

Appendix I

Illicit Discharge Records
Outfall Inspection Map
Outfall Inspection Data

Illicit Discharge Log

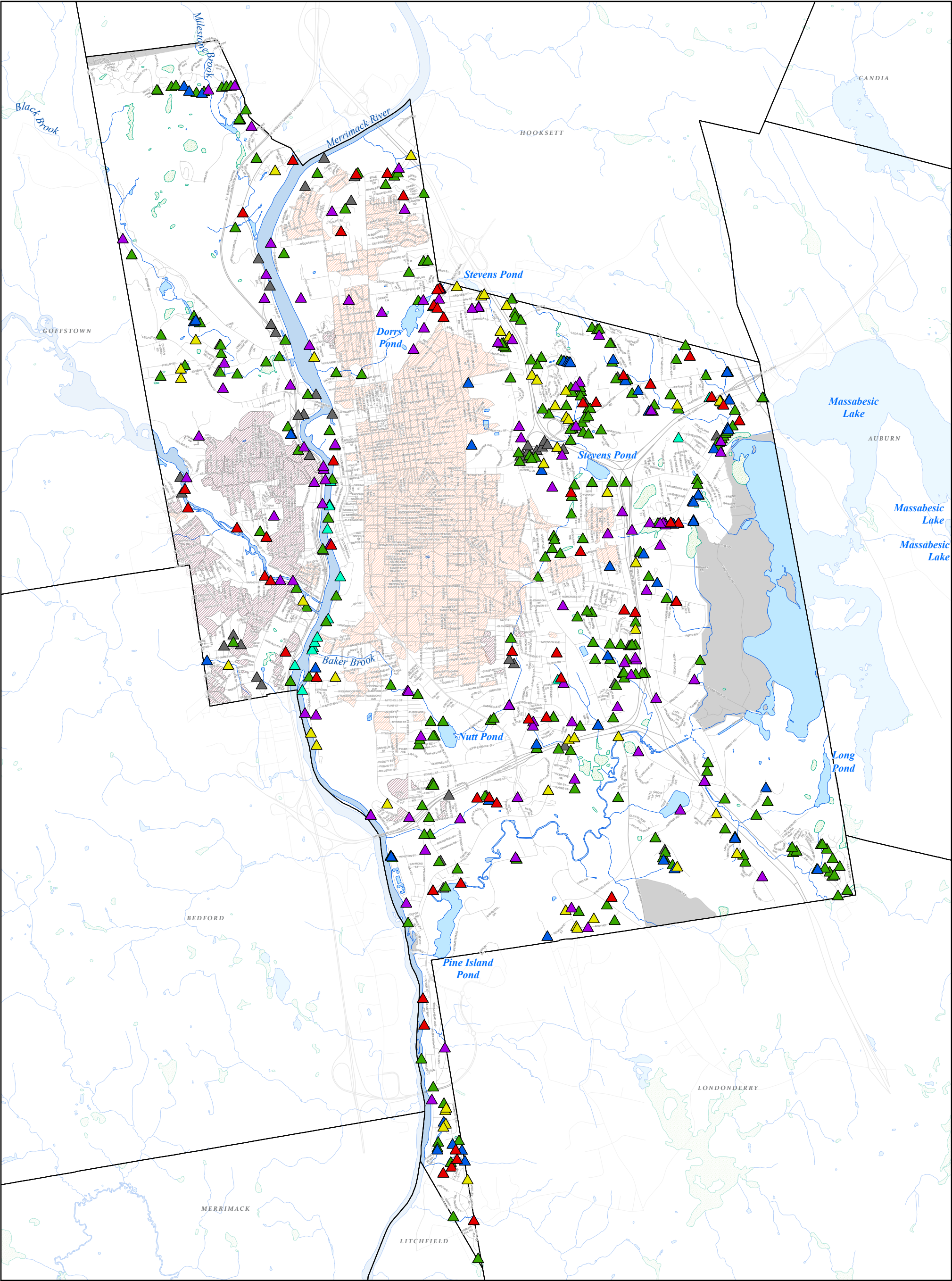
Date	Outfall ID	Outfall Location	Description of Discharge	Description of Discovery	Source of Discharge	Date of Mitigation	Planned Corrective Actions	Estimated volume of Flow Removed
5/29/2020	DOU 109404; DRN 213614	1 Electric Street; 345 Kelley Street	DPW-EPD received a report of a sewage smell from a drainage outfall pipe at 1 Electric Avenue.	A CCTV crew located a connection between 345 and 375 Kelley Street.	8-inch diameter clay pipe connection that is approximately 15-feet below the roadway level.	7/1/2020	Replacement of failed sewer pipe (completed).	219,545 gallons/day



Illicit Discharge Tracking Log

Outfall ID:	
Outfall Location:	
Description of Discharge:	
Description of Discovery (Methods used):	
Source of Discharge:	
Date of Discovery:	Date of Mitigation (if corrected):
Planned Corrective Actions (with schedule):	
Estimated Volume of Flow Removed:	





Legend

- Outfall Inspection Results:

 - Flowing
 - Found
 - Not Found
 - Could Not Access
 - Not Outfall
 - New
 - Not Visited
- Combined Sewer
 - Previously CSO
 - Local Roads
 - State or Interstate
 - Pond, Reservoir
 - Swamp, Marsh
 - Stream, River
 - Non-Urban Area



0 1 Miles

**Dry Weather Outfall
Screening Results
Manchester, NH**



Comprehensive
Environmental
Incorporated

Data Sources: GRANIT, City of Manchester, CEI

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
CEI-DOU-000002	11/26/2019 16:18	42.9735644	-71.471581	Found New Outfall	Merrimack River	1	Pipe	CMP	Round		None	Outfall perched	Projecting	Good	N/A	N/A		No		None	None
CEI-DOU-000003	11/26/2019 16:00	42.9728688	-71.472039	Found New Outfall	Merrimack River	1	Pipe		Round		None		Projecting	Good	Reinforced Concrete	Good		Moderate	Bank erosion	None	None
CEI-DOU-000005	11/26/2019 16:04	42.9722283	-71.472359	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		None		Projecting	Good	N/A	N/A				None	None
CEI-DOU-000004	11/26/2019 16:05	42.9718942	-71.472509	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		None		Projecting	Good	N/A	N/A		No		None	None
CEI-DOU-000006	11/27/2019 3:53	42.9698518	-71.475613	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		None	Filter or cap on outlet	Projecting	Good	Stone	Good		No		None	None
CEI-DOU-000007	11/26/2019 5:06	42.9666057	-71.474294	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		None		Flared End	Good	N/A	N/A		No		None	None
CEI-DOU-000010	12/16/2019 19:18	42.9877583	-71.469714	Found New Outfall	Merrimack River	1	Pipe	Stone	Round		None	Partially submerged	Flush with Headwall	Good	Stone	Good		No		None	None
CEI-DOU-000011	12/16/2019 19:24	42.9907969	-71.469328	Found New Outfall	Merrimack	1	Pipe	Brick	Round		None		Flush with Headwall	Good	Stone	Good		No		None	None
CEI-DOU-000013	11/11/2019 15:00	42.9814829	-71.467441	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		None		Projecting	Good	N/A	N/A		No		None	None
CEI-DOU-000012	12/16/2019 17:11	42.9909571	-71.469331	Found New Outfall	Merrimack River	1	Pipe	RCP	Round		Spalling	Chipping along outlet. Partially submerged	Projecting	Fair	Stone	Good		No		None	None
CEI-DOU-000014	5/4/2020 15:36	42.9940171	-71.469106	Found New Outfall							None	Fair	Projecting	Fair	Reinforced Concrete	Good		No		None	None
CEI-DOU-000015	5/5/2020 17:26	43.0171029	-71.450511	Found New Outfall	Dorrs Pond - E Inlet	1	Pipe	PVC	Round	12	None		Projecting	Good	Stone	Good		Moderate	Bank erosion ranging from 6-12 inches	None	25- 50%
CEI-DOU-000017	5/20/2020 12:49	42.999594	-71.406867	Found New Outfall		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Precast Concrete	Good		No		None	None
CEI-DOU-000016	5/5/2020 17:54	43.016939	-71.450742	Found New Outfall	Dorrs Pond - E Inlet	1	Pipe	RCP	Round	24	Spalling	Spalling on top right of outlet	Flush with Headwall	Fair	Stone	Fair	Cracked mortar between stones and around outfall pipe. Earthen bank behind wall seems to have slightly eroded.	Moderate	Erosion along drainage channel about 4 inches high	None	<25%
CEI-DOU-000018	5/20/2020 13:56	42.9989829	-71.399555	Found New Outfall		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
CEI-DOU-000019	5/20/2020 15:50	43.004649	-71.397804	Found New Outfall		1		RCP	Round	12	Corrosion	Exposed rebar	Flush with Headwall	Fair	Stone	Fair	Some loose blocks	No		None	<25%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments		
CEI-DOU-000002	No								No			No	No																		Outfall inspection completed via drone. New outfall adjacent to private business, possibly privately owned. Pipe perched	
CEI-DOU-000003	No								Yes	Substantial		Yes	No																		Outfall inspection completed via drone. New outfall adjacent to private business, potentially privately owned. Substantial dry weather flow from outfall.	
CEI-DOU-000005	No								No			No	No																		Outfall inspection completed via drone. New outfall adjacent to private business, potentially privately owned. Concrete slabs in conveyance channel possibly as erosion controls	
CEI-DOU-000004	Yes	Orange	None				Unlikely	Orange discoloration along pipe invert and conveyance	No			Yes	No																		Outfall inspection completed via drone. New outfall adjacent to private business, potentially privately owned. Orange discoloration in pipe and along conveyance	
CEI-DOU-000006	No								No			No	No																			Outfall inspection completed via drone. New outfall adjacent to state highway, potentially state owned
CEI-DOU-000007	No								No			No	No																			Outfall inspection completed via drone
CEI-DOU-000010	No								No			Yes	No																			Outfall inspection completed via drone. New outfall, adjacent to private business possibly privately owned. Outfall submerged, will check upstream structure to confirm flow
CEI-DOU-000011	No								No			No	No																			Outfall inspection completed via drone. New outfall, may be connected to drainage on Commercial St or private business
CEI-DOU-000013	No								No			No	No																			Outfall inspection completed via drone. New outfall, may drain baseball field
CEI-DOU-000012	Yes	Green	None	None	None	None	Unlikely	Green algal growth upstream from sampled catch basin.	Yes	Moderate	0.25	Yes	Yes	Yes	Unmapped catch basin	TP,Aluminum	0	0.08	1.5	840	0.41	28.9	9.53	4.86	2420	1.86			0.089		Outfall inspection completed via drone. New outfall, in line with drain pipe DRN-204747 from Waumbec St. Revisited and sampled from unmapped catch basin in parking area. Flow originating from behind garage door of building.	
CEI-DOU-000014	No								No			No	No																			Outfall pipe seems to connect to an upstream catch basin, but basin is full of sediment so cannot view inlets in structure to confirm
CEI-DOU-000015	No								No			No	No																			Outfall appears to be newer than those adjacent to it. Source is unclear. Consider further investigation for mapping purposes
CEI-DOU-000017	No								No			No	No																			New outfall created in Collector
CEI-DOU-000016	Yes	Gray/black	None	None	None	None, Suds and polymer-like floatable clearly originating from outfall.	Potential	Suds and polymer-like floatables and gray benthic growth	Yes	Trickle	1	No	Yes	No	DOU-NEW	Chloride	0	0	0.25	1125	0.56	9.3	6.85	8.48	1				383			
CEI-DOU-000018	No								Yes	Moderate	4	No	Yes	No	5.20.20		0	0.8	0.75	542.5	0.26	12.8	6.66	6.46	0						New outfall roughly 150 ft from not Found outfall. Chlorine and surfactants exceeded benchmarks	
CEI-DOU-000019	No								Yes	Trickle	0.25	No	Yes	No	5.20.20 #3		0	0.4	0.5	739	0.36	14.3	6.76	6.96	5						Outfall in culvert headwall. Beaver lodge adjacent to outfall, small dam approx 100' downstream. Homeowner says it's active but no flooding problems yet. Chlorine and surfactants exceeded benchmarks	

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
CEI-DOU-000021	5/20/2020 18:33	43.0048001	-71.391605	Found New Outfall		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good		Moderate	Stream banks	None	None
CEI-DOU-000020	5/20/2020 17:30	43.0044278	-71.399281	Found New Outfall		1	Pipe	PVC	Round	3		Partially buried and submerged	N/A	N/A	N/A	N/A		No		Moderate	>75%
CEI-DOU-000022	5/20/2020 18:39	43.0048475	-71.391784	Found New Outfall		1	Pipe	RCP	Round	12	Cracking	Cracked invert	Flush with Headwall	Good	Stone	Good		No		None	<25%
CEI-DOU-000023	5/20/2020 18:50	43.0048134	-71.391778	Found New Outfall		1	Pipe	HDPE	Round	12	None		Flush with Headwall	Good	Stone	Fair	Some crumbling stones	No		None	<25%
CEI-DOU-000024	5/5/2020 13:27	42.9678756	-71.428602	Found New Outfall		1	Pipe	HDPE	Round	12	None	Pipe slightly oval but overall in good condition. Leaves causing a slight blockage.	Flared End	Good	N/A	N/A		No		None	None
CSO-011	11/26/2019 15:25	42.9719288	-71.474019	Not Found																	
CSO-018	11/22/2019 14:55	42.9813636	-71.469434	Found	Merrimack River	1	Pipe	Cast Iron	Round		None	Submerged and half filled with sediment	Projecting	Fair	Reinforced Concrete	Fair	Headwall deteriorating	No		None	50- 75%
CSO-044	11/22/2019 15:00	42.9813356	-71.467609	Found	Merrimack River	1	Pipe	RCP	Round		None		Flush with Headwall	Good	Reinforced Concrete	Good		No		None	<25%
CSO-045	12/16/2019 19:14	42.9855752	-71.469084	Found	Merrimack River	1	Pipe	RCP	Round				Projecting		Reinforced Concrete	Good					
CSO-046	12/16/2019 18:47	42.9940961	-71.468916	Not Found																	
CSO-047	2/12/2020 18:22	42.9986944	-71.468362	Found	Merrimack River	1	Pipe	RCP	Round		None	Partially submerged	Projecting	Good	Reinforced Concrete	Good		No		None	None
CSO-050	12/16/2019 15:43	42.9469571	-71.459263	Found	Merrimack River	1	Pipe	RCP	Round		Spalling	Spalling on outlet	Flush with Headwall	Fair	Reinforced Concrete	Good		No		None	None
CSO-052	12/16/2019 16:32	42.9492938	-71.461229	Found	Merrimack River	1	Pipe	RCP	Round		None	Outfall capped	Projecting	Good	N/A	N/A		No		None	None
CSO-055	11/26/2019 5:12	42.9635684	-71.473728	Not Found																	
DOU-101018	5/13/2020 13:29	42.8920996	-71.443135	Found		1	Pipe	RCP	Round	12	None	Good, no signs of degradation	Projecting	Good	Stone	Good	Good condition, no signs of degradation	No		None	None
DOU-101025	5/13/2020 12:45	42.8977022	-71.443851	Found	Watts Brook	1	Pipe	RCP	Round	48	Collapsing	Pipe collapsing	Flared End	Fair	N/A	N/A		No		None	<25%
DOU-101063	5/13/2020 13:37	42.902423	-71.445548	Could Not Access																	
DOU-101116	5/13/2020 16:20	42.9123505	-71.449147	Found		1	Pipe	RCP	Round	36	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-101117	5/13/2020 16:15	42.9117643	-71.448318	Could Not Access																	
DOU-101118	5/13/2020 16:26	42.911285	-71.449379	Could Not Access																	
DOU-101124	5/13/2020 16:35	42.9127917	-71.451374	Not Found																	
DOU-101150	5/13/2020 14:57	42.9045629	-71.447853	Found	Unnamed Brook to Merrimack river	1	Pipe	RCP	Round	24	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		No		None	<25%
DOU-101156	5/13/2020 13:41	42.9046247	-71.445637	Found, Not an Outfall									Flared End	Good	N/A	N/A		No		None	<25%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
CEI-DOU-000021	No								No			No	No																		Not on map, next to culvert
								Dark brown staining, obvious sheen and bubbles																							3" PVC pipe appears to come from 3 car garage. Constant trickle. Heavy brown and orange staining downstream. Ammonia, surfactants, and conductivity exceeded benchmarks
CEI-DOU-000020	Yes	Brown	None	Faint, Orange tint	Slight	Slight, Oil sheen	Potential		Yes	Trickle	0.25	No	Yes	No	5.20.20 #4		1.5	0	0.75	2723	1.42	12.5	6.6	5.95	0						
CEI-DOU-000022	No								No			No	No																		Recieves flow from single catch basin
CEI-DOU-000023	No								No			No	No																		Cluster of 3 outfalls at upstream culvert end, two new.
CEI-DOU-000024	No								No			No	No																		New outfall previously marked as "other drainage structure" in GIS. Some yard waste dumping around outfall drainage area.
CSO-011																															Outfall inspection completed via drone. Searched bank, could not locate pipe. Possibly submerged
CSO-018	No								No			No	No																		Outfall inspection completed via drone. Outfall completely submerged during revisits. No dye observed during dye testing
CSO-044	No								No			No	No																		Outfall inspection completed via drone. Debris build up along conveyance
CSO-045									Yes	Trickle		Yes	No																		Outfall inspection completed via drone. Outfall under bridge performed inspection from closest safe distance allowed, will check upstream structure to confirm flow
CSO-046																															Outfall inspection completed via drone. Unable to locate pipe, bridge prevented close inspection with drone
CSO-047	No								No			Yes	No																		Outfall inspection completed via drone. Submerged will check upstream structure to confirm flow
CSO-050	No								Yes	Moderate		Yes	No																		Outfall inspection completed by drone. Flow may be from culverted stream, will check upstream structure to confirm flow
CSO-052	No								No			No	No																		Outfall inspection completed via drone.
CSO-055																															Outfall inspection completed via drone. Searched bank but could not locate outfall
DOU-101018	No								No			No	No																		
DOU-101025	No								Yes	Moderate	0.5	No	Yes	No	DOU-101025		0	0	0.25	625	0.3	8.4			1						
DOU-101063																															Could not access, behind several fenced off properties
DOU-101116	No								No			No	No																		Lots of trash dumped in front of outfall, may require removal
DOU-101117																															Could not access for assessment, located behind a gated property
DOU-101118																															Could not fully assess, property was gated and did not provide access to outfall.
DOU-101124																															Could not locate outfall
DOU-101150	No								No			No	No																		
DOU-101156	No								No			No	No																		Water flowing into pipe; potential culvert inlet

