Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part I: General Conditions

General Information

Name of Municipality or Organization: City of Waltham | State: MA

EPA NPDES Permit Number (if applicable): MAR0410066

Primary MS4 Program Manager Contact Information

Name: Stephen A. Casazza | Title: City Engineer

Street Address Line 1: Arthur J Clark - Government Center

Street Address Line 2: 119 School Street, Room #10

City: Waltham | State: MA | Zip Code: 02451

Email: scasazza@city.waltham.ma.us | Phone Number: (781) 314-3830

Fax Number: (781) 314-3535

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed): Same as above

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes | Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete? Yes | Eligibility Criteria (check all that apply): ☒ A ☐ B ☐ C

☑ Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? *(Part II, III, IV or V, Subpart B.3.(a.) of 2003 permit)*: 100%

If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:

If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

https://www.city.waltham.ma.us/sites/walthamma/files/uploads/drain system map overview - outfall locations 1.pdf

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? *(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)*: Yes | Effective Date or Estimated Date of Adoption (MM/DD/YY): 06/23/08

Construction/Erosion and Sediment Control (ESC) Authority Adopted? *(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit)*: Yes | Effective Date or Estimated Date of Adoption (MM/DD/YY): 06/23/08

Post- Construction Stormwater Management Adopted? *(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)*: Yes | Effective Date or Estimated Date of Adoption (MM/DD/YY): 06/23/08

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: *Massachusetts 2014 List of Impaired Waters*- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Charles River (MA72-07)	59	☐	☐	☐	☐	☐	☒	☐	☐	☐	Pathogens
Beaver Brook (MA72-28)	37	☐	☐	☐	☐	☐	☐	☐	☐	☐	Pathogens
Hardy's Pond (MA72-045)	17	☐	☐	☐	☐	☐	☒	☒	☐	☐	Excess Algal Growth
Chester Brook	50	☐	☐	☐	☐	☐	☐	☐	☐	☐	
West Chester Brook	43	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Clematis Brook	21	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Lyman Pond	14	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Stony Brook/Reservoir	14	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Master's Brook	6	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Hobbs Brook/Basin	89	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Tributary (MA72-27)	1	☐	☐	☐	☐	☐	☐	☐	☐	☐	Low flow alterations
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
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Click to lengthen table

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	**BMP Description**	**Targeted Audience**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal**	**Beginning Year of BMP Imple-mentation**
Brochures/Pamphlets	Pet waste disposal	Residents	Engineering	Website visits Stories placed Estimated Audience	2018
Brochures/Pamphlets	Proper waste disposal	Businesses, Institutions and Commercial Facilities	Engineering and Conservation	Website visits Stories placed Estimated Audience	2018
Brochures/Pamphlets	Erosion and Sediment Control	Developers (construction)	Building and Conservation	# distributed from City offices # distributed at public events	2019
Brochures/Pamphlets	Proper waste disposal	Industrial Facilities	CPW and Health with assistance from Environmental Specialist	Website visits and # distributed by city officials	2019
Social Media Outreach	Pet waste disposal Proper waste disposal Erosion and Sediment Control	Residents, Businesses and Developers	IT-Social Media Coordinator	Followers Views Likes Comments Shares	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	Brief BMP Description (enter your own text to override the drop down menu)	Responsible Department/Parties (enter your own text to override the drop down menu)	Additional Description/ Measurable Goal	Beginning Year of BMP Implementation
Public Participation	SWMP Review	Engineering	Host a workshop/ stakeholder meeting to present a draft of the Stormwater Management Plan and seek comments and input.	2019
Public Review	SWMP Review	Engineering	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2019
Public Participation	Household haz. waste/used oil collection	Consolidated Public Works/Recycling	Hazardous waste collection days	2018
Public Participation	Partnership - Advocacy Groups	Conservation, Engineering, Consolidated Public Works	Partner with Waltham Land Trust	2019
Public Participation	Curbside food waste collection	Consolidated Public Works/Recycling	Conduct pilot program with vendor	2018
Public Participation	Cleanups - Shoreline/Waterbody	Consolidated Public Works	Annual Earthday stream cleanup	2019
Public Participation	Rain Barrel Program	Consolidated Public Works/Recycling	Offer rain barrels to the residents through vendors	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
SSO inventory	Develop SSO inventory in accordance of permit conditions	Engineering	Complete within 1 year of effective date of permit	2018
Storm sewer system map	Create map and update during IDDE program completion	Engineering and GIS	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
Written IDDE program	Create written IDDE program	Engineering	Complete within 1 year of the effective date of permit and update as required	2018
Implement IDDE program	Implement catchment investigations according to program and permit conditions	Engineering	Complete 10 years after effective date of permit	2018
Employee training	Train employees on IDDE implementation	CPW and Engineering with assistance from Environmental Specialist	Train annually	2019
Conduct dry weather screening	Conduct in accordance with outfall screening procedure, permit conditions and Administrative Order	Engineering	Complete 3 years after effective date of permit	2018
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Engineering	Complete 10 years after effective date of permit	2018
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Engineering	Complete ongoing outfall screening upon completion of IDDE program	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Engineering , Conservation, Building	Complete within 1 year of the effective date of permit	2019
Site plan review	Complete written procedures of site plan review and begin implementation	Engineering, Building	Complete within 1 year of the effective date of permit	2019
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Engineering, Conservation. Building	Complete within 1 year of the effective date of permit	2019
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Building and Conservation with assistance from Health	Complete within 1 year of the effective date of permit	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
Update/Modify Stormwater Ordinance		Engineering, Law Department	Complete 2 years from effective date of permit.	2020
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	IT/GIS, Engineering	Complete 4 years after effective date of permit and report annually on retrofitted properties	2022
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Conservation, Engineering, Building	Complete 4 years after effective date of permit and implement recommendations of report	2022
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Traffic, Board of Survey and Planning with assistance from Engineering	Complete 4 years after effective date of permit and implement recommendations of report	2022

Ensure any stormwater controls or management practices for new development and redevelopment meet the retention or treatment requirements of the permit and all applicable requirements of the Massachusetts Stormwater Handbook	Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements	Conservation, Engineering, Building	Complete 2 years after effective date of permit	2020
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	Engineering, Conservation, Building	Complete 1 year after effective date of permit. Require submission of as-built plans for completed projects	2019

