Year 2 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2019-June 30, 2020

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2019 and June 30, 2020 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Town of Medway

EPA NPDES Permit Number: MAR041132

Primary MS4 Program Manager Contact Information

Name: Stephanie Carlisle Title: Compliance Coordinator

Street Address Line 1: 45B Holliston Street

Street Address Line 2:

City: Medway State: MA Zip Code: 02053

Email: scarlisle@townofmedway.org Phone Number: (508) 321-4871

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://www.townofmedway.org/sites/medwayma/files/uploads/stormwater_management_program.pdf

Date SWMP was Last Updated: Jun 29, 2020

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state

Impairment(s)

☒ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☒ Phosphorus
☐ Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: ☐ Assabet River Phosphorus ☒ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☒ Charles River Watershed Phosphorus ☐ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☐ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. ***By checking each box you are certifying that you have completed that permit requirement fully.*** *If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

Year 2 Requirements

- ☐ Completed Phase I of system mapping
- ☐ Developed a written catchment investigation procedure and added the procedure to the SWMP
- ☐ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- ☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
- ☐ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- ☒ Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- ☐ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☐ Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

1. Phase I of the system mapping is approximately 50% completed. The DPW continued mapping open channel conveyances and town-owned storm water treatment structures during Year 2, but there are more features to map. The Town has been in the process of changing its mapping platform, which has delayed the

completion of this task. The DPW is partnering with the GIS Coordinator on how to best delineate catchment areas using topography and storm water infrastructure. Interconnection locations need to be labeled.
2. The catchment investigation procedure is listed in the IDDE Program, but it was added to the SWMP in September 2020.
3. The Town requires the the submission of as-built drawings and long term O&M plans for construction sites through the MS4CD Permit, the Land Disturbance Permit, and Site Plan requirements. However, the procedure for the Conservation Commission and/or the Planning and Economic Development Board to transfer the completed plans to the DPW has not been finalized. The Town is in the process of switching to a new permitting platform and workflow procedures are still in development.
4. The operations and maintenance procedures for all permittee-owned facilities in the categories of parks and open space, building facilities was added as an attachment to the SWMP in September 2020.
6. The Compliance Coordinator is compiling the MS4 infrastructure maintenance procedures into one document that will be added as an attachment to the SWMP.
7. The Compliance Coordinator is writing the SWPPPs for the maintenance garage, public works yard, and recycling center. The Town has also been working on a Vegetation Management Plan for parks, open spaces, and roadside maintenance. The Compliance Coordinator, Conservation Agent, and DPW Deputy Director are partnering on this task.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☐ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - ○ This is not applicable because we do not have sanitary sewer
  - ◉ This is not applicable because we did not find any new SSOs
  - ○ The updated SSO inventory is attached to the email submission
  - ○ The updated SSO inventory can be found at the following website:
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated outfall and interconnection inventory and priority ranking as needed

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

Bacteria/ Pathogens (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☐ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time

☐ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

1. The Town is working on the best way to distribute educational material directly to dog owners. Dog licenses are issued and renewed through an online permitting system. The DPW planned on distributing material during the annual rabies clinic, but it was canceled due to COVID-19.
2. The DPW will partner with the Board of Health to distribute information to septic system owners regarding proper maintenance, specifically to owners in catchment areas that discharge to the Charles River, Chicken Brook, and Hopping Brook.

Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers

☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☐ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

** Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Potential structural BMPs

☐ Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- ○ The BMP information is attached to the email submission
- ○ The BMP information can be found at the following website:

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

1. The Town will distribute an annual message in late September 2020 encouraging the proper disposal of leaf litter.
2. The Town continues to build its inventory of structural BMPs and will begin tracking the phosphorus removal using attachment 3 of Appendix F.

Charles River Watershed Phosphorus TMDL

☒ Completed Legal Analysis

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

The Town updated its Stormwater Management and Land Disturbance Bylaw twice during FY20. Both updates were approved at Town Meeting and were approved by Town Counsel and the Attorney General. Changes included updates to our internal regulating authorities by clarifying said authorities jurisdiction, responsibilities, procedures, and enforcement abilities. The DPW will enforce the IDDE plan, issue MS4CD permits, and manage the long term O&M of new and redevelopments. The Conservation Commission and PEDB enforce the Land Disturbance section of the Bylaw and issue and enforce the Land Disturbance Permit requirements. Therefore, the Town meets the obligation of the legal analysis.

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- (●) Yes
- ( ) No

If yes, describe below, including any relevant impairments or TMDLs:

The 2016 Integrated List of Waters changed Chicken Brook and Hopping Brook from Category 2 to Category 5 waters. Both brooks have an E.coli impairment and need a TMDL. These changes have been updated in Medway's Stormwater Map.

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 4

*Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.*

BMP: Landscaping Best Practices: Grass Clippings and Fertilizer

Message Description and Distribution Method:

The Town posted the annual message on Facebook regarding proper lawn care and maintenance procedures. The post included a link to the Think Blue MA web page as well for additional information.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

The Facebook message reached 2,003 people and 164 people clicked to open the link.

Message Date(s): June 25, 2020

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☐

Was this message different than what was proposed in your NOI? Yes ◉ No ○

If yes, describe why the change was made:

The message did not change, but the form of distribution changed. The Town has a very active presence on Facebook and it is the preferred method of communication in Town because it reaches a large audience and it is more cost effective than traditional printed mailings.

BMP:Proper Disposal of Pet Waste

Message Description and Distribution Method:

The Town posted two messages on Facebook regarding proper pet waste management. The first post focused on proper pet waste management in parks and on trails, which is a trending topic in Town. The second post was based on the Think Blue "Scoop the Poop" campaign, and included a link to the Think Blue MA web page.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

The first Facebook message reached 3,391 people and 352 clicked open the link. The second message reached 2,847 people 133 clicked open the link.

Message Date(s): April 9, 2020. June 24, 2020.

Message Completed for: Appendix F Requirements ☐ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ◉ No ○

If yes, describe why the change was made:

The message is the same, but the method of distribution is different than what was proposed in the NOI. Facebook posts reach a wide audience in Town and is a more cost effective method of message distribution.

BMP: Clean Water Begins with You

Message Description and Distribution Method:

The Town customized the Think Blue Massachusetts educational poster sample so that the messaging and images displayed were specific to Medway. The poster and the Think Blue Massachusetts rubber duck mascot is displayed in the DPW office and would have been displayed at the annual Medway Pride Day event, but it was canceled due to COVID-19.

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

The DPW booth was staffed by the DPW Director and the DPW Compliance Coordinator who were able to answer questions about stormwater and the Town's Stormwater Management Plan.

Message Date(s): all year.

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

Was this message different than what was proposed in your NOI? Yes ○ No ◉

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period**:

During this reporting period, the Town revised the Stormwater Management and Land Disturbance Bylaw twice (once during the Fall Town Meeting and again during the Spring Town Meeting). The Fall Town Meeting focused on amendments to the allowable non-stormwater discharges to the MS4 and the creation of the MS4CD permit for new and existing connections to the MS4. Residents had several opportunities to comment on the changes at Board of Selectmen meetings and Finance Committee meetings. The public voted and the changes were approved at Fall Town Meeting. All Massachusetts public notice requirements were followed.
Additional changes were proposed at the Spring Town Meeting including: reducing the triggering disturbance size from one acre to 20,000 square feet, developers must comply with the updated NOAA Atlas 14 stormwater projections when constructing stormwater BMPs and comply with all Massachusetts Stormwater Standards, and the administrative team was removed as the regulating authority of the Land Disturbance permit. If a proposed project is within the Conservation Commission's jurisdiction, they will be the regulating authority of the Land Disturbance Permit. If the project is outside the jurisdiction of the Conservation Commission, the Planning Board will be the permitting authority. These changes were also brought to Spring Town Meeting and followed all Massachusetts public notice requirements. Furthermore, the SWMP is always posted on the Town website for review and comment.

Was this opportunity different than what was proposed in your NOI? Yes ○ No ◉

Describe any other public involvement or participation opportunities conducted **during this reporting period**:

During this reporting period, the Town participated in Massachusetts EOEEA's Municipal Vulnerability Preparedness Program, which requires active engagement from the public on climate change planning. Based on community and key stakeholder feedback, increased intensity and frequency of storms and the threat of flooding is of high concern to residents. Focusing on stormwater management was among the top priority actions identified through the process.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

☐ This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period**.*

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

☒ Outfalls and receiving waters

☐ Open channel conveyances

- ☐ Interconnections
- ☐ Municipally-owned stormwater treatment structures
- ☒ Waterbodies identified by name and indication of all use impairments
- ☐ Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

Throughout the reporting period, the DPW has been working toward mapping all open channel conveyances, town-owned stormwater treatment structures, interconnections and initial catchment delineations. Thirty one features have been mapped to date. The Compliance Coordinator and the GIS Coordinator have been working together to map the initial catchment delineations; however, there seems to be additional ArcGIS programming needed to map the catchments. The GIS Coordinator is working on the best way to map the catchments. The updated water body impairments were relabeled after the reporting period.

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.

- ◉ The outfall screening data is attached to the email submission
- ○ The outfall screening data can be found at the following website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period**.*

Number of outfalls screened: 20

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

- ◉ The catchment investigation data is attached to the email submission
- ○ The catchment investigation data can be found at the following website:

*Below, report on the number of catchment investigations completed **during this reporting period**.*

Number of catchment investigations completed this reporting period: 1

*Below, report on the percent of catchments investigated **to date.***

Percent of total catchments investigated: 1

Optional: Provide any additional information for clarity regarding the catchment investigations below:

During this reporting period, the Town has been updating its GIS platform and catchment delineations have not been completed yet. The system is nearing completion and the catchment delineations will be marked out. Furthermore, the Town is in the process of changing its work order system and will be able to schedule inspections and track completed work during the Year 3 reporting period.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- (●) The illicit discharge removal report is attached to the email submission
- ( ) The illicit discharge removal report can be found at the following website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period.***

Number of illicit discharges identified: 1

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018)**.*

Total number of illicit discharges identified: 1

Total number of illicit discharges removed: 0

Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:

The Stormwater Management and Land Disturbance Bylaw update strengthened the Town's authority to regulate entities currently connected or seeking connection to the MS4. The MS4 Connection and Discharge (MS4CD) Permit pertains to new development seeking new connections, redevelopments seeking new connections or authorization for their current connections, and properties that have existing connections that are discovered through the IDDE program. The commercial property owner applied for an MS4CD Permit as a part of their Site Plan Review and Drainage Improvement Plan to renovate their nearly 10 acre parking lot. As a part of the MS4CD Permit rules and regulations, the DPW completed a catchment investigation on April 1, 2020 and took stormwater samples uphill and downhill (including the outfall) and at each connection point along the property. The sample results showed a high level of E.coli present at one of the connections. The Illicit Discharge Removal Report (Attachment 3) explains the situation and actions taken since the discovery.

Employee Training

Describe the frequency and type of employee training conducted **during the reporting period**:

On October 3, 2019, the DPW stormwater team was trained on MCM3: IDDE program requirements and MCM6: Pollution Prevention and Good Housekeeping. They were also trained on stormwater sampling methods and requirements in February 2020.