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-101157	5/13/2020 14:13	42.9040985	-71.447882	Found		1	Pipe	RCP	Round	24	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		Moderate	Bank erosion	None	None
DOU-101201	8/20/2020 18:30	42.9182384	-71.453142	Found		1	Pipe	RCP	Round	24	None		N/A		Precast Concrete	Good		Severe	Bank erosion	None	<25%
DOU-101219	5/13/2020 15:04	42.9060926	-71.445806	Found, Not an Outfall									Flared End	Good	N/A	N/A		Moderate	Bank erosion	None	<25%
DOU-101220	5/13/2020 15:10	42.9063687	-71.446675	Found	Unnamed wetland	1	Pipe	RCP	Round	42	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		No		None	None
DOU-101245	8/20/2020 18:15	42.9096169	-71.448319	Could Not Access																	
DOU-101246	5/13/2020 15:30	42.9069583	-71.447629	Found, Not an Outfall																	
DOU-101257	5/13/2020 15:41	42.9093069	-71.449231	Could Not Access																	
DOU-101259	7/31/2020 17:48	42.9196056	-71.448944	Not Found																	
DOU-101286	8/20/2020 18:01	42.914452	-71.451064	Found		1	Pipe	RCP	Round	30	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-101362	8/6/2020 18:58	42.9444216	-71.436072	Found		1	Pipe	RCP	Round	12	Cracking,Spalling	Top left portion of pipe cracked off. Invert spalling	Flush with Headwall	Fair	Stone	Good		No		Little	<25%
DOU-101363	8/6/2020 19:03	42.9446066	-71.436172	Not Found																	
DOU-101411	9/22/2020 12:44	42.9360761	-71.455582	Found	Merrimack River	1	Pipe	RCP	Round	30	Spalling		Flush with Headwall	Good	Reinforced Concrete	Good		No		None	None
DOU-101443	8/21/2020 14:00	42.9496182	-71.446143	Not Found																	
DOU-101624	5/13/2020 16:52	42.9341481	-71.430613	Found, Not an Outfall								O						No		None	None
DOU-101650	5/13/2020 17:29	42.9354953	-71.425547	Could Not Access																	
DOU-101651	5/13/2020 17:23	42.9352326	-71.425306	Could Not Access																	
DOU-101670	9/22/2020 14:57	42.9261119	-71.452981	Found	Merrimack River	1	Pipe	RCP	Round	48	None		Flared End	Good	N/A	N/A		Moderate	Plunge pool	None	None
DOU-101709	7/21/2020 13:29	42.94304	-71.380895	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good	Stone and mortar headwall	Moderate	Scour pit	Little	None
DOU-101713	7/21/2020 13:57	42.9432156	-71.378201	Found		1	Pipe	RCP	Round	12	Corrosion	Invert deterioration	Flush with Headwall	Good	Stone	Good	Stone and mortar headwall	No		None	<25%
DOU-101716	7/21/2020 12:52	42.9401755	-71.376957	Found		1	Pipe	RCP	Round	18	Spalling,Cracking	Minor spalling and cracking but structure overall in good condition	Flush with Headwall	Good	Stone	Good		No		None	None
DOU-101724	7/21/2020 13:50	42.9420796	-71.379774	Found			Open Drain	Grass							N/A	N/A		No		None	None
DOU-101738	7/21/2020 13:02	42.9394066	-71.378504	Found	Cohas Brook	1	Pipe	RCP	Round	36	Cracking	Hairline cracks	Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-102009	8/6/2020 13:59	42.9628642	-71.418658	Found		1	Pipe	PVC	Round	4	None		Projecting	Good	N/A	N/A		No		None	None
DOU-102020	8/6/2020 14:11	42.9643561	-71.417795	Not Found																	
DOU-102021	8/6/2020 15:10	42.9671334	-71.418148	Found		1	Pipe	RCP	Round	12	None	Pipe completely submerged	Flush with Headwall	Fair	N/A	N/A		No		None	25- 50%
DOU-102058	8/6/2020 18:21	42.9656304	-71.410737	Not Found																	
DOU-102121	5/14/2020 19:15	42.9457094	-71.452228	Not Found																	
DOU-102148	5/13/2020 17:05	42.937463	-71.424913	Found		1	Pipe	RCP	Round	15	None	Good condition, no signs of degradation	Flush with Headwall	Good	Reinforced Concrete	Good	Good condition, no signs of degradation	No		None	<25%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-102193																														Could not access, fenced off	
	No																													Sediment deposits within drainage channel clearly originating from outfall but none present within outfall pipe.	
DOU-102239									No			No	No																	Significant sediment deposits from roadway sanding originating from this pipe (approx 4 inch layer) causing moderate vegetation distress immediately downstream from pipe.	
DOU-102240									No			No	No																	Discharges to BMP. Buildup of many clear plastic bags at outfall	
DOU-102244	No								No			No	No																		Discharges to BMP
DOU-102245	No								No			No	No																		Discharges to BMP
DOU-102397	No								Yes	Trickle	3	No	Yes	No	DOU-201139		0	0.08	1	3270	1.72	13.5	6.99	7.58	2						Audible trickle can be heard within pipe
	Yes	Tan colored growth. Algae growth is also abundant in downstream channel																												Boulders and overgrown vegetation around outfall may limit accessibility to outfall. Ammonia exceeded benchmark	
DOU-102249			None	None	None	None	Unlikely	Pipe growth and algae	Yes	Moderate	0.5	No	Yes	No	DOU-102249		0.5	0	0.25	934	0.46	14	6.99	7.8	0						Outfall flows into detention BMP with overflow structure.
DOU-102399			No							No			No	No																	Channel appears to be dug out by homeowner, slope is very flat appears to have significant clogging issues at times. Discharges to wetland area
DOU-102404	No								No			No	No																		Outfall appears to be the downstream end of a culverted stream, although flow from an upstream catch basin could be heard entering the pipe from within. Heavy erosion present on the slope adjacent to the structure from parking lot runoff originating from a broken berm. Chlorine, surfactants, and conductivity exceeded benchmarks
DOU-102413	No								Yes	Moderate	2	No	Yes	No	DOU-102413		0	0.4	0.5	3153	1.66	11.2	6.66	6.64	29						Area fenced off and could not be accessed. Potentially discharges to BMP
DOU-102433																															Pipe not Found. Mapped location is on small hill from mall to street. No outlet pipe could be seen within upstream catch basin
DOU-102437																															Outfall not Found
DOU-102527																															Culvert with drainage connection. Flow appears to be from culverted stream, no flow in upstream catch basin
DOU-102528	No								No			No	No																		Outfall not Found, likely hidden by overgrown vegetation. Strong sewer odor in area, broken sewer manhole likely responsible for smell.
DOU-102546																															Discharging to pond impaired for DO, cyanobacteria, pH and chlorophyll.
DOU-102648	No								Yes	Trickle	0.25	No	Yes	No	DOU-102648	DO,pH,TP,BO D5	0	0	0.25	761	0.37	12.9	6.58	7.59	1	0					Pipe located at base of retaining wall. Some sediment built up and stagnant water with slight sheen
DOU-102632	Yes		None	None	None	None, Slight oily sheen	Unlikely	Slight sheen on water	No			No	No																		
DOU-102655	No								No			No	No																		
																															Outfall located on fenced-in private property with locked gate. Could not access. Upstream catch basin (CB-102657) has audible flow coming from within and should be revisited for sampling.
DOU-102656									Yes	Substantial		Yes	Yes																		Found outfall but could not access for full assessment. Located behind a barbed wire fence
DOU-102736																															Could not locate and assess
DOU-102737																															

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-102767	5/13/2020 17:51	42.9399578	-71.418937	Found		1	Pipe	RCP	Round	36	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		No		None	<25%
DOU-102806	7/21/2020 14:57	42.9450869	-71.386619	Found			Open Drain	Grass							N/A	N/A		No		None	None
DOU-102810	7/21/2020 14:34	42.9451724	-71.385798	Found		1	Pipe	RCP	Round	24	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-102813	7/21/2020 14:41	42.9457515	-71.386711	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Poor	Stone headwall with mortar. Large pieces of headwall have broken off	No		None	None
DOU-102827	5/13/2020 17:37	42.9364148	-71.422236	Could Not Access														No		None	
DOU-102841	5/13/2020 17:44	42.9363996	-71.418441	Found		1	Pipe	RCP	Round	24	None	Good condition, no signs of degradation	Flush with Headwall	Good	Reinforced Concrete	Good		No		None	<25%
DOU-102844	5/13/2020 18:15	42.9383117	-71.419628	Found		1	Pipe	RCP	Round	12	Spalling	Good, some minor spalling of concrete around pipe rim	Flush with Headwall	Good	Precast Concrete	Good	Good condition, no signs of degradation	No		None	25- 50%
DOU-102870	7/21/2020 13:49	42.9420504	-71.379616	Found			Open Drain	Grass							N/A	N/A		No		None	None
DOU-102872	7/21/2020 13:46	42.9422925	-71.379913	Found			Open Drain	Grass							N/A	N/A		No		None	None
DOU-102897	7/21/2020 14:19	42.945487	-71.380715	Found			Open Drain	Grass							N/A	N/A		No		None	None
DOU-102901	5/28/2020 14:54	43.0257262	-71.506301	Not Found																	
DOU-102909	5/28/2020 15:04	43.0237647	-71.504844	Found			Pipe					Outfall buried, unable to assess	N/A	N/A	N/A	N/A		No		None	>75%
DOU-102954	5/29/2020 14:21	43.045475	-71.500092	Found		1	Pipe	RCP	Round	12	None	RCP flared end section very damaged, one side mostly broken off	Flared End	Poor	N/A	N/A		No		None	25- 50%
DOU-103026	9/22/2020 12:57	42.9500009	-71.455116	Not Found																	
DOU-103079	8/21/2020 13:31	42.9477272	-71.451571	Found		1	Pipe	CMP	Round	12	Corrosion	Invert of metal pipe is completely corroded and has crumbled away.	Projecting	Fair	N/A	N/A		Severe	Entire bank between outfall and adjacent stream has collapsed, with roots exposed, forming a sinkhole approx. 7ft deep and 2ft into the sides	Moderate	None
DOU-103080	8/21/2020 13:23	42.9476394	-71.452522	Found		1	Pipe	RCP	Round	12	Collapsing,Pipe seems to be recessed within surrounding brick and mortar headwall	Stone opening functions as pipe invert, irregular shape with some signs of chipping/collapse	Flush with Headwall	Fair	Stone	Fair	Stone/brick and mortar, some cracks and chipping	No		None	<25%
DOU-103196	11/26/2019 5:16	42.9635434	-71.473734	Not Found																	
DOU-103197	11/26/2019 17:42	42.9609645	-71.472704	Could Not Access																	
DOU-103199	7/29/2020 18:09	42.9633453	-71.471924	Not Found																	
DOU-103234	8/6/2020 12:55	42.9548348	-71.425604	Not Found																	
DOU-103354	11/22/2019 15:16	42.9605248	-71.453158	Not Found																	
DOU-103449	11/22/2019 15:37	42.9625637	-71.451384	Found		1	Pipe	HDPE	Round	12	None				N/A	N/A		No		None	50- 75%
DOU-103591	7/31/2020 14:19	42.9544606	-71.402364	Not Found																	
DOU-103592	7/31/2020 14:14	42.9544983	-71.402322	Found	Cohas Brook	1	Pipe	RCP	Round	18	None	Outfall in good condition but adjacent tree has started growing around it and may become a significant blockage in time	Projecting	Good	N/A	N/A		Moderate	Liner fabric exposed, no riprap	Little	None
DOU-103595	9/22/2020 18:42	42.9558334	-71.402126	Found	Cohas Brook-Long Pond Brook	1	Pipe	CMP	Round	12	Collapsing,Corrosion	Pipe is slightly corroded and there is a chance that it has broken off from upstream pipe segments due to caved in and eroded earth all around it. In any case, the pipe is very unstable	Projecting	Poor	N/A	N/A		Severe	Erosion in hillside and along banks of the brook is severe, multiple feet high and deep.	Moderate	25- 50%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-102767	No								Yes	Moderate	1.5	No	Yes	No	DOU-102767		0	0.2	0.25	1083	0.54	10.8			0						Chlorine exceeded benchmark
DOU-102806	No								No			No	No																		Vegetated open drainage outfall
DOU-102810	No								No			No	No																		
DOU-102813	No								No			No	No																		Man made channel with no erosion present
DOU-102827	No								No			No	No																		Could not access to assess, basin surrounded by chain link fence
DOU-102841	No								No			No	No																		
DOU-102844	No								No			No	No																		
DOU-102870	No								No			No	No																		Vegetated open drainage outfall
DOU-102872	No								No			No	No																		Vegetated open drainage outfall
DOU-102897	No								No			No	No																		Vegetated open drainage outfall that flows over stone Foundation wall
DOU-102901																															
DOU-102909	No								No			No	No																		Outfall completely buried due to bank collapse. Channel and stagnant water indicate outfalls location. Outfall is final discharge point for a small drainage system
DOU-102954	No								No			No	No																		
DOU-103026																															Searched patch of woods around mapped location but outfall not Found
DOU-103079	No								No			No	No																		Severe bank erosion, bank stabilization may want to be considered
DOU-103080	No								No			No	No																		Outfall is located adjacent to the inlet of a culverted stream beneath a protective grate into which the stream flows.
DOU-103196																															Outfall inspection completed via drone. Searched bank but could not locate pipe, potentially hidden behind vegetation
DOU-103197																															Outfall inspection completed via drone. Outfall further inland and closer to road than the river. Could not access with drone due to canopy cover.
DOU-103199																															Could not locate outfall, possibly buried
DOU-103234																															Could not locate, potentially hidden behind dense vegetation
DOU-103354																															This is a culvert, water is flowing through
DOU-103449	No								No			No	No																		
DOU-103591																															Overgrown slope may be obstructing view of outfall pipe, but no structure observed at this location
DOU-103592	No								No			No	No																		
DOU-103595	No								No			No	No																		Outfall is in extremely poor condition overall. Yard waste / organic waste dumping is an issue at this location. Outfall likely had a headwall that has since collapsed.

