FUSS & O'NEILL

M E M O R A N D U M

TO: William Cundiff, Supervisor, Highway Department, Town of Spencer

FROM: Stefan Bengtson, MS; William Guenther, MS

DATE: May 25, 2021

RE: Dry-Weather Outfall Screening Results

This memo summarizes the results of dry-weather outfall screening inspections and sampling, conducted by Fuss & O'Neill, to assist the Town in its compliance with the 2016 Massachusetts Municipal Separate Storm Sewer System (MS4) permit. Dry-weather conditions were defined as less than 0.1 inches of rain within the previous 24 hour period and no snowmelt. Inspections occurred on September 15, 17, 24 and 25, 2020 and sampling occurred on October 9 and 22 and November 6, 2020. As specified in the IDDE Plan, antecedent weather conditions were determined at Worcester Regional Airport, 4 miles to the east of Spencer.

Based on the Town's stormwater system mapping, Fuss & O'Neill staff assessed each outfall for dry-weather flow and any visual or olfactory evidence of illicit discharges. As specified in the Town's IDDE plan, where outfalls were inaccessible or inundated by the receiving water, the first upstream structure was assessed, where feasible. Outfalls observed to be damp or actively flowing were revisited so samples could be collected. Where outfalls were flowing during a subsequent field visit, a sample of flow was collected and analyzed for parameters listed in *Table 1*. For each outfall, information was collected on visual and olfactory indicators of non-stormwater discharges and outfall physical dimensions, including images of the outfalls and any notes on unique conditions or needed maintenance.

Table 1: Sampling parameters and pollutants of concern

Parameter (units)	Permit Threshold
Temperature (°C)	None specified
Conductivity (µS/cm)	
Salinity (PPT)	
Ammonia (mg/L)	≥0.5 mg/L
Surfactants (mg/L)	≥0.25 mg/L
Chlorine (mg/L)	>0.02 mg/L
E. coli (MPN/100mL)	235 MPN/100 mL
Total Nitrogen (mg/L)	None specified

Results:

Results of the dry-weather screening are included in *Attachment 1*. Thirteen outfalls were observed to be flowing under dry-weather conditions during a screening visit. Samples of flow were collected during follow-up visits on October 9, 22 and November 6, 2020 and analyzed for E. coli and Total Nitrogen by

New England Testing Laboratory in West Warwick, RI. All other parameters were analyzed using field test kits or calibrated meters, following all manufacturer instructions. All samples were delivered to the laboratory or tested in the field within specified hold times. Dry-weather sampling results are included in *Table 2*. While no outfall had visual evidence of illicit discharge, three outfalls had olfactory evidence of a potential illicit discharge. Additionally, 27 outfalls may require some form of maintenance. These maintenance issues are summarized in *Attachment 2*.

Recommendations:

The screening and sampling work summarized here satisfies the Town's MS4 permit requirements under section 2.3.4.7.b. Based on the results in Table 1 and olfactory evidence of illicit discharges, we have categorized our recommendations based on the next steps the Town may consider taking.

Likely sewer input:

Sampling results from outfall 505 exceeds the permit thresholds indicating likely sewer input. This outfall is located in a culvert under Main Street and drains a section of Main Street and Pleasant Street. During the screening visit, a strong odor of sewage was noted at the culvert outlet. This odor was not present at the time of sampling. We recommend beginning source tracking measures at outfall 505 as soon as practicable.

Intermittent illicit discharge:

During a screening visit of at outfall 41, Fuss & O'Neill staff observed the start of dry-weather discharge, originating from the pool at 15 Bell Street, which was being emptied into the street (*Attachment 3*). The outfall was observed to be dry prior to the flow from the pool. Staff reported a burning sensation in their eyes and nose after the start of flow, suggesting the pool water had not been dechlorinated prior to discharge. We recommend reaching out to the property owners of 15 Bell Street, as well as providing educational messaging town-wide, explaining how to dechlorinate pool water before emptying the pool.

Potential Illicit Discharges:

Sampling results at outfalls 47, 586, and an unmapped outfall from CB-1506 indicated elevated levels of *E. coli*. Although this does not meet the permit requirements for likely sewer input, the *E. coli* levels indicate a higher priority level is warranted in catchment investigations. We recommend updating the catchment ranking for these outfalls to High Priority from Low Priority for catchment investigations. Catchments investigations must be completed by June 30, 2027.

Table 2: Dry-weather sampling results from outfalls with flow. Exceedances of permit criteria[1] are shaded.

Outfall ID	Flow Description	Olfactory Evidence	Temperature (°C)	Conductivity (µS/cm)	Salinity (ppt)	Ammonia (mg/L)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Pollutant of Concern[2]	
30	Trickle	None	15.5	604	0.3	0	0	0.01	84	TN	2.74
41	High	Chlorine	Not sampled[3]								
47	High	None	13.4	627	0.3	0	0	0.02	4,110	TN	3.38
186	Trickle	Musty	12.0	183	0.0	0	1.0	0.00	4,880	TN	2.36
499	Trickle	Musty	18.1	713	0.3	0	0	0.02	160	TN	3.80
500	High	None	12.5	328	0.1	0	0	0.00	63	TN	2.00
503	Trickle	None	18.8	470	0.2	0	0.25	0.02	31	TN	4.48
505	Moderate	None	16.8	941	0.4	1.0	0.50	0.01	5,170	TN	4.34
510	Moderate	None	13.2	406	0.2	0	0.25	0.00	20	TN	2.62
543	Trickle	None	15.7	491	0.2	0	0	0.01	463	TN	2.78
576-L[4]	Moderate	None	15.6	522	0.2	0	0.25	0.02	41	TN	2.01
576-R[4]	Moderate	None	17.4	801	0.4	0	0	0.00	74	TN	1.74
585	High	None	15.3	169	0.0	0	0	0.03	72	TN	0.84
586	High	None	15.6	443	0.2	0	0	0.00	1,300	TN	1.70
627	Moderate	None	13.6	576	0.2	0	0	0.00	<10	TN TP	6.58 0.26
650	Trickle	None	15.2	289	0.1	0	0	0.02	<10	TN	0.81
IN-1506	Moderate	None	14.2	1,125	0.5	0	0.25	0.01	2,400	TN	2.74