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed: 10

Number of inspections completed: 63

Number of enforcement actions taken: 0

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- (●) Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- ( ) Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted
- ( ) Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites:

As-built drawings and long term O&M plans are required with Site Plans, Land Disturbance Permits, and MS4 Connection and Discharge Permits (MS4CD Permits).

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

During the Year 1 reporting period, the Community and Economic Development Department revised the Site Plan Rules and Regulations to require street and parking lot designs to use green infrastructure, low impact designs or Massachusetts Stormwater Handbook BMPs to the maximum extent practicable. The revisions were approved at the Annual Fall Town Meeting (November 18, 2019). The Town did not complete a street design and parking lot assessment, but will begin the process during Year 3.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

The Community and Economic Department Department revised the Town's Site Plan Rules and Regulations to require the use of green infrastructure and low impact design in new or redeveloped sites. These revisions were approved at Fall Town Meeting (November 18, 2019). A formal report on green infrastructure in Medway has not been completed, but will be explored during Year 3.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

This measure was completed on June 30, 2020. The Town received a Water Management Act Grant in January 2020 to complete a infiltration feasibility assessment on town-owned properties. All town-owned properties were assessed by their hydrologic soil group, depth to seasonal high ground water, depth to soil restrictive layer, ground water recharge priority needs, impervious cover, and land use/town priorities. Based on these criteria, the properties were ranked for their ability to be retrofitted with green infrastructure. Concept designs with associated stormwater infiltration calculations and phosphorus removal calculations were created for the top five properties. The Town applied for additional grant funding to implement the concept designs. If awarded, the project would be completed in spring 2022. The report, inventory, ranking, and concept designs are available on the town web page at https://www.townofmedway.org/sites/g/files/vyhlif866/f/uploads/wma_grant.pdf

MCM6: Good Housekeeping

Catch Basin Cleaning

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period**.*

Number of catch basins inspected: 2,070

Number of catch basins cleaned: 2,055

Total volume or mass of material removed from all catch basins: 106.41 tons

Below, report on the total number of catch basins in the MS4 system.

Total number of catch basins: 2,468

If applicable:

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

Street Sweeping

*Report on street sweeping completed **during this reporting period** using one of the three metrics below.*

- ◉ Number of miles cleaned: 177
- ○ Volume of material removed: [Select Units]
- ○ Weight of material removed: [Select Units]

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

Stormwater Pollution Prevention Plan (SWPPP)

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed: 0

Describe any corrective actions taken at a facility with a SWPPP:

During FY20, the Town began constructing a new public works facility. A new SWPPP is in development.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- (●) Not applicable
- ( ) The results from additional reports or studies are attached to the email submission
- ( ) The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Additional Information

Optional: Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

COVID-19 Impacts

Optional: If any of the above year 2 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

The impacts of COVID-19 are discussed in their corresponding sections.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 3 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow
- Complete follow-up ranking as dry weather screening becomes available

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary

Provide any additional details on activities planned for permit year 3 below:

During Year 3, the Town will complete the following measures:
1. Complete MS4 system mapping (interconnections, town-owned BMPs, and catchment areas).
2. Create written procedures for the transfer of as-built drawings between the Planning Department, Conservation Commission and the DPW.
3. Compile the MS4 infrastructure maintenance procedures into one document and add it to the SWMP.
4. Create SWPPPs for the maintenance garage, public works yard, and recycling center.
5. Create seasonal messaging for residents regarding leaf waste, snow and ice, fertilizer application, and water conservation best management practices.
6. Create educational material for dog owners regarding proper pet waste management.
7. Create brochure for septic system owners regarding proper maintenance especially for those in catchment areas that discharge to an impaired water body.
8. Create brochure for developers regarding construction site best management practices, erosion and sediment control, and low impact design.
9. Create brochure for industrial facilities regarding proper maintenance of parking lots (i.e. street sweeping, catch basin cleaning etc.) and proper waste management.
10. Create educational material for business, commercial, and institutional regarding proper maintenance of parking areas, proper waste disposal and storage, and sanitary sewer and drainage infrastructure maintenance.
11. Continue screening outfalls and catchment areas.
12. Complete the IDDE investigation with the private commercial property owner discussed above.
13. Begin the Street Design and Parking Lot Report due in Year 4.
14. Begin the Green Infrastructure Report due in Year 4.

15. Complete the Phosphorus Control Plan (PCP) funding assessment.
16. Begin tracking and calculating phosphorus removal at existing town-owned BMPs.
17. Contribute to the stakeholder discussion regarding institutional, commercial, and industrial sites and their potential residual designation status.
18. Continue to implement green infrastructure BMPs and retrofit existing facilities.

Part V: Certification of Small MS4 Annual Report 2020

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:	Michael E. Boynton	Title:	Town Manager
Signature:		Date:	

[Signatory may be a duly authorized representative]

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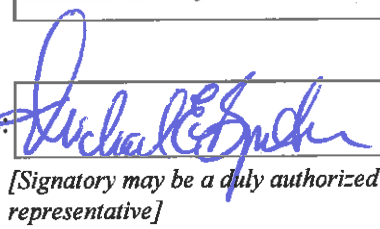
40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Michael E. Boynton Title: Town Manager

Signature:  Date: 9/23/20

[Signatory may be a duly authorized representative]

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Alder ST	Tax Map #:	Outfall ID: OF- 53-1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 18	
Today's date: 4/16/20		Time (Military): 10:35	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 41°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

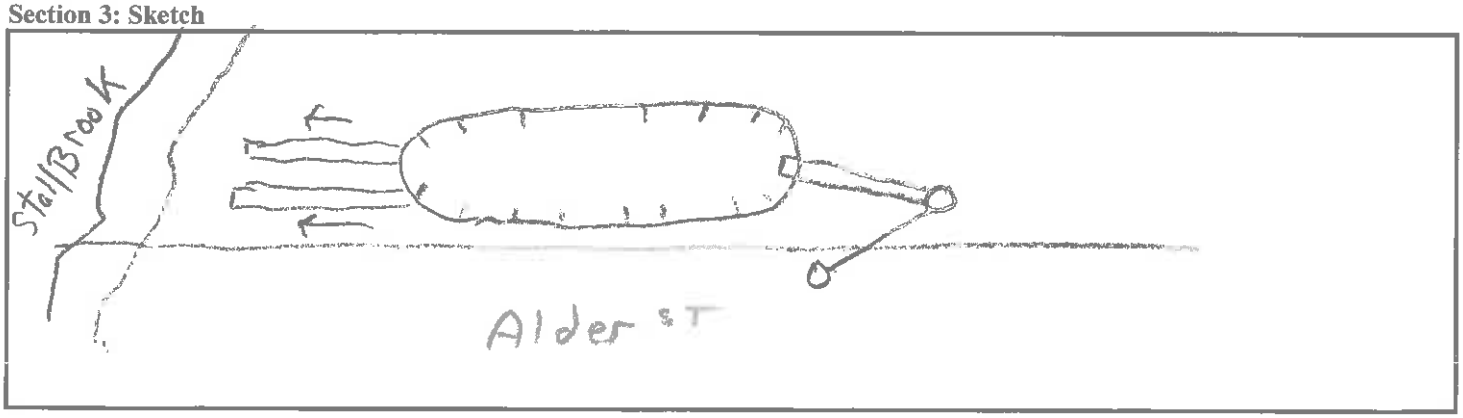
- ☒ Industrial
- ☐ Urban Residential
- ☐ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 4 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 16"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 -- Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Alder	Tax Map #:	Outfall ID: OF- 53-2
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 15	
Today's date: 4/16/20		Time (Military): 10:41	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 41°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

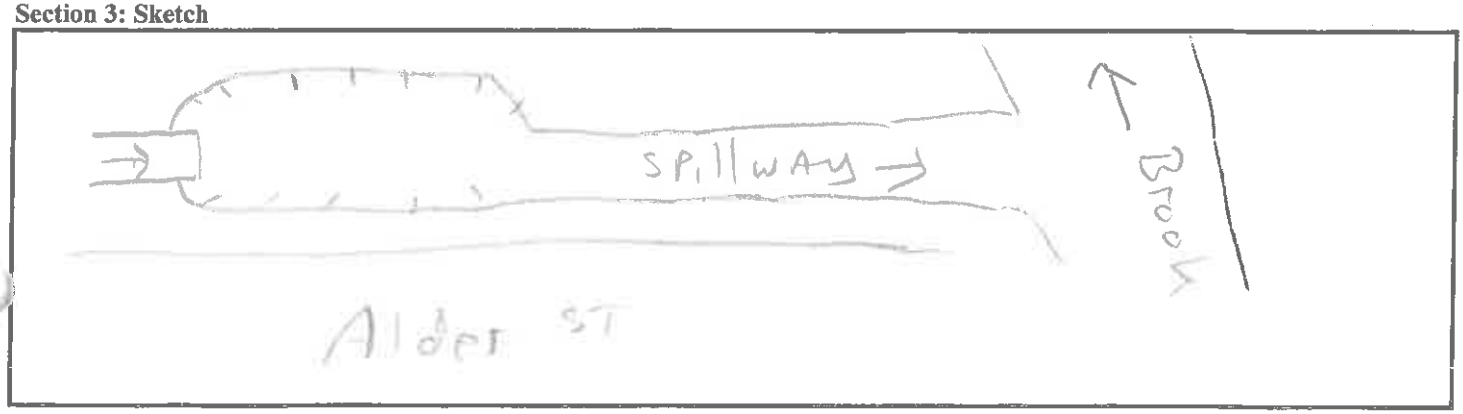
☒ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☐ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g., origin of outfall, if known): 6 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 16"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO.

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Trotter DR.	Tax Map #:	Outfall ID: OF- 54-3
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: Bridge	
Today's date: 4/16/20		Time (Military): 10:02	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 41°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

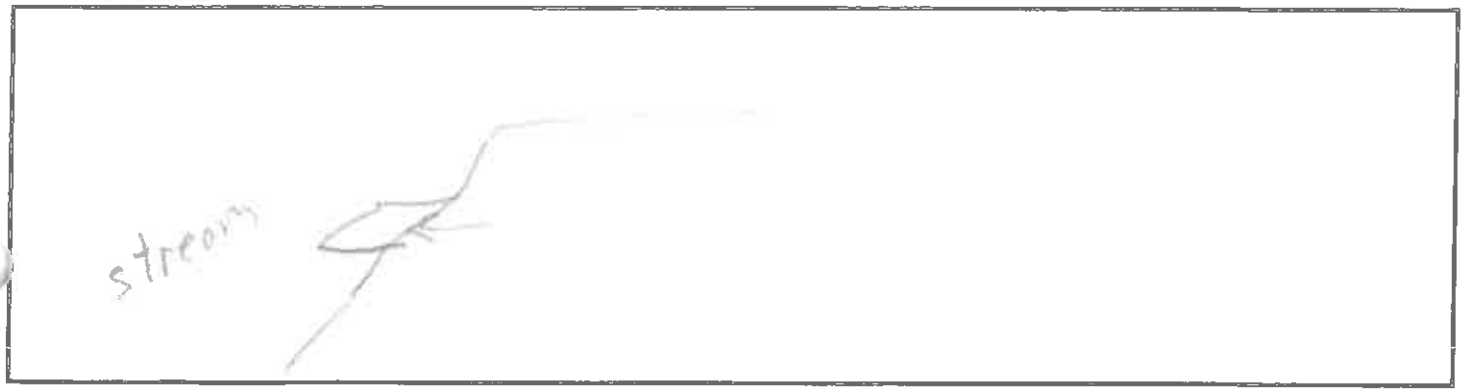
☒ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☐ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g., origin of outfall, if known): 1 CB