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-103615	9/22/2020 18:32	42.9569426	-71.401728	Found	Cohas Brook-Long Pond Brook	1	Pipe	CMP	Round	12	None		Flush with Headwall	Good	Reinforced Concrete	Poor	Headwall completely undercut and is solely resting on the outfall	Severe	Headwall is completely undercut	None	None
DOU-103748	11/26/2019 17:46	42.9594552	-71.471827	Could Not Access																	
DOU-103773	11/22/2019 14:00	42.9624133	-71.448703	Found	Nutt Pond	1	Pipe	PVC	Round	6	None				N/A	N/A		No		None	<25%
DOU-103790	11/22/2019 14:18	42.9605236	-71.450677	Found		1	Pipe	RCP	Round	36	None				N/A	N/A		Moderate		None	25- 50%
DOU-103844	11/22/2019 15:53	42.9659533	-71.453741	Found		2	Pipe	RCP	Round	36	None	2nd pipe is 8-in PVC in good condition			Stone	Fair		Severe	Scour pool	None	<25%
DOU-104040	9/22/2020 15:38	42.9625894	-71.440557	Found	Humphrey Brook	1	Pipe	RCP	Round	24	Corrosion,Spalling	Invert is beginning to chip away and exposed rebar is rusting along pipe end.	Flush with Headwall	Fair	Stone	Good		No		None	None
DOU-103847	11/22/2019 16:28	42.9672005	-71.458275	Found	Baker Brook	1	Pipe											Severe			
DOU-104046	9/22/2020 15:55	42.96292	-71.440048	Found	Humphrey Brook	1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	N/A	N/A		No		None	25- 50%
DOU-104049	8/6/2020 13:26	42.9623392	-71.426097	Not Found																	
DOU-104053	8/6/2020 13:07	42.9603808	-71.426267	Could Not Access																	
DOU-104056	5/21/2020 13:03	42.9629423	-71.429382	Found		1	Pipe	RCP	Round	16	None		Flush with Headwall	Good	Stone	Fair	Some separation of stone and mortar	No	Defined flow channel	None	<25%
DOU-104058	5/21/2020 13:08	42.9630474	-71.429418	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good	Headwall may soon become overwhelmed by excessive yard waste dumping in the area	No		None	50- 75%
DOU-104064	5/21/2020 12:53	42.9624691	-71.433006	Not Found																	
DOU-104065	5/21/2020 14:00	42.9629878	-71.433823	Found	Cohas Brook	1	Pipe	RCP	Round	18	None	Outfall condition is good but outfall is partially submerged in water/sediment.	Flush with Headwall	Good	Stone	Fair	Some cracking between mortar and stone	No		None	25- 50%
DOU-104070	5/21/2020 14:25	42.9630419	-71.430543	Found	Cohas Brook	1	Pipe	RCP	Round	30	Spalling	Slight spalling around outlet rim	Flush with Headwall	Fair	Stone	Good	Gaps forming between outlet pipe and mortar	Moderate	Erosion varies between 4-6 inches high	None	25- 50%
DOU-104084	5/21/2020 13:29	42.9618333	-71.433224	Not Found																	
DOU-104116	8/6/2020 18:32	42.9603623	-71.417577	Could Not Access																	
DOU-104208	11/22/2019 14:47	42.9594128	-71.453467	Found		1	Pipe	RCP	Round	36	Spalling	Minor chipping			Stone	Fair	Organic debris build up on headwall	No		None	25- 50%
DOU-104218	11/22/2019 14:55	42.9599018	-71.453124	Found		1	Pipe	RCP	Round	24	None				Stone	Fair		Moderate		None	25- 50%
DOU-104388	5/21/2020 15:17	42.9588368	-71.428504	Found		1	Pipe	RCP	Round	12	None		Projecting	Good	N/A	N/A		No		None	<25%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
																															Base of headwall has deteriorated away completely and is only held up by the outfall pipe
DOU-103615	No								No			No	No																		
DOU-103748																															Outfall inspection completed via drone. Outfall further inland and closer to road than river. Could not access with drone due to canopy cover
DOU-103773	No								No			No	No																		Standing water, no flow confirmed in upstream catch basin
DOU-103790	No								No			No	No																		Standing water, no flow confirmed in upstream catch basin
DOU-103844	No								No			No	No																		Adjacent culvert blockages with organic and inorganic debris. Standing water, no flow confirmed in upstream catch basin
DOU-104040	No								No			No	No																		Outfall is not flowing but is slightly damp (watermark can be seen in photo).
DOU-103847	Yes	Grey	None	Faint, Blue grey	Slight	Slight, Suds and blue tint to water	Potential		No			Yes	No																		Culvert with drainage connection, looks like an old pipe was pulled and is broken/loose in the stream bed. Revisit required
DOU-104046	No								No			No	No																		
DOU-104049																															Outfall not Found. Followed drain line back to concrete surcharge manhole but could not locate outlet. Mapped location was in patch of woods with no obvious channel
DOU-104053																															Could not access due to yard fences. No flow in upstream catch basin
DOU-104056	No								No			No	No																		Riprap at outlet has been displaced and seems sparse
DOU-104058	No								No			No	No																		Yard waste is filling in around headwall/outfall and will likely begin to obstruct flow entirely
DOU-104064																															Extremely dense vegetation surrounding supposed outfall location. Could not access to investigate. Consider waiting for the end of growing season to access when vegetation is less dense.
DOU-104065	No								Yes	Moderate	3	No	Yes	No	DOU-104065	pH	0	0	2	3544	1.87	12.4	6.7	7.5	0						Vegetation surrounding outfall is very overgrown. Other streamflow in the area seems to originate from adjacent pond. Surfactants and conductivity exceeded benchmarks
DOU-104070	No								Yes	Moderate	4	No	Yes	No	DOU-104070	pH	0	0.4	0.5	1446	0.73	13.9	7.09	8.11	344						Outlet seems to be the downstream end of a culverted stream. Chlorine, surfactants and E. coli exceeded benchmarks
DOU-104084																															Could not locate, upstream catch basin is clogged with sediment. Water appears to bypass catch basin, significant runoff erosion in area
DOU-104116																															Area fenced off and not accessible
DOU-104208	No								No			No	No																		Yard waste dumping
DOU-104218	No								Yes	Moderate		No	No	No																	It was determined during the site visit that this is a privately owned outfall. Therefore, although there was observed dry weather flow, a dry weather screening sample was not taken. Excess leaf debris.
DOU-104388	No								No			No	No																		Pipe discharges to rt 293 shoulder. Conveyance down steep slope is well armored with half of CMP

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-104392	No								No			No	No																		
DOU-104393																															Could not access due to yard fences
DOU-104581																															Outfall not Found, potentially buried in wetlands
DOU-104512	Yes	Orange	Easily detected, Chemical with some sulfide	None	None	None, Suds forming where flow lands in plunge pool.	Potential	Orange growth/deposits are extensive, smell is strong and outfall is flowing heavily.	Yes	Substantial	4	No	Yes	No	DOU-104512	TP,Aluminum ,pH	2.5	0	0.5	964	0.48	11.7	7.14	7.3	0	0.012				0	Flow depth was measured in conveyance
DOU-104676																															Could not locate outfall
DOU-104679																															Could not access, fenced off property
DOU-104690	No								No			No	No																		Invert wet but not flowing
DOU-105119																															Inaccessible due to overgrown vegetation on steep banks. Upstream catch basin contains flow from a culverted stream that is 20'+ deep. Only flow was between inlet and outlet pipes for stream, no drainage flow observed.
DOU-105128	No								No			No	No																		
DOU-105178																															Culvert inlet, not an outfall
DOU-105268																															Could not access, fenced off property
DOU-105300																															Outfall located on private property. Attempted to contact homeowner to gain access but no one was home
DOU-105301																															Structure appears to be the downstream end of a culverted stream. Cannot access further due to barbed wire fence but pipe is approx 5' in diameter.
DOU-105304	No								No			Yes	No																		Outfall inspection completed via drone. Another outfall above pipe. Submerged will check upstream structure to confirm flow
DOU-105754	No								Yes	Trickle	0.3	No	Yes	No	DOU-105754	Chloride	0	0	0.75	2234	1.15	11.5	6.79	7.98	1				768		Outfall located next to unmapped culvert. Outfall seems to be a significant source of sand deposits within stream, may contribute to chloride impairment. Surfactants and conductivity exceeded benchmarks
DOU-105911	No								No			No	No																		Culverted stream with catch basin integration. Neighbors claim they've seen oil flow from the outfall. No flow confirmed in catch basin
DOU-105996																															Densely settled, fenced off, no access
DOU-106000	No								No			No	No																		Standing water in pipe but no flow. Confirmed in upstream catch basin
DOU-106006	No								No			No	No																		Outfall has large drainage channel that almost looks like a streambed, but no flow.
DOU-106799	No								No			No	No																		Outfall inspection completed via drone
DOU-106823																															Outfall inspection completed via drone. Pipe not located potentially covered by vegetation. Proximity to bridge prevented closer inspection with drone

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-107324	No								Yes	Moderate	1	No	Yes	No	DOU-107324	pH	0	0	0.25	480.2	0.339	8.8	7.22	10.05	6						Salinity calculated using conductivity
DOU-106941	Yes	Orange	None	None	None	None	Unlikely		Yes	Moderate	0.5	No	Yes	No	DOU-106941	TP,pH,DO,Aluminum	0	0	1.25	2304	1.19	12.5	8.16	8.25	2	0					Under granite st bridge, moderate clear steady flow. Aluminum and Phosphorus were non detects
DOU-108210	No								No			No	No																		Pipe seems to be an inlet and not an outfall
DOU-108229	No								No			No	No																		May need maintenance to clear vegetation
DOU-108237	No								No			No	No																		Needs maintenance to clear debris and sediment
DOU-108284	No								No			No	No																		No photo of outfall
DOU-108305	No								Yes	Trickle	1	No	Yes	No	Dou-108305		0.25	0.2	0.25	1117	0.55	6				1					Surfactants equal to 0.25 but no signs of sewer input or illicit discharges. E. coli lab result was <1 MPN/100ml
DOU-108654	No								No			No	No																		Water within outfall, but visited upgradient catch basins and no flow was observed. Some snow melt going into catch basins
DOU-108712	No								No			No	No																		
DOU-108713	No								No			No	No																		Outfall is lower than bottom of BMP.
DOU-108715	No								No			No	No																		Discharges to BMP. Resident believes skunk lives in pipe and is getting around grate
DOU-108718	No								No			No	No																		
DOU-108755	No								No			No	No																		Downstream conveyance armored with boulders and concrete
DOU-108823																															Could not access due to yard fences
DOU-108824	No								No			No	No																		
DOU-108878	No								Yes	Moderate	3	No	Yes	No	DOU-108878		0	0.4	0.75	579	0.28	22.3	7.5	8.8	488						
DOU-108832	Yes	Orange	None	None	None	None	Unlikely	Pale orange benthic growth along invert	Yes	Trickle	0.25	No	Yes	No	DOU-108832		0	0	0.25	560.4	0.27	17.5	7.1	6.7	579						Tracks along invert indicate raccoons are living in pipe
DOU-108878	No								No			No	No																		Part of a resampling effort to validate E. coli, tried to resample but there was no flow.
DOU-108880	No								No			No	No																		
DOU-108881	No								Yes	Trickle	2	No	Yes	No	DOU-119448		0	0	0.25	587.6	0.29	7.4				1					Surfactants equal to 0.25, but no signs of illicit discharges or sewage. E. coli lab result was <1 MPN/ml
DOU-108901																															Outfall not Found, potentially buried in hillside
DOU-108902	No								No			No	No																		
DOU-108917																															Outfall not Found, potentially buried under organic debris. Catch basin in street could also not be located
DOU-108923	No								No			No	No																		
DOU-108924	No								No			No	No																		
DOU-108925	No								No			No	No																		
DOU-108949	No								No			No	No																		Invert wet but not flowing
DOU-108978																															Searched field and forest around mapped location but outfall not Found
DOU-108994																															Not outfall, appears to be inlet. Water flowing into structure

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-109052	1/14/2020 16:00	42.9870333	-71.419484	Not Found																	
DOU-109096	9/22/2020 17:42	42.9874885	-71.415233	Not Found																	
DOU-109223	1/15/2020 18:50	42.9846357	-71.413797	Found		1	Pipe		Round	36	None	Good condition no signs of degradation	Flush with Headwall	Good	N/A	N/A		No		None	None
DOU-109225	1/15/2020 16:11	42.9853723	-71.410135	Not Found																	
DOU-109224	1/15/2020 18:45	42.9846525	-71.413801	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-109228	1/15/2020 15:05	42.9884197	-71.407871	Found, Not an Outfall																	
DOU-109232	1/15/2020 15:06	42.9880725	-71.409415	Not Found																	
DOU-109237	1/15/2020 14:58	42.9884453	-71.408205	Found	Unnamed tributary to Cohas Brook	1	Pipe	RCP	Round	15	Cracking,Spalling,C ollapsing	Outfall in poor condition, exposed rebar and major structural damage	Projecting	Poor	Stone	Good		No		None	None
DOU-109242	8/14/2020 17:59	42.983213	-71.41446	Could Not Access																	
DOU-109256	1/15/2020 14:01	42.9884708	-71.412058	Not Found																	
DOU-109310	1/15/2020 18:33	42.9796615	-71.412538	Not Found																	
DOU-109327	1/15/2020 18:25	42.9814313	-71.412196	Found		1	Pipe	CMP	Round	12	Corrosion	Some minor corrosion within interior of pipe	Projecting	Fair	N/A	N/A		No		None	None
DOU-109404	7/21/2020 17:12	42.993001	-71.495228	Found	Piscataquog River	1	Pipe	RCP	Round	48	None		Flush with Headwall	Good	Precast Concrete	Good		No		None	None
DOU-109404	5/28/2020 18:37	42.9930696	-71.495189	Found	Piscataquog River	1	Pipe	RCP	Round	48	Spalling	Outfall chipped at invert.	Flush with Headwall	Fair	Reinforced Concrete	Good		No		None	<25%
DOU-109407	5/28/2020 18:21	42.994805	-71.494352	Not Found																	
DOU-109769	5/4/2020 15:25	42.994243	-71.468909	Found	Merrimack River	1	Pipe	RCP	Round	36	Spalling	River flow eroding pipe	N/A	N/A	Reinforced Concrete	Good	Part of retaining wall along Merrimack River	No		None	None
DOU-109807	12/16/2019 18:47	42.9955773	-71.470326	Not Found																	
DOU-109916	9/23/2020 15:29	42.9937308	-71.471976	Not Found																	
DOU-110031	7/31/2020 17:22	42.9999742	-71.492544	Not Found																	
DOU-110291	12/16/2019 18:47	42.9987495	-71.474034	Not Found																	
DOU-110309	12/16/2019 18:32	42.9988552	-71.468365	Not Found																	
DOU-110329	12/16/2019 18:47	42.9961083	-71.470444	Not Found																	
DOU-110363	2/12/2020 19:17	42.9987204	-71.468456	Found	Merrimack River	1	Pipe	RCP	Round		None	Partially submerged	Projecting	Good	Reinforced Concrete	Good		No		None	None
DOU-110349	12/16/2019 17:43	42.9967272	-71.468598	Found	Merrimack River	1	Pipe	RCP	Round	36	None		Projecting	Good	Reinforced Concrete	Good		No		None	None

	Illicit Discharge Potential								Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-109052																															
DOU-109096																															Outfall buried and submerged
DOU-109223	No								No			No	No																		
DOU-109225																															Outfall does not seem to exist. Could have been landscaped over.
DOU-109224	Yes	Orange	Faint, Gas, sour		Cloudy	Cloudy, Oil sheen	Potential	Orange sludge material, oil sheens, gas smell	No			Yes	No																		Outfall heavily polluted
DOU-109228																															Not outfall. Appears to be culvert. Drainage may go to DOU-109237
DOU-109232																															Could not access/locate
DOU-109237	No								No			No	No																		In need of repair
DOU-109242																															Catch basins present within newly paved road but access to outfall is hindered by sound barrier fence along highway. No flow observed within upstream catch basin.
DOU-109256																															Could not locate
DOU-109310																															Could not locate
DOU-109327	No								No			No	No																		
DOU-109404	No								Yes	Trickle	1	No	Yes				0	0.6	0.25	731	0.39	20.1	7.71	8.43	32						Revisit to resample after issue causing sewage input Found during previous inspection was corrected.
DOU-109404	Yes	Gray	Noticeable , Sewage	Clearly visible, Gray	Opaque	Opaque, Sewage - toilet paper and wet wipes	Obvious	Strong indication of sewage discharge	Yes	Substantial	3	No	Yes	No	DOU-109404	pH	4	0.4	3	721	0.35	20	7.37	1.21	2420						Ammonia and surfactants were both over the detection range for the supplied test kits based on the color results. E. coli lab result was greater than range for test (>2,420 MPN/100 ml). Very obvious illicit discharge. Ammonia, chlorine, surfactants, and E. coli exceeded benchmarks.
DOU-109407																															Outfall appears to be located within headwall of footbridge but upon inspection there was nothing there.
DOU-109769	No								No			No	No																		Pipe half submerged in river but no signs of flow in upstream structure
DOU-109807																															Outfall inspection completed via drone. Unable to locate pipe, potentially behind vegetation
DOU-109916																															Outfall appears on map to be located in median on W Bridge St, but it is a raised median with no structures. Outfall may be located within the median between the two bridge lanes, but there is no way for us to access
DOU-110031																															Could not locate outfall
DOU-110291																															Outfall inspection completed via drone. Unable to locate pipe, possibly submerged. Unable to fly closer without violations line of sight laws
DOU-110309																															Outfall inspection completed via drone. Unable to locate pipe, possibly hidden under debris
DOU-110329																															Outfall inspection completed via drone. Unable to locate pipe, potentially hidden behind vegetation
DOU-110363	No								No			Yes	No																		Outfall inspection completed via drone. Partially submerged, will check upstream structure to confirm flow
DOU-110349	Yes	Orange	None	None	None	None	Unlikely	Some orange benthic growth beneath outfall	Yes	Trickle	0.5	Yes	Yes	No																	Outfall inspection completed via drone and supplemented with on the ground survey. Dry weather flow, will check upstream structure to confirm flow

