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File:	IDDE_Plan_Memo.docx	Date:	May 19, 2017

**Reference: Town of Belmont, MA
Illicit Discharge Detection and Elimination (IDDE) Plan**

The Town of Belmont has outlined the IDDE plan for identifying sources of contamination entering the storm drain system. The Town will follow the guidelines and requirements of the EPA Region 1's EPA New England Bacterial Source Tracking Protocol, the 2003 Small MS4 General Permit, the 2016 MS4 Permit, any other NPDES permits, and the Order for Compliance on Consent. The Town has conducted dry-weather and wet-weather sampling at outfalls discharging to the Mystic River Watershed and utilized the results to prioritize sub-catchment areas (Table 1) requiring further investigation. The complete sampling results were submitted to the EPA in the January 10, 2017, Sampling Results Memo. The 17 Outfalls discharging to the Mystic River Watershed and their sub-catchment areas are depicted in Figure 1.

The IDDE Plan for each sub-catchment area will be conducted in 4 Phases. The plan will generally be implemented in a top-down approach, whereas illicit connections identified in the upper reaches of a sub-catchment are removed prior to further investigations in downstream areas.

Phase 1 – Sampling/Storm Drain Inspections

Phase 1 will identify smaller tributaries within each sub-catchment area suitable for more intensive investigations conducted in Phases 2 and 3. Historical sampling data will be used to target areas containing potential contamination sources. Previous sampling locations will be utilized when possible to correlate historical sampling data with the new sampling results.

Dry-weather and wet-weather sampling will be conducted to isolate sections that exhibit elevated levels of E. coli, surfactants, ammonia, or chlorine. Sampling will be conducted from 7:00 AM – 10:00 AM, during the peak sewer use period.

During dry-weather sampling, a sand bagging method may be utilized in storm drain segments that have very little flow, but show evidence of contamination. Sand bags will be placed in the channel of the pipe at a manhole to capture drainage flow over a 24-hour period. That captured flow will then be sampled and the sand bags removed.

Phase 2 – Dyed-water Testing/Building Inspections

Once a smaller tributary is identified, dyed-water testing will be conducted to identify cross contamination of sewage flow from the sanitary system into the storm drain system. In areas where the sewer mainline is above the storm drain, dyed-water testing of the mainlines will be conducted first. Internal building inspection will commence once the mainlines are cleared. Whereas many homes in Belmont have both sewer and storm drain services, the internal plumbing will be inspected for inadvertent cross connections. The sewer service will be tested by flowing dyed-water from a toilet or sink and then monitoring the downstream drain manholes for traces of dye.



May 19, 2017
Belmont, MA Sampling Program Memo
Page 2 of 2

Phase 3 – Closed Circuit Televised (CCTV) Inspections

Cleaning and CCTV inspections will be conducted on all sewer or storm drain mainlines with elevated levels of contamination. Services that were identified as a contamination source in Phase 2 will also be cleaned and CCTV inspected from the mainline to the building foundation.

Phase 4 – Illicit Connection Removal

When an illicit connection(s) is identified, the appropriate rehabilitation method will be determined based on the CCTV and internal plumbing inspections. Once the source is eliminated, additional dry- and wet-weather sampling will be conducted for verification. The schedule for removal and verification of a confirmed illicit connection will be in accordance with Section IV, Paragraph 5 of the Order for Compliance on Consent.

Please do not hesitate contacting us if you have any questions.

Very truly yours,

STANTEC CONSULTING SERVICES INC.

A handwritten signature in blue ink, appearing to read "Justin D. Gould", written over a faint circular stamp.

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BELMONT, MA
ILLICIT DISCHARGE DETECTION & ELIMINATION PLAN
TABLE 1
SUB-CATCHMENT AREA PRIORITIZATION

OUTFALL/SUB-CATCHMENT AREA	PRIORITY	DRY-WEATHER SAMPLING (E.coli - MPN/100ml)	WET-WEATHER SAMPLING (E.coli - MPN/100ml)
OF-11 (DMH-41D045)	1	>10,000	>20,000
OF-12 (DMH-41D037)	2	>10,000	400
OF-11A (DMH-41D045)	3	8,600	>20,000
OF-2 (DMH-11D010)	4	5,500	19,000
OF-15A (DMH-50D022)	5	1,050	>20,000
OF-15 (DMH-46D060)	6	NF	>20,000
OF-10 (At Outfall)	7	200	7,200
OF-9A (At Outfall)	8	NF	9,450
OF-8 (DMH-22D027)	9	100	8,400
OF-1 (CB-01D012)	10	100	4,000
OF-13 (DMH-41D057)	11	50	1,100

NF = NO FLOW