[1] Likely sewer input indicators require assigning a higher priority during catchment investigation and are any of the following:

- Olfactory or visual evidence of sewage
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water (235 MPN/100mL for Class B waters)
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine.

[2] TN – Total Nitrogen, mg/L; T – Turbidity, NTU

[3] Intermittent discharge from pool draining, not flowing during sampling visit

[4] swOF-576 is mapped as one outfall, but two outfalls are located in the same headwall at the southeast corner of Muzzy Meadow Pond but are mapped as one outfall. Both outfalls were flowing, so these outfalls have been distinguished by their position when facing the headwall

Mapping updates:
Catchment investigations also represent an opportunity to update the Town's stormwater system map to meet the requirements of the second phase of system mapping in the permit. The Town's system map is well-positioned to meet or exceed its obligations for the permit deadline of the second phase of mapping, June 30, 2027. Specifically, the following storm drain system mapping gaps were identified during outfall screening:

- Outfall 576
  As noted in *Table 2*, outfall 576 is mapped as one outfall at the southeast corner of Muzzy Meadow Pond, but two separate outfalls are present within the same headwall. The drainage alignment from the east receives runoff from Clark Street and Knox Trail Junior High School. The south drainage alignment collects runoff from Howe Village. We recommend confirming the accuracy of this stormwater system mapping and updating it as necessary.

- Drainage Manholes 16, 234, 250, and 465
  The outlet of Muzzy Meadow Pond is buried in a culvert from Maple Street and to Lloyd Dyer Drive. At least one drainage alignment enters the culvert at each of these manholes. Based on the permit definition, these represent outfalls and were inspected as such. We recommend adding outfall points from these drainage alignments.

- Culverts mapped as outfalls
  Several culverts are mapped as outfalls, without drainage infrastructure connected. These are primarily in the southern end of Spencer. We recommend removing these outfalls from the Town's outfall mapping.