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-110382	9/23/2020 15:43	42.9981258	-71.474943	Found		1	Pipe	Unknown submerged				Unable to inspect structure because it is submerged	N/A	N/A	Precast Concrete	Fair	Big cracks in precast cement	Moderate	Hole where pipe is eroding channel	None	None
DOU-110768	12/16/2019 19:06	42.9911663	-71.470532	Not Found																	
DOU-111521	7/29/2020 17:46	42.9987553	-71.443871	Found, Not an Outfall								Good condition, no signs of degradation	Flush with Headwall	Good	Stone	Good		No		None	None
DOU-111614	1/14/2020 18:39	42.9936747	-71.42541	Found	Humphrey Brook	1	Pipe	RCP	Round	12	None	Good condition no signs of degradation	Flush with Headwall	Good	Stone	Good	Good condition no signs of degradation	No		None	<25%
DOU-111619	8/19/2020 16:00	42.993148	-71.429437	Not Found																	
DOU-111621	8/19/2020 15:25	42.9953962	-71.431394	Found, Not an Outfall			Open Drain				None										
DOU-111728	8/19/2020 18:39	42.9996367	-71.435013	Not Found																	
DOU-111737	8/19/2020 15:19	42.9962789	-71.430933	Could Not Access																	
DOU-111747	8/19/2020 15:03	42.9969274	-71.433198	Found		1	Pipe		Round				Flush with Headwall	Fair	N/A	N/A		No		None	>75%
DOU-111747	8/19/2020 14:56	42.9973981	-71.433543	Not Found																	
DOU-111756	9/23/2020 17:25	42.9981698	-71.429025	Could Not Access																	
DOU-111764	8/19/2020 18:00	42.9992817	-71.42613	Found			Pipe					Outfall submerged, unable to fully assess	Flush with Headwall	Fair	Precast Concrete	Good		No		None	None
DOU-111786	8/19/2020 15:08	42.9971388	-71.432542	Found		1	Pipe	CMP	Round	18	Collapsing,Corrosion	Pipe collapsed and corroding	N/A	N/A	N/A	N/A		No		None	50- 75%
DOU-111787	9/23/2020 17:35	42.9968944	-71.43316	Found		1	Pipe	HDPE	Round		Buried	Outfall is entirely buried with a hole dug directly above it - hole is approx 2 ft deep and water doesn't seem to be draining out of it very well	N/A	N/A	N/A	N/A		No		None	>75%
DOU-111799	9/23/2020 17:13	42.9973713	-71.427758	Not Found																	
DOU-111817	9/23/2020 17:49	42.9965553	-71.435241	Found		1	Pipe	CMP	Round		Collapsing,Corrosion,Cracking	Unknown diameter, pipe end has completely disintegrated	Projecting	Poor	N/A	N/A		No		None	>75%
DOU-111825	8/19/2020 18:31	42.9976677	-71.435445	Found		1	Pipe	CMP	Round	12	Spalling,Corrosion	Invert has completely deteriorated away	Projecting	Poor	N/A	N/A		Severe	Channelization	None	None
DOU-111863	1/14/2020 19:18	42.9937753	-71.422344	Found		2	Pipe	RCP	Round	18	Cracking,Collapsing	Some parts of outfalls are cracked and chipped away.	Projecting	Fair	Reinforced Concrete	Good	Good condition no signs of degradation	No		None	<25%
DOU-112131	1/14/2020 15:49	42.9896832	-71.426055	Found	Humphrey Brook	1	Pipe	RCP	Round	32	None	Good condition	Flush with Headwall	Good	Stone	Good	Good condition	Moderate	Some minor bank erosion	None	<25%
DOU-112136	8/19/2020 15:33	42.9919815	-71.426001	Found		1	Pipe	RCP	Round	18			Flush with Headwall	Good	Stone	Fair	Displaced stones	Moderate	Plunge pool	None	50- 75%
DOU-112137	1/14/2020 18:47	42.9923275	-71.426194	Found	Humphrey Brook	1	Pipe	CMP	Round	36	Corrosion	Outer edges of pipe corroded	Projecting	Fair	N/A	N/A		No		None	<25%
DOU-112207	5/28/2020 17:23	43.0078777	-71.499539	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Reinforced Concrete	Fair	Some cracking	No		None	>75%
DOU-112208	5/28/2020 17:02	43.0092815	-71.495177	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Good		Moderate	Plunge pool	None	25- 50%
DOU-112212	8/14/2020 17:35	43.0092325	-71.495423	Could Not Access																	
DOU-112214	8/20/2020 19:19	43.0079518	-71.495888	Could Not Access																	

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments
	No																													Outfall submerged but no flow in upstream drainage structures. 3 catch basins checked and no flow. There is standing water in the catch basin on Lorraine St but there is no perceptible flow.
DOU-110382									No			Yes	No																	
DOU-110768																														Outfall inspection completed via drone. Unable to locate pipe, possibly submerged
DOU-111521	No																													Not an outfall but an inlet. Drainage channel runs into pipe
DOU-111614	No								No			No	No																	No flow in upstream catch basin
DOU-111619																														Could not locate, possibly submerged in wetland/pond area on golf course
DOU-111621																														Mapped location is in the middle of a grassy field. Leaching catch basin was observed in outfalls indicated location
DOU-111728																														Map location shows it by a parking lot near an apartment building, Found nothing nearby
DOU-111737																														Thickly vegetated on a steep hill, could not access, no flow in catch basin
DOU-111747	No								No			No	No																	Outfall is located within a small pit below ground level. Pit filled with standing water
DOU-111747																														No sign of flow channel
DOU-111756																														Unable to access due to fencing and a locked gate
DOU-111764	No								No			No	No																	Submerged,shares headwall with culvert
DOU-111786	No								No			No	No																	
DOU-111787	No								No			No	No																	Outfall buried. Material was assumed based on prodding. Diameter and condition were unable to be assessed.
DOU-111799																														Outlet pipe is clearly visible within upstream catch basin but not Found in adjacent hillside. Pipe is likely buried under the large amount of loose fill that exists there. Conveyance was identified further down the hillside at an off angle from the CB and is likely the result of stormwater breaking through fill from buried pipe.
DOU-111817	No								No			No	No																	Standing water, pipe has become a pit in the ground
DOU-111825	No								No			No	No																	
DOU-111863	No								No			No	No																	Sediment may need to be cleared out in front of outfall.
DOU-112131	No								No			No	No																	No flow in upstream catch basins
DOU-112136	No								No			No	No																	Resident has noticed issues with catch basin draining
DOU-112137	No								Yes	Moderate	6	No	Yes	No	Dou-112137	Chloride	0	0	0.25	914	0.45	7.5	6.47	9.04	21		3	233		BOD lab result was <3 mg/L
DOU-112207	No								No			No	No																	Sediment has mounded heavily around outfall. Large deposits. Pipe only partially in view. Outlets to BMP.
DOU-112208	No								No			No	No																	Pipe partially filled with sediment. Natural plunge pool shows evidence of erosion. Outlets to small pond approx 25 ft away
DOU-112212																														Could not access outfall, fenced off property
DOU-112214																														Outfall access extremely steep and overgrown, unsafe and difficult to access.

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-112418	5/21/2020 19:15	43.0104145	-71.478622	Found	Black Brook	1	Pipe	RCP	Round	18	None	Precast is lightly cracked	Flush with Headwall	Fair	Precast Concrete	Good		No		None	None
DOU-112419	5/28/2020 13:16	43.0096824	-71.480649	Found	Maxwell Pond	1	Pipe	RCP	Round	18	None		Flush with Headwall	Fair	Reinforced Concrete	Fair	Partially buried	Severe	Significant erosion channel roughly 3 feet deep,10 ft across and 50 ft long	None	None
DOU-112421	5/28/2020 13:34	43.0080389	-71.485428	Found	Black Brook	1	Pipe	RCP	Round	18	Spalling	Spalling around inlet at headwall	Flush with Headwall	Fair	Reinforced Concrete	Good		Moderate	Erosion under splash pad ranging from .5-1 ft high and 0-.5 ft deep. Splash pad may becomed undermined if erosion continues	None	None
DOU-112422	5/28/2020 16:12	43.0096308	-71.488078	Not Found																	
DOU-112425	5/28/2020 16:47	43.0061548	-71.488304	Not Found																	
DOU-112459	7/29/2020 17:25	43.0105748	-71.471981	Could Not Access																	
DOU-112471	5/28/2020 16:27	43.0083669	-71.488827	Found	Black Brook	1	Pipe	HDPE	Round	18	None		Projecting	Good	N/A	N/A		Moderate	Plunge pool within riprap immediately downstream of outlet, approx 1.5 ft deep, 3.5 ft wide and 3.5 ft long. Erosion also present on either side of riprap channel, 0.5-1 ft deep	None	None
DOU-112529	9/23/2020 16:21	43.005475	-71.472918	Found		1	Pipe	RCP	Round	24	None		Flush with Headwall	Good	Stone	Good		No		None	None
DOU-112570	5/21/2020 19:08	43.0070796	-71.476601	Not Found																	
DOU-112612	11/26/2019 14:36	43.0081488	-71.463472	Found			Open Drain	Riprap			collapsing				N/A	N/A		No		None	<25%
DOU-112715	5/28/2020 16:01	43.0108794	-71.488522	Found	Black Brook	1	Pipe	VC	Round	15	None		Projecting	Good	N/A	N/A	No headwall but slope is very eroded around pipe.	Moderate	Plunge pool approx 2 ft deep, 5.5 ft wide and 10 ft long immediately downstream of outlet.	None	None
DOU-112802	12/16/2019 18:05	43.0006197	-71.469199	Found	Merrimack River	1	Pipe	RCP	Round		None	Grate over outlet	Flush with Headwall	Good	Reinforced Concrete	Good		No		None	None
DOU-112819	9/23/2020 16:07	43.0010616	-71.476647	Found		1	Pipe	RCP	Round	36	None	In good condition	Projecting	Good	N/A	N/A		No		None	25- 50%
DOU-112943	9/23/2020 16:01	43.0004592	-71.475993	Found, Not an Outfall																	
DOU-112948	9/23/2020 15:58	43.000267	-71.476333	Found, Not an Outfall																	
DOU-113199	8/19/2020 19:02	43.0067822	-71.44427	Found, Not an Outfall																	
DOU-113328	8/19/2020 18:49	43.0074699	-71.436927	Found			Open Drain	Paved					N/A	N/A	N/A	N/A		No		None	None
DOU-113347	8/19/2020 13:20	43.0034758	-71.423041	Found		1	Pipe	RCP	Round			Outfall completely filled with sediment unable to assess structurally	Projecting	Fair	N/A	N/A		No		None	>75%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-112418	No								No			No	No																		Structure is entirely within Black Brook. Looks to be a dumping site downstream for a business on the north bank
DOU-112419	No								No			No	No																		Headwall and outlet buried by large amount yard waste and grass clippings. Deep erosion channel indicates heavy flows into a steep slope. A second large channel from parking lot runoff nearby
DOU-112421	No								No			No	No																		
DOU-112422												No																			Outfall not Found and most likely does not exist, as the catch basins that appear to connect to it on GIS were not present on the roadway.
DOU-112425																															Outfall not in this location, but other parts of local system were identified.
DOU-112459																															Could not access, fenced off and located next to railroad.
DOU-112471	No								No			No	No																		
DOU-112529	No								No			No	No																		
DOU-112570																															Outfall not Found. No evidence of burying, no overgrown vegetation, and no sign of a drainage channel.
DOU-112612	No								No			No	No																		There appears to be a stream that runs directly below a double catch basin and out a culvert
DOU-112715	No								No			No	No																		Slope may need eventual reinforcement to prevent outfall collapse.
DOU-112802	No								Yes	Moderate		Yes	No																		Outfall inspection completed via drone. Outfall is also CSO outfall 053. Dry weather flow, grate over outfall
DOU-112819	No								No			No	No																		Sedimentation is not within pipe but in conveyance. 1 ft thick in places
DOU-112943																															Structure is the downstream end of an unmapped, 36" RCP culvert.
DOU-112948																															Structure is the upstream end of an unmapped, 36" RCP culvert.
DOU-113199																															Appears to be inlet for culvert. No evidence of outfall in surrounding area.
DOU-113328	No								No			No	No																		Open drainage outfall directing flow from roadway to catch basin. Outfall is dry but substantial flow in catch basin from inlet. No indication the catch basin is connected to a culverted stream.
DOU-113347	No								No			No	No																		Extreme sedimentation burying outfall. Water would be unable to exit pipe during a flow event

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-113349	8/19/2020 14:04	43.0057357	-71.424244	Found	Unnamed stream	1	Pipe	RCP	Round		None	Dense overgrown vegetation growing over outfall, unable to view pipe well enough to fully assess	N/A	N/A	N/A	N/A		No		None	None
DOU-113348	9/4/2020 13:23	43.0042859	-71.423914	Found		1	Pipe	RCP	Round	36	Spalling, Separation between pipe and FES	Slight spalling along bottom half of invert	Flared End	Fair	N/A	N/A		Moderate	Channelization from outfall flow		<25%
DOU-113350	8/19/2020 14:11	43.0062367	-71.42444	Found	Unnamed stream	1	Pipe	RCP	Round	24	None		Projecting	Good	N/A	N/A		No		None	None
DOU-113351	5/26/2020 15:43	43.006914	-71.424573	Not Found	Could Not Access																
DOU-113356	8/19/2020 19:09	43.0079026	-71.434532																		
DOU-113370	8/19/2020 13:56	43.0051418	-71.424335	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Precast Concrete	Good	Headwall shared with a double barrel culvert	Moderate	Channelization	None	<25%
DOU-113437	8/19/2020 13:46	43.0042816	-71.423932	Found		1	Pipe	RCP	Round	30	None		Flared End	Good	N/A	N/A		Severe	Plunge pool and standing water in eroded conveyance	None	None
DOU-113437	8/19/2020 13:36	43.0029888	-71.422404	Not Found																	
DOU-113634	8/19/2020 18:06	43.0003332	-71.423934	Found		1	Pipe	RCP	Round	24	None		Flared End	Good	N/A	N/A		Moderate	Channelization	None	None
DOU-113650	8/19/2020 17:28	43.0008004	-71.426165	Found		1	Pipe	CMP	Round	24	Collapsing	Slightly collapsed	N/A	N/A	N/A	N/A		No		None	50- 75%
DOU-113652	8/19/2020 17:36	43.0008508	-71.425907	Found		1	Pipe	CMP	Round	12	Corrosion,Collapsing	Pipe has corroded away and tunnel is now collapsing, burying the outfall			N/A	N/A		Moderate	Channelization	None	>75%
DOU-113653	8/19/2020 17:43	43.0011581	-71.425276	Not Found																	
DOU-113664	8/19/2020 18:44	43.0011459	-71.435409	Not Found																	
DOU-113689	8/19/2020 17:50	43.0015608	-71.424117	Found		1	Pipe	CMP	Round	24	Corrosion,Collapsing	Crushed pipe end	Flared End	Good	N/A	N/A		Moderate	Plunge pool after flared end	None	None
DOU-113708	8/19/2020 14:37	43.0022271	-71.423694	Found		1	Pipe	RCP	Round		Collapsing	Pipe collapsing	Projecting	Poor	N/A	N/A		Moderate	Visible erosion	None	None
DOU-113709	9/23/2020 18:22	43.0024319	-71.42297	Found		1	Pipe	RCP	Round	30	None		Mitered	Good	N/A	N/A	Hill is eroding around outfall	Moderate	Dirt is eroding the hill in the flow path of the outfall	Little	None
DOU-113733	8/19/2020 18:12	43.0001596	-71.423036	Found		1	Pipe	RCP	Round	36	None		Flared End	Good	N/A	N/A		No		None	None
DOU-113764	1/15/2020 13:49	42.9916839	-71.418918	Could Not Access																	
DOU-113778	1/14/2020 19:24	42.9937513	-71.418722	Found		1	Pipe	CMP	Round	18	Collapsing	Outfall is completely submerged under water	Projecting	Fair	Stone	Good	Good condition no signs of degradation	Moderate	Some channelization and minor bank erosion	None	50- 75%
DOU-113800	1/14/2020 19:31	42.9938405	-71.416375	Found		1	Pipe	CMP	Round	12	Collapsing	Pipe almost full of sediment	Projecting	Fair	N/A	N/A		No		None	>75%
DOU-114034	8/20/2020 13:38	42.9991301	-71.399478	Not Found																	
DOU-114072	1/15/2020 13:53	42.9900342	-71.417057	Not Found																	
DOU-114150	8/19/2020 13:07	43.0072443	-71.415953	Found		1	Pipe	RCP	Round	24	None		Flush with Headwall	Good	Precast Concrete	Good		No		None	<25%
DOU-114153	8/12/2020 16:57	43.0077751	-71.416661	Found		1	Pipe	RCP	Round	15	None		Flush with Headwall	Good	Reinforced Concrete	Good		No		None	None
DOU-114154	8/12/2020 17:32	43.0073658	-71.417995	Found		1	Pipe	RCP	Round	48	None	Spalling between pipe invert and edge of flared end section at connection	Flared End	Fair	N/A	N/A		Moderate	Channelization from wet weather flows	None	<25%
DOU-114161	8/12/2020 16:48	43.0095346	-71.418707	Found		1	Pipe	RCP	Round	15	None		Flush with Headwall	Good	N/A	N/A		Moderate	Some channelization from wet weather flow	None	25- 50%
DOU-114162	8/19/2020 13:14	43.0054769	-71.415181	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	N/A	N/A		Moderate	Channelization	None	None
DOU-114271	8/7/2020 15:45	43.005819	-71.41403	Found, Not an Outfall																	
DOU-114267	8/7/2020 15:51	43.0039371	-71.411367	Found		1	Pipe	RCP	Round	24	Spalling,Corrosion	Spalling at invert with exposed rebar	Flush with Headwall	Fair	N/A	N/A		Moderate	Slight flow channel	None	None
DOU-114275	8/7/2020 13:08	43.0077991	-71.401943	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good		No		None	50- 75%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-113349	No								No			No	No																		
DOU-113348	Yes	Brown	None	None	None	None, Bacteria sheen	Potential		Yes	Trickle	0.3	No	Yes	No	DOU-113348		0.05	0.05		574	0.28	19.3	6.65	5.45	17.1						Surfactants were unable to be tested at time of inspection.
DOU-113350	No								No			No	No																		
DOU-113351																															Outfall not Found. No overgrown vegetation blocking the slope or evidence of a flow path from outfall.
DOU-113356																															Not accessible. Fence and highway blocking access.
DOU-113370	No								No			No	No																		Half filled with standing water. Adjacent to culvert with flowing water.
DOU-113437	No								No			No	No																		
DOU-113437																															Outfall not Found, mapped location is in the middle of a parking lot. A privately owned open drain was Found nearby
DOU-113634	No								No			No	No																		
DOU-113650	No								No			No	No																		
DOU-113652	No								No			No	No																		Mostly filled with sediment. Pipe has completely deteriorated away and now flows through an earthen tunnel
DOU-113653																															Likely on headwall of stream culvert and submerged. Culvert more than 50% full
DOU-113664																															Outfall not Found, area surrounding mapped location is lawns and driveways
DOU-113689	No								No			No	No																		
DOU-113708	No								No			No	No																		
DOU-113709	No								No			No	No																		
DOU-113733	No								No			No	No																		
DOU-113764																															Not accessible
DOU-113778	No								No			No	No																		May need to be replaced/repaired. No flow in catch basin
DOU-113800	No								No			No	No																		Sediment may need to be cleared out.
DOU-114034																															Outfall not Found. Upstream catch basins not in their mapped locations either.
DOU-114072																															Could not locate
DOU-114150	No								No			No	No																		
DOU-114153	No								No			No	No																		Shares headwall with DOU-121622
DOU-114154	No								No			No	No																		
DOU-114161	No								No			No	No																		
DOU-114162	No								No			No	No																		
DOU-114271																															Structure is an inlet
DOU-114267	Yes	Orange	None	None	None	None	Unlikely		No			No	No																		
DOU-114275	No								No			No	No																		Appears to also function as an overflow for pond across the street. Standing water in conveyance and pipe but no flow in upstream catch basin

