19      | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:58 |       |      |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828007** Matrix: WATER  
 Sample ID: **LRM12** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 170     | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:58 |       |      |





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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828008** Matrix: WATER  
 Sample ID: **LRM14** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 130     | CFU/100mL |     | 1  | 6/10/2019 14:45 | 6/11/2019 15:58 |       |      |

Date: 06/20/2019

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828009** Matrix: WATER  
 Sample ID: **LRM15** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

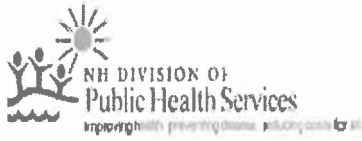
| Parameters                                 | Results | Units         | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|---------------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |               |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |               |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |               |     |    |                 |                 |       |      |
| E.Coli, CTS                                |         | 100 CFU/100mL |     | 1  | 6/10/2019 15:10 | 6/11/2019 15:58 |       |      |

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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828010** Matrix: WATER  
 Sample ID: **LRM20** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 220     | CFU/100mL |     | 1  | 6/10/2019 15:10 | 6/11/2019 15:58 |       |      |





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**ANALYTICAL RESULTS**

Workorder: B903828 - COMPLAIN  
 Project ID: 05-0022560 - NON-POINT SOURCE

Lab ID: **B903828011** Matrix: WATER  
 Sample ID: **LRM25** Sample Type: SAMPLE  
 Description: Collector : ROB LIVINGSTON

| Parameters                                 | Results | Units     | RDL | DF | Prepared        | Analyzed        | Limit | Qual |
|--|---------|-----------|-----|----|-----------------|-----------------|-------|------|
| <b>Microbiology</b>                        |         |           |     |    |                 |                 |       |      |
| Preparation Method: EPA 1603 Modified mTec |         |           |     |    |                 |                 |       |      |
| Analytical Method: EPA 1603 Modified mTec  |         |           |     |    |                 |                 |       |      |
| E.Coli, CTS                                | 110     | CFU/100mL |     | 1  | 6/10/2019 15:10 | 6/11/2019 16:03 |       |      |

Date: 06/20/2019

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DEPARTMENT OF HEALTH AND HUMAN SERVICES  
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PHONE (603) 271-3445  
FAX (603) 271-4783

## Invoice

Invoice To ERIC WILLIAMS  
NON-POINT SOURCE

Invoice Number 157852  
Invoice Date 6/20/2019  
Due Date 7/20/2019  
Account ID 05-0022560  
PO

CC

Workorder B903828  
Project ID 05-0022560 - NON-POINT SOURCE

### Charge Details

| Lab ID               | Sample ID | Collected       | Test Description   | Charge          |
|----------------------|-----------|-----------------|--------------------|-----------------|
| B903828001           | LRM1      | 6/10/2019 10:21 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828002           | LRM2      | 6/10/2019 10:22 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828003           | LRM3      | 6/10/2019 10:26 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828004           | LRM6      | 6/10/2019 10:27 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828005           | LRM10     | 6/10/2019 10:43 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828006           | LRM11     | 6/10/2019 10:44 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828007           | LRM12     | 6/10/2019 10:45 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828008           | LRM14     | 6/10/2019 10:55 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828009           | LRM15     | 6/10/2019 10:56 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828010           | LRM20     | 6/10/2019 11:11 | E.COLI,CTS,AQUEOUS | \$20.00         |
| B903828011           | LRM25     | 6/10/2019 11:30 | E.COLI,CTS,AQUEOUS | \$20.00         |
| <b>Invoice Total</b> |           |                 |                    | <b>\$220.00</b> |



## No. Hampton seeks help in identifying Little River pollution

By **Max Sullivan**

[msullivan@seacoastonline.com](mailto:msullivan@seacoastonline.com)

Posted May 9, 2019 at 6:27 PM

**NORTH HAMPTON** -- Town officials hope to identify the source of high fecal counts in the Little River, believed to be a frequent source of contamination at the nearby state beach.

Conservation Commission Chair Lisa Wilson hopes the state Department of Environmental Services can be tapped for testing potential sources of contamination identified in a report last summer by the firm FB Environmental.

The sources are believed to be in the vicinity of Viano Island where Conservation Commission members are concerned about the possible presence of human sewage from a failed septic system. The report states adjacent homeowners should be contacted about their septic systems being evaluated.

Areas near Appledore Avenue and Boulders Cove were also tested, according to the report. FB Environmental, which completed the report, recommended four Appledore Avenue homeowners and one on Boulders Cove be contacted as well about their septic systems.

Wilson presented the report to the Select Board April 22 asking it to seek DES assistance. While the board tabled the discussion, Town Administrator Bryan Kaenrath said Thursday Wilson was reaching out to DES. Wilson could not be reached Thursday but last week said she is hopeful the town is close to confirming sources along the river.

“We want to do more testing to verify where the pollution is coming from,” Wilson said, adding she hopes future testing could be done during dry weather, as rain events can lead to contaminants washing into the river to mask true sources of pollution.



The Little River has been monitored since 2010 by the town for fecal contamination. Select Board member Larry Miller said the biggest impact is the river's flow to the ocean and its potential to carry contaminants to North Hampton State Beach.

Last summer's report states several sources including malfunctioning septic systems have been found and remediated over the years, "but much work remains."

The report noted the correlation between the Little River and beach advisories over the years, stating there were four beach advisories for fecal count at the state beach in 2018. Beach advisories are posted when samples show bacteria levels are above the state standard, indicating the possible presence of disease-causing organisms, according to DES. Contamination at the beach was likely sourced from the Little River, according to FB Environmental, though no outlet sample was collected at the time to confirm.

The report states one potential source identified for human sewage contamination was along Huckleberry Lane in Hampton, a beach neighborhood near the North Hampton border. Hampton Town Manager Fred Welch said this week that was not the case to his knowledge.

Welch said Hampton's Public Works Department investigated that possibility last year and did not find evidence Hampton was contributing to the Little River's contamination. He deferred questions on the specifics of that investigation to Public Works Director Chris Jacobs, who did not respond to an email seeking comment Thursday.

Miller said it is not uncommon for local rivers to have contamination but added North Hampton stands out for how seriously it takes investigating sources.

"Any small river in the Seacoast ... if you tested, you'll probably find contamination," said Miller. "Our town is very proactive. The other towns aren't looking."

DES watershed specialist Rob Livingston, who in past years has investigated complaints about contamination in the river, said sources of contamination can be difficult to pinpoint. Various species of wildlife, including many seagulls seen near the Little River, can contribute to the river's contamination.

“Natural sources definitely mask ... a bad septic system along the river,” he said. “It makes it difficult to track down a source.”

Miller believes it could be difficult to get DES to test the Little River since it is often are tied up with many projects, but DES Coastal Watershed Supervisor Sally Soule said a round of watershed assistance grants for municipalities is about to become available. She said DES and the town have not had much contact the last few years and it would be beneficial for them to strengthen their connection.

“This could be good timing for them,” Soule said of applying for grant money. “If they have the capacity and the interest to do it, that would be great.”