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: Flange	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 10"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK If Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☐ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Alder ST.	Tax Map #:	Outfall ID: OF- 63-1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 23	
Today's date: 4/16/20		Time (Military): 10:14	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 40°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: .01	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: – Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

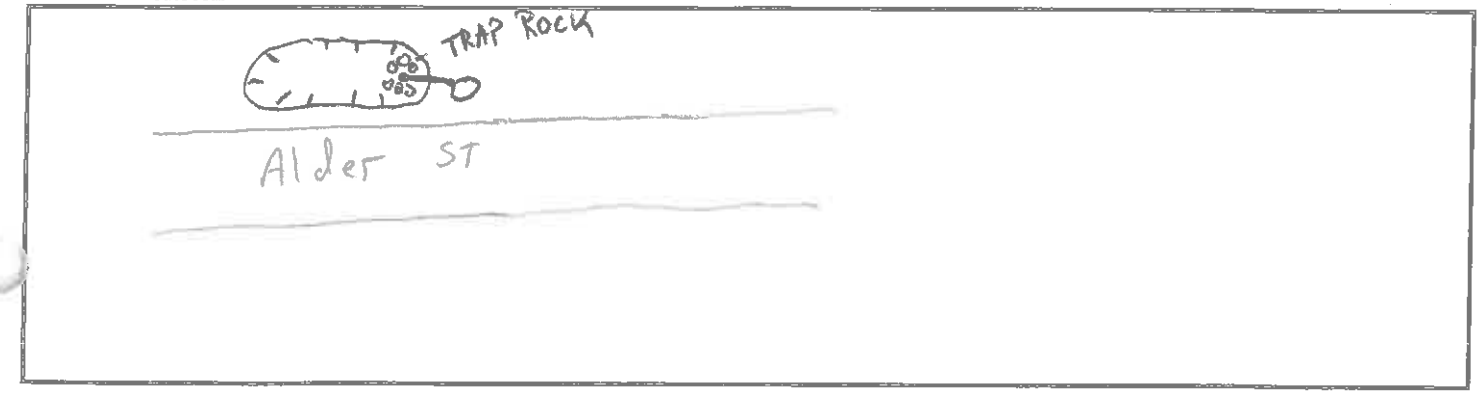
☒ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☐ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g.., origin of outfall, if known): 4 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

TRASH.

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Alder ST	Tax Map #:	Outfall ID: OF- 63-2
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 22	
Today's date: 4/16/20		Time (Military): 10:16	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 40°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

☒ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☐ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

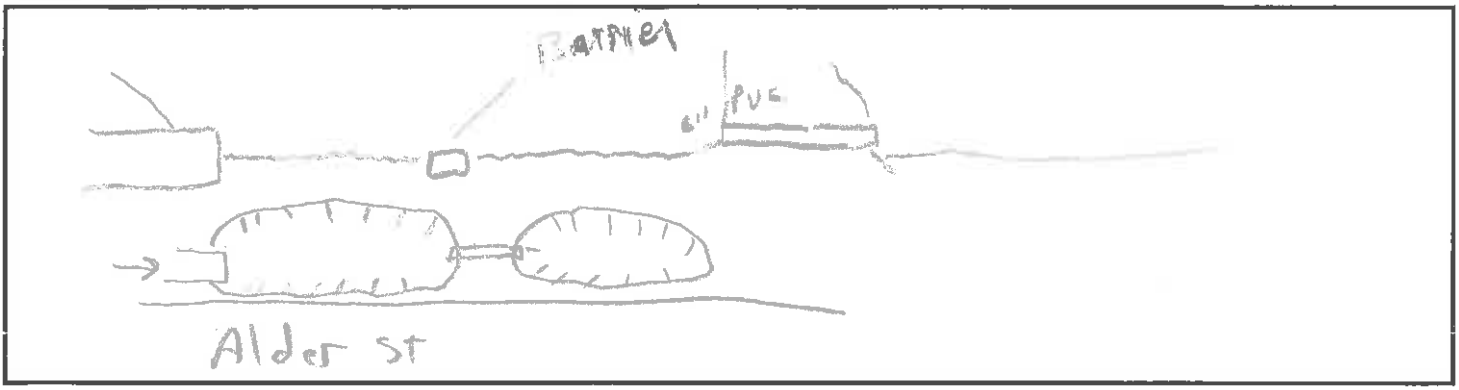
Notes (e.g., origin of outfall, if known): 2 CB's

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 12"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	

Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*	
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial	Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☐ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

TRASH

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Holbrook	Tax Map #:	Outfall ID: OF- 55-4
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: House #5	
Today's date: 4/16/20		Time (Military): 11:10	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 43°	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☒ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

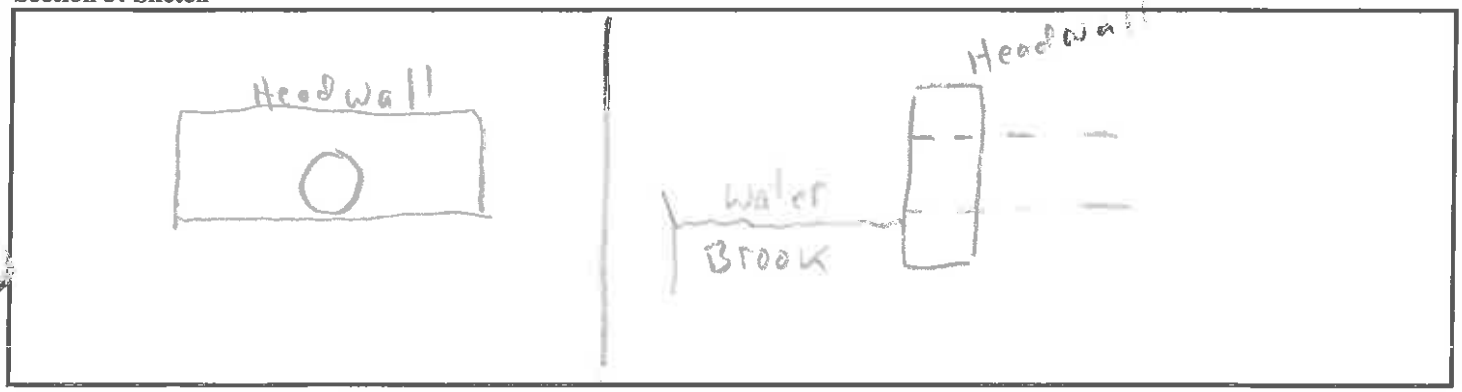
Notes (e.g., origin of outfall, if known): 12 CB's 1 inlet from retention

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: _____	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 16"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	

Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*
Flow Description (If present)	☐ Trickle ☐ Moderate ☒ Substantial	Flow Direction (If Present):

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO

OF 55-4

1. Temperature- 55.8 F
2. PH- 7.93
3. Conductivity- 595ps/cm
4. TDS- 419 ppm
5. Salinity- .30 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- .25

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Lovering	Tax Map #:	Outfall ID: OF- 21-9
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 68 Lovering / Pole 46	
Today's date: 5/13/2020		Time (Military): 10:22	
Investigators: Nolan / Dave		Form completed by: Dave	
Temperature (°F): 54°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Urban Residential ☐ Institutional

☒ Suburban Residential Other: _____

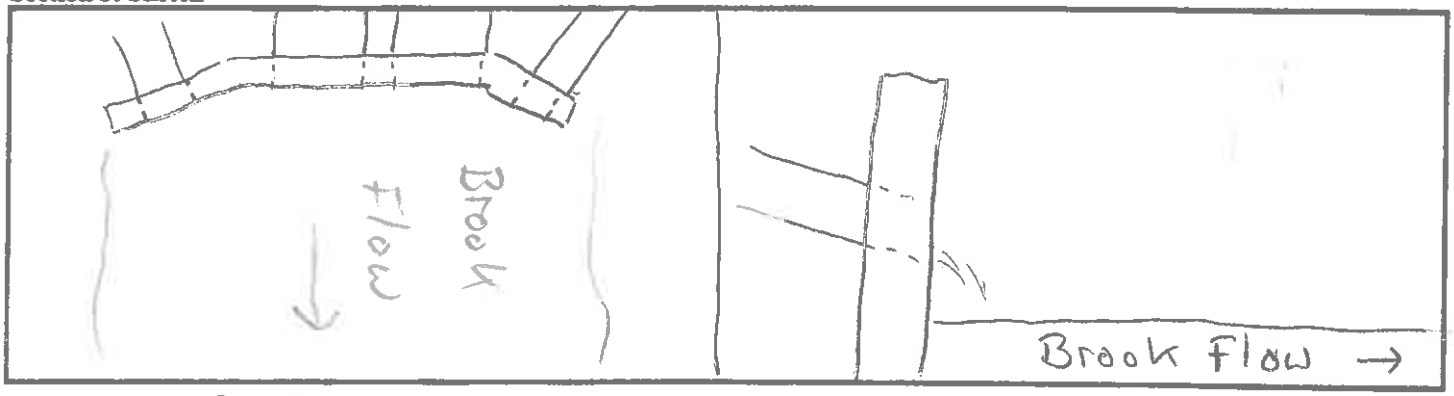
☐ Commercial Known Industries: _____

Notes (e.g., origin of outfall, if known): 6 CB

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☐ Closed Pipe	☐ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present): South	

Section 3: Sketch



Top View

Outfall Inventory Field Sheet

Outfall 21-9

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1– Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

OF 21-9

1. Temperature- 48.38 F
2. PH- 6.95
3. Conductivity- 215 ps/cm
4. TDS- 153 ppm
5. Salinity- 0 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Lovering ST	Tax Map #:	Outfall ID: OF- 21-11
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: House # 88	
Today's date: 4/16/20		Time (Military): 1340	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 41°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

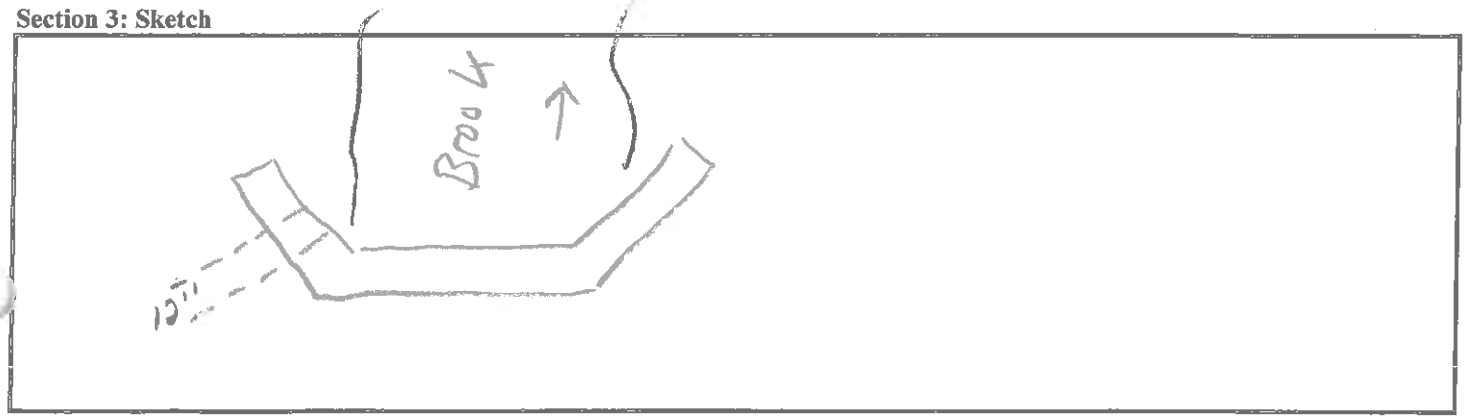
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 2 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 12"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present): SW	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO

OF 21-11

1. Temperature- 43.7 F
2. PH- 8.81
3. Conductivity- 227 ps/cm
4. TDS- 1.59 ppm
5. Salinity- 1.10 ppt
6. Detergent- .50
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- .25

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Oak ST	Tax Map #:	Outfall ID: OF- 48-1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 135, By Bridge	
Today's date: 5/13/2020		Time (Military): 8:24 AM	
Investigators: Nolan, Dave		Form completed by: Dave	
Temperature (°F): 46°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

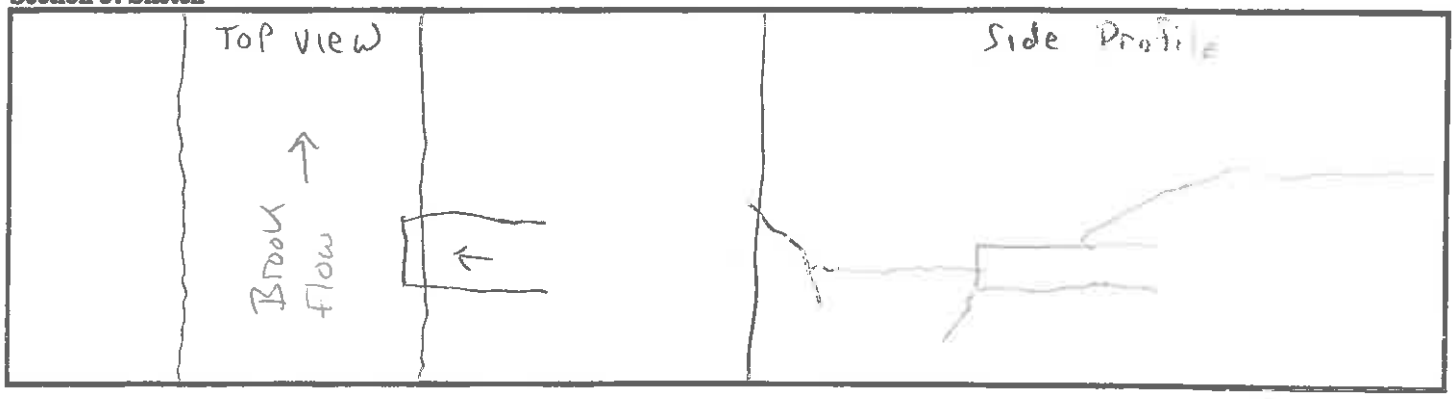
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 4 CB's + Brook

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☐ RCP ☒ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 12"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial			Flow Direction (If Present): East	

Section 3: Sketch



Outfall Inventory Field Sheet

Outfall 48-1

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 - Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 - Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 - Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 - Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OF 48-1

1. Temperature- 46.76 F
2. PH- 7.2
3. Conductivity- 363 ps/cm
4. TDS- 257 ppm
5. Salinity- .20 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Alder ST	Tax Map #:	Outfall ID: OF- 54-7
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #:	Bridge or Pole 10 Alder
Today's date: 4/16/20		Time (Military): 10:53	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 41°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

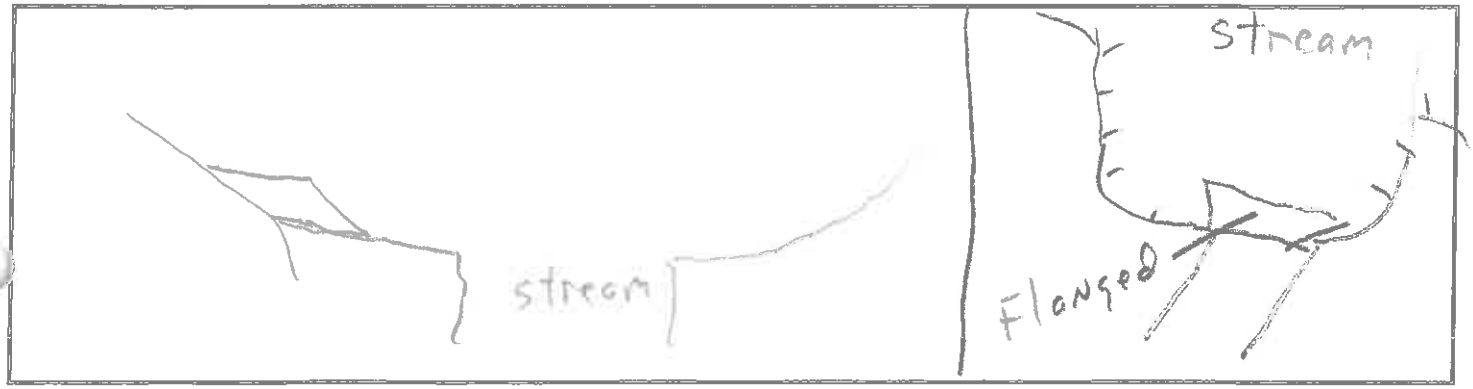
☒ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☐ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

Notes (e.g., origin of outfall, if known): 2 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☒ Other: Flange	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 16"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO - TRASH

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Curtis LN	Tax Map #:	Outfall ID: OF- 4-1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #:	#1 Curtis LN
Today's date: 5/13/20		Time (Military):	10:54
Investigators: Nolan / Dave		Form completed by:	Dave
Temperature (°F): 55	Rainfall (in.): Last 24 hours: 0	Last 48 hours:	0
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s:	-- Take 1 Upstream (head on) and 1 Downstream view

Land Use in Drainage Area (Check all that apply):

☐ Industrial ☐ Open Space

☐ Urban Residential ☐ Institutional

☐ Suburban Residential Other: _____

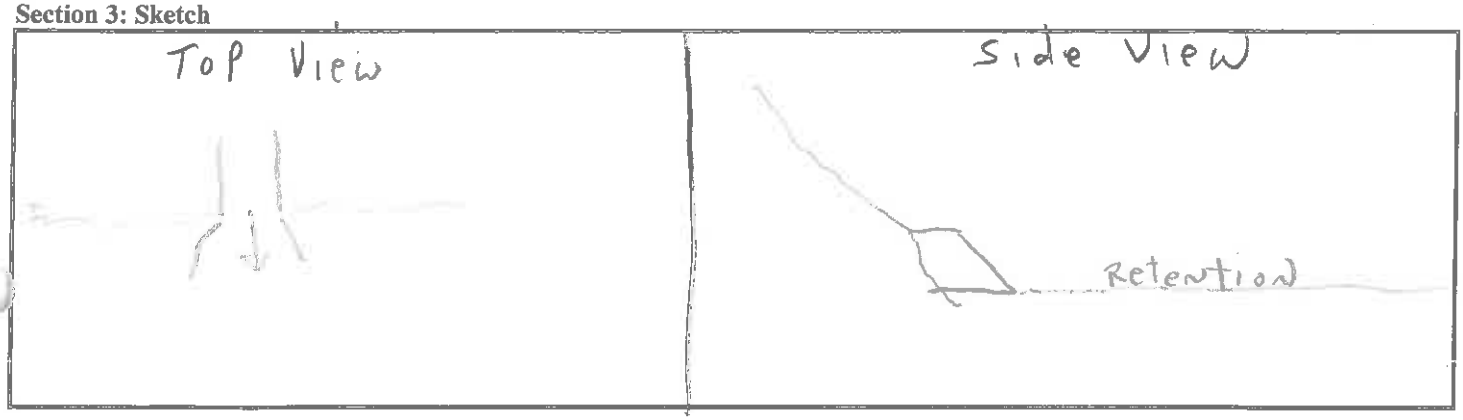
☐ Commercial Known Industries: _____

Notes (e.g., origin of outfall, if known): 4 CB's

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: Flange	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 15"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Delmar	Tax Map #:	Outfall ID: OF- 30 - 1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: Pole 6 / 9 Delmar	
Today's date: 5/13/2020		Time (Military): 900 AM	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 50°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

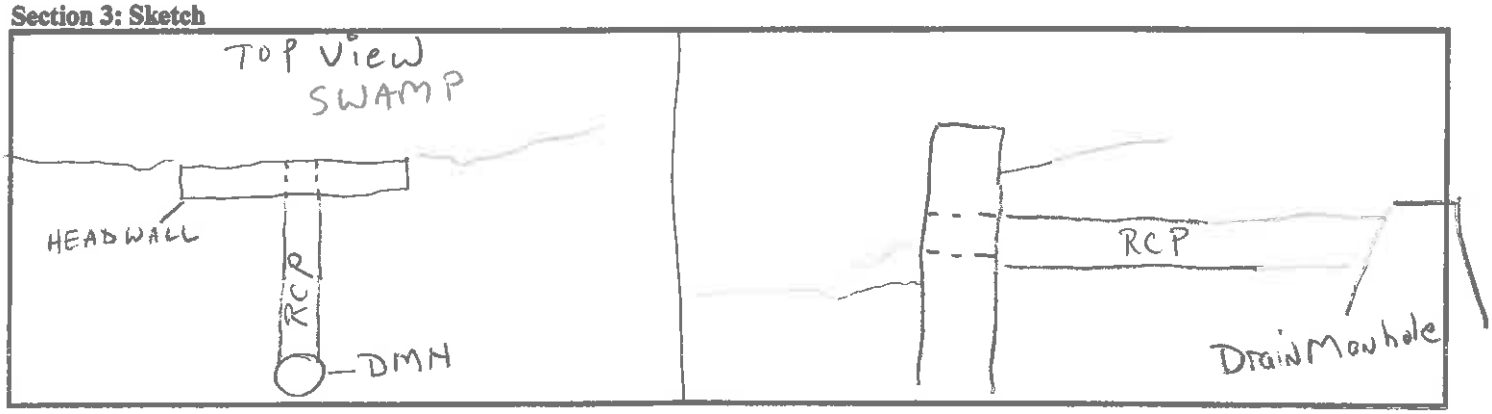
Notes (e.g., origin of outfall, if known): 14 CB's

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 18"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	

Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial	Flow Direction (If Present): South

Section 3: Sketch



Outfall Inventory Field Sheet

Outfall 30-1

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK If Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OF 30-1

1. Temperature- 50 F
2. PH- 7.18
3. Conductivity- 428 ps/cm
4. TDS- 302 ppm
5. Salinity- .20 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Fairway	Tax Map #:	Outfall ID: OF- 8-3
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: 27 Fairway	
Today's date: 5/13/2020		Time (Military): 11.25	
Investigators: Nolan / Dave		Form completed by: Dave	
Temperature (°F): 55°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