FUSS & O'NEILL

Attachment 1

Dry Weather Outfall Screening and Sampling Results

Outfall ID	Location	Inspection Date	Last Rain Date	Last Rain Amount (in)	Innundated/ Inaccessable	Upstream Structure ID	Visual IDDE Evidence	Olfactory IDDE Evidence	Flow Description	Temperature (°C)	Conductivity (µS/cm)	Salinity (ppt)	Ammonia (mg/L)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Total Nitrogen (mg/L)	Notes
swOF-30	Opp. 9 Wilson	2020-09-17	2020-09-10	0.72	no		no	no	Slight									Pipe tied in to upstream structure appears dry at 10oclock position.
swOF-30	Opp. 9 Wilson	2020-10-22	2020-10-17	0.88	no		no	no	Trickle	15.5	604	0.30	0.0	0.00	0.01	84	2.74	sample ID 01391201022-03
swOF-41	right by side of road	2020-09-17	2020-09-10	0.72	no		no	chlorine	Moderate									Strong chlorine odor. See photo, house on crown st pumping out pool to street. 2 outfalls each 12"" cmp, 1 each from upstream structures at intersection crown and walnut.
swOF-47	115 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Moderate									
swOF-47	115 MEADOW RD	2020-10-09	2020-10-07	0.24	no		no	no	High	13.4	627	0.30	0.0	<0.25	0.02	3870, 4110*	2.90, 3.38*	(*duplicate sample) sample IDs 01391201009-01 and -01D
swOF-48	97 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-49	50 GREENVILLE ST	2020-09-24	2020-09-10	0.72	yes	NA												Private catch basin. Evidence of only one pipe not two at this location. Did not assess upstream structure on private property.
swOF-50	37 SHERMAN GROVE	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Possible culvert, no upstream structures. Two pipe end at this location, both dry
swOF-51	10 OVERLOOK DR	2020-10-09	2020-10-07	0.24	no		no	no	Dry									
swOF-65	knoxtrail jr high school	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Two pipes in headwall, one 8"", one 12"". Both dry.
swOF-67	meadow @ fourth ave	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-68	meadow @ school street	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Debris blocks access for photo. No flow.
swOF-69	meadow westbound	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Inundated, but not flowing, water not leaving scour pool. Possible culvert.
swOF-70	meadow rd eastbound side	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Discharges to culvert.
swOF-71	meadow westbound side	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Pipe invert rotted
swOF-72	meadow west bound side	2020-09-17	2020-09-10	0.72	yes	NA												Revisit. Electrical line work ongoing at time of visit. 20200924 not located. No evidence of third pipe. No obvious upstream structures to assess. Verify mapping.
swOF-73	10 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Moderate									Twin box culvert for two ""outfalls"". No structures on road.
swOF-74	4 VINE ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-75	meadow westbound side	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-76	87 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Outfall now BMP, assessed at inlet. Outfall photo 2 is overflow outlet.
swOF-85	5 TREADWELL DR	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert inlet. Revise mapping.
swOF-86	5 CORNFIELD RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-87	5 TREADWELL DR	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-128	132 SMITHVILLE RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Headwall work needed. Minor pipe corrosion. No upstream structures, culvert under road.
swOF-167	49 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Culvert outlet, no upstream structures
swOF-168	36 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Flow audible upstream, not reaching outfall, 4"" pvc pipe tapped in at 1st upstream structure (new), trickle. Pipe appears to come from 36 Paxton rd
swOF-171	35 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									scour pool
swOF-172	17 DONNELLY CROSS RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Culvert. No upstream structures just swale drainage
swOF-173	31 DONNELLY CROSS RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Homeowner noted that in heavy rain, outfall exceeds channel and runs through yard. Mentioned plans on town website and wonders about project status
swOF-174	MOOSE HILL RD @ DONNELLY	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-175	MOOSE HILL RD	2020-09-15	2020-09-10	0.72	no		no	no	Moderate									Culvert: inlet found. No structures tie in, no sampling required
swOF-176	MOOSE HILL RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-177	34 BOND	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Drainage swale to culvert under road
swOF-178	12 BOND	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Culvert end, inlet located upstream. GIS notes no u/s sttrs, and comments 90deg bends in pipe
swOF-179	80 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Culvert inlet, no CBs tie in
swOF-180	80 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Culvert inlet, receives surface flow only
swOF-181	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert outlet, inlet at swOF-750
swOF-182	40 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-183	59 HIGHLAND ST	2020-09-17	2020-09-10	0.72	no		no	no	Moderate									Is culvert. No structures tie in. No need to sample flow. Scour protection eroded away 90%. Last rain 20200910, 0.72 in.
swOF-184	55 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-185	55 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-186	25 HASTINGS RD	2020-09-15	2020-09-10	0.72	no		no	musty	Dry									Musty smell
swOF-186	25 HASTINGS RD	2020-11-06	2020-11-03	0.06	no		no	no	Moderate	12.0	183	0.00	0.0	1.0	0	4880	2.36	Owner at 51 Lake St indicated a groundwater well is tied into storm drain at end of Lake St on their property, upstream of swIN-337
swOF-187	25 HASTINGS RD	2020-09-15	2020-09-10	0.72	no		no	mildew	Slight									Culvert outlet, mildewy odor. Trickle from outfall at invert, nothing tied into culvert before inlet. Culvert invert rotted cmp
swOF-188	37 HASTINGS RD	2020-09-15	2020-09-10	0.72	no		algea	no	Dry									Green staining on scour protection, possibly from algae.
swOF-189	20 WIRE VILLAGE RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									2x8 inch cmp, from same of.
swOF-191	26 WIRE VILLAGE RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-193	26 WIRE VILLAGE RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-194	36 WIRE VILLAGE RD	2020-09-17	2020-09-10	0.72	no		no	no	Moderate									Culvert outlet. Do not sample. No upstream structures tied in.
swOF-195	31 HASTINGS RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Stagnant water at outfall not flowing into turkey hill brook
swOF-239	76 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet. Invert rotted out completely
swOF-240	92 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									No upstream structures. Appears to be culvert outlet. Inlet across street
swOF-241	114 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-242	130 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet. Single cb discharges upstream of inlet via 2x4"" HDPE, dry.
swOF-280	59 W MAIN ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-281	15 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Damp									Damp. Upstream structure swIN-621 inundated. Next upstream structure private at flexcon.
swOF-282	15 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-283	90 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Culvert outlet. Inlet assessed, dog. No upstream structures to assess. No flow.
swOF-284	95 SO SPENCER RD	2020-09-24	2020-09-10	0.72	yes	NA	no	no										Not accessible behind fence. Culvert outlet. No upstream structures to assess. Culvert inlet not located, but small pond across road from outfall and streambed from outlet. Do not sample.
swOF-306	1 WM CASEY RD	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet.
swOF-309	75 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet.
swOF-310	3 JOLICOEUR AVE	2020-09-24	2020-09-10	0.72	no		no	no	Moderate									Culvert outlet. Do not sample.
swOF-311	100 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-312	100 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-315	3 HEBERT RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-318	68 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-319	71 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-346	18 wilson st	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-398	18 BAY PATH RD	2020-09-17	2020-09-10	0.72	yes	swIN-447	no	no	Dry									Could not locate. Update gps point. Beware, dog. Assessed upstream structure swIN-447, no flow.
swOF-433	69 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-437	48 PAXTON RD	2020-10-09	2020-10-07	0.24	no		no	no	Dry									BMP outfall. Assessment at inlet. Consider mowing bmp
swOF-457		2020-09-15	2020-09-10	0.72	yes	swIN-1493	no	no	Dry									Private property, no access
swOF-458	10 OLDE MAIN ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Repair flared end section.
swOF-468	7 OLD FARM RD	2020-09-17	2020-09-10	0.72	yes	swIN-421	no	no	Dry									Verify mapping. Upstream structure has pipe that runs parallel to old farm rd. Possibly connects to swOF-631. No flow at swIN-421
swOF-470	85 JOLICOEUR AVE	2020-09-24	2020-09-10	0.72	yes	swIN-1167	no	no	Dry									No access, private property. Upstream structure swIN-1167 assessed.
swOF-473	28 MAY ST	2020-09-25	2020-09-10	0.72	yes	swIN-42	no	no	Dry									Not located. No evidence of discharge to stream. May tie into sewer line? Upstream structure swIN-42 assessed, no flow.
swOF-475	35 LAKE ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Outfall needs to be dug out. Upstream structure no flow.