[illegible]

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)		
Outfall ID																															Overall Comments
															DOU-114286																Size of outfall suggests this may be a culvert stream, flow had no odor, color or floatables.
DOU-114286	No								Yes	Moderate	0.3	No	Yes	No				0	0.06	0.4	855	0.42	19.5	7.29	6.84	3					Outfall completely buried in yard waste. Could not inspect
DOU-114294																															2 new outfalls Found at upstream end of culvert.
DOU-114311	No								No			No	No																		Structure is a culvert/bridge, above diameter threshold for culvert inspections (approx 24 ft)
DOU-114334																															Outfall certainly exists here based on observed staining within basin but vegetation is too overgrown to identify and inspect. Recommend revisit in the fall when vegetation has thinned. Source of staining likely originates from direction of highway
DOU-114338																															
DOU-114337	Yes	Brown	None	Faint, Orange tint	Slight	Slight,	Potential	Dark brown staining, obvious sheen and bubbles	No			Yes	Yes	Yes	5.20.20 #4																Sheen, brown orange staining and veg stress
DOU-114339	No								No			No	No																		Based on ground level grading outfall may be acting as an inlet. Smaller PVC pipe inside concrete pipe is buried under sediment and yard waste. Heavy yard waste dumping along sides of detention basin
DOU-114459	No								Yes	Trickle	0.1	No	Yes	No	DOU-114459		0	0.08	0.5	619	0.3	19.1	6.5	3.37	128						Flow is most likely infiltrating groundwater, as observed within pipe.
DOU-114460	No								Yes	Moderate	0.75	No	Yes	No	DOU-114460		0	0	0.25	611	0.3	19.2	6.77	6.3	2						Flow is clear with no associated staining/growth or odor. May be a small culverted stream.
DOU-114496																															Outfall not Found; outlet pipes from catch basin shown on map do not exist
DOU-114497																															Outfall not Found; outlet pipes from catch basin shown on map do not exist
DOU-114594																															Could not locate outfall. Photo taken of mapped location
DOU-114609																															Outfall not Found and may not exist as no catch basins exist along this road. No drainage channel observed in roadside area, stormwater runoff likely sheet flows off of shoulder.
DOU-114635																															Outfall not Found - outlet channel identified (pictured) but no sign of outlet pipe. Unearthed sections of RCP drain pipe present nearby (also pictured).
DOU-114665	No								No			No	No																		Outfall in power line easement. Very overgrown surrounding structure
DOU-114666																															Outfall likely on other side of two fence lines, no clear way to access it at this time.
DOU-114775	No								No			No	No																		Outfall is submerged. Water present but stagnant, no flow from immediate upstream catch basin. Location was also inspected as a culvert
DOU-114778	No								No			No	No																		Projecting pipe over steep rip rap armored slope. Trash and debris in the area. Rip rap appears to sufficiently protect the slope from erosion
DOU-114866	No								No			No	No																		
DOU-114951																															Double mapping of open drainage
DOU-114952	No								No			No	No																		
DOU-114953																															
DOU-115004																															Outfall supposedly located on hill between two houses; no sign of structure or drainage channel.

[illegible]

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-114955	Yes	Orange	Easily detected, Sewage	None	Slight	Slight, Suds and slime	Potential		Yes	Trickle	1	No	Yes	No	Dou-114955		0.5	0	0.25	2007	1.473	9.8	6.88	8.77	2						E. coli result was collected using MPN method. Salinity calculated using conductivity
DOU-114984	Yes	Brown	None	None	None	None	Unlikely	Brown benthic pipe growth is only indicator	Yes	Trickle	0.3	No	Yes	No	DOU-114984	Chloride	0	0	0.25	615	0.3	12.5	7.39	8.19	345				176		Only 1 outfall pipe flowing at this location. Homeowner says outfall was extended around 2010 when old pipes were Found completely buried. E. coli exceeded benchmark
DOU-114994	Yes	Dark Brown/gray	Easily detected, Slight sewage odor	None	None	None, Suds	Potential	Streambed immediately downstream of outfall is dark brown/gray. Water coming from outfall has sewage odor.	Yes	Trickle	2	No	Yes	No	DOU-114994	Chloride	0.25	0	0.5	821	0.41	10.2	6.94	8.25	162				251		
DOU-114994	Yes	Orange	Easily detected, Sewage	Visible, Orange brown	Slight	Slight, Foam or small pieces of the benthic growth	Potential	Sewage odor, color, floatables, and growth.	Yes	Moderate	0.5	No	Yes	No	114994	Chloride	0	0	0.25	1448	0.72	23.8	7.07	4.84	240						Revisit to resample suspected sewage input noted during previous inspection
DOU-115006																														Outfall apparently located between two homes on a hill. No sign of structure or drainage channel was Found and neighbors did not know of any structures either.	
DOU-115008																														Found but extremely difficult to access. Located at bottom of very steep slope in a small swamp. Large diameter, 50% submerged	
DOU-115013																														No sign of outfall or drainage channel. Area was not particularly overgrown and did not contain yard waste.	
DOU-115018																														Could not access due to homeowner fence	
DOU-115021												No																		Culverted stream. Outfall are in upgradient drainage structures.	
DOU-115072																														Collector location inaccurate, outfall was likely extended during new construction and may be located behind fence with no gate (end of fence is a series of objects to continue the barrier)	
DOU-115035	Yes	Orange	Faint, Slight odor	None	None	None, Suds	Potential		Yes	Moderate	1	No	Yes	No	Dou-115035		0	0	0.5	2015	1.471	10	7.19	10.15	1				1080		E. coli result was less than 1 MPN/100 mL. Salinity calculated using conductivity
DOU-115141	No								No			No	No																	Appears to be culverted stream with 2 culverts. 1 culvert is completely submerged, other is mostly submerged. Outfall is open drainage from roadway. Standing water, no flow confirmed in upstream catch basin	
DOU-115196	No								No			No	No																		
DOU-115197	No								No			No	No																		
DOU-115198	No								No			No	No																	Pipe roughly 75% full of sediment	
DOU-115199	No								No			No	No																	Some corrosion and small holes in pipe. About 40% full of sediment	
DOU-115243	No								No			No	No																	Flared end RCP surrounded by thick vines	
DOU-115247																														Outfall could not be located. Mapped location is in the soccer field. Possibly developed over	

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-115270	7/29/2020 17:07	43.0141179	-71.452575	Not Found																	
DOU-115342	8/12/2020 13:13	43.0121128	-71.438092	Found		1	Pipe	Unclear	Unclear		Collapsing	Outfall is almost completely buried in sediment, and pipe seems to have collapsed as evidenced by apparent sinking of the surrounding earth. Clear defined drainage channel, sediment most likely originating from roadway sand, and floatable litter present makes it clear that this is in fact an outfall in poor condition.	Unclear	Poor	N/A	N/A		Moderate	Clear, defined drainage channel	Little	>75%
DOU-115304	8/12/2020 14:37	43.0115917	-71.437791	Found		2	Pipe	RCP	Round	18	None	Two pipes: RCP is in good condition, CMP has corrosion along invert	Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-115345	8/12/2020 13:04	43.0121385	-71.43916	Not Found																	
DOU-115346	8/12/2020 14:57	43.0138236	-71.438397	Could Not Access																	
DOU-115348	8/12/2020 13:31	43.0128854	-71.437046	Could Not Access																	
DOU-115349	8/12/2020 13:25	43.0126243	-71.436541	Not Found																	
DOU-115360	8/12/2020 14:40	43.0116987	-71.438167	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Reinforced Concrete	Fair	Embankment behind headwall very washed out / eroded and undermining is occurring on the front end of the headwall below the invert.	Severe	Deep channels from wet weather flow, 2 ft high and approx 8 inches deep	None	None
DOU-115363	8/12/2020 13:04	43.0120672	-71.438482	Found		1	Pipe	CMP	Round	12	Corrosion,Collapsin g	Outfall pipe appears have lost its end portion to corrosion after exposure from the eroded surrounding land. Stand alone rebar is present that may indicate where original invert was, and current invert of the rusted and crumbling pipe is about 12 inches behind the rebar.	Projecting	Poor	N/A	N/A		Moderate	Clearly defined flow channel	None	<25%
DOU-115464	5/4/2020 13:37	43.0253434	-71.479019	Not Found																	
DOU-115486	5/29/2020 17:31	43.0293208	-71.484685	Found	Milestone Brook	1	Pipe	RCP	Round	30	None		Flush with Headwall	Good	Reinforced Concrete	Poor	Headwall is being undermined by the plunge pool.	Moderate	Plunge pool, some channeling	None	None
DOU-115503	7/29/2020 16:35	43.0269557	-71.467226	Found		1	Pipe	RCP	Round	36	None	Good condition, no signs of degradation	Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-115503	8/7/2020 16:51	43.0269784	-71.46726	Found		1	Pipe	RCP	Round	36	None		Flush with Headwall	Good	Stone	Good		Severe	Erosion along banks up to 5' high and 2.5' deep	None	None
DOU-115503	8/14/2020 14:02	43.0269691	-71.467169	Found		1	Pipe	RCP	Round	36	None		Flush with Headwall	Good	Stone	Good		Severe	Bank erosion	None	None
DOU-115589	8/14/2020 15:36	43.0273719	-71.486033	Found		1	Pipe	RCP	Round	24	Spalling	Spalling along wet weather flow path within pipe, no exposed rebar	Projecting	Fair	Reinforced Concrete	Fair	Spalling at invert of outfall and at various points on headwall. Some undermining also occurring along foot of headwall.	Moderate	Undermining of headwall	None	None
DOU-115673	5/4/2020 13:55	43.0239378	-71.477403	Found	Unnamed swamp	1	Pipe	RCP	Round	30	Spalling	Outfall condition not affecting performance. Spalling only.	Projecting	Fair	Stone	Fair	Mortar cracked in some places, rebar visible but condition is acceptable.	No		Little	25- 50%
DOU-115818	7/29/2020 13:17	43.0300517	-71.455712	Not Found																	
DOU-115878	7/29/2020 14:29	43.0313226	-71.456005	Found		1	Pipe	RCP	Round	24	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		No		None	<25%
DOU-115889	5/29/2020 18:31	43.0317651	-71.452353	Found		1	Pipe	RCP	Round	15	None		Projecting	Good	N/A	N/A		No		None	25- 50%
DOU-115943	11/26/2019 17:04	43.0230233	-71.452276	Found		1	Pipe	RCP	Round	24	None				Stone	Good		No		None	25- 50%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-115270																															Could not locate outfall, possibly buried
DOU-115342	No								No			No	No																		
DOU-115304	Yes	Brown	None	Visible, Brown staining	Cloudy	Cloudy,	Potential	Brown staining	No			Yes	No																		Two pipes 1 RCP and 1 corrugated metal pipe. Sheen and strong brown staining in channel but no dry weather flow.
DOU-115345																															No evidence of outfall in the area
DOU-115346																															Pipe not at indicated position on map. Appears to be large inlet nearby for flowing stream, but behind gate/fence. Does appear to connect to catch basin on Holmes Dr
DOU-115348																															Fencing blocked access to outfall. Headwall is visible and there does not appear to be any dry weather flow
DOU-115349																															Possibly buried under rock and debris
DOU-115360	No								No			No	No																		Standing water present but no dry weather flow. Plunge pool immediately downstream of outfall and significant sand deposits within channel.
DOU-115363	No								No			No	No																		Significant sediment deposits are present in the channel downstream from the outfall, and the invert is much lower than the ground immediately downstream of the outfall.
DOU-115464																															Outfall not Found - likely buried under excessive amounts of yard waste, pictured. Upstream catch basin dry with no indication of flow.
DOU-115486	No								Yes	Moderate	0.5	No	Yes	No	DOU-115486		0	0	0.75	839	0.41	16.8	6.65	8.32	5						Plunge pool filled with road debris that is undermining about 50% of headwall. Headwall is <10 ft from major roadway. Some rusty colored staining in pipe and channel. Surfactants exceeded benchmark
DOU-115503	No								Yes	Moderate	2	No	Yes	No			0.25	0.2	0.5	683	0.34	19.7									E. coli sampling issues.
DOU-115503	Yes	Black stain	None	None	None	None	Unlikely		Yes	Trickle	0.1	No	Yes	No	DOU-115503		0.25	0	0.5	690	0.37	20.9	7.52	6.65	548						Outfall inspection is part of a revisit to verify previous samples.
DOU-115503	No								Yes	Moderate	2	No	Yes	No			0	0.04	1.5	716	0.35	19.1			687						Full assessment not performed, part of resampling effort for E. coli.
DOU-115589	No								No			No	No																		
DOU-115673	No								No			No	No																		Standing water present, very clear, no smell or discoloration. No flow.
DOU-115818																															Could not locate outfall
DOU-115878	No								Yes	Trickle	3	No	Yes	No			5	0.2	0.5	888	0.43	19.2									E. coli sampling issues, revisit to collect sample
DOU-115889	No								No			No	No																		Approximately 30% full of sediment
DOU-115943	No								No			No	No																		Standing water, no flow. Confirmed in upstream catch basin