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	CPW, Recreation, Conservation, Building	Complete 2 years after effective date of permit and implement annually	2020
O&M procedures	Create written O&M procedures as part of SWMP including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	CPW, Recreation, Conservation, Building	Complete and implement 2 years after effective date of permit	2020
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Engineering, CPW	Complete 2 years after effective date of permit	2020
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	CPW, Engineering with assistance from Environmental Specialist	Complete and implement 2 years after effective date of permit	2020
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	CPW, Engineering (Water and Sewer)	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2019
Street sweeping program	Sweep all streets and permitee-owned parking lots in accordance with permit conditions	CPW	Sweep all streets and permitee-owned parking lots once per year in the spring	2019
Winter Road salt use optimization program	Establish and implement a program to minimize the use of road salt	CPW	Implement salt use optimization during deicing season	2019

Inspections and maintenance of stormwater treatment structures	Establish and implement inspection and maintenance procedures and frequencies	CPW and Engineering	Inspect and maintain treatment structures at least annually	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Applicable TMDL	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Lower Charles River (Phosphorus)	Adhere to requirements in part A.I of Appendix F	Conservation, Building, Engineering
Charles River Watershed (Bacteria/Pathogen)	Adhere to requirements in part B.I of Appendix F	Conservation, Building, Engineering
Beaver Brook	Adhere to requirements in part B.I of Appendix F	Conservation, Building, Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Pollutant	Waterbody ID(s)	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Phosphorus	MA72-07 (Charles River)	Adhere to requirements in part II of Appendix H	Engineering, Conservation
Fecal Coliform	MA72-07 (Charles River)	Adhere to requirements in part III of Appendix H	Engineering, Conservation
Fecal Coliform	MA72-28 (Beaver Brook)	Adhere to requirements in part III of Appendix H	Engineering, Conservation
Phosphorus	MA72-045 (Hardys Pond)	Adhere to requirements in part II of Appendix H	Engineering, Conservation
Turbidity	MA72-045 (Hardys Pond)	Adhere to requirements in part V of Appendix H	Engineering, Conservation

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

ADDITIONAL INFORMATION

1. Phosphorus TMDL Requirements:
The City of Waltham is required to achieve a 50 percent reduction in phosphorus from the stormwater discharges to the Charles River and it's tributaries as soon as possible but no later than 20 years from Effective Permit Date (year 2038). In accordance with the New MS4 Permit requirements the City will develop a Phosphorus Control Plan (PCP) and implement it as follows:
Permit Years 2018-2023 - Develop PCP Phase I
Permit Years 2023-2028 - Implement PCP Phase I and Develop PCP Phase II
Permit Years 2028-2033 - Implement PCP Phase II and Develop PCP Phase III
Permit Years 2033-2038 - Implement PCP Phase III

2. Pathogen TMDL Requirements

Charles River and Beaver Brook segments in Waltham are subject to pathogen TMDL requirements under the New MS4 Permit. The City will develop and implement enhanced Best Management Practices (BMPs) such as promoting vegetated buffers along the banks to allow for filtration and infiltration of stormwater runoff, aggressive pet waste management education program and Illicit Discharge Detection and Elimination (IDDE) .

3. Endangered Species Act Determination:
Based on the Endangered Species Act (ESA) Determination Process in accordance with Appendix C of the NOI, we found that the City of Waltham only contains the Northern Long Eared Bat (Please see Attachment 1). It is anticipated that future planned actions within the MS4 outfall watershed areas will have no effect on the Northern Long Eared Bat. We will consult with US Fish and Wildlife as needed during the Permit Term on any future BMPs proposed.
Included in Attachment 1 is a letter dated March 27, 2003 from the Fish and Wildlife regarding their initial determination.

4. Historic Preservation Act Determination:
Please see Attachment 2 that includes an initial determination by the Massachusetts Historical Commission dated March 10, 2003. It is anticipated that future planned actions will not have an impact on the existing historic properties.

5. Develop Stormwater Master Plan (SWMP) to coordinate multi-department understanding of permit requirements. Develop clear outline of responsible parties to enact Rules and Regulations for implementation of the Stormwater Ordinance.

6. The City of Waltham is under a United States Environmental Protection Agency (EPA) Administrative Order (dated November 9, 2004) to implement an Illicit Discharge Detection and Elimination (IDDE) Program. The IDDE Program's main goal is to progressively eliminate illicit connections or flows into the City's stormwater system in order to minimize contamination in the receiving water bodies within the City of Waltham This is being accomplished through systematic water quality sampling and detailed investigations of the outfalls and contributing areas to locate the sources of these illicit connections and subsequently eliminate the contaminated discharges.

The City is implementing the IDDE Program using a phased approach through investigations (closed circuit television inspection, manhole inspections, dye testing, etc.), manhole junction sampling and field investigations, design of construction repairs, and public bidding of work packages. Attachment 4 is the most recent Semi-Annual Report submitted to the EPA that includes a schematic figure showing the status of the IDDE program in each drainage area.

Part V: 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: Jeannette A. McCarthy

Title: MAYOR

Signature: Jeannette A. McCarthy MAYOR

Date: 9/28/2018

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

ATTACHMENTS

ATTACHMENT 1
Endangered Species Act Determination Correspondence

ATTACHMENT 1

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Field Office
70 Commercial Street, Suite 300
Concord, New Hampshire 03301-5087

RE NPDES General Permit
Waltham, Massachusetts

March 27, 2003

Ian B. Catlow
Rizzo Associates
One Grant Street
Framingham, MA 01701-9005

Dear Mr. Catlow:

This responds to your February 24, 2003 letter requesting information on the presence of federally-listed and proposed endangered or threatened species in relation to the proposed NPDES general permit in Waltham, Massachusetts. Our comments are provided in accordance with Section 7 of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531-1543).

Based on information currently available to us, no federally-listed or proposed, threatened or endangered species under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area, with the exception of occasional transient bald eagles (*Haliaeetus leucocephalus*). Preparation of a Biological Assessment or further consultation with us under Section 7 of the Endangered Species Act is not required. Should additional information on listed or proposed species becomes available, this determination may be reconsidered.