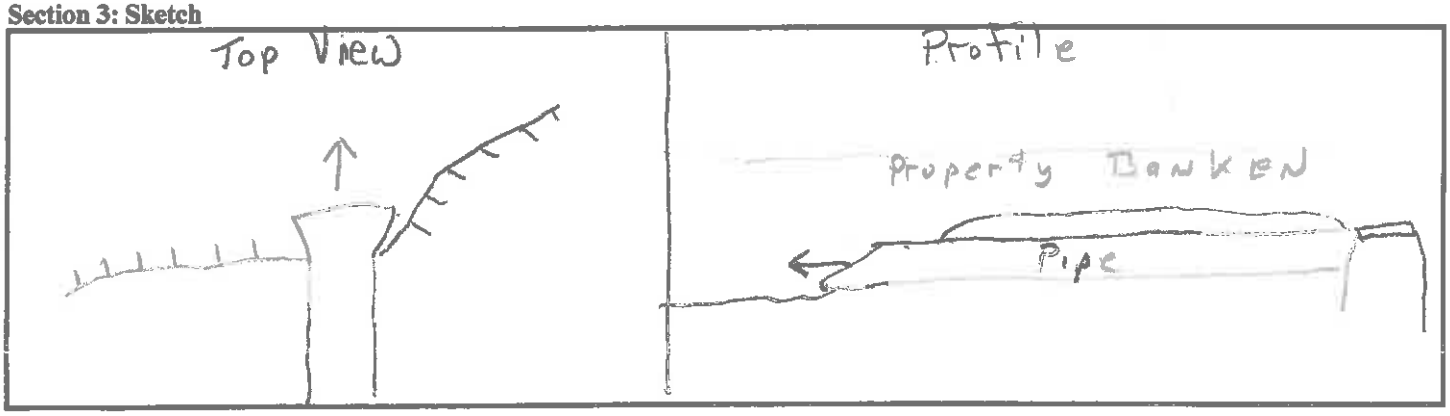
Notes (e.g., origin of outfall, if known): 2 CB's - Stream

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: Flange	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 18"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	

Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial	Flow Direction (If Present): West

Section 3: Sketch



Outfall Inventory Field Sheet

Outfall ID
S-3

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OF 8-3

1. Temperature- 49.46 F
2. PH- 6.05
3. Conductivity- 182.9 ps/cm
4. TDS- 126 ppm
5. Salinity- 0 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Green Valley	Tax Map #:	Outfall ID: OF- 23-3
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #:	#14 Green Valley ✓
Today's date: 5/13/2020		Time (Military):	13:03
Investigators: Nolan / Dave		Form completed by:	Dave
Temperature (°F): 57°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s:	-- Take 1 Upstream (head on) and 1 Downstream view

Land Use in Drainage Area (Check all that apply):

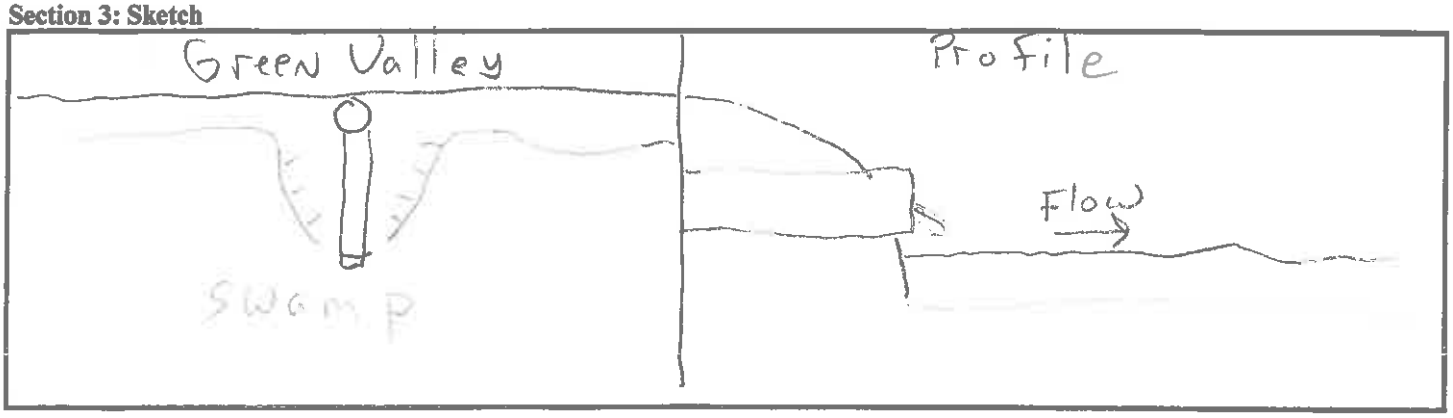
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): ✓ 14 CB's stream

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☐ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 24"	In Water: ☒ No ☐ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial			Flow Direction (If Present):	South

Section 3: Sketch



Outfall Inventory Field Sheet

Outfall 23-3

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OF 23-3

1. Temperature- 52.16 F
2. PH- 7.60
3. Conductivity- 453 ps/cm
4. TDS- 322 ppm
5. Salinity- .20 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- .25

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Lovering	Tax Map #:	Outfall ID: OF- 21-8
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: Pole 46	/ 38 Lovering
Today's date: 5/13/20		Time (Military): 1000	
Investigators: Nolan / Dave		Form completed by: Dave	
Temperature (°F): 53°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

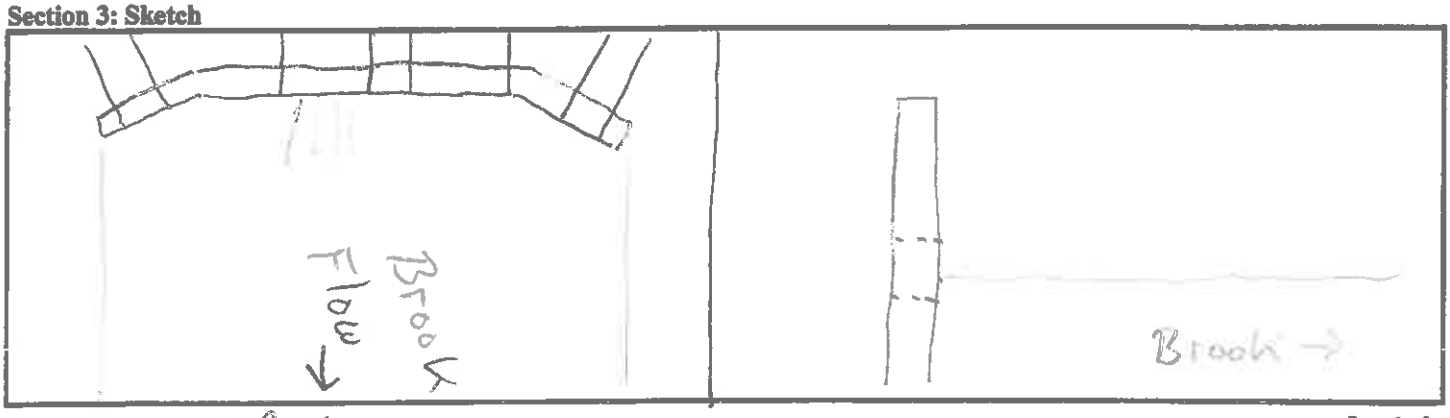
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 1 CB + Brook

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 30"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial			Flow Direction (If Present): South	

Section 3: Sketch



Top View

Outfall Inventory Field Sheet

Outfall 21-8

Section 4: Physical Indicators for Flowing Outfalls Only
Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls
Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OF 21-8

1. Temperature- 49.46 F
2. PH- 5.9
3. Conductivity- 87.1 ps/cm
4. TDS- 61.5 ppm
5. Salinity- 0 ppt
6. Detergent- 0
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Lovering	Tax Map #:	Outfall ID: OF- 21-10
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: House # 88	
Today's date: 4/16/20		Time (Military): 1400	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 40°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0.1	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

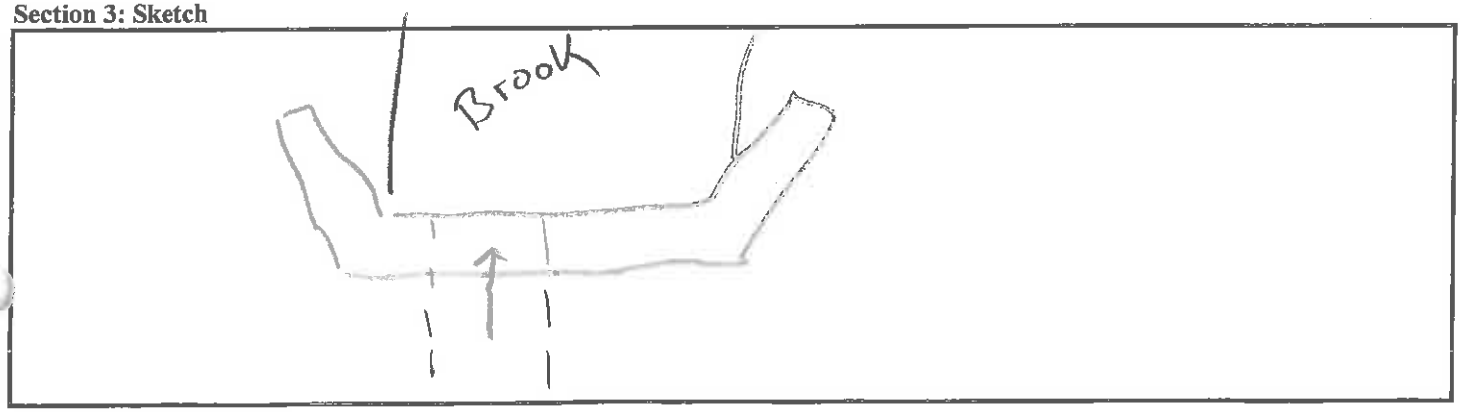
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g.., origin of outfall, if known): 6 CB's

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 36"	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☒ Moderate ☐ Substantial			Flow Direction (If Present): South	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)?