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-115945	11/26/2019 17:02	43.0228667	-71.452416	Found		1	Pipe	RCP	Round	15	Spalling				Stone	Good		No		None	25- 50%
DOU-115946	11/26/2019 17:09	43.0229372	-71.451682	Found		1	Pipe	RCP	Round	18	None				Stone	Fair		Moderate		None	25- 50%
DOU-115992	8/12/2020 15:58	43.0138458	-71.421407	Found		1	Pipe	RCP	Round	18	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-116003	8/12/2020 16:10	43.0128212	-71.421148	Not Found																	
DOU-116028	8/12/2020 16:23	43.0120483	-71.419084	Found		1	Pipe	RCP	Round	24	None		Flush with Headwall	Good	Stone	Good		Moderate	Significant erosion and channeling	None	None
DOU-116083	8/14/2020 12:47	43.0364698	-71.482263	Found		12	Pipe	RCP	Round		None	Good condition, no signs of degradation	N/A	N/A	N/A	N/A		No		None	<25%
DOU-116153	8/14/2020 12:41	43.0404546	-71.483149	Not Found																	
DOU-116126	5/29/2020 13:47	43.0361944	-71.475786	Found	Merrimack River	1	Pipe	RCP	Round	24	None		Projecting	Good	Stone	Fair	Cracked mortar, some stones dislodged around edge of headwall	No		None	25- 50%
DOU-116157	8/14/2020 12:28	43.0416086	-71.485145	Found	Milestone Brook	1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Reinforced Concrete	Good		Moderate	Bank erosion	None	<25%
DOU-116158	7/31/2020 15:46	43.0427968	-71.484145	Found		1	Pipe	PVC	Round	24	None	Dirt around pipe end beginning to fill pipe in from side	Projecting	Fair	Reinforced Concrete	Good		Moderate	Channelization	Little	50- 75%
DOU-116224	7/29/2020 15:25	43.0343307	-71.46444	Found		1	Pipe	RCP	Round	24	Spalling	Minor invert spalling	Projecting	Good	N/A	N/A		Moderate	Channelization	None	None
DOU-116224	8/7/2020 16:29	43.0343331	-71.464392	Found		1	Pipe	RCP	Round	24	Spalling,Corrosion	Spalling around invert and within pipe indicates long term and consistent flow at this location. Rebar is also exposed and rusted.	Projecting	Fair	N/A	N/A		Moderate	Channelized flow	None	None
DOU-116263	5/29/2020 13:33	43.0350131	-71.478757	Could Not Access																	
DOU-116271	7/29/2020 13:31	43.034353	-71.464473	Found		1	Pipe	RCP	Round	16	Spalling,Corrosion	Generalized spalling and corrosion	Projecting	Fair	N/A	N/A		Severe	Channelization	None	None
DOU-116289	7/29/2020 15:49	43.0344138	-71.471411	Found		1	Pipe	RCP	Round	12	None	Good condition, no signs of degradation	Flush with Headwall	Good	Masonry	Good		Moderate	Minor bank erosion	None	None
DOU-116327	7/29/2020 12:25	43.036901	-71.454462	Could Not Access																	
DOU-116349	7/29/2020 12:42	43.0330303	-71.459102	Found		1	Pipe	PVC	Round	12		Unable to fully assess because outfall is mostly buried	Flush with Headwall	Good	N/A	N/A		Moderate	Channelization	None	>75%
DOU-116357	7/29/2020 12:31	43.0341046	-71.457719	Found		1	Pipe	HDPE	Round	12	None	Good condition, no signs of degradation	Flush with Headwall	Good	N/A	N/A		No		None	None
DOU-116372	7/29/2020 15:00	43.0345291	-71.45889	Found		1	Pipe	VC	Round	12	collapsing	Outfall in critical condition, end of pipe has collapsed in	Flush with Headwall	Poor	Stone	Fair	Some displaced stones	No		None	<25%
DOU-116372	8/7/2020 17:12	43.0344168	-71.4588	Found		1	Pipe	VC	Round	12	Cracking,Collapsing	End of pipe broken	Flush with Headwall	Poor	Stone	Fair	Some displaced stones	No		None	<25%
DOU-116372	8/14/2020 13:12	43.0345705	-71.459326	Found		1	Pipe	VC	Round	12	Cracking,Collapsing	End of pipe broken	Flush with Headwall	Poor	Stone	Fair	Some displaced stones	No		None	<25%
DOU-116374	5/29/2020 18:39	43.034482	-71.456954	Found		1	Pipe	RCP	Round	24	None		Flared End	Good	N/A	N/A		No		None	25- 50%
DOU-116380	5/29/2020 18:49	43.0350434	-71.456733	Not Found																	
DOU-116491	5/29/2020 14:53	43.045948	-71.495134	Found, Not an Outfall																	
DOU-116495	5/29/2020 14:31	43.0458721	-71.497395	Found		1	Pipe	RCP	Round		None	Partially buried and unable to assess structurally	N/A	N/A	N/A	N/A		No		None	>75%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)		
Outfall ID																															Overall Comments
DOU-115945	No								No			No	No																	Standing water but no flow. Confirmed in upstream catch basin	
DOU-115946	No								No			No	No																	Excess organic debris blocking outfall from yard waste	
DOU-115992	No								No			No	No																	Flows into very small landscaped basin with 6” HDPE outlet	
DOU-116003																														Outfall not Found but muddy drainage ditches were present in the general area with roof leaders discharging there also. Adjacent resident likely made these ditches as a result of apparent drainage issues	
DOU-116028	No								No			No	No																	Large pipe with a deep channelized conveyance. Appears to see heavy flows	
DOU-116083	No								No			No	No																		
DOU-116153												No																		Could not located outfall, may have been removed or buried during development of adjacent office building	
DOU-116126	Yes	Orange	None	None	None	None, Sheen from iron bacteria (separates when disturbed)	Unlikely	Orange benthic growth likely due to iron bacteria. May be groundwater inflow.	Yes	Trickle	3	No	Yes	No	DOU-116126	E. coli	0	0	0.25	1115	0.56	15.4	6.29	5.77	3					E. coli was the pollutant of concern for this section of the Merrimack River	
DOU-116157	No								No			No	No																	Standing water present but no flow	
DOU-116158	No								No			No	No																		
DOU-116224	No								Yes	Moderate		No	Yes	No			0	0.4	0.5	672	0.33	22.4									
DOU-116224	No								Yes	Trickle	0.2	No	Yes	No	DOU-116224		0	0.08	0.25	635	0.31	21	7.04	5.9	10						This inspection was part of a revisit to verify previous sampling.
DOU-116263																														Outfall submerged due to surcharged culvert. Can’t see or access. Upstream Catch basins are also surcharged, not possible to determine if there is any flow through this local system at this time.	
DOU-116271	No								No			No	No																		
DOU-116289	No								No			No	No																		
DOU-116327																														Could not access outfall, area fenced off	
DOU-116349	No								No			No	No																	Almost completely covered by yard waste pile	
DOU-116357	No								No			No	No																	Steep slopes and pond made it difficult to obtain a good photo of the outfall	
DOU-116372	No								Yes	Trickle	3	No	Yes	No			0	0.4	0.5	831	0.41	22								E. coli sampling issues.	
DOU-116372	No								Yes	Moderate	0.25	No	Yes	No	Dou-116372		0.35	0.05		792	0.39	18.8	7.82	5.97	2420						Inspection part of revisit to verify previous samples
DOU-116372	No								Yes	Moderate	3	No	Yes	No			0	0.12	2	865	0.43	20.7			548						Full assessment not performed, part of a resample for E. coli. Surfactant result may be skewed. Surfactant tube was deconned during last sampling round and may still have residual soap
DOU-116374	No								No			No	No																	Standing water present due to surrounding wetland area. No active flow	
DOU-116380																														Recent construction in the area, system may have been moved or buried	
DOU-116491																														Culvert, not an outfall. Stream appears heavily impaired	
DOU-116495	No								No			No	No																	Pipe barely visible and almost completely filled in with sediment.	

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-116496	5/29/2020 15:01	43.0450449	-71.494437	Found, Not an Outfall																	
DOU-116503	5/29/2020 14:39	43.0460389	-71.496683	Found		1	Pipe	RCP	Round	15	None		Flush with Headwall	Good	Stone	Good		No		None	50- 75%
DOU-116506	5/29/2020 15:10	43.0451191	-71.492903	Found		1	Pipe	RCP	Round	15	Spalling	Some chipping and cracking at top of pipe	Flared End	Fair	N/A	N/A		No		None	None
DOU-116513	5/29/2020 15:19	43.0451897	-71.491622	Found		1	Pipe	RCP	Round	18	Spalling,Corrosion	Exposed rebar and bottom of inlet has been chipped away	Flush with Headwall	Fair	Stone	Fair	Minor cracking in mortar	Moderate	Riprap present but minor plunge pools exist further down the slope	None	None
DOU-116517	5/29/2020 15:39	43.0454316	-71.490913	Not Found																	
DOU-116536	5/29/2020 15:48	43.0458033	-71.488462	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-116539	5/29/2020 15:58	43.0458616	-71.487713	Found		1	Pipe	RCP	Round	15	Buried	Pipe is almost entirely buried, condition unclear	Flush with Headwall	Poor	Stone	Fair	Headwall is almost entirely buried, condition unclear	No		None	>75%
DOU-116542	5/29/2020 16:05	43.0459094	-71.48681	Found		1	Pipe	RCP	Round	15	None		Flush with Headwall	Good	Stone	Good		No		None	25- 50%
DOU-116545	5/29/2020 16:16	43.0458432	-71.486071	Not Found																	
DOU-116640	5/26/2020 18:11	42.9906092	-71.494632	Found	Piscataquog River	1	Pipe	RCP	Round	48	Corrosion,Collapsin g	Rebar is exposed and corroded. Invert is thin from spalling	Projecting	Fair	Reinforced Concrete	Fair	Headwall seems to be bowing under pressure from the adjacent hillside, with some cracking at the joint. Erosion beneath headwall footing from river may jeopardize structural integrity in the future.	No		None	None
DOU-116753	9/23/2020 12:53	42.9874669	-71.481676	Found		1	Pipe	RCP	Irregular	24	None	Outfall in good condition	Flared End	Good	Stone	Good	Loose riprap stone	Severe	Severe erosion 6-7 ft plunge pit and torn filter fabric	None	None
DOU-116870	11/22/2019 18:07	42.9810364	-71.48004	Found	Piscataquog River	1	Pipe	Clay Coated Cast Iron	Round	24	Cracking	Outer clay layer is broken in half with large pieces gone. Cast iron layer is intact.			Stone	Fair	Stone and brick	Moderate		None	None
DOU-116870	7/31/2020 14:50	42.9810995	-71.479902	Found	Piscataquog River	1	Pipe	Cast Iron	Round	18	Corrosion	Pipe is quite rusted and was at one point encased in clay, which has since broken away.	Projecting	Fair	Stone	Fair	Remnants of an old brick headwall present	Moderate	Standing water exists downstream of outfall in what appears to be a plunge pool	Little	None
DOU-116978	5/26/2020 17:46	42.9729149	-71.486607	Found		1	Pipe	RCP	Round	18	Spalling	Spalling at invert. Rebar also placed horizontally within pipe.	Flush with Headwall	Fair	Stone	Good		No		None	25- 50%
DOU-117026	8/14/2020 12:32	43.0416145	-71.48532	Found		1	Pipe	RCP	Round	15	Spalling,Corrosion	Minor spalling and some corrosion in FES due to small spots of exposed rebar	Flared End	Fair	N/A	N/A		Moderate	Some channelization	None	25- 50%
DOU-117040	5/13/2020 13:48	42.9050222	-71.446943	Found		1	Pipe	RCP	Round	48	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-117043	5/29/2020 15:29	43.0449357	-71.492007	Found, Not an Outfall																	
DOU-117073	8/6/2020 14:23	42.9705747	-71.421971	Found		1	Pipe	Cast Iron	Round	18	None		Flush with Headwall	Good	Stone	Good	Stone wing walls	No		None	None

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments
DOU-116496																														Structure is a culvert inlet with associated catch basins downstream. Flow clearly originates from wetland area there.
DOU-116503	No								No			No	No																	Outfall is about 60% full of sediment, with heavy sediment deposits present, reaching approx 20 ft from the outlet.
DOU-116506	No								No			No	No																	Sediment delta of moderate size near outlet composed of course sand
DOU-116513	No								No			No	No																	Outfall appears slightly misshapen because it approaches the headwall at an angle but was cut to be flush with headwall. Pipe may also function as a culvert during times of high water, as daylight from the upstream CB illuminates two pipes draining to either side of road, connecting the wooded areas on both sides.
DOU-116517																														Outfall not Found. Armored slope was not particularly shrouded in vegetation or organic waste, no evidence of headwall or flow channel. Nearby culvert was also checked but no sign of outfall there either.
DOU-116536	No								No			No	No																	Moderate long term sediment build up around outfall.
DOU-116539	No								No			No	No																	Outfall almost completely buried, diameter taken from GIS drain pipe layer
DOU-116542	No								No			No	No																	50% full of sediment. Outlet to roadside drainage swale
DOU-116545																														Outfall not Found, upstream catch basin only had pipes connecting to other catch basins; DRN-209344 does not appear to exist. Would assume that this system outlets to DOU-116542
DOU-116640	No								Yes	Substantial	2.5	No	Yes	No	DOU-116640	pH	0	0	1.5	1072	0.53	14.2	7.58	7.79	67					Outfall located on side of steep bank and headwall is perched over river. Surfactants exceeded benchmark
DOU-116753	No								No			No	No																	Severe erosion, not hurting outfall but damaging surrounding area
DOU-116870	No								Yes	Moderate	1	No	Yes	No	DOU-116870	pH	0.75	0	0.75	116.1	0.081	8	7.72	9.71	770					
DOU-116870	No								No			No	No																	Outfall was revisited for resampling due to suspected sewage input noted in previous inspection. No flow was observed during this inspection
DOU-116978	No								No			No	No																	Outfall located/draining into residential yard. Drainage ditch has been turned into a rain garden by owner.
DOU-117026	No								No			No	No																	
DOU-117040	No								Yes	Moderate	0.25	No	Yes	No	DOU-117040		0	0	0.25	170.5	0.08	7.9			2					
DOU-117043																														Culvert
DOU-117073	No								No			No	No																	Cast iron 18" with small granite wing walls. Appears to discharge into upward sloping area. Nearby buried pipe, possibly abandoned

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-117087	8/12/2020 14:00	43.0169166	-71.437116	Could Not Access																	
DOU-117109	8/6/2020 13:44	42.9619215	-71.42144	Found, Not an Outfall																	
DOU-117183	5/4/2020 16:14	42.9799539	-71.475185	Found	Piscataquog River	1	Pipe	RCP	Round	36	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-117291	11/22/2019 17:27	42.981488	-71.481558	Not Found																	
DOU-117480	8/6/2020 13:47	42.9619179	-71.421443	Found	Cohas Brook	1	Pipe	RCP	Round	12	Spalling	Invert spalling	Flush with Headwall	Fair	Stone	Good	Shares headwall with culvert	No		None	None
DOU-117481	8/6/2020 13:36	42.9617879	-71.424657	Found		1	Pipe	VC	Round	12	None		Projecting	Good	Stone	Good	Shares headwall with small culvert	No		None	None
DOU-117681	7/31/2020 13:03	42.9471907	-71.397023	Found		1	Pipe	HDPE	Round	18	None	Good condition, no signs of degradation	Flush with Headwall	Good	Masonry	Good		Moderate	Channelization, bank erosion	Little	None
DOU-117683	7/31/2020 13:08	42.9470644	-71.396951	Found, Not an Outfall									Flush with Headwall	Good	Stone	Good		No		Little	<25%
DOU-117685	7/31/2020 13:07	42.9470541	-71.396967	Found, Not an Outfall									Flush with Headwall	Good	Stone	Good		No		Little	<25%
DOU-117693	7/31/2020 12:53	42.9448044	-71.395548	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-117699	7/31/2020 12:46	42.9438718	-71.395134	Found		1	Pipe	HDPE	Round	18	None	Good condition, no signs of degradation	Flush with Headwall	Good	Masonry	Good		Moderate	Minor bank erosion	None	<25%
DOU-117713	7/31/2020 12:40	42.9419276	-71.39234	Not Found																	
DOU-117717	8/21/2020 13:45	42.9498798	-71.451681	Found		1	Pipe	RCP	Round	12	Spalling	Minor invert spalling	Flush with Headwall	Good	Reinforced Concrete	Fair	Crack in headwall above outfall pipe	No		None	<25%
DOU-117947	7/29/2020 18:29	42.9445759	-71.458313	Found		1	Pipe	RCP	Round	24	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-117948	8/21/2020 13:03	42.9447155	-71.458421	Found, Not an Outfall																	
DOU-117949	8/21/2020 13:04	42.9446951	-71.45852	Found, Not an Outfall																	
DOU-117950	8/21/2020 13:09	42.944838	-71.458537	Found		1	Pipe	RCP	Round	12	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-117951	8/21/2020 13:05	42.9448514	-71.458539	Found		1	Pipe	RCP	Round	12	Spalling	Minor generalized spalling	Flared End	Good	N/A	N/A		No		None	<25%
DOU-117952	8/21/2020 13:11	42.9448381	-71.458576	Found	Merrimack River	1	Pipe	RCP	Round	12		Limited access unable to fully assess	Projecting		Stone	Good	Riprap headwall	No		None	
DOU-118036	5/28/2020 14:15	43.0150314	-71.49352	Found, Not an Outfall	Black Brook	1	Pipe	HDPE	Round	8	Cracking,Collapsing	Pipe in very poor condition, cracked almost in half with riprap caving in above.	Projecting	Poor	N/A	N/A		No		None	<25%
DOU-118037	5/28/2020 14:32	43.0135863	-71.491888	Found, Not an Outfall		1	Pipe	HDPE	Round	8	None		Projecting	Good	N/A	N/A		No		None	25- 50%
DOU-118117	5/28/2020 14:39	43.0148422	-71.492432	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Fair	Loose blocks	No		None	<25%
DOU-118118	5/28/2020 14:06	43.0156488	-71.493609	Found	Black Brook	1	Pipe	RCP	Round	15	None		Projecting	Good	N/A	N/A		No		None	None
DOU-118182	11/26/2019 18:58	42.9677074	-71.476422	Found	Merrimack	1	Pipe	RCP	Round		None	Partially submerged	Projecting	Good	Stone	Good		No		None	None
DOU-118259	1/15/2020 16:18	42.9785575	-71.409143	Found	Unnamed brook	1	Pipe	RCP	Round	24	None	Pipe almost fully submerged in receiving water	Flush with Headwall	Good	Stone	Fair	Headwall seems angled slightly forward, possibly from pressure of road/soil behind it	Moderate	Bank erosion	Little	25- 50%