Thank you for your cooperation. Please contact me at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Andrew R. Major
Fish and Wildlife Biologist
New England Field Office

ATTACHMENT 1

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

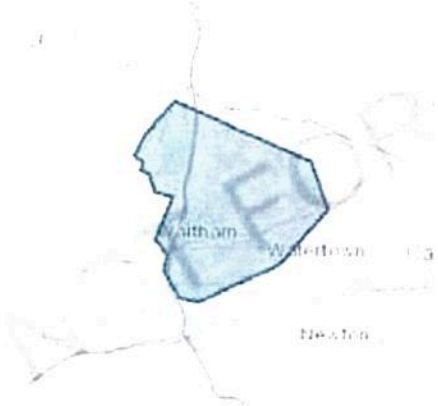
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Middlesex County, Massachusetts



Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are

available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler *Dendroica cerulea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 29 to Jul 20

Dunlin Calidris alpina arcticola This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Eastern Whip-poor-will Antrostomus vociferus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Red-throated Loon Gavia stellata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush Hylocichla mustelina This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence ( )

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season ( )
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

probability of presence | breeding season | survey effort | – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Black-billed Cuckoo
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

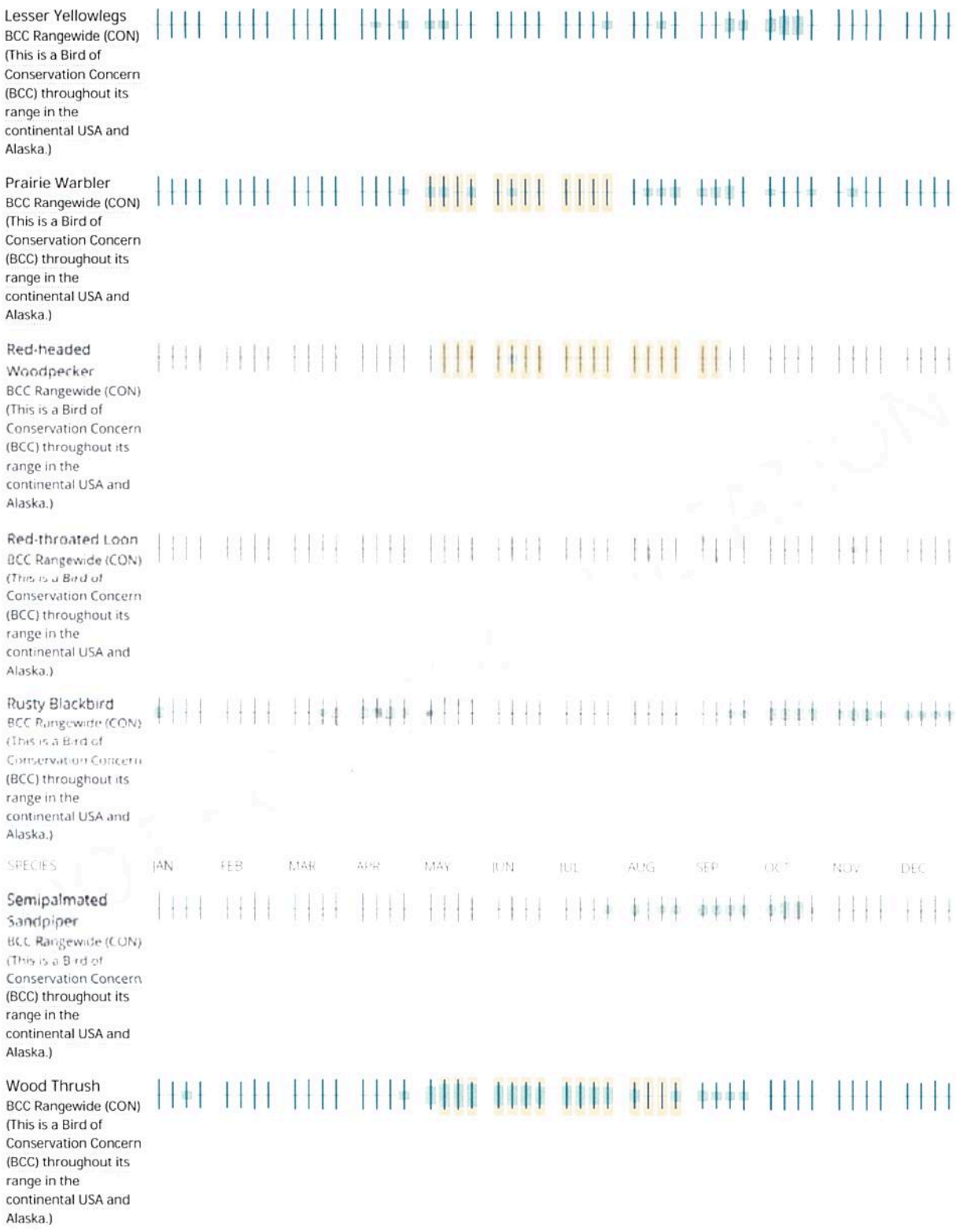
Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Cerulean Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Eastern Whip-poor-will
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the E-bird Explore Data Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your projec area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1E
- PEM1Ed
- PEM1Eb
- PEM1Ad
- PEM1A
- PEM1F
- PEM1C

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1Ed
- PFO1E
- PSS1E
- PFO1A
- PSS1A
- PFO1B
- PSS1Eh

FRESHWATER POND

- PUBHh
- PUBHx
- PUBH

LAKE

- L1UBHh
- L1UBH

RIVERINE

- R2UBH
- R2UBHx
- R4SBC
- R5UBH
- R4SBCx
- R5UBFx

A full description for each wetland code can be found at the National Wetlands Inventory website

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

ATTACHMENT 2
National Historic Preservation Act Determination Correspondence

ATTACHMENT 2

RE 542.160 KC

The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

March 10, 2003

Ian B. Catlow
Project Engineer
Rizzo Associates
One Grant Street
Framingham, MA 01701-9005

RE: Stormwater Pollution Control Program, Waltham, MHC #RC.32538

Dear Mr. Catlow:

Thank you for submitting a Project Notification Form to the Massachusetts Historical Commission regarding the proposed project referenced above. Staff of the MHC have reviewed the information you submitted and have the following comments.

The City of Waltham includes numerous properties including buildings, districts, cemeteries, and bridges listed in the National and State Registers of Historic Places as well as nine recorded archaeological sites dating from as early as 6,000 years ago and as recently as the nineteenth century. There are also undoubtedly additional archaeological sites within the city that have not yet been identified.