NO

OF 21-10

1. Temperature- 43.7 F
2. PH- 6.6
3. Conductivity- 219 ps/cm
4. TDS- 154 ppm
5. Salinity- .10 ppt
6. Detergent- .75
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Green Valley	Tax Map #:	Outfall ID: OF- 23-1
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #:	#16 Green Valley
Today's date: 5/13/2020		Time (Military):	1327
Investigators: Nolan / Dave		Form completed by:	Dave
Temperature (°F): 60°	Rainfall (in.): Last 24 hours: 0	Last 48 hours:	0
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s:	-- Take 1 Upstream (head on) and 1 Downstream view

Land Use in Drainage Area (Check all that apply):

☐ Industrial
☐ Urban Residential
☒ Suburban Residential
☐ Commercial
☐ Open Space
☐ Institutional
Other: _____
Known Industries: _____

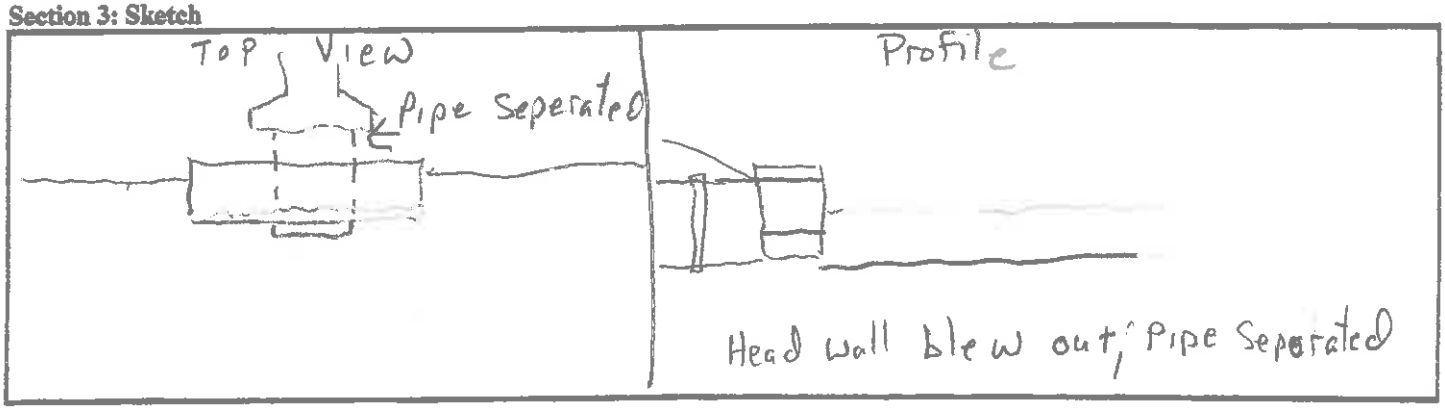
Notes (e.g., origin of outfall, if known): 4 CB'S

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: _____	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	

Flow Present?	☒ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*	
Flow Description (If present)	☒ Trickle ☐ Moderate ☐ Substantial	Flow Direction (If Present):	South

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1– Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1– Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1– Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1– Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK If Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? No

OF 23-1

1. Temperature- 51.8 F
2. PH- 6.81
3. Conductivity- 1105 ps/cm
4. TDS- 785 ppm
5. Salinity- .50 ppt
6. Detergent- .25
7. Chlorine
    a. Free- 0
    b. Total- 0
8. Ammonia- 0

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Green Valley	Tax Map #:	Outfall ID: OF- 23-2
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: #20	
Today's date: 5/13/20		Time (Military): 14:15	
Investigators: Nolan / Dave		Form completed by: Dave	
Temperature (°F): 60°	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

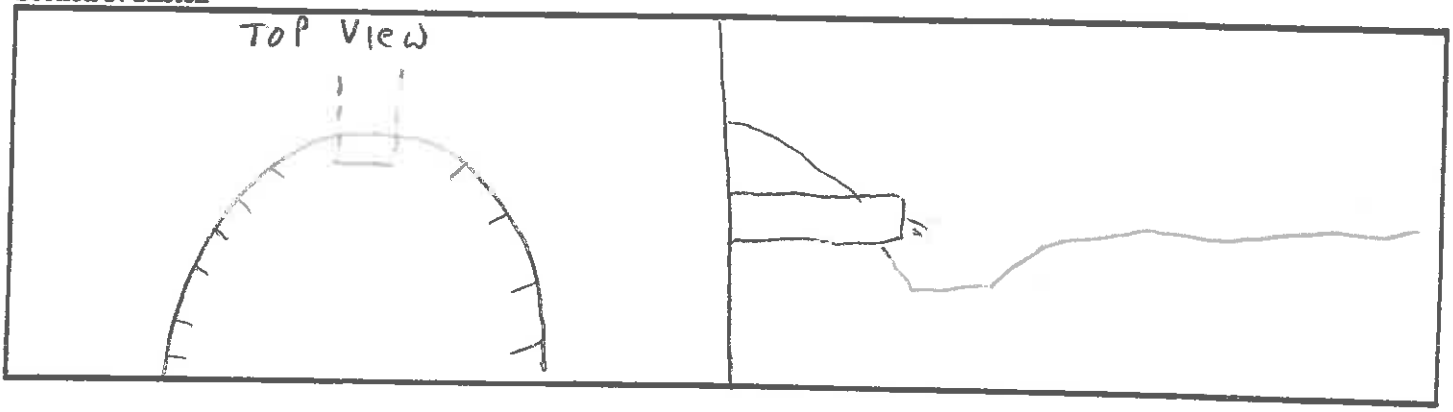
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 6 CB's

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☒ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: _____	In Water: ☐ No ☒ Partially ☐ Fully With Sediment: ☒ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	
Flow Present?	☐ Yes ☒ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only Outfall 23-2

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK If Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Holliston ST	Tax Map #:	Outfall ID: OF- 4-2
Owner: ☒ City ☐ State ☐ Private ☐ Other: ____		Nearest House/Utility Pole #: #189 Holliston ST	
Today's date: 5/13/2020		Time (Military): 1115	
Investigators: Nolan / Dave		Form completed by: Dave	
Temperature (°F): 55	Rainfall (in.): Last 24 hours: 0	Last 48 hours: 0	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

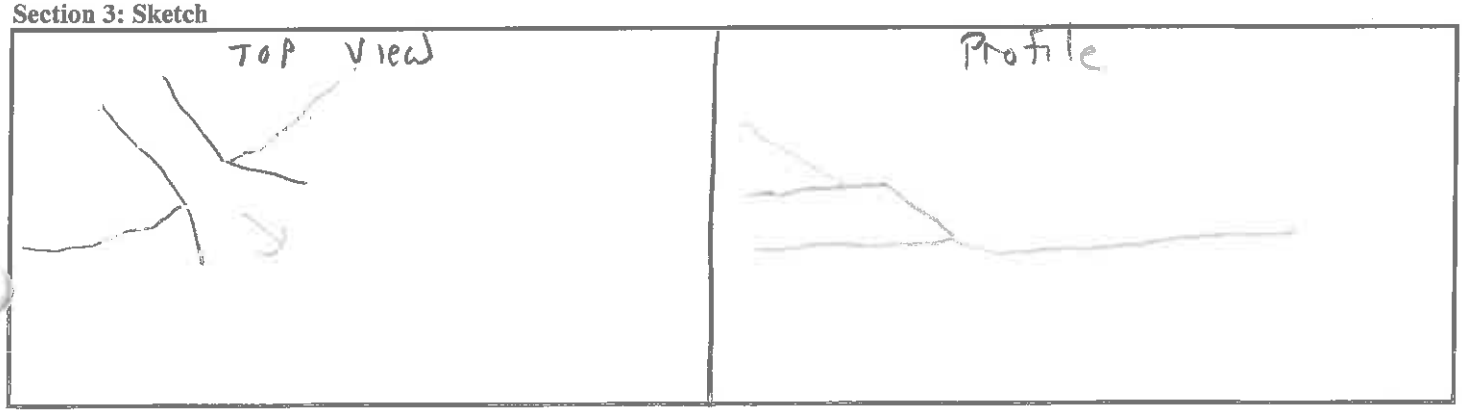
- ☐ Industrial
- ☐ Urban Residential
- ☒ Suburban Residential
- ☐ Commercial
- ☐ Open Space
- ☐ Institutional
- Other: _____
- Known Industries: _____

Notes (e.g., origin of outfall, if known): 3 CB's Outfall Dammed with leaves cleaned area

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: Flared	☒ Single ☐ Double ☐ Triple ☐ Other: _____	Diameter/Dimensions: 15"	In Water: ☐ No ☐ Partially ☐ Fully With Sediment: ☐ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: _____	☐ Trapezoid ☐ Parabolic ☐ Other: _____		Depth: _____ Top Width: _____ Bottom Width: _____	
Flow Present?	☐ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*			
Flow Description (If present)	☐ Trickle ☐ Moderate ☐ Substantial			Flow Direction (If Present):	

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK If Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☒ No *(If No, Skip to Section 6)*

INDICATOR	CHECK If Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO

OUTFALL INVENTORY FIELD SHEET

Section 1: Background Data

City/Town: Medway, MA	Street: Evergreen	Tax Map #:	Outfall ID: OF- 48-16
Owner: ☐ City ☐ State ☒ Private ☐ Other: ____		Nearest House/Utility Pole #: 155 Main St / Pole 65	
Today's date: 4/1/20		Time (Military): 0945 AM	
Investigators: Nolan + Dave		Form completed by: Dave	
Temperature (°F): 37°	Rainfall (in.): Last 24 hours:	Last 48 hours:	
Northing:	Easting:	GPS Unit:	GPS LMK #:
Rim Elevation:		Invert Elevation:	
Elevation Datum:		Receiving Water:	
Camera:		Photo #s: -- Take 1 Upstream (head on) and 1 Downstream view	

Land Use in Drainage Area (Check all that apply):

☐ Industrial	☐ Open Space
☐ Urban Residential	☐ Institutional
☑ Suburban Residential	Other: _____
☐ Commercial	Known Industries: _____

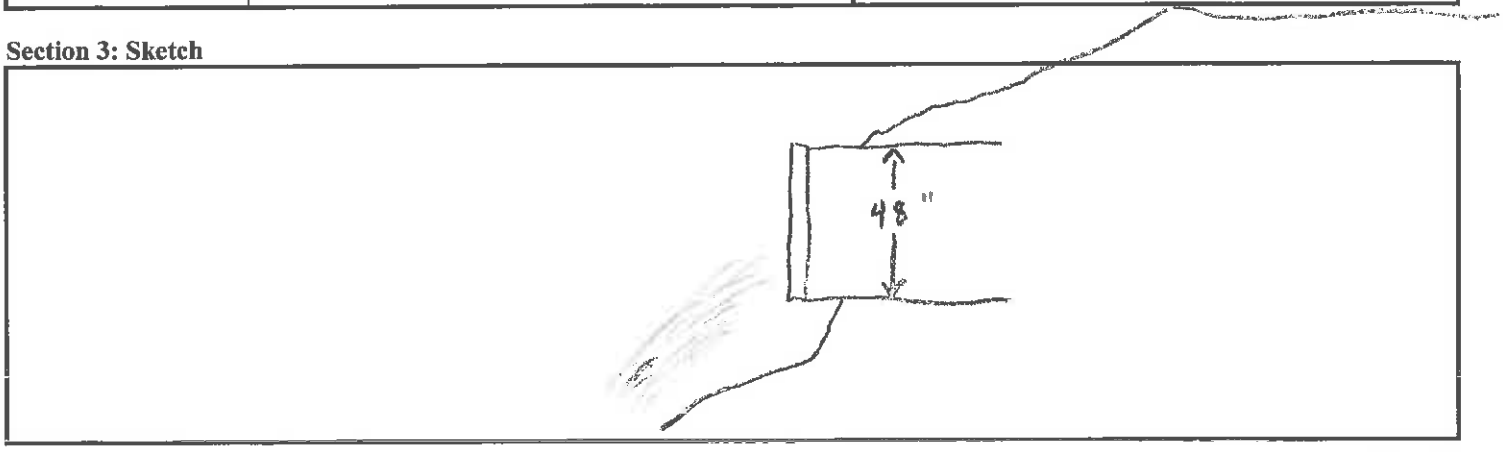
Notes (e.g.., origin of outfall, if known):