	Illicit Discharge Potential								Flow Characteristics				Sampling Parameters																Overall Comments		
	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)		
Outfall ID																															Overall Comments
DOU-117087																														Yard fencing prevented access	
DOU-117109																															
DOU-117183	No								No			No	No																	Riprap slightly displaced, liner visible. Outfall in good condition overall.	
DOU-117291																														Unable to locate because of fences along back side of all properties along river.	
DOU-117480	No								No			No	No																	Paved open drainage outfall located next to headwall	
DOU-117481	No								No			No	No																		
DOU-117681	No								No			No	No																		
DOU-117683	No								No			No	No																		Not outfall, culvert. Pipe daylights to other side
DOU-117685	No								No			No	No																		Not outfall, culvert. Pipe daylights to other side
DOU-117693	No								No			No	No																		
DOU-117699	No								No			No	No																		
DOU-117713									No																						Outfall not Found. May have been hidden by layer of leaf litter covering the ground but no evidence of a drainage channel in the area either.
DOU-117717	No								No			No	No																		Sediment building up in conveyance
DOU-117947	No								No			No	No																		
DOU-117948																															Structure is an inlet for a drainage culvert
DOU-117949																															Structure is an inlet for a drainage culvert
DOU-117950	No								No			No	No																		Leaf litter buildup in flared end. Drainage culvert that directs flow into small swale.
DOU-117951	No								No			No	No																		Leaf litter buildup in flared end. Drainage culvert that directs flow into small swale.
DOU-117952	No								No			No	No																		Inlet and outlet are reversed on map. Drainage culvert that directs flow from swale out to Merrimack River. Area fenced off limiting access and assessment
DOU-118036	No								No			No	No																		Outfall is likely a culvert. No associated catch basins and a direct line to drainage ditch on opposite side of road.
DOU-118037	No								No			No	No																		iPad did not have service at time of inspection to open collector and take photos (field notes were taken to later to later complete form). This structure is likely a culvert inlet / detention basin outlet pipe, as indicated by the lack of associated catch basins and the direct line to the opposite side of the road.
DOU-118117	No								No			No	No																		Discharges into large dry basin
DOU-118118	No								No			No	No																		Rip rap conveyance
DOU-118182	No								No			Yes	No																		Outfall inspection completed via drone. Outfall partially submerged. Will check upstream structure to confirm flow
DOU-118259	No								No			No	No																		No flow in catch basins

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-118256	11/22/2019 14:29	42.9605288	-71.45086	Found		1	Pipe	RCP	Round	36	None				N/A	N/A		Moderate		None	25- 50%
DOU-118260	1/15/2020 18:19	42.980589	-71.410714	Found, Not an Outfall																	
DOU-118288	1/15/2020 14:22	42.9885608	-71.4083	Not Found																	
DOU-118290	1/15/2020 14:04	42.9885285	-71.410578	Found	Cohas Brook	1	Pipe	RCP	Round	15	None	Very full of sediment deposits and debris. Vegetation almost blocking outfall.	Flush with Headwall	Good	Reinforced Concrete	Good		No		Little	>75%
DOU-118292	1/15/2020 14:21	42.988514	-71.408327	Not Found																	
DOU-118293	1/15/2020 15:02	42.9884023	-71.40772	Not Found																	
DOU-118294	1/15/2020 15:04	42.9885067	-71.407824	Found, Not an Outfall																	
DOU-118301	1/22/2020 15:42	42.9887248	-71.40385	Found, Not an Outfall																	
DOU-118303	1/15/2020 15:41	42.9887117	-71.40384	Found, Not an Outfall																	
DOU-118305	1/15/2020 15:52	42.9912063	-71.404341	Found, Not an Outfall																	
DOU-118306	1/16/2020 15:51	42.9912195	-71.404325	Found, Not an Outfall																	
DOU-118307	1/15/2020 15:57	42.9921355	-71.403218	Found, Not an Outfall																	
DOU-118308	1/15/2020 15:56	42.9921522	-71.403241	Found, Not an Outfall																	
DOU-118309	1/15/2020 15:55	42.9921618	-71.40326	Found, Not an Outfall																	
DOU-118310	1/15/2020 15:54	42.9921402	-71.40329	Found, Not an Outfall																	
DOU-118314	8/20/2020 13:15	42.9940882	-71.403569	Found		1	Pipe	RCP	Round	36	None		Flared End	Good	N/A	N/A		Moderate	Slight channelization immediately downstream of outfall	Little	50- 75%
DOU-118316	8/20/2020 13:09	42.9935462	-71.403552	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		Little	25- 50%
DOU-118325	1/15/2020 15:14	42.98845	-71.407021	Found	Unnamed tributary to Cohas Brook	1	Pipe	RCP	Irregular	15	None	Structure in good condition but almost full of sediment	Projecting	Good	N/A	N/A		No		None	>75%
DOU-118326	1/15/2020 15:20	42.98837	-71.406988	Found	Unnamed tributary to Cohas Brook	1	Pipe	RCP	Round	30	None	Good condition	Flared End	Good	N/A	N/A		No		None	None
DOU-118327	1/15/2020 15:17	42.988403	-71.406973	Found	Unnamed tributary to Cohas brook	1	Pipe	RCP	Irregular	15	Cracking	Some minor chipping, almost full of sediment	Projecting	Fair	N/A	N/A		No		None	>75%
DOU-118352	1/15/2020 18:53	42.9843773	-71.4132	Found, Not an Outfall																	
DOU-118417	5/20/2020 13:06	42.9980585	-71.400313	Found, Not an Outfall																	
DOU-118421	5/20/2020 13:34	42.9989051	-71.399983	Found		1	Pipe	RCP	Round	15	None	Pipe end filled with leaves	Projecting	Fair	N/A	N/A		No		None	None
DOU-118442	5/20/2020 14:17	42.9994685	-71.399094	Found		1	Pipe	RCP	Round	15	None	Flared end has slight spalling	Flared End	Fair	N/A	N/A		No		Little	None
DOU-118443	5/20/2020 14:25	42.999822	-71.398832	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		None	None
DOU-118445	5/20/2020 14:30	43.0001814	-71.398446	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		None	25- 50%
DOU-118450	5/20/2020 14:41	43.0004727	-71.398142	Found		1	Pipe	RCP	Round	15	None		Flared End	Good	N/A	N/A		No		None	25- 50%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-118256	Yes		None	None	Cloudy	Cloudy, Slight oil sheen	Potential		No			Yes	No																	Standing water in BMP. No flow confirmed in upstream catch basin	
DOU-118260																															Not outfall, appears to be an inlet. Water flowing into structure.
DOU-118288																															
DOU-118290	No								No			No	No																		Maintenance may be required to remove sediment and vegetation
DOU-118292																															
DOU-118293																															Seem to have double marked outfall DOU-109237
DOU-118294																															Not outfall. Appears to be culvert
DOU-118301																															Not outfall, appears to be culvert
DOU-118303																															Not outfall, appears to be culvert
DOU-118305																															Not outfall, appears to be culvert
DOU-118306																															Not outfall, appears to be culvert
DOU-118307																															Not outfall, appears to be culvert
DOU-118308																															Not outfall, appears to be culvert
DOU-118309																															Not outfall, appears to be culvert
DOU-118310																															Not outfall, appears to be culvert
DOU-118314	No								No			No	No																		Heavy sedimentation within pipe and downstream channel
DOU-118316	No								No			No	No																		Heavy sedimentation immediately downstream of outfall.
DOU-118325	No								No			No	No																		Sediment may need to be cleared out
DOU-118326	No								Yes	Moderate	2	No	Yes	No	DOU-118326		0	0	1	2558	1.32	6.5				66					Surfactants were 1.0 but no signs of sewage or illicit discharges. There were signs of trash and debris though.
DOU-118327	No								No			No	No																		Sediment may need to be cleared out
DOU-118352																															Not outfall, appears to be culvert or inlet. Water flowing into structure.
DOU-118417																															No outfall Found at this location. Structure appears to be an inlet for a drainage ditch that was flowing. Flow was also heard in nearby catch basins
DOU-118421	No								No			No	No																		Some leaf build up in outlet obstructing flow
DOU-118442	No								No			No	No																		Invasive species may cause future blockages
DOU-118443	No								No			No	No																		Outfall connected to single catch basin
DOU-118445	No								No			No	No																		Organic debris and vegetation from invasive species filling between 25-50% outlet.
DOU-118450	No								No			No	No																		Debris has dammed outfall to approximately 50%.

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-118451	8/20/2020 13:50	43.000857	-71.398119	Found, Not an Outfall																	
DOU-118452	8/20/2020 13:53	43.0008467	-71.398143	Found, Not an Outfall																	
DOU-118453	8/20/2020 13:45	43.0006565	-71.397892	Found, Not an Outfall																	
DOU-118454	8/20/2020 13:48	43.000662	-71.397881	Found, Not an Outfall																	
DOU-118457	5/20/2020 14:48	43.0007004	-71.397965	Found	Unnamed Brook to Lake Massebesic	1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Good	Invasive knotweed growing behind outfall	Moderate	Erosion cutting into bank adjacent to outfall	None	<25%
DOU-118458	5/20/2020 14:57	43.0011806	-71.39719	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Good		Moderate	Plunge pool from high flows	None	None
DOU-118463	5/20/2020 15:08	43.00186	-71.395941	Found		1	Pipe	RCP	Round	18	None		Projecting	Good	Stone	Good		No		None	<25%
DOU-118501	5/20/2020 13:17	42.9984619	-71.399832	Found		1	Pipe	RCP	Round	24	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-118525	8/6/2020 14:42	42.9680919	-71.416691	Found	Cohas Brook	1	Pipe	Ductile Iron	Round	20	None		Flush with Headwall	Good	N/A	N/A		No		None	None
DOU-118691	7/21/2020 13:15	42.9428332	-71.382292	Found, Not an Outfall																	
DOU-118722	7/21/2020 14:29	42.946093	-71.38178	Found		1	Pipe	RCP	Round	36	None		Flush with Headwall	Good	Precast Concrete	Good		No		None	None
DOU-118693	7/21/2020 13:18	42.9429162	-71.382327	Found		1	Pipe	RCP	Round	24	None	Buried	Flush with Headwall	Fair	Stone	Good		No		None	50- 75%
DOU-118723	7/21/2020 14:25	42.9461288	-71.38297	Found		1	Pipe	RCP	Round	12	Cracking		Mitered	Good	N/A	N/A		No		None	None
DOU-118732	7/21/2020 14:08	42.9442154	-71.379462	Found		1	Pipe	RCP	Round	32	None		Flush with Headwall	Good	Precast Concrete	Good		No		None	None
DOU-118739	7/31/2020 12:57	42.9449831	-71.396558	Could Not Access																	
DOU-118769	5/13/2020 16:06	42.9098803	-71.44941	Found, Not an Outfall									Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-118782	5/13/2020 12:35	42.897422	-71.447529	Found		1	Pipe	RCP	Round	12	Spalling	Spalling and chipping around rim	Flush with Headwall	Fair	Masonry	Good	Good condition, no signs of degradation	Moderate	Bank erosion	None	<25%
DOU-118803	5/13/2020 14:37	42.9032954	-71.44934	Found		1	Pipe	RCP	Round	24	None	Good condition, no signs of degradation	Flared End	Good	N/A	N/A		No		None	None
DOU-118805	5/13/2020 15:34	42.9073957	-71.44651	Found		1	Pipe	HDPE	Round	12	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-118841	5/26/2020 13:34	43.010243	-71.431396	Found		1	Pipe	RCP	Round	18	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-118855	5/26/2020 13:49	43.0099708	-71.432727	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good		Moderate	Natural formed plunge pool	None	<25%
DOU-118861	5/26/2020 13:58	43.0092373	-71.432212	Found		1	Pipe	RCP	Round	12	None		Flush with Headwall	Good	Stone	Good		No		None	>75%
DOU-118893	5/14/2020 18:51	42.9440574	-71.449876	Found		1	Pipe	RCP	Round	9	None		Flush with Headwall	Good	Reinforced Concrete	Good		Moderate	Channelization from apparent moderate to heavy flows at times	None	None
DOU-118938	7/31/2020 14:01	42.9431942	-71.407385	Could Not Access																	
DOU-118939	7/31/2020 13:56	42.9435462	-71.408168	Found		1	Pipe	HDPE	Round	12	None		Projecting	Good	Reinforced Concrete	Good		No		None	<25%
DOU-118941	7/31/2020 13:59	42.9431539	-71.407374	Found, Not an Outfall																	
DOU-118942	7/31/2020 13:46	42.9443652	-71.409487	Found		1	Pipe	HDPE	Round	12	None	Good condition, no signs of degradation	Flush with Headwall	Good	Precast Concrete	Good		No		None	None

	Illicit Discharge Potential								Flow Characteristics				Sampling Parameters																Overall Comments		
	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)		
Outfall ID																															Overall Comments
DOU-118451																														Structure is a double-barrel culvert (downstream end)	
DOU-118452																														Structure is a double-barrel culvert (downstream end)	
DOU-118453																														Structure is a double-barrel culvert.	
DOU-118454																														Structure is a double-barrel culvert	
DOU-118457	No								No			No	No																	Outfall was partially submerged at time of inspection but no flow was observed there or at upstream catch basin. Overgrown invasive vegetation surrounding outfall	
DOU-118458	No								No			No	No																	Evidence of high flows, moderate erosion	
DOU-118463	No								Yes	Trickle		Yes	Yes	Yes																Outfall submerged. Flow observed in upstream CB 118480. Revisit required to sample that structure. Overgrown invasive vegetation surrounding strucutre	
DOU-118501	No								No			No	No																	Outfall only connected to a single catch basin. Pipe starts as 12” in catch basin and goes into 24” pipe before outfall. GIS mapping of surrounding infrastructure seems inaccurate at this location.	
DOU-118525	No								No			No	No																	Culvert with drainage connection. Standing water in pipe and no drainage flow in upstream structures	
DOU-118691																														Culvert with no apparent drainage connection	
DOU-118722	No								No			No	No																		
DOU-118693	Yes		Easily detected, Sewage	None	None	None	Potential	Strong sewage smell	No			Yes	No																	No flow and water quality data but sewage odor noted.	
DOU-118723	No								No			No	No																		
DOU-118732	No								No			No	No																		
DOU-118739																														Outfall not located, possibly hidden by overgrown vegetation. No signs of dry weather flow in the area.	
DOU-118769	No								No			No	No																	Water flowing into pipe ; possible inlet to a closed system	
DOU-118782	No								No			No	No																		
DOU-118803	No								Yes	Moderate	1	No	Yes	No	DOU-118803		5	0	0.5	461.5	0.21	10.3	7.45		3					Ammonia and surfactants exceeded benchmarks	
DOU-118805	No								No			No	No																		
DOU-118841	No								No			No	No																	Stagnant water in outlet from small wetland but no dry weather flow	
DOU-118855	No								No			No	No																	Dry but appears to receive heavy flows at times, fair amount of erosion	
DOU-118861	No								No			No	No																	Outfall almost completely full of sediment at outlet.	
DOU-118893	No								No			No	No																	Outfall in woods from line that passes through elementary school field	
DOU-118938																														Overgrown vegetation too thick to access outfall.	
DOU-118939	No								No			No	No																		
DOU-118941																														This outfall is a culvert.	
DOU-118942	No								No			No	No																		

[illegible]

