

Mr. Alex Rosenberg
Compliance and Enforcement Officer
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USEPA Region 1
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October 27, 2014

Subject: September 26, 2014 Letter and July 16, 2014 MS4 Sampling Inspection in York, Maine

Hi Alex,

Thank you for assisting in our illicit discharge investigations, and for transmitting the results of surface water quality samples collected by the US Environmental Protection Agency on July 16, 2014. The analytical results have helped us to formulate our plans for additional investigations in the areas targeted.

With this letter, we are providing you with the results the additional samples we have collected since July 16, and our proposed plan for continued investigations in each of the areas visited.

Additional sample collection: As you are aware, the Town has been working with Dr. Stephen Jones at UNH on a model to predict high bacteria concentrations along the York Coastline. As part of his work, Dr. Jones visited the following locations five days each week between 7/17/2014 and 9/8/2014: LS04, LS03, SS01, LSR01, and an outlet from a marsh south of the LS04 location. Dr. Jones sampled any observed flows at these locations, and analyzed the samples for *enterococci*. Although he is still correlating the results to assess for patterns, the results he obtained are informing our proposed investigations as described in the paragraphs below.

Proposed Plans for continued investigations: On September 18, 2014 the Stormwater Coordinator, Leslie Hinz, met with Kristie Rabasca of Integrated Environmental Engineering to develop a proposed plan of action to investigate each site. On October 9, 2014; shortly after receiving your letter, I met with the Public Works Director, Stormwater Manager, Dr. Stephen Jones, and Kristie Rabasca to revisit the proposed plan developed on September 18, and compare it to the data and recommendations you provided. Based on this meeting, we refined the proposed plan of action to investigate each location. Our proposed actions for these areas are described below:

OS103 (Catch basin adjacent to bath houses on ocean side of Long Beach Avenue, at intersection of Oceanside Avenue referenced by EPA as LS04A on 7/16/2014) and LB127 (outfall which EPA referred to as LS04 on 5/29/2013) – We field confirmed that the catch basin sampled on 7/16/2014 is connected only to Outfall LB127 at the bath house (sampled on 5/29/2013). No other inlets or outlets to the catch basin are present. We plan to dye test the bath house in order to confirm that sanitary lines are correctly connected to the sanitary sewer and not to this portion of the storm drain system. (Please note that the location you sampled on 9/4/2012 at Lat/Long 43.1651189592212N/-70.6170901253628, the outfall that the Town considers to be LS04, is north of this area, and is connected to OSA1 described below.)

OSA1 (catch basin at the south east corner of Oceanside Ave and Reserve Street) and Outfall LS04 (to the North). The Public Works Director provided information on the connectivity of the storm drain pipes in this area as you advised. We are field confirming all pipe connections including two additional basins along Reserve Street that were recently installed to assist in alleviating flooding conditions of a low wet area to the west of Sea Rose Lane. We are refining the catchment area for Outfall LS04 and will incorporate the findings into the GIS. Dr. Jones visited LS04 Mondays through Fridays between 7/17 and 9/8/2014 and sampled for *enterococci*. The highest concentrations of *enterococci* appear during and just after rain events (7/24 and 8/12 to 8/13), however, Dr. Jones assessment is not complete, and there may be other factors contributing to the high bacteria concentrations beyond rainfall.

We plan to install an optical brightener trap to assess for dry weather human source contributions for a 7 day period in a section of this piping between OSA1 and LS04.

We also plan to sample the wetland area. We suspect that the bacteria concentrations in the wetland are naturally high. When the wetland overflows to the storm drain system during rain events, it may be the wetland waters causing the increased bacteria concentrations in the storm drain system, rather than any anthropogenic source.

The Stormwater and GIS Managers will also map septic systems in the area (including those around the wetland area), and cross reference the systems with a pumping database that the Town recently began maintaining to assess if any septic system issues may be the cause of the bacteria concentrations. We will follow up on any suspect septic system issues.

LS03 and LS03A (Outfall and wetland area near 65 Long Beach Ave). We are updating the infrastructure details in this area to reflect a 2012 construction project

that changed the storm drain system. The construction project was conducted to alleviate flooding issues in the low wetland area west of 65 Long Beach Ave. Since the project was constructed, the flooding of this area has been reduced. These locations receive runoff from the Nubble Point area in addition to receiving runoff from the wetland area. Dr. Jones visited and sampled the LS03 location Mondays through Fridays from 7/17/2014 to 9/8/2014 and analyzed for *enterococci*. As for the LS04 location, the highest concentrations were observed after rain events. The increased bacteria contributions may be from naturally occurring bacteria sources in the wetland areas that overflow to the storm drain system during precipitation events (as evidenced by the LS03A concentrations on 7/16/2014).

To assess whether there are also human sources contributing to the bacteria concentrations, the Stormwater and GIS Managers will map septic systems in the area, and cross reference the systems with the pumping database that the Town recently began maintaining to assess if any septic system issues may be the cause of the bacteria concentrations. We will follow up on any suspect septic system issues.

