FUSS & O'NEILL

M E M O R A N D U M

TO: David Desrosiers, DPW Director, Town of Granby

FROM: Julianne Busa, PhD

DATE: June 1, 2020

RE: MS4 Compliance - Dry Weather Outfall and Interconnection Sampling

---

This memo summarizes Fuss & O'Neill's dry weather outfall sampling for the Town of Granby, in compliance with the Town's Municipal Separate Storm Sewer System (MS4) permit. The permit requires all outfalls within the Town's regulated area to be screened for flow during dry-weather conditions as part of the Town's Illicit Discharge Detection and Elimination (IDDE) plan. All outfalls where flow is observed must be sampled and tested for a set of parameters designed to indicate the presence of sanitary sewage and pollutants of concern for the outfalls' receiving waterbody.

The permit defines dry-weather conditions as 24 hours of no more than 0.1 inches of rainfall, and without significant snow melt. Fuss & O'Neill recorded previous weather conditions on each day of sampling based on the weather station at Westover Air Reserve Base.

Town staff had previously screened the 129 Town-owned outfalls and observed five outfalls to have flow. On March 6, 2020, Fuss & O'Neill staff sampled dry weather flow from four of these outfalls. The fifth outfall was not flowing during the return visit. At the time of the field sampling, the most recent rainfall was 0.02 inches recorded on March 4, 2020.

Prior to sampling, Fuss & O'Neill set up a digital data collection system to efficiently collect and store sampling data. All sampling was conducted in accordance with the procedures detailed in section 2.3.4.7(b) of the MS4 Permit, including the use of field kits where allowed by the permit. Ammonia levels were measured with Hach ammonia test strips; chlorine was measured with the Hach 5870000 Pocket Colorimeter II; surfactants were measured with a Chemetrics CHEMets visual field kit. All analytical samples collected were transported to, and analyzed by, Phoenix Laboratory in Manchester, CT within hold times and according to the methods specified in 40 CFR § 136.

Per the Permit requirements, dry weather samples were analyzed for ammonia, surfactants, chlorine, *E. coli*, temperature, conductivity, salinity, and pollutants of concern. All samples were analyzed for total nitrogen, under the Long Island Sound TMDL; outfalls #0082, #0084, and #0120 were also analyzed for total phosphorus and total suspended solids (TSS) due to listed impairments for Stony Brook and its tributaries. See Table 1 and Table 2 for sampling results.

Based on these sampling data, none of the outfalls sampled showed evidence of an illicit discharge. Surfactant levels at outfall ID #0082 exceeded the benchmark value of 0.25mg/L; however, this is not considered indicative of an illicit discharge unless coupled with an exceedance for ammonia and either bacteria above water quality thresholds or detectable levels of chlorine.

Table 1: Results of outfall sampling for standard IDDE parameters. (Exceedances shown in bold text.)

Outfall ID	Ammonia (ppm)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Temp (° C)	Specific Conductivity (S/m)	Salinity (ppt)
0082	0.25	**0.25-0.50**	0	<10	8.2	438.7	0.21
0084	0.25	<0.25	0	<10	7.3	240.6	0.11
0120	0	<0.25	0	<10	6.5	280.3	0.13
0116	0.25	<0.25	0	<100	10.9	299.7	0.14

Table 2: Outfall sampling lab results for pollutants of concern.

Outfall ID	Total Nitrogen (mg/L)	Phosphorus (mg/L)	TSS (mg/L)
0082	1.46	0.011	2.5
0084	4.32	0.022	<2.5
0120	2.28	0.014	<2.5
0116	4.38	0.039	–

The MS4 Permit does not specify threshold values for nitrogen, phosphorus, or total suspended solids (TSS) as pollutants of concern. Based on nitrogen and phosphorus levels, we recommend that the Town consider ranking outfall #0116 as High Priority for catchment investigations. The Town may also wish to consider these catchments for retrofit projects required under Minimum Control Measure 5 (Post-Construction Stormwater Management).

The Town should report these sampling results in their MS4 Annual Report. No further follow-up is necessary at this time.