MHC understands that the proposed stormwater management plan does not include any demolition or new construction at this time. Therefore, MHC staff have determined that the proposed project is unlikely to affect significant historic or archaeological resources at present. If implementation of the plan should entail new construction or demolition, MHC requests the opportunity to review project plans in order to in order to assess the likelihood that historic properties may be located within project impact areas in compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (36 CFR 800) and Massachusetts General Laws, Chapter 9, Sections 26-27C (950 CMR 71.). If you have any questions concerning this review, please feel free to contact me at this office.

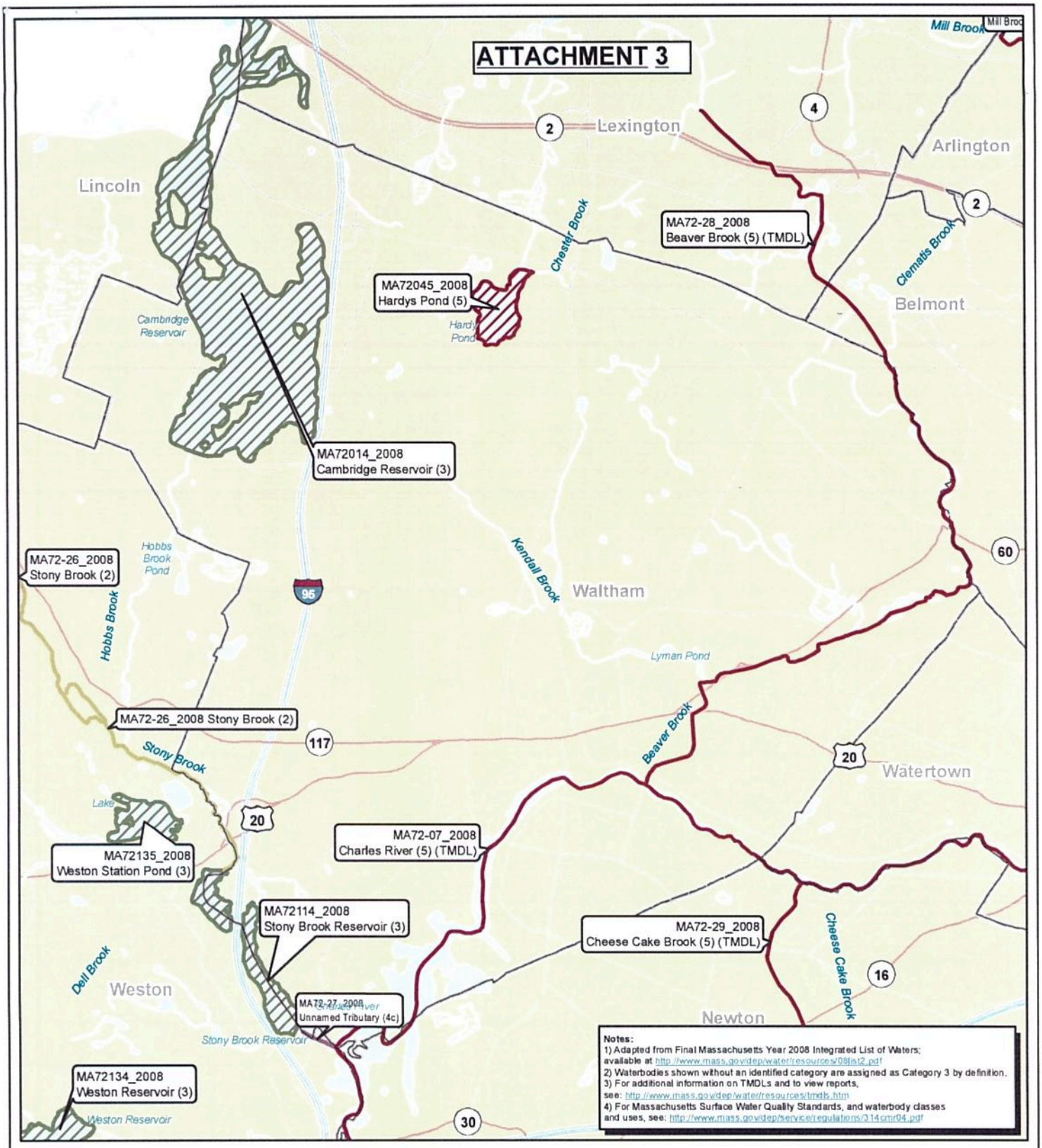
Sincerely,

Eric S. Johnson
Archaeologist/Preservation Planner
Massachusetts Historical Commission

xc: Jeannie Brochi, EPA
Waltham Historical Commission

220 Morrissey Boulevard, Boston, Massachusetts 02125
(617) 727-8470 • Fax: (617) 727-5128
www.state.ma.us/sec/mhc

ATTACHMENT 3
Water Body Assessment and TMDL Status - Waltham, MA



Waterbody Assessment and TMDL Status
Waltham, MA

N

0 0.5 Miles

EPA

Map produced by EPA Region I GIS Center
Map Tracker ID 6678, February 25, 2010
Data Sources: TeleAtlas, Census Bureau, USGS, MassDEP

Waterbody Label

State ID,
Waterbody Name (Category)
(TMDL(s) approved for this waterbody)

See companion table for a listing of pollutants, non-pollutants, and TMDLs for each waterbody

Assessment of Waterbody Segment

- Category 2: Attaining some uses; other uses not assessed
- Category 3: Insufficient information to make assessments for any use.
- Category 4a: TMDL is completed and approved for one or more pollutants
- Category 4c: Impairment not caused by a pollutant.
- Category 5: Impaired or threatened for one or more uses and requiring a TMDL.

- Waterbodies
- Swamp/Marsh
- MS4 Urbanized Areas (2000 Census)
- Municipal Boundaries

ATTACHMENT 4
IDDE Program Summary - Semi-Annual Report to EPA
July 2018

ATTACHMENT 4

CITY OF WALTHAM
Engineering Department

Stephen A. Casazza, P.E.
City Engineer

July 30, 2018

Mr. Todd Borci
Office of Environmental Stewardship
US EPA New England
5 Post Office Square, Suite 100
Boston, MA 02109-3912

RE: City of Waltham
EPA Clean Water Act Administrative Docket No. 05-06
IDDE Program – Semi-Annual Report No. 20

Dear Mr. Borci:

Included in this package is the City of Waltham's IDDE Program Report No. 20 for your review.