Outfall ID	Location	Inspection Date	Last Rain Date	Last Rain Amount (in)	Innundated/ Inaccessable	Upstream Structure ID	Visual IDDE Evidence	Olfactory IDDE Evidence	Flow Description	Temperature (°C)	Conductivity (µS/cm)	Salinity (ppt)	Ammonia (mg/L)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Total Nitrogen (mg/L)	Notes
swOF-479	COLLIER CIR	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-482	99 CLARK RD	2020-09-24	2020-09-10	0.72	yes	swIN-696	no	no	Dry									No access, private property. Likely inundated. Upstream structure is direct discharging catch basin. No illicit connections visible.
swOF-483	117 WILSON AVE	2020-09-24	2020-09-10	0.72	yes	swIN-697	no	no	Dry									No access, private property. Upstream structure swIN-697 assessed.
swOF-484	33 WILSON AVE	2020-09-24	2020-09-10	0.72	yes	swIN-698 swIN-1398	no	no	Dry									Upstream structures full of sediment, should be cleaned. No access, private property. Both upstream structures assessed.
swOF-497	50 VALLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-498	50 VALLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Culverted stream. Do not sample.
swOF-499	50 VALLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Slight									
swOF-499	50 VALLEY ST	2020-10-22	2020-10-17	0.88	no		no	musty	Trickle	18.1	713	0.30	0.0	0.00	0.02	160	3.8	sample ID 01391201022-10
swOF-500	16 ELM ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									
swOF-500	16 ELM ST	2020-11-06	2020-11-03	0.06	no		no	no	High	12.5	328	0.10	0.0	0.00	0.00	63	2.00	
swOF-501	16 ELM ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-502	36 VALLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Sewage odor from culvert, not storm pipes. See photo. Live fish and crayfish observed in scour pool.
swOF-503	36 VALLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Slight									Upstream structures paved over. Discharges to 36"" culvert.
swOF-503	36 VALLEY ST	2020-10-22	2020-10-17	0.88	no		no	no	Trickle	18.8	470	0.20	0.0	0.25	0.02	31	4.48	sample ID 01391201022-09
swOF-505	14 ELM ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									
swOF-505	14 ELM ST	2020-10-22	2020-10-17	0.88	no		no	no	Moderate	16.8	941	0.40	1.0	0.50	0.01	5170	4.34	sample ID 01391201022-08
swOF-506	6 PARENT ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Culvert inlet.
swOF-507	5 PARENT ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Resident indicated past complaint to the town re: erosion from outfall during storms. Pipe also half full of sediment.
swOF-510	56 TEMPLE ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Laundry odor but no suds observed entering upstream structure swIN-1448.
swOF-510	56 TEMPLE ST	2020-10-22	2020-10-17	0.88	no		no	no	Damp									
swOF-510	56 TEMPLE ST	2020-11-06	2020-11-03	0.06	yes	swIN-1451	no	no	Moderate	13.2	406.00	0.20	0.0	0.25	0	20	2.62	2" pipe with flowing water discharging overland into swIN-1450
swOF-511	56 TEMPLE ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									Flow observed entering at upstream cb from brook. Flow amount appears similar entering cb and exiting outfall. During inspection, mechanical flow sound observed. May represent sump pump or similar tied in upstream of outfall.
swOF-512	18 LANGEVIN ST	2020-09-25	2020-09-10	0.72	yes	NA												Comment ""outfall from a home'. Private, not assessed.
swOF-513	18 LANGEVIN ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-514	18 EARLEY ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-515	142 MECHANIC ST	2020-09-25	2020-09-10	0.72	no		no	no	Damp									Damp. Asbestos concrete pipe.
swOF-517	COLLIER CIR	2020-09-15	2020-09-10	0.72	no		no	no	Dry									landscape waste causes inundation
swOF-518	7 COLLIER	2020-09-15	2020-09-10	0.72	no		no	no	Dry									75% blocked by sediment. outfall appears to flow over/flood paved driveway at 7 Collier
swOF-519		2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-520		2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-521		2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-522	SPINNAKER DR	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-523		2020-09-15	2020-09-10	0.72	yes	swIN-1492	no	no	Dry									Private property, no access
swOF-524		2020-09-15	2020-09-10	0.72	yes	swIN-1495	no	no	Dry									Private property, no access
swOF-525	MOOSE HILL RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									80% blocked by soil
swOF-526	MOOSE HILL RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									25% blocked by soil
swOF-527	MOOSE HILL RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-528	39 POINT EASTALEE DR	2020-09-15	2020-09-10	0.72	yes	NA												Private property, no access
swOF-529	16 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									CB tied into culvert. Observed end of pipe from culvert inlet, no flow. Odor at culvert inlet not obviously related to drainage system
swOF-530	57 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-531	60 PAXTON RD	2020-10-09	2020-10-07	0.24	no		no	no	Dry									BMP outfall. Assessed three inlets
swOF-532	20 LEDGE AVE	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Homeowner at 20 Ledge Ave indicated that erosion from the outfall during the winter of 2019 had undercut his fence
swOF-537	62 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									BMP inlet.
swOF-538	94 MAPLE ST	2020-09-25	2020-09-10	0.72	yes	swMH-63	no	no	Dry									No access, vegetation. Upstream structure swMH-63 assessed. No flow.
swOF-541	4 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-543	20 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Trickle									4" pipe tapped into swIN-274 discharging trickle from 3oclock position.
swOF-543	20 WILSON ST	2020-10-22	2020-10-17	0.88	no		no	no	Trickle	15.7	491	0.20	0.0	0.00	0.01	465	2.78	sample ID 01391201022-02
swOF-544	20 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-545	25 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-546	53 HIGHLAND ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-547	29 WILSON ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-548	53 HIGHLAND ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-549	69 WILSON ST	2020-09-15	2020-09-10	0.72	yes	swIN-637	no	no	Dry									Upstream structure under 3"" sediment. Cleared. Could not locate outfall under brush. Upstream structure swIN-637 assessed, trickle from 9 o'clock pipe. Flow does not appear to be reaching outlet
swOF-550	4 BELLEVUE DR	2020-10-09	2020-10-07	0.24	yes	swIN-635	no	no	Dry									No access, private property. Upstream structure swIN-635 assessed. Not able to enter in field
swOF-551	20 BELLEVUE DR	2020-10-09	2020-10-07	0.24	yes	NA												No upstream structure as mapped. 4"" outfall not located. Verify mapping.
swOF-552	64 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									BMP inlet assessed, no flow
swOF-572	68 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-573	13 CONDON DR	2020-09-24	2020-09-10	0.72	yes	swIN-1146	no	no	Dry									Outfall not found. Upstream structure swIN-1146 assessed. No flow.
swOF-574	73 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-575	8 CLARK TERR	2020-09-25	2020-09-10	0.72	yes	NA												Not located. No upstream structures to assess. Private road.
swOF-576	1 POND ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									Two pipes at this location. Left from alignment along Clark St. Right from along pond st.
swOF-576	1 POND ST	2020-10-22	2020-10-17	0.88	no		no	no	Moderate	15.6	522	0.20	0.0	0.25	0.02	41	2.01	sample ID 01391201022-07
swOF-577	19/21 ADAMS ST	2020-09-25	2020-09-10	0.72	yes	NA												Revise mapping. Only one outfall at this location. Upstream structure is sanitary MH. No DMH in vicinity.
swOF-578	19/21 ADAMS ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Only one pipe visible in vicinity.
swOF-579	14 ADAMS ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-580	104 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-581	56 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Pipe at photo right, 8"". No flow.
swOF-582	56 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Slight									Culvert outlet. No upstream structures to assess. Do not sample.
swOF-583	29 MAY ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									Culvert outlet. Do not sample.
swOF-584	29 MAY ST	2020-09-25	2020-09-10	0.72	no		no	no	Slight									Culvert outlet. Do not sample.
swOF-585	62 CHERRY ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Right 36"" pipe.
swOF-585	62 CHERRY ST	2020-10-22	2020-10-17	0.88	no		no	no	High	15.3	169	0.00	0.0	0.00	0.03	72	0.84	sample ID 01391201022-04
swOF-586	62 CHERRY ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									Left 36"" pipe. Is not culverted stream.
swOF-586	62 CHERRY ST	2020-10-22	2020-10-17	0.88	no		no	no	High	15.6	443	0.20	0.0	0.00	0	1300	1.7	sample ID 01391201022-05
swOF-587	62 CHERRY ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Above twin culvert
swOF-595	69 WILSON ST	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									Culvert inlet. Not 48"". Is this mapped correctly?
swOF-597	13 DALE ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-598	24 HOLMES ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-599	24 HOLMES ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-600	22 SUNSET LANE	2020-09-25	2020-09-10	0.72	no		no	no	Dry									BMP inlet