Section 2: Outfall Description

TYPE	MATERIAL	SHAPE		DIMENSIONS (IN.)	SUBMERGED
☒ Closed Pipe	☒ RCP ☐ CMP ☐ PVC ☐ HDPE ☐ Steel ☐ Other: _____	☐ Circular ☐ Elliptical ☐ Box ☐ Other: ____	☒ Single ☐ Double ☐ Triple ☐ Other: ____	Diameter/Dimensions: 49"	In Water: ☑ No ☐ Partially ☐ Fully With Sediment: ☑ No ☐ Partially ☐ Fully
☐ Open drainage	☐ Concrete ☐ Pavement/Scupper ☐ Earthen ☐ rip-rap ☐ Other: ____	☐ Trapezoid ☐ Parabolic ☐ Other: ____		Depth: ____ Top Width: ____ Bottom Width: ____	

Flow Present?	☑ Yes ☐ No	*If No, Skip to Section 3. If Yes, Notify Town and continue field reconnaissance.*
Flow Description (If present)	☐ Trickle ☐ Moderate ☑ Substantial	Flow Direction (If Present):

Section 3: Sketch



Outfall Inventory Field Sheet

Section 4: Physical Indicators for Flowing Outfalls Only

Are Any Physical Indicators Present in the flow? ☐ Yes ☒ No *(If No, Skip to Section 5)*

INDICATOR	CHECK if Present	DESCRIPTION	RELATIVE SEVERITY INDEX (1-3)		
Odor	☐	☐ Sewage ☐ Rancid/sour ☐ Petroleum/gas ☐ Sulfide ☐ Other:	☐ 1 – Faint	☐ 2 – Easily detected	☐ 3 – Noticeable from a distance
Color	☐	☐ Clear ☐ Brown ☐ Gray ☐ Yellow ☐ Green ☐ Orange ☐ Red ☐ Other:	☐ 1 – Faint colors in outfall flow	☐ 2 – Clearly visible in outfall flow	☐ 3 – Clearly visible in outfall flow
Turbidity	☐	See severity	☐ 1 – Slight cloudiness	☐ 2 – Cloudy	☐ 3 – Opaque
Floatables -Does Not Include Trash!!	☐	☐ Sewage (Toilet Paper, etc.) ☐ Suds ☐ Petroleum (oil sheen) ☐ Other:	☐ 1 – Few/slight; origin not obvious	☐ 2 – Some; indications of origin (e.g., possible suds or oil sheen)	☐ 3 - Some; origin clear (e.g., obvious oil sheen, suds, or floating sanitary materials)

Section 5: Physical Indicators for Both Flowing and Non-Flowing Outfalls

Are physical indicators that are not related to flow present? ☐ Yes ☐ No *(If No, Skip to Section 6)*

INDICATOR	CHECK if Present	DESCRIPTION	COMMENTS
Outfall Damage	☐	☐ Spalling, Cracking or Chipping ☐ Peeling Paint ☐ Corrosion	
Deposits/Stains	☐	☐ Oily ☐ Flow Line ☐ Paint ☐ Other:	
Abnormal Vegetation	☐	☐ Excessive ☐ Inhibited	
Poor pool quality	☐	☐ Odors ☐ Colors ☐ Floatables ☐ Oil Sheen ☐ Suds ☐ Excessive Algae ☐ Other:	
Pipe benthic growth	☐	☐ Brown ☐ Orange ☐ Green ☐ Other:	

Section 6: Potential for Illicit Discharge

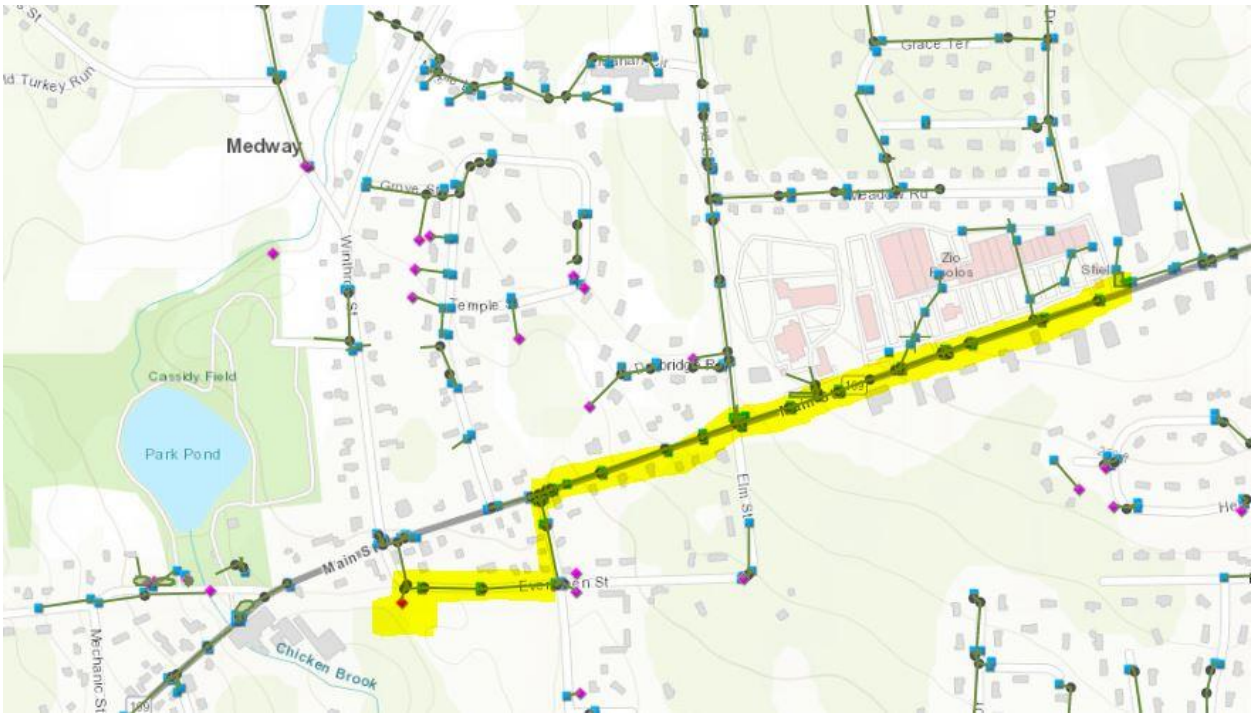
☒ Unlikely ☐ Potential (presence of two or more indicators) ☐ Suspect (one or more indicators with a severity of 3) ☐ Obvious

Section 7: Any Non-Illicit Discharge Concerns (e.g., trash or needed infrastructure repairs)? NO TRASH OR DEBRIS. Infrastructure is basicly NEW.

OF 48-16

1. Temperature-47 F
2. PH- 7.36
3. Conductivity- 783 ps/cm
4. TDS- 558 ppm
5. Salinity- .30 ppt
6. Detergents- .25
7. Chorine
    a. Total- 0
    b. Free- 0
8. Ammonia- 0

Proposal for Medway Plaza Stormwater Connections and Testing Locations



Highlighted yellow represents the stormwater path from Medway Plaza to outfall.

Legend
Blue square = catch basin
Green line = pipe network
Black circle = drain manhole
Purple diamond = outfall

The image above is from the Town's Drainage System map on ArcGIS Online. The outfall locations are geolocated. Catch basin and manhole points were manually entered using data from available engineering plans including the Route 109 Redevelopment plans and the Medway Plaza plans dated September 7, 2019. In addition, the drainpipe lines were entered manually based on topography and Highway Division staff field knowledge. All points were verified by Highway Division Right-of-Way Supervisor. The stormwater flow path was deduced from these sources.

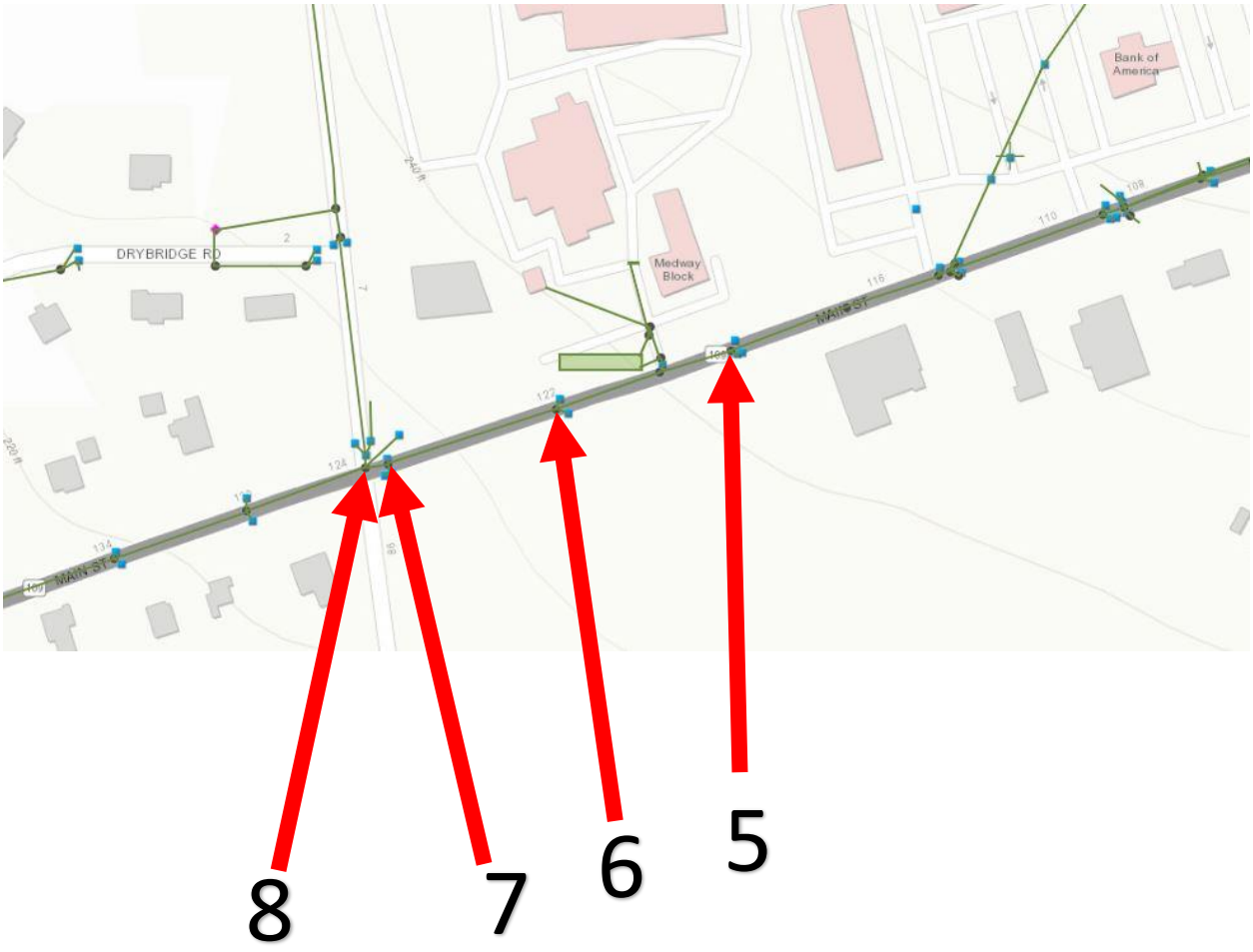
We propose testing at the following 14 locations:

Location 1: Topographical peak. Test this location to determine stormwater composition before it interacts from Medway Plaza's discharge.