The City's second bid package "IDDE Work Package 2017" was awarded to National Water Main in September 2017, and the rehabilitation work was completed in April 2018. The work covered under this package is primarily trenchless rehabilitation of pipelines and manholes that were identified under the City's IDDE Program.

In addition to the summary report, this package contains the schedule for the next six (6) months.

Should you have any questions, please contact me or our consultant, Natalie Pommersheim of Environmental Partners Group, Inc. (EP) at 617 657-0257 or nmp@envpartners.com.

Sincerely,

Stephen A. Casazza, P.E.
City Engineer

Cc: Honorable Jeannette A. McCarthy, Mayor
Patricia A. Azadi, Assistant City Solicitor
Natalie Pommersheim (EP)
Paul Millett, PE (EP)

Engineering Department
119 School Street
Waltham MA 02451
TEL: (781) 314-3830 FX: (781) 314-3844
scasazza@city.waltham.ma.us

City of Waltham, MA

Illicit Discharge Detection and Elimination (IDDE) Program

EPA IDDE Program Progress Report No. 20

July 2018

City of Waltham
Illicit Discharge Detection and Elimination Program
IDDE Program Progress Report No. 20
July 2018

1. Introduction and Program Approach

This document serves as the City of Waltham's Semi-Annual IDDE Progress Report of July 2018. It contains a description of program achievements since submission of the Semi-Annual IDDE Progress Report #19 dated January 2018.

The City of Waltham is under a United States Environmental Protection Agency (EPA) Administrative Order (dated November 9, 2004) to implement an Illicit Discharge Detection and Elimination (IDDE) Program. The IDDE Program's main goal is to progressively eliminate illicit connections or flows into the City's stormwater system in order to minimize contamination in the receiving water bodies within the City of Waltham. This will be accomplished through systematic water quality sampling and detailed investigations of the outfalls and contributing areas to locate the sources of these illicit connections and subsequently eliminate the contaminated discharges.

Environmental Partners Group Inc. (EP) is implementing the IDDE Program using a phased approach through investigations (closed circuit television inspection, manhole inspections, dye testing, etc.), manhole junction sampling and field investigations, design of construction repairs, and public bidding of work packages. ***Appendix A*** includes a schematic figure showing the status of the IDDE program in each drainage area.

1.1. CCTV Investigations

EP works with a closed circuit camera/television (CCTV) crew to inspect pipelines in areas of concern. With this approach, suspected contaminated pipe reaches were isolated and subsequently inspected with a CCTV as needed. After field inspections the CCTV videos were reviewed and further evaluated for contamination sources and repair methods.

1.2. Sampling and Field Investigations

Sampling of outfalls and junction manholes are conducted to locate potential illicit connections. CCTV inspections and dye testing are used to follow up samples indicating illicit connections. The City works from a "top down" approach in catchments for each outfall.

1.3. IDDE Construction Work Packages

The development of Construction Work Packages involves field investigation and design. The field investigation includes inspection of manholes and surrounding areas for potential illicit connections and sources of contamination, CCTV (camera) pipeline inspection, smoke testing and dye testing work. The design and biddable work packages are divided into two categories:

1. Excavation work:
    a. In some cases the excavation work must be completed before trenchless repairs can be completed.
    b. Design work included field inspection of drainage and sewer structures, topographic and utility surveys, review of existing infrastructure plans, coordination with local utilities including gas and electric, and development of full scale design plans and specifications.

2. Trenchless repairs:
    a. Trenchless technology repairs include cured-in-place-pipe liners, root removal, and manhole liners.
    b. Design work included CCTV inspections, review of CCTV video tapes, additional site inspection follow-up, coordination with the City's I/I consultant, and development of full contract documents ready for public bid.

Work packages are further described in the following sections.

2. Completed and On-Going Work

Work completed between January 1, 2018 and July 31, 2018 is presented below.

2.1. IDDE Investigation

No sampling or testing activities have been completed since January 2018.

2.2. IDDE Work Packages

2.2.1. IDDE Work Package #2

An IDDE Work Package (IDDE Work Package #2) was bid and awarded in September 2017. The work is primarily trenchless rehabilitation of pipelines and manholes. The trenchless construction project was submitted to the Central Register and CommBuys for public bid on June 28, 2017.

This work package includes the following areas identified for trenchless repairs:

- BB-6; Upton / Brookfield — CIPP line sewer; CIPP line drain pending investigation
- BB-14; Canterbury /Candace — CIPP line sewer
- BB-27; Pierce St / River St — CIPP line sewer; seal sewer and drain manholes
- BB-12; Barbara Rd & Beal Rd — Seal drain and sewer manholes
- IMC-11; Fuller St / Newton St — CIPP line sewer; seal sewer and drain manholes
- MB-6; Irving St / Oak Hill Rd — Cut protruding connection in sewer; complete CCTV

The Pre-Bid Meeting took place on Thursday, July 27 and the Bid Opening occurred on Thursday, September 7. The bid was awarded to National Water Main on September 19, and the Pre-construction meeting was held on Tuesday, November 28. Work began on December 4 and the project was completed on April 4th 2018.

The following table presents the estimated infiltration removed from the sewer rehabilitation work conducted as part of the IDDE Work Package - 2017. As the post-construction flow isolation was done at a time not comparable to the pre-construction flow isolation, we have estimated the infiltration where measurements were unclear.

Infiltration Removal Estimate - Post-Rehabilitation						
Location	Upstream Manhole	Manhole Infiltration	Downstream Manhole	Manhole Infiltration (gpm)	Pipe Infiltration (gpm)	
Upton Rd	SMH R46_24310	0	SMH R46_24305A	0	0.6	measured improvement
Upton Rd	SMH R46_24305A	0	SMH R46_24300	0	0.25	50% removal
Beal Rd	SMH R63_12155	0	N/A	N/A	N/A	
Candace Ave	SMH R53_12340	0	SMH R53_12335	0	2.7	50% removal
Pierce St	SMH R61_09015	0	SMH R61_09010	0	1.15	50% removal
Fuller St	SMH R77_02570	0	SMH R77_02565	0	0.06	50% removal
Fuller St	SMH R77_02565	0	SMH R77_02555	0	0.62	50% removal
Fuller St	SMH R77_02560	0	SMH R77_02555	0	1.17	50% removal
				Total	**6.55**	**gpm**
				Total	**9,430**	**gpd**

The following project is currently under design:

- MBN-4; Jennings Road
    - Replace segments of 12-inch sewer and 15-inch drains, including manholes. The drains and sewers have been inspected via CCTV and are in deteriorated condition.
    - Existing Conditions Survey was conducted in November 2017.
    - Geotechnical Borings were conducted in December 2017.