Outfall ID	Location	Inspection Date	Last Rain Date	Last Rain Amount (in)	Innundated/ Inaccessable	Upstream Structure ID	Visual IDDE Evidence	Olfactory IDDE Evidence	Flow Description	Temperature (°C)	Conductivity (µS/cm)	Salinity (ppt)	Ammonia (mg/L)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Total Nitrogen (mg/L)	Notes
swOF-601	24 SUNSET LANE	2020-09-25	2020-09-10	0.72	no		no	no	Dry									BMP inlet
swOF-602	24 SUNSET LANE	2020-09-25	2020-09-10	0.72	no		no	no	Dry									BMP outlet
swOF-603	95 JOLICOEUR AVE	2020-09-24	2020-09-10	0.72	yes	swIN-1513	no	no	Dry									No access, private property.
swOF-604	91 JOLICOEUR AVE	2020-09-24	2020-09-10	0.72	yes	swIN-1164	no	no	Dry									No access, private property.
swOF-605	93 JOLICOEUR AVE	2020-09-24	2020-09-10	0.72	yes	swIN-1166	no	no	Dry									No access, private property.
swOF-606	7 SULLIVAN ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-607	28 PLEASANT ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Lots of trash, likely litter at outfall.
swOF-609	25 BIXBY RD	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Flared end section detached, see photo.
swOF-610	3 BIXBY RD	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-611	3 BIXBY RD	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Outfall covered by thorns.
swOF-612	6 OLDE MAIN ST	2020-09-24	2020-09-10	0.72	yes	swIN-537	no	no	Dry									Culverted stream. Outfall mapped at outlet. Catch basin immediately upstream does not tie in. Is private outfall, see photo 2 8"" pvc. DMH not located, inspection conducted at upstream structure swIN-537.
swOF-613	10 OLDE MAIN ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-615	3 RICHLAND AVE	2020-09-24	2020-09-10	0.72	no		no	no	Dry									BMP outlet assessed, could not access inlet, vegetation.
swOF-616	6 GARRETTE LANE	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-617	13 & 15 CANDLEWOOD DR	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-618	13 & 15 CANDLEWOOD DR	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-623	1-2 VISTA LANE	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Possibly private.
swOF-624	2 POND ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Pipe invert dry in pipe.
swOF-624	2 POND ST	2020-10-22	2020-10-17	0.88	no		no	no	Moderate	17.4	801	0.40	0.0	0.00	0	74	1.74	sample ID 01391201022-06
swOF-625	5 MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Not buried.
swOF-626	9 SUMNER ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-627	51 LAKE ST	2020-09-17	2020-09-10	0.72	no	swIN-337	no	no	Moderate									Cmp invert rotted at outfall. Outfall not easily accessible. Assessed outfall swIN-337 (private property), but recommend sampling swMH-409 in ROW.
swOF-627	51 LAKE ST	2020-10-22	2020-10-17	0.88	yes	swIN-336	no	no	Dry									MH not located, possibly paved over
swOF-627	51 LAKE ST	2020-11-06	2020-11-06	0.06	no		no	musty	Moderate	13.6	576.00	0.20	0.0	0.00	0.00	<10	6.58	Pollutant of Concern Turbidity 0.26
swOF-628	18 LINCOLN ST	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Clear vegetation around outfall.
swOF-629	95 MEADOW RD	2020-09-17	2020-09-10	0.72	yes	swIN-511	no	no	Dry									No access, vegetation. Assessed upstream structure swIN-511.
swOF-631	27 OLD FARM RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Invert rotted out. Water in corrugations, no flow further up pipe, dry.
swOF-632	76 CHICKERING RD	2020-09-24	2020-09-10	0.72	yes	swIN-1646/164:	no	no	Dry									Inundated and no access. First upstream structure inundated. Next two upstream structures swIN-1646 and swIN-1642 no flow.
swOF-640	80 CRANBERRY MEADOW RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Outfall in swIN-1163. Culvert inlet mapped as current outfall.
swOF-641	1 WM CASEY RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-643	69 GH WILSON RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-645	230 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-646	211 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-647	156 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-648	16 WALL ST	2020-09-25	2020-09-10	0.72	no		no	no	Damp									Damp. Motorcycle shop owner Jake indicated he had tied into sewer line rather than discharging to storm drain. Ties to culvert across street. Catch basin on wall st discharges directly.
swOF-650	19 LK WHITTEMORE DR	2020-09-17	2020-09-10	0.72	no		no	no	Trickle									
swOF-650	L WHITTEMORE DR	2020-10-09	2020-10-07	0.24	no		no	no	Dry									homeowner at 19 Lake Whittemore Dr (works for hwy dept) indicated this OF is tied into stream and flows 10 months of the year. No flow at time of inspection
swOF-650	L WHITTEMORE DR	2020-10-22	2020-10-17	0.88	no		no	no	Trickle	15.2	289	0.10	0.0	0.00	0.02	ND	0.81, 0.54	sample IDs 01391201022-01 and -01D
swOF-651	7 ROYS DR	2020-09-17	2020-09-10	0.72	yes	swIN-339	no	no	Dry									No access due to vegitation. Assessed upstream structure swIN-339. Catchbasin image in sedaru