Location 2: Medway Plaza direct connection to MS4. Test at manhole (verify ROW at this location).

Location 3: Medway Plaza direct connection to MS4. Catch basin in plaza connects to Town's catch basin on Route 109. Test at manhole.

Location 4: Medway plaza direct connection to MS4. Test at manhole.



Location 5: Test at manhole before Medway Block.

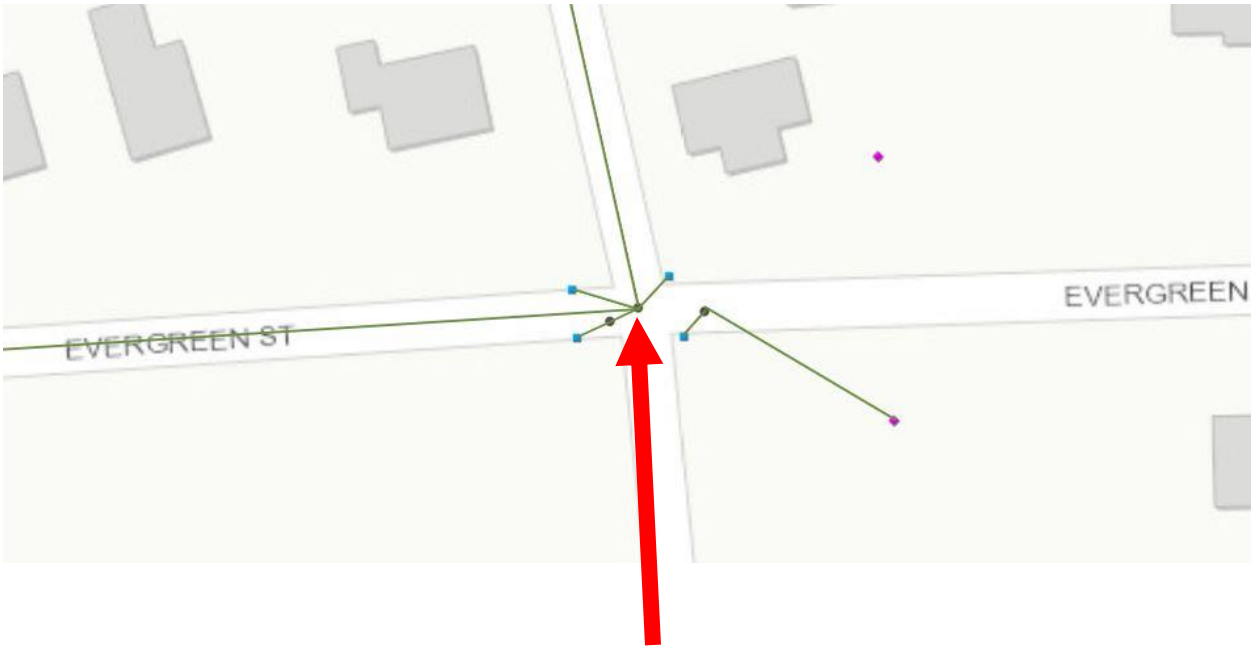
Location 6: Test at manhole after Medway Block.

Location 7: Test at manhole before the connection with Pond Street.

Location 8: Test at manhole after connection with Pond Street.

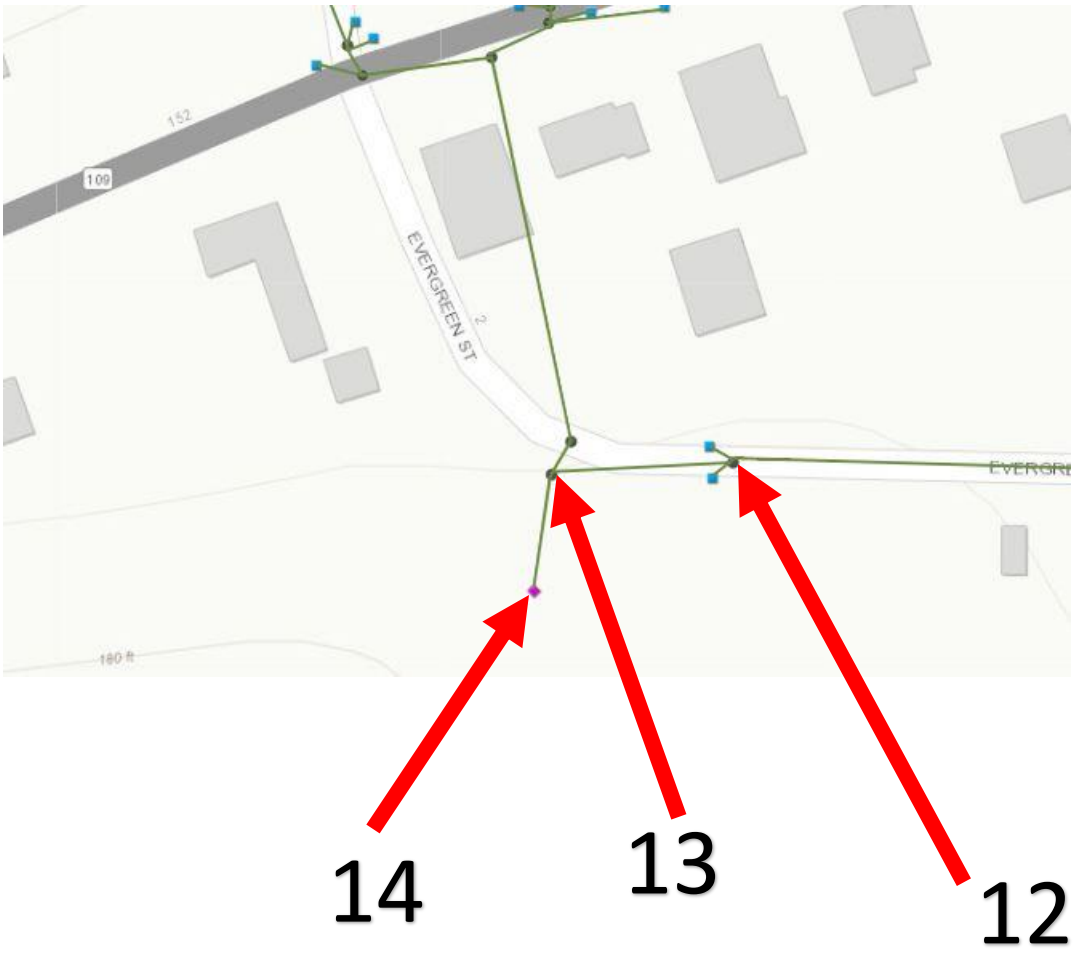
Location 9: Last location before connection with stormwater from other catchment area. Test at manhole.

Location 10: First location with combined catchment areas. Test at manhole.



11

Location 11: Additional location. Test at manhole that collects stormwater from the three catch basins.



Location 12: Last location before connecting with new catchment area. Test at manhole.

Location 13: First location with combined catchment areas. Test at manhole.

Location 14: Outfall for the Medway Plaza catchment area. Test at outfall.

Stormwater Testing Parameters

Manholes - Stormwater testing shall include:

- E.Coli
- Total Phosphate
- Cadmium, Copper, Lead, Zinc
- Total Petroleum Hydrocarbons

Outfall – Stormwater testing shall include:

- E.Coli
- Total Phosphate
- Cadmium, Copper, Lead, Zinc
- Total Petroleum Hydrocarbons (TPH)
- Temperature
- Salinity
- Conductivity
- Chlorine
- Ammonia
- Surfactants

Bring E.coli, total phosphate, Cadmium/Copper/Lead/Zinc, and TPH samples to R. I. Analytical Laboratories in Hudson, Massachusetts within 6- 8 hours of sampling.

Tel: 800-937-2580

Screening and Sampling Equipment

Testing Equipment:

- ☐ Ammonia test strips
- ☐ Chlorine test strips
- ☐ Surfactant test kit
- ☐ Conductivity, pH, salinity, and temperature meter

Sampling equipment

- ☐ Map of sample locations
- ☐ Clipboard (if not using tablet)
- ☐ Sample bottles (pre-labeled and verified on site)
- ☐ Data sheets
- ☐ Chain of Custody forms (return a copy to the DPW Compliance Coordinator.)
- ☐ De-ionized water for cleaning sample containers
- ☐ Hand sanitizer or wet wipes
- ☐ Sample pole
- ☐ Pen and/or permanent marker
- ☐ Label tape
- ☐ Paper towels

Transport equipment

- ☐ Cooler
- ☐ Ice for samples

Tools

- ☐ Flashlight and/or headlamp
- ☐ Manhole hook
- ☐ Shovel
- ☐ Pry bar or pick
- ☐ Measuring tape
- ☐ Traffic cones

Personal Protection Equipment

- ☐ Nitrile gloves
- ☐ Safety glasses
- ☐ Safety vests
- ☐ Waders or knee-high rubber boots

TOWN OF MEDWAY
COMMONWEALTH OF MASSACHUSETTS

Department of Public Works

Medway Department of Public Works
45B Holliston Street
Medway, MA 02053
Phone (508) 533-3275
Fax (508) 321-4985

Director
David D'Amico

Deputy Director
Peter Pelletier

RE: Illicit Discharge Removal Report

As a part of the MS4CD Permit Application review, the DPW implemented its catchment investigation procedure on April 1, 2020. Dry weather flow was present at a few locations in the catchment area and the DPW collected stormwater samples in order to trace any contamination back "between two manholes." The Town received the results and determined that there was an illicit discharge (E.coli) coming from the commercial property. Since its discovery the Town has worked extensively with the property owner, legal teams on both sides, and engineering teams on both sides to identify the source of the contamination and remove it.

The property owner disputed the results from the stormwater testing conducted by the DPW during dry and wet weather conditions that showed high levels of E.coli. Dry weather testing occurred on April 1, 2020 and wet weather testing occurred on June 11, 2020. The DPW ordered a cease and desist on June 17, 2020 and required the property owner to trace their system to identify the source of contamination. If the source was not removed by July 17, 2020, the DPW was prepared to plug their connections to the Town's MS4 to prevent further contamination. At that time, the property owner was still disputing the sampling results and denying any issue. Therefore, in order to avoid an injunction, the DPW and property owner agreed to conduct wet weather sampling simultaneously so the results could not be disputed.

Testing occurred on August 17, 2020, and the results from both parties showed that E.coli was present. The DPW established a new deadline for the property owner to find and remove the source of contamination (September 17, 2020). The property owner's engineer conducted a camera investigation on September 4, 2020 and did not find any cross connections; however, they did find that part of the pipeline was collapsed, and another section was blocked with sediment. On September 8, 2020 the line was cleaned, and a camera investigation is being scheduled. On September 15, 2020 the property owner's legal team acknowledged that they need to replace the collapsed section of pipe; however, they would prefer to do so when they redo their parking lot. The DPW denied this request because the parking lot renovation is a part of a separate action item that involves the MS4CD Permit and Site Plan Approval. The DPW will not approve a MS4CD permit with connection that has a known contaminant entering the Town's MS4.

The planned corrective action includes additional camera investigation if the section of pipes that were missing, and additional sampling at catch basins along the drain line to determine the origin of the contamination. If it is determined that the source of contamination is from surface runoff, then the DPW will require a more robust O&M plan demonstrating how the property owner will implement good housekeeping practices.