The following projects are included in other contracts:

- CL-9; Juniper Hill Rd / Cliff Rd
    - The sewer has been lined with CIPP by an independent contractor as part of the City's I/I mitigation program.

- MB-2; Prospect Street
    - The excavation and replacement of a crushed drain will be included in the City's contract to replace the downstream drain in Prospect Street.

3. Status of Outfall Areas and Illicit Flow Removal

3.1 Work planned for 2018

The attached schematic shows the status of the City's IDDE program in the Masters Brook Watershed. Nine (9) drainage areas have been cleared of illicit connections through dry weather and wet weather sampling. Outfall 28-A will be monitored visually because previous sampling did not indicate a consistent potential illicit connection. Three (3) areas in the Masters Brook Watershed are pending construction work packages. The remaining construction work is aimed at resolving previous sampling issues in other watersheds. Twelve (12) drainage areas in the Masters Brook Watershed will be sampled as the upstream issues are resolved. The SIB catchment areas are on the schedule to investigate areas downstream of SIB-7.

Recommendations are included in the following Table. Check marks (✓) indicate a completed task.

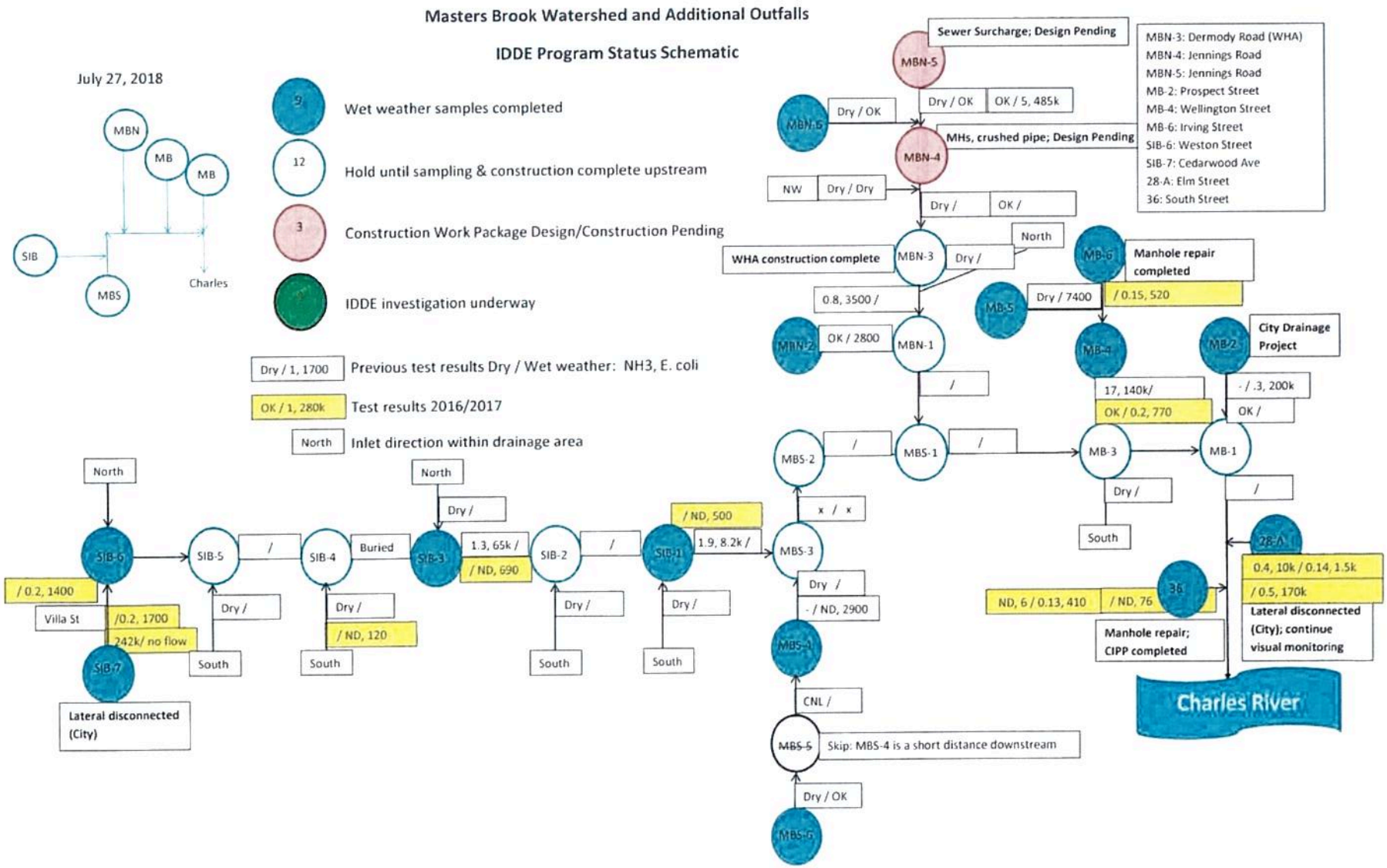
Status Update and Construction Contract Recommendations

Phase 3-Work Package 1	**Investigate**	**Contract Type**		**Notes**
		Excavation	**Trenchless**	
CL-9; Juniper Hill Rd / Cliff Rd		✓	✓	Completed. To be removed from status updates.
BB-6; Upton / Brookfield			x	CIPP included in the trenchless contract
BB-14; Canterbury /Candace		✓	x	Relocated sewer service lateral; CIPP sewer
BB-27; Pierce St / River St			x	CIPP Sewer; Repair manholes
MB-6; Irving St / Oak Hill Rd	✓		✓	Separated sewer/drain in manhole. CCTV of sewer under upcoming work package.
MBN-3; Dermody / Hansen	✓	✓		Completed. To be removed from status updates
SIB-6; Weston St (RTE 20)	✓	x		CCTV completed; Future project to excavate drain in easement: non-IDDE issue
Phase 2-Work Package 3				
BB-12; Barbara Rd & Beal Rd		✓	x	Sealed an illicit connection; Seal 3 DMH, 1 SMH
IMC-11; Fuller St / Newton St	✓	✓	x	#75 and #111 services repaired; Excavated 10' of sewer; Seal 4 SMHs, 1 DMH; CIPP sewer
BB-23; Main St @ Heard & Newton	x			City Engineer to contact previous consultant to determine location of defect and corrective action
2017 Investigations				