swOF-652	96 CLARK RD	2020-09-24	2020-09-10	0.72	yes	swIN-695	no	no	Dry									Not found, may be in culvert. Upstream structure swIN-695 assessed.
swOF-656	127 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-657	127 ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet.
swOF-658	6 HASTINGS RD	2020-09-15	2020-09-10	0.72	no		no	no	Slight									Culvert or bmp outlet. Flow from wetland
swOF-662	6 W MAIN ST	2020-09-24	2020-09-10	0.72	no		no	no	Heavy									Culvert inlet, do not sample.
swOF-663	near white birch tree bet	2020-09-17	2020-09-10	0.72	no		no	no	Dry									GPS location update (+/- 4m): 42.244628, -72.004335. Birch tree at top of ridge, but outfall not buried
swOF-664	21 SHERMAN GROVE	2020-09-15	2020-09-10	0.72	yes	swIN-675	no	no	Dry									No access thru private property, upstream structure swIN-675 assessed, no flow
swOF-675	97 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Possible duplicate of swOF48.
swOF-676	48 MEADOW RD	2020-09-17	2020-09-10	0.72	yes	NA												See swOF-68, located same spot, only one pipe.
swOF-679	10 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Moderate									Culvert outlet. No upstream structures. Do not sample.
swOF-693	28 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Heavy									Culvert outlet cranberry river. Do not sample.
swOF-694	28 SO SPENCER RD	2020-09-24	2020-09-10	0.72	no		no	no	Heavy									Culvert inlet, do not sample.
swOF-695	67 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-701	59 WILSON AVE	2020-09-24	2020-09-10	0.72	yes	NA	no	no	Dry									No access, private property.
swOF-703	2 OVERLOOK DR	2020-10-09	2020-10-07	0.24	no		no	no	Dry									Culvert outlet. No upstream structures to assess. Do not sample.
swOF-704	2 OVERLOOK DR	2020-10-09	2020-10-07	0.24	no		no	no	Dry									Culvert. Do not sample flow. No upstream structures to assess.
swOF-705	40 LAMBS GROVE	2020-09-15	2020-09-10	0.72	yes	swIN-684	no	no	Dry									Outfall inundated by groundwater seep. Assessed upstream structure swIN-684, no flow.
swOF-723	wall st across barnstorm	2020-09-25	2020-09-10	0.72	no		no	no	Trickle									4x12"" HDPE culvert inlet. Do not sample.
swOF-735	10 BAY PATH RD	2020-09-17	2020-09-10	0.72	yes	NA												Possible mapping error. No pipes or structures connect to this. Drains on bay path connected to swOF-70 in mapping.
swOF-736	24 WALL ST	2020-09-25	2020-09-10	0.72	no		no	no	Moderate									End of culverted stream, flowing from stream. Do not sample.
swOF-741	80 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet
swOF-742	160 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Slight									Culvert outlet, no upstream structures to assess. Do not sample.
swOF-743	160 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Slight									Culvert inlet, no upstream structures to assess. Do not sample.
swOF-744	51 CHICKERING RD	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert inlet . Completely submerged. No upstream structures to assess. Do not sample.
swOF-745	51 CHICKERING RD	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet, no upstream structures to assess. Do not sample.
swOF-746	80 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Trickle									Culvert outlet, receives surface flow only, no upstream CBs
swOF-750	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert inlet recieves flow from swOF-754
swOF-751	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert inlet. Surface drainage only
swOF-752	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert outlet. No subsurface infrastructure
swOF-753	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-754	65 DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									
swOF-755	87 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									Water in corrugations, up pipe is dry.
swOF-761	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert inlet
swOF-762	DONNELLY RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									culvert outlet
swOF-765	116 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert. No upstream structures to assess.
swOF-766	116 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									Culvert. No upstream structures to assess.
swOF-768	9 MEADOW RD	2020-09-17	2020-09-10	0.72	no		no	no	Dry									
swOF-769	25 CLARK ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-772	15 PAXTON RD	2020-09-15	2020-09-10	0.72	no		no	no	Dry									Outfall is stream right of culvert. Culvert is flowing, outfall is dry. In general photo, outfall is image left
swOF-773	50 GREENVILLE ST	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-774	39 GREENVILLE ST	2020-09-24	2020-09-10	0.72	yes	NA												Revise mapping, uphill from drainage.
swOF-775	63 R JONES RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									