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																		Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
DOU-118944	No								No			No	No																		Not outfall, culvert. Pipe daylights on other side
DOU-118945	No								No			No	No																		
DOU-118949	No								No			No	No																		
DOU-118960	No								No			No	No																		Standing water present but no flow from outfall or in upstream catch basin
DOU-118974	No								No			No	No																		
DOU-118975	No								No			No	No																		
DOU-118978	No								No			No	No																		Outfall seems to be an inlet or outlet for swale. Water flowing into it from snow melt. No flow confirmed in upstream catch basin
DOU-118988	No								No			No	No																		
DOU-119040																															Catch basins full of sediment, can't locate pipes
DOU-119041																															Catch basins full, pipes not located
DOU-119072	No								No			No	No																		Outfall inspection completed via drone.
DOU-119223																															Outfall inspection completed via drone. Searched along bank but could not locate pipe. Possibly hidden behind vegetation
DOU-119224	No								No			Yes	No																		Outfall inspection performed via drone. Outfall partially submerged, will check upstream structure to confirm flow
DOU-119233																															Outfall not Found. Stones in river near bank seem to resemble a possible riprap splash pad. No sign of pipe outlet, may have been buried over the course of riverbank erosion.
DOU-119261	No								No			No	No																		48 in culvert
DOU-119296	No								Yes	Substantial	1	No	Yes	No	DOU-119296	pH	0	0	0.25	1289	0.65	16.6	7.23	6.98	0						Animal feces present on ground adjacent to outfall. No staining, floatables or odor detected anywhere within the flow or around the pipe/discharge point. This may be a culverted stream outlet.
DOU-119297																															Pipe may have been buried beneath significant land slides/sinkholes throughout the hillside. Two outfalls mapped in this location, only one Found. The Found outfall was traced back to the catch basins and there was no sign of this outfall.
DOU-119311	No								No			No	No																		Outfall inspection completed via drone. Invert deterioration
DOU-119298	Yes	Orange	None	Clearly visible, Grey brown	Opaque	Opaque,	Potential		Yes	Substantial	1.5	No	Yes	No	DOU-119298		0.15	0	0.5	1707	0.87	16.5	7.27	6.08	5						
DOU-119427													No																		Appears to be old, caved-in culvert under Theodore Rd

[illegible]

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
								Sewage smell, orange staining and fuel sheen in standing water																							Sewage smell believed to originate from CSO outfall 043 which is within 30 feet of this structure. Ammonia and surfactants exceeded benchmarks
DOU-119318	Yes	Orange	Easily detected, Intermittent sewage smell	Faint, Orange tint	None	None, Oily Sheen	Potential		Yes	Moderate	0.5	No	Yes	No	DOU-119318	TP,pH,Aluminum	0.5	0	1.5	1180	0.59	12.8	7.39	7.76	1	0.015				0	
DOU-119328	Yes	Orange	None	None	Cloudy	Cloudy, Algae, petroleum/oil sheen and polymer-like floatables clearly originate from outfall and are also present within upstream catch basin.	Potential	Floatables and benthic growth. May originate from adjacent car dealership.	Yes	Trickle	3	No	Yes	No	DOU-119328	Chloride	0.25	0	1.25	1239	0.62	11.6	6.87	6.54	0						Surrounding banks are overgrown with invasive plants (Japanese knotweed).
DOU-119428													No																		Appears to be old, caved-in culvert under Theodore Rd.
DOU-119441																															Culvert for stream
DOU-119448																															Not outfall, appears to be culvert
DOU-119460	No								No			No	No																		
DOU-119464	No								No			No	No																		Overgrown invasive vegetation is disrupting outlet
DOU-119480	No								No			No	No																		
DOU-119488																															Outfall not Found. Extensive drainage network around the school grounds likely leads somewhere and would require further investigation, but the outfall is mapped in the school parking lot outletting into the building
DOU-119724																															Not able to approach the outfall which is located under bridge. Couldn't access water's edge.
DOU-119741																															
DOU-119747	No								No			No	No																		
DOU-119767	No								No			No	No																		Standing water present but no dry weather flow. Outfall discharges into drainage ditch system.
DOU-119770	No								No			No	No																		Outlets into vegetated swale
DOU-119773																															"Outfall" is likely a drainage inlet due to its location uphill of nearest catch basin. Could not access due to location behind private fence with no gate.
DOU-119786																															Outlet control structure
DOU-119787	No								No			No	No																		Very overgrown, pipe is nearly clogged with sediment mounded at the invert
DOU-119793	No								Yes	Trickle	0.5	Yes	Yes	Yes																	Revisit required to sample CB-119791.
DOU-119801																															Could not locate outfall, may be buried under debris and leaves. Picture taken of approximate location of outfall

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-119800	5/5/2020 14:15	42.9713951	-71.428729	Found		1	Pipe	RCP	Round	12	None	Slightly deformed pipe	Flush with Headwall	Good	Stone	Fair	Cracked grout, some small sinkholes in backfill	No		None	None
DOU-119808	7/21/2020 15:04	42.9499828	-71.393123	Found		1	Pipe	RCP	Round	16	None		Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-119809	7/21/2020 15:39	42.9516538	-71.391139	Found		1	Pipe	RCP	Round	12	None		Mitered	Good	N/A	N/A		No		None	None
DOU-119838	5/26/2020 14:14	43.0071982	-71.432163	Could Not Access																	
DOU-119856	5/26/2020 14:33	43.0028148	-71.43007	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Fair	Tree growing on headwall	Moderate	Channelization but gravel added to conveyance	None	<25%
DOU-119861	9/23/2020 18:09	43.0023427	-71.426927	Could Not Access									N/A	N/A	Reinforced Concrete						
DOU-119864	9/23/2020 18:13	43.002386	-71.426986	Could Not Access																	
DOU-119870	5/26/2020 14:25	43.0034831	-71.431183	Found		1	Pipe	RCP	Round	18	Corrosion	Some reinforcement visible	Flush with Headwall	Fair	Stone	Good		No		None	25- 50%
DOU-119873	5/26/2020 14:56	43.0039063	-71.426902	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Stone	Good		Moderate	Small plunge pool	None	None
DOU-119877	5/26/2020 15:04	43.005632	-71.426409	Could Not Access																	
DOU-119879	8/19/2020 14:33	43.0024773	-71.42303	Not Found																	
DOU-119879	8/19/2020 14:21	43.0064296	-71.425297	Not Found																	
DOU-119880	5/26/2020 15:07	43.005606	-71.425875	Found		1	Pipe	RCP	Round	30	None		Flush with Headwall	Good	Stone	Good		Moderate	Lots of large exposed boulders in conveyance	None	None
DOU-119881	5/26/2020 13:26	43.0098868	-71.427798	Found		1	Pipe	RCP	Round	18	Spalling	Heavy spalling at invert	Flush with Headwall	Fair	Stone	Fair	Cracking between stone and mortar	No		None	50- 75%
DOU-119882	5/26/2020 13:23	43.0097463	-71.427347	Found, Not an Outfall																	
DOU-119886	5/26/2020 13:14	43.0096399	-71.426652	Found, Not an Outfall																	
DOU-119887	5/26/2020 13:12	43.0096037	-71.426417	Found, Not an Outfall																	
DOU-119888	5/26/2020 13:16	43.0096827	-71.426875	Found		1	Pipe	RCP	Round	8	Spalling	Slight spalling at invert	Flush with Headwall	Fair	Stone	Fair	Slight cracking between mortar and stones/pipe invert	No		None	<25%
DOU-119890	5/26/2020 13:10	43.0095686	-71.426303	Found, Not an Outfall																	
DOU-119950	12/16/2019 18:47	42.9941023	-71.47	Not Found																	
DOU-119989	8/20/2020 13:27	42.9976446	-71.399365	Not Found																	
DOU-119994	8/19/2020 18:20	43.0006781	-71.420751	Found		1	Pipe	HDPE	Round	16	None		Flared End	Good	N/A	N/A		No		None	>75%

Illicit Discharge Potential									Flow Characteristics				Sampling Parameters																	Overall Comments	
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments	
								Heavy algae growth in multiple colors. Fuel sheen, homeowners claims fuel smell is often much worse																							Small flowing outfall discharges to wetland, obvious sheen in flow. Significant algae growth over the length of the channel. Headwall has some sinkholes behind it
DOU-119800	Yes	Brown	Faint, Fuel	None	None	None, Fuel sheen	Potential		Yes	Trickle	3	No	Yes	No	DOU-119800	pH		0	0	2	1056	0.53	13	6.34	6.18	0					
DOU-119808	No								No			No	No																		
DOU-119809	No								No			No	No																		
DOU-119838																															Blocked by fence along rt 93, could not access
DOU-119856	No								No			No	No																		Tree growing on top of headwall, some erosion and sediment build up at invert
DOU-119861									No			No	No																		Outfall was visible through chain link fence but not accessible. No flow observed.
DOU-119864																															Outfall not accessible. Chain link fence surrounds entire area. Outfall is mapped as being only connected to DOU-119861 so may potentially be a culvert
DOU-119870	No								No			No	No																		Stagnant water within outfall pipe, dammed by surrounding leaves/yard waste buildup
DOU-119873	No								No			No	No																		
DOU-119877																															"Outfall" is likely a drainage inlet due to its location uphill of nearest catch basin. Could not access due to location behind private fence with no gate.
DOU-119879																															Not Found in dense vegetation and a steep cliff. Not observed in area around mapped location. Could be buried or farther down slope.
DOU-119879																															Could not locate. Steep slope with dense vegetation and downed trees
DOU-119880	No								No			No	No																		Large 30" outfall and drainage swale
DOU-119881	No								No			No	No																		Outfall discharges to drainage ditch system. Sedimentation may be due to decomposing yard waste, which was blocking outfall and is clogging the ditch.
DOU-119882									No			No	No																		This structure is part of a drainage ditch system. It is a driveway under drain, with both sides pictured. Upstream is a 36" pipe that becomes two 18" pipes downstream.
DOU-119886									No			No	No																		This structure is part of a drainage ditch system. It is a driveway under drain, with both sides pictured.
DOU-119887									No			No	No																		This structure is part of a drainage ditch system. It is a driveway under drain, with both sides pictured.
DOU-119888	No								No			No	No																		Outfall drains to drainage ditch system.
DOU-119890									No			No	No																		This structure is part of a drainage ditch system. It is a driveway under drain, with both sides pictured.
DOU-119950																															Outfall inspection completed via drone. Unable to locate pipe due to bridge proximity
DOU-119989																															Could not locate. Dense vegetation with no indication of pipe or channel
DOU-119994	No								No			No	No																		Excessive sediment is now surrounding and blocking pipe

[illegible]

	Illicit Discharge Potential								Flow Characteristics				Sampling Parameters																	Overall Comments
Outfall ID	Any Illicit Discharge Indicators?	Pipe Benthic Growth	Odor	Color	Turbidity/ Cloudiness	Floatables	Illicit Discharge Potential	Illicit Discharge Indicator Comments	Is Dry Weather Flow Present?	Flow Description	Flow Depth (inches)	Revisit Required?	Is a Sample Required?	Is Outfall Submerged?	Unique ID	Pollutant(s) of Concern	Ammonia Result (mg/L)	Chlorine Result (mg/L)	Surfactants Result (mg/L)	Conductivity Result (uS/cm)	Salinity Result (ppt)	Temp. Result (C)	pH	Dissolved Oxygen (mg/L)	E. Coli Result (MPN/100 mL)	Total Phosphorus Result (mg/L)	BOD Result (mg/L)	Chloride Result (mg/L)	Aluminum (mg/L)	Overall Comments
DOU-121044																														Rock pile where outfall should be. Could be buried
DOU-121046	No								No			No	No																	May need maintenance to clear sediment
DOU-121047	No								Yes	Trickle	3	No	Yes	No	DOU-121047		0	0	0.25	981	0.49	7.4			3					May need maintenance to clear out sediment. Surfactants equal to 0.25, but no signs of sewage or illicit discharges.
DOU-121092	No								No			No	No																	
DOU-121203									Yes	Trickle		Yes	No																	Outfall inspection completed via drone. Dry weather flow, will check upstream structure to confirm flow. Outfall under bridge completed inspection from closest safe distance
DOU-121502																														Structure is an inlet with water flowing into it. Could not be accessed for further inspection due to fence and extremely high headwall/steep slopes, but in any case this is not an outfall.
DOU-121528																														Structure is part of a fenced-in BMP at the end of Linda Lane.
DOU-121530	No								No			No	No																	Originates from upstream BMP
DOU-121547	No								Yes	Trickle	3	No	Yes	No	DOU-121547	pH	0	0	0.25	371.8	0.19	10.6	6.16	7.24	2					Discharged into BMP type structure, probably a gravel wetland. The BMP drains into three manhole structures before reaching impaired stream. Flow depth is indicative of standing water within BMP; flow into structure is still a trickle.
DOU-121553																														Outfall not Found. Likely buried under excessive yard waste dump in the general area. Piping/other structures on GPS indicate this may be a culvert structure.
DOU-121573	No								No			No	No																	Riprap beneath outfall displaced where plunge pool has formed, liner is exposed
DOU-121575																														Structure is a culvert not an outfall
DOU-121582	No								No			No	No																	Headwall was designed for a 24"" pipe but the outfall is only 18"" leaving a large gap around the pipe. Could potentially lose material behind headwall due to gap
DOU-121584																														Outfall not Found, map shows outfall connected to single manhole, may be part of the BMP it is located within, vegetation was overgrown at the time of inspection and no structure was visible even upon entry.
DOU-121585	No								No			No	No																	Homeowners indicate there is significant flooding in the downstream area during heavy rain
DOU-121591																														Outfall not Found possibly buried or obscured by vegetation
DOU-121594	No								No			No	No																	
DOU-121598	No								No			No	No																	
DOU-121600	No								No			No	No																	Beaver dam located adjacent to outfall pipe.
DOU-121600																														Culvert for stream
DOU-121604	No								No			No	No																	Outlet is likely the downstream or upstream side of a culvert based on GIS info, but could not see through to the other side at the time of inspection.
DOU-121605																														Appears to be a culvert with no drainage connection

	Outfall Characteristics												Pipe Ends and Headwall Cndition					Erosion and Sedimentation			
Outfall ID	Date / Time of Inspection	Lat.	Lon.	Outfall Located?	Receiving Water (if any)	Number of Outfall Pipes	Outfall Type	Closed Pipe Outfall Material	Outfall Shape	Outfall Diameter (inches)	Outfall Damage	Outfall Condition Comment	Pipe End Treatment	Pipe End Treatment Condition	Headwall Material	Headwall Condition	Headwall Condition Comment	Downstream Erosion	Downstream Erosion Comment	Vegetation Distress	Sedimentation Level
DOU-121607	8/7/2020 14:05	43.0098855	-71.407297	Found		1	Pipe	RCP	Round	36	Spalling	Some spalling at invert, not of any concern	Flush with Headwall	Good	Stone	Good		No		None	<25%
DOU-121609	8/7/2020 14:14	43.0117178	-71.405617	Found		1	Pipe	RCP	Round	24	Spalling	Minor spalling but overall in good condition	Flush with Headwall	Good	Stone	Good		Moderate	Plunge pool	None	None
DOU-121620	8/12/2020 16:42	43.0100938	-71.418608	Found, Not an Outfall																	
DOU-121613	8/7/2020 14:25	43.0103162	-71.404799	Found		1	Pipe	HDPE	Round	24	None		Projecting	Good	N/A	N/A		Moderate	Channelized drainage ditch	None	None
DOU-121625	5/20/2020 15:22	43.0032729	-71.39682	Found		1	Pipe	CMP	Round	8	None	Outfall is elevated above bank	Projecting	Fair	N/A	N/A		No		None	None
DOU-121622	8/12/2020 17:06	43.007803	-71.416693	Found		1	Pipe	RCP	Round	18	None		Flush with Headwall	Good	Reinforced Concrete	Good		No		None	None
DOU-121633	8/20/2020 18:07	42.9071994	-71.450205	Found		1	Pipe	RCP	Round	12	Spalling		Flush with Headwall	Fair	Reinforced Concrete	Good		No		None	50- 75%
DOU-121634	5/13/2020 15:58	42.9061692	-71.450322	Found, Not an Outfall											Precast Concrete	Good	Good condition, no signs of degradation	No		None	None
DOU-121638	5/13/2020 15:55	42.9064782	-71.450369	Found		1	Pipe	RCP	Round	12	None		Flared End	Good	N/A	N/A		No		None	<25%
DOU-121646	8/6/2020 18:39	42.9523802	-71.41786	Found		1	Pipe	RCP	Round	12	None	Outfall recessed in bank	Flush with Headwall	Good	N/A	N/A		No		None	25- 50%
CEI-DOU-000001	11/22/2019 16:18	42.9759655	-71.469629	Found New Outfall	Merrimack River	1	Pipe	HDPE	Round		None	Leaf buildup in outfall	Flared End	Good	Stone	Good		No		None	<25%
DOU-121656	8/20/2020 18:47	42.9226233	-71.452729	Found	Merrimack River	1	Pipe	RCP	Round	36	None		Flush with Headwall	Good	Reinforced Concrete	Good		No		None	None
New Outfall 8.7.20	8/7/2020 13:25	43.0048767	-71.401317	Found New Outfall		1	Pipe	RCP	Round	12	None		Flared End	Good	N/A	N/A		No		None	<25%

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