City of Waltham, MA
EPA IDDE Program Six Month Look-Ahead Schedule
July 2018

Construction Work Packages		July	August	September	October	November	December
Design	Jennings Road Currently Under Contract for Design						
Construction	Trenchless Repairs						
Field IDDE Program		**July**	**August**	**September**	**October**	**November**	**December**
Investigations	Continue to visually monitor Prospect Street Elm Street						

Notes: Follow-up sampling will continue as needed to identify IDDE sources


Masters Brook Watershed and Additional Outfalls
IDDE Program Status Schematic
July 27, 2018
MBN
MB
MB
SIB
MBS
Charles
9
Wet weather samples completed
12
Hold until sampling & construction complete upstream
3
Construction Work Package Design/Construction Pending
IDDE investigation underway
Dry / 1, 1700
Previous test results Dry / Wet weather: NH3, E. coli
OK / 1, 280k
Test results 2016/2017
North
Inlet direction within drainage area
MBN-3: Dermody Road (WHA)
MBN-4: Jennings Road
MBN-5: Jennings Road
MB-2: Prospect Street
MB-4: Wellington Street
MB-6: Irving Street
SIB-6: Weston Street
SIB-7: Cedarwood Ave
28-A: Elm Street
36: South Street
Sewer Surcharge; Design Pending
MBN-5
Dry / OK
Dry / OK
OK / 5, 485k
MBN-6
MHs, crushed pipe; Design Pending
MBN-4
NW
Dry / Dry
Dry /
OK /
WHA construction complete
MBN-3
Dry /
North
MB-6
Manhole repair completed
0.8, 3500 /
MB-5
Dry / 7400
/ 0.15, 520
MBN-2
OK / 2800
MBN-1
MB-4
MB-2
City Drainage Project
/
17, 140k/
OK / 0.2, 770
- / .3, 200k
OK /
MBS-2
/
MBS-1
/
MB-3
MB-1
Dry /
/
South
28-A
0.4, 10k / 0.14, 1.5k
/ 0.5, 170k
Lateral disconnected (City); continue visual monitoring
ND, 6 / 0.13, 410
/ ND, 76
36
Manhole repair; CIPP completed
Charles River
x / x
MBS-3
Dry /
- / ND, 2900
MBS-4
CNL /
MBS-5
Skip: MBS-4 is a short distance downstream
Dry / OK
MBS-6
North
SIB-6
/ 0.2, 1400
Villa St
/0.2, 1700
242k/ no flow
SIB-7
Lateral disconnected (City)
SIB-5
/
Dry /
South
SIB-4
Buried
Dry /
/ ND, 120
South
North
SIB-3
Dry /
1.3, 65k /
/ ND, 690
South
SIB-2
/
Dry /
South
SIB-1
/ ND, 500
1.9, 8.2k /
Dry /
South

ATTACHMENT 5
Stormdrain Outfalls Map

(Attached Separately)

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part II: Summary of Receiving Waters

Please list the waterbodies to which your MS4 discharges. For each waterbody, please report the number of outfalls discharging into it and, if applicable, the segment ID and any impairments.

Massachusetts list of impaired waters: *Massachusetts 2014 List of Impaired Waters-* http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Charles River (MA72-07)	59	☐	☐	☐	☐	☐	☒	☐	☐	☐	Pathogens
Beaver Brook (MA72-28)	37	☐	☐	☐	☐	☐	☐	☐	☐	☐	Pathogens
Hardy's Pond (MA72-045)	17	☐	☐	☐	☐	☐	☒	☒	☐	☐	Excess Algal Growth
Chester Brook	50	☐	☐	☐	☐	☐	☐	☐	☐	☐	Sediment buildup
West Chester Brook	43	☐	☐	☐	☐	☐	☐	☐	☐	☐	Sediment buildup and overgrowth of vegetation
Clematis Brook	21	☐	☐	☐	☐	☐	☐	☐	☐	☐	Sediment buildup
Lyman Pond	14	☐	☐	☐	☐	☐	☐	☐	☐	☐	Sediment buildup
Stony Brook/Reservoir	14	☐	☐	☐	☐	☐	☐	☐	☐	☐	Deicing chemicals from winter highway maintenance
Master's Brook	6	☐	☐	☐	☐	☐	☐	☐	☐	☐	Sediment (predominantly piped)
Hobbs Brook/Basin/Cambridge Reservoir	89	☐	☐	☐	☐	☐	☐	☐	☐	☐	Deicing chemicals from winter highway maintenance
Unnamed Tributary (MA72-27)	1	☐	☐	☐	☐	☐	☐	☐	☐	☐	Low flow alterations
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	
		☐	☐	☐	☐	☐	☐	☐	☐	☐	

Click to lengthen table

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	**BMP Description**	**Targeted Audience**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal**	**Beginning Year of BMP Imple-mentation**
Brochures/Pamphlets	Pet waste disposal	Residents	Engineering	number of brochures distributed with the water sewer bills	2019
Web Page	Stormwater Management - Include proper fertilizer, pesticide, herbicide application; car washing and maintenance; deicing materials; hazardous waste and pet waste disposal.	Residents	Engineering and Conservation	Website visits Stories placed Estimated Audience	2018
Web Page	Make information available to developers and construction contractors via the City's website. Include sediment and erosion control measures and elements of stormwater pollution prevention plan and required permits.	Developers (construction)	Building and Conservation	Website visits Stories placed Estimated audience	2019

Brochures/Pamphlets	Sedimentation and erosion controls; proper construction equipment fueling and maintenance.	Developers (construction)	Building and Conservation	Number of brochures picked up at the City offices	2019
Social Media Outreach	Pet waste disposal Proper waste disposal Erosion and Sediment Control	Residents, Businesses and Developers	IT-Social Media Coordinator	Followers Views Likes Comments Shares	2019
Web Page	Proper waste disposal	Industrial Facilities	CPW, Health Department with assistance from Environmental Special	Website visits, stories placed, estimated audience	2022
Brochures/Pamphlets	Proper waste disposal	Industrial Facilities	CPW, Health Department with assistance from Environmental Special	Number of brochures picked up at the City offices	2023
Brochures/Pamphlets	Proper equipment inspection, waste disposal, dumpster maintenance, use and storage of de-icing materials, and parking lot sweeping.	Commercial (small businesses)	Building, Engineering and CPW	Number of brochures picked up at the City offices	2020
Web Page	Stormwater good house keeping measures	Commercial (small businesses)	Building, Engineering and CPW	Website visits, stories placed, estimated audience	2021