Outfall ID	Location	Inspection Date	Last Rain Date	Last Rain Amount (in)	Innundated/ Inaccessable	Upstream Structure ID	Visual IDDE Evidence	Olfactory IDDE Evidence	Flow Description	Temperature (°C)	Conductivity (µS/cm)	Salinity (ppt)	Ammonia (mg/L)	Surfactants (mg/L)	Chlorine (mg/L)	E. coli (MPN/100mL)	Total Nitrogen (mg/L)	Notes
swOF-779	84 CHICKERING RD	2020-09-24	2020-09-10	0.72	no		no	no	Dry									
swOF-817	99 MAPLE ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									
swOF-825	98 CHICKERING RD	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert, no upstream structure to assess.
swOF-826	98 Chickering Rd	2020-09-24	2020-09-10	0.72	no		no	no	Trickle									Culvert, no upstream structures to assess.
swOF-830	11 PIONEER VALLEY RD	2020-09-17	2020-09-10	0.72	yes	swIN-409	no	no	Dry									No access vegetation. Upstream structure swIN-409 assessed, no flow.
swOF-845	83 MAIN ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									Uphill from street. If inlet, is from roof leaders at 83 main st
sw-MH16	2 CHESTNUT St	2020-11-06	2020-11-03	0.06	yes	sw-MH16	no	no	Dry									Unmapped outfall discharging to outlet of Muzzy Meadow Pond from Maple St
sw-MH234	2 CHESTNUT St	2020-11-06	2020-11-03	0.06	yes	sw-MH16	no	no	Dry									Unmapped outfall discharging to outlet of Muzzy Meadow Pond from Maple St
swIN-49,51,52	HOLMES AND ASH ST	2020-09-25	2020-09-10	0.72	no		no	no	Dry									3 direct discharge catchbasins to culvert. Can see light from catchbasins at outlet of culvert. Flow from stream not MS4
swIN-1506	opp #41 Mechanic St.	2020-11-06	2020-11-03	0.06	yes	swIN-1505	no	no	Moderate	14.2	1,125	0.50	0.0	0.25	0.01	2250	2.74	Unmapped outfall discharging to outlet of Muzzy Meadow Pond from Mechanic St north
swIN-1508	opp #41 Mechanic St.	2020-10-22	2020-10-17	0.88	no		no	no	Dry									Unmapped outfall discharging to outlet of Muzzy Meadow Pond from Mechanic St south