In addition, we identified one key location that will be monitored hourly on a daily basis for 5 days from approximately 7 am to 10 am for dry weather flows that might originate from Nubble Point. If any dry weather flow is identified, we will inspect each up stream connected catch basin to determine the source of the flow. We will sample as close to any potential source as we can (for example if a catch basin up stream appears to be the source of the flow, we will sample the flow at that basin) and will analyze for pH, conductivity, temperature, surfactants, ammonia, *E. coli* and *enterococci*. An optical brightener monitoring trap will be installed at this location.

A second location, near the inlet to the contributing pipe from the wetland area directly west of LS03 will be fitted with an optical brightener monitoring trap for 7 days.

LSR1A and LSR01 (at Long Beach Avenue end of Long Sands Road) – Dr. Jones' team visited outfall LSR01 Mondays through Fridays between 7/16/2014 and 9/8/2014. No dry weather flows were observed except on 9/1/2014. Analysis of the 9/1/2014 sample showed *enterococci* at 20 MPN/100 ml.

This location is scheduled for catch basin cleaning the week of October 20, 2014. The Stormwater Manager will attend the catch basin cleaning and will assess each location for dry weather contribution from human sources. Any suspect dry weather contributions will be sampled and analyzed as described for LS03.

After the cleaning, an optical brightener monitoring trap will be installed and monitored for 7 days.

SS01, SS01-PL, SS01-BS, SS01-SS, and SS01A (Short Sands Beach locations): We have attached for your information, a graphic in Attachment B showing the current piping configurations, with the 7/16/2014 sampling locations shown. The Town is in the process of updating the GIS to reflect this new piping which was installed in 2012/2013. You will note that as the Short Sands drainage structures go underground, they are now routed through a new box culvert along Beach Street. We refer to this as the Northern Box Culvert for the remainder of this discussion. You will also note that much of the infrastructure along the southern branch is new, but incorporates sump discharges from basements of older buildings. We do plan to investigate known sump discharges, and to confirm whether human bacteria sources are contributing to the bacteria concentrations detected to date.

In reviewing the concentrations associated with this area, we believe the concentrations associated with the Northern Box Culvert (SS01A and SS01BS) may be either naturally occurring (fowl and wildlife) or the result of historic bacteria concentrations in Briley Brook that have since been resolved (a retrofit of the York Animal Kingdom waste area). The Town Stormwater Manager recently inspected the York Animal Kingdom waste area and found it to be well maintained and functioning as intended. It is the Stormwater Manager's opinion that this area is not the cause of high bacteria concentrations in the Northern Box Culvert. Though *enterococci* concentrations increase between SS01A and SS01BS, we have found that *enterococci* concentrations in seaweed piles on the beach can increase with time without contributing sources (e.g., enterococci can proliferate on its own). The construction between SS01A and SS01BS is new, and the Town is confident there are no illicit connections in this section of pipe. The absence of acetaminophen in concentrations above background also suggests the source from this branch may be naturally occurring or residual from prior discharges which should diminish over time.

For the southern section of SS01 (SS01-PL and SS01-SS), the Town will monitor two locations on a daily basis for 5 days from approximately 7 am to 10 am for dry weather flows, and will retrofit the locations with an optical brightener monitoring trap. Dry weather flows will be sampled as described for the LS03 location.

We will also review the septic systems database and map to assess if there may be historic systems contributing to the bacteria concentrations.

For both the Northern Box Culvert and the southern section of SS01, to assess if human sources are contributing to the bacteria concentrations, we anticipate sampling dry weather flow from this section of pipe for analysis using a PCR-based microbial source tracking method that differentiates human from non-human

sources of fecal contamination. We anticipate using the Short Sands Beach locations for analysis to assess if human sources are contributing to the bacteria concentrations.

As you know, the Town became regulated by the MS4 General Permit July 1, 2013. As we move into our second year of regulation, we have developed systems and programs to comply with the General Permit requirements. We recently drafted an Illicit Discharge Detection and Elimination Program document which specifies protocols for outfall, ditch and catch basin inspections. These protocols will be used as we proceed in our inspections for these locations.

As you suggest, we also plan to conduct confirmatory sampling after removal of any know illicit discharges to confirm that the sources of contamination have been removed.

Thank you again for your assistance in our illicit discharge investigations. If you have any questions regarding this letter or its contents, please contact Leslie Hinz at 207-363-1002 or me at 207-363-1000.

Sincerely,

Stephen H. Burns

Town Manager

CC: York Board of Selectmen
York Budget Committee
York Planning Board
York Conservation Commission
Leslie Hinz, York Stormwater Manager
Dean Lessard, York Public Works Director
David Ladd, Maine DEP Stormwater Coordinator
Stephen Jones, UNH
Kristie Rabasca, Integrated Environmental Engineering, Inc.
Erin Trainor, EPA
Denny Dart, EPA

Attachments:

A – Short Sands Beach Infrastructure and Sample Locations

ATTACHMENT A