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	**BMP Description**	**Responsible Department/Parties** (enter your own text to override the drop down menu)	**Measurable Goal** (all text can be overwritten)	**Beginning Year of BMP Imple-mentation**
Update/Modify Stormwater Ordinance	The draft Rules and Regulations for the City's Stormwater Ordinance will be reviewed for conformance with the new MS4 Permit Requirements and updated accordingly.	Engineering, Law Department	Complete 2 years from effective date of permit.	2020
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	IT/GIS, Engineering	Complete 4 years after effective date of permit and report annually on retrofitted properties	2022
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Conservation, Engineering, Building	Complete 4 years after effective date of permit and implement recommendations of report	2022
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Traffic, Board of Survey and Planning with assistance from Engineering	Complete 4 years after effective date of permit and implement recommendations of report	2022

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Applicable TMDL	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Lower Charles River (Phosphorus)	Adhere to requirements in part A.I of Appendix F	Conservation, Building, Engineering
Charles River Watershed (Bacteria/Pathogen)	Adhere to requirements in part A.III of Appendix F	Conservation, Building, Engineering

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. In addition, if you are subject to additional requirements due to a downstream nutrient impairment (see Part 2.2.2 of the permit) select the pollutant of concern and indicate applicable waterbody IDs or write "all waterbodies" if applicable. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, **enter your own text to override drop-down menus.**

Pollutant	Waterbody ID(s)	Action Description	Responsible Department/Parties (enter your own text to override the drop down menu)
Phosphorus	MA72-045 (Hardy's Pond)	Adhere to requirements in part II of Appendix H	Engineering, Conservation
Fecal Coliform	MA72-28 (Beaver Brook)	Adhere to requirements in part III of Appendix H	Engineering, Conservation

From: Casazza, Stephen
To: Vuto, Michelle
Subject: Re: Small MS4 NOI submission - additional or corrected information required
Date: Monday, April 01, 2019 10:31:58 AM

Michelle,
Thank you for your comments. I will update our records as requested.
Sincerely,
Steve Casazza

Sent from my iPhone

> On Apr 1, 2019, at 10:21 AM, Vuto, Michelle <Vuto.Michelle@epa.gov> wrote:
>
> Hi Steve,
>
> Thanks for the additional information.
>
> There are still some impairments missing on the receiving waters list (e.g. Sedimentation/ Siltation, Taste and Odor, Non-native Aquatic Plants, Other anthropogenic substrate alterations for Beaver Brook 72-28; DDT, PCB in Fish Tissue, Fishes Bioassessments, Eurasian Water Milfoil- Myriophyllum spicatum, Fish passage barrier, Non-Native Aquatic Plants, and other flow regime alterations for Charles River 72-07).
>
> Also, part V of Appendix H should still be followed for waterbodies with sedimentation/siltation impairments (page 18 of the NOI).
>
> Please just respond to this email confirming the updates above and make sure to update your records with the discussed information. If the confirmation is not received within 30 days of the date on this email EPA may initiate the process to deny your NOI, unless additional time is granted by EPA for such submission.
>
> Let me know if you have any questions.
>
> Best,
> Michelle
>
> Michelle Vuto
> Stormwater & Construction Permits
> U.S. EPA Region 1
> 5 Post Office Square-OEP06-4
> Boston, MA 02109-3912
> 617-918-1222
>
>
> -----Original Message-----
> From: Casazza, Stephen <scasazza@city.waltham.ma.us>
> Sent: Friday, March 29, 2019 11:49 AM
> To: Vuto, Michelle <Vuto.Michelle@epa.gov>
> Cc: Reports Stormwater <Stormwater.Reports@epa.gov>
> Subject: RE: Small MS4 NOI submission - additional or corrected information required
>
> Michelle,
> Please see attached revised NOI pages per your comments / review.
> 1. In particular, the list of impaired waters was updated with "Other pollutant(s) causing impairments" for each waterbody on page 2 of 20.
> 2. Under the Public Education MCM we have provided 2 messages for each of 4 audiences as required by the

permit. These are included on the attached pages 3 and 4 of 20.
> 3. For the Post Construction MCM, BMP description for the update / modify Stormwater ordinance, please see revised page 12 of 20 which includes the an updated BMP description.
> 4. Relative to the Action Descriptions for Charles River Watershed TMDL, has be updated to reflect appropriate sections of Appendix F. As noted the TMDL for Beaver Brook has be removed for the list. Please see attached page 17 of 20.
> 5. With respect to the comment relative to TMDLs we have updated the "Action Descriptions" related to Water Quality limited waters on page 18 of 20.
> Please let me know if you have any questions, Sincerely, Steve Casazza
>
>
> Stephen A. Casazza, PE
> City Engineer
> City of Waltham
> Government Center
> Waltham, MA 02451
> 781 -314-3830
>
>
> -----Original Message-----
> From: Vuto, Michelle [mailto:Vuto.Michelle@epa.gov]
> Sent: Thursday, March 21, 2019 4:10 PM
> To: Casazza, Stephen <scasazza@city.waltham.ma.us>
> Cc: Reports Stormwater <Stormwater.Reports@epa.gov>
> Subject: Small MS4 NOI submission - additional or corrected information required
>
> Hello Stephen,
>
> EPA requires additional or corrected information to receive a complete NOI submission for your MS4 and continue the review process.
>
> Please respond to this email with the requested details in the attached report. You do not need to resubmit your entire NOI form. Please respond with the requested information as soon as you can. If the additional information is not received within 30 days of the date on this email EPA may initiate the process to deny your NOI, unless additional time is granted by EPA for such submission.
>
> Please let me know if you have any questions.
>
> Best,
> Michelle
>
> Michelle Vuto
> Stormwater & Construction Permits
> U.S. EPA Region 1
> 5 Post Office Square-OEP06-4
> Boston, MA 02109-3912
> 617-918-1222
>