FUSS & O'NEILL

Attachment 2

Summary of Identified Maintenance Needs

Maintenance Notes

Outfall ID	Condition	Notes
71	Poor	Remove Accumulated Sediment, pipe end rotted
128	Poor	Headwall work needed. Minor pipe corrosion.
180	Poor	Culvert inlet
183	Good	Downstream concrete channel is undercutting
186	Crumbling	CMP invert rotted away
187	Crumbling	Culvert outlet. Culvert invert rotted cmp
239	Poor	Culvert outlet. Invert rotted out completely
315	Poor	Headwall stabilization
319	Poor	Pipe end shear
433	Poor	Remove Accumulated Sediment
458	Fair	Flared end section detached
475	Critical	Outfall completely buried
507	Poor	Erosion Around Structure, Remove Accumulated Sediment
517	Poor	Landscape waste causes inundation
518	Poor	75% blocked by sediment. outfall appears to flow over/flood paved driveway at 7 Collier
525	Poor	80% blocked by soil
532	Good	Erosion Around Structure
549	Poor	Upstream structure under 3" sediment. Cleared. Could not locate outfall under brush. pipe completely clogged
579	Crumbling	Pipe end shear
580	Poor	Erosion downstream
607	Poor	Remove trash
609	Crumbling	Flared end section detached
627	Crumbling	Pipe invert rotted
628	Fair	Clear vegetation around outfall
631	Poor	Pipe invert rotted
656	Poor	Pipe end dented
704	Poor	Pipe is clogged

FUSS & O'NEILL

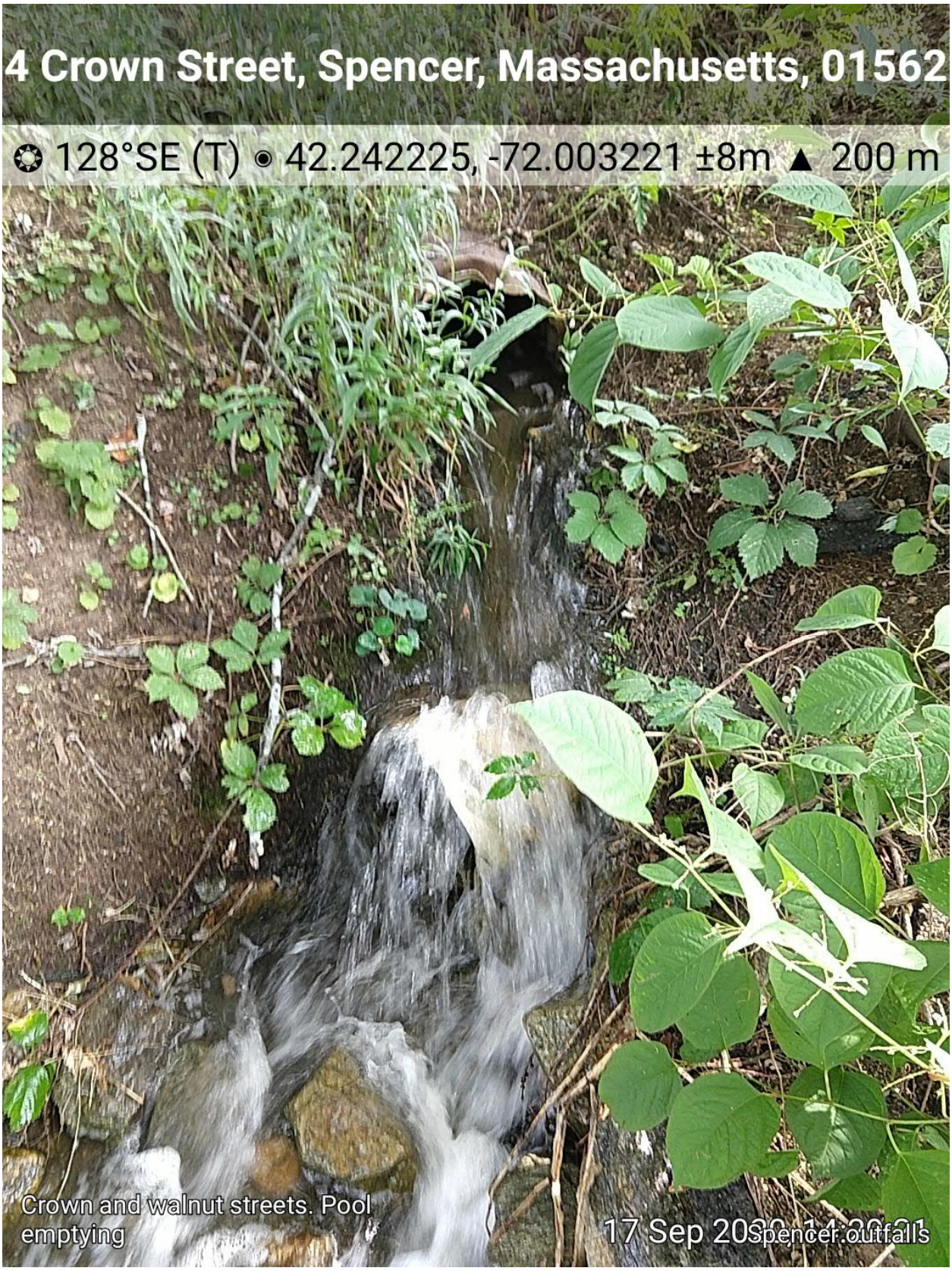
Attachment 3

Photographs of Pool Draining
September 17, 2020

FUSS & O'NEILL


4 Crown Street, Spencer, Massachusetts, 01562
342°NW (T) 42.242161, -72.00332 ±12m ▲ 198 m
Crown and walnut streets. Pool emptying
17 Sep 2020 14:20:52
Spencer outfalls

FUSS & O'NEILL


4 Crown Street, Spencer, Massachusetts, 01562
128°SE (T) 42.242225, -72.003221 ±8m ▲ 200 m
Crown and walnut streets. Pool emptying
17 Sep 20
Spencer outfalls