

Part I: General Conditions

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

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

Eligibility Determination

Endangered Species Act (ESA) Determination Complete?

Eligibility Criteria (check all that apply): ☐ A ☐ B ☒ C

National Historic Preservation Act (NHPA) Determination Complete?

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) 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)

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) Effective Date or Estimated Date of Adoption (MM/DD/YY):

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

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

Part II: Summary of Receiving Waters

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

Check off relevant pollutants for discharges to impaired waterbodies (see above 303(d) lists) without an approved TMDL in accordance with part 2.2.2.a of the permit. List any other pollutants in the last column, if applicable.

[illegible]

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 Implementation
Brochures/Pamphlets	Develop brochures/pamphlets regarding SW Utility and related SW Topics	Residents	Department of Public Works	Distribute material to target audience and maintain material in at least 1 publicly accessible location	2019
Brochures/Pamphlets	Develop brochures/pamphlets regarding SW Utility and related SW Topics	Businesses, Institutions and Commercial Facilities	Department of Public Works	Distribute material to target audience and maintain material in at least 1 publicly accessible location	2019
Brochures/Pamphlets	Develop brochures/pamphlets for permittees receiving the SW Management Permit on related SW Topics	Developers (construction)	Department of Public Works	Distribute material to target audience and maintain material in at least 1 publicly accessible location	2020
Brochures/Pamphlets	Develop brochures/pamphlets regarding SW Utility and related SW Topics	Industrial Facilities	Department of Public Works	Distribute material to target audience and maintain material in at least 1 publicly accessible location	2019

Web Page	Develop and/or share educational material for target audience on related SW topics	Residents	Department of Public Works	Post or link to a website or social media at least 1 piece of educational material targeting audience regarding SW quality or pollution	2021
Web Page	Develop and/or share educational material for target audience on related SW topics	Businesses, Institutions and Commercial Facilities	Department of Public Works	Post or link to a website or social media at least 1 piece of educational material targeting audience regarding SW quality or pollution	2021
Web Page	Develop and/or share educational material for target audience on related SW topics	Developers (construction)	Department of Public Works	Post or link to a website or social media at least 1 piece of educational material targeting audience regarding SW quality or pollution	2022
Web Page	Develop and/or share educational material for target audience on related SW topics	Industrial Facilities	Department of Public Works	Post or link to a website or social media at least 1 piece of educational material targeting audience regarding SW quality or pollution	2022
Web Page	Develop annual messages in spring, summer, and fall regarding specific messages (App F.A. V.1.a.i.1)	Resident, Business/Institution/Commercial	Department of Public Works	Post or link to website or social media at least 1 piece of educational material regarding SW quality or pollution for spring, summer, and fall	2019

[illegible]

Part III: Stormwater Management Program Summary (continued)

[illegible]

[illegible]

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 Implementation
SSO inventory	Develop SSO inventory in accordance of permit conditions	Department of Public Works	Complete within 1 year of effective date of permit	2018
Storm sewer system map	Create map and update during IDDE program completion	Department of Public Works	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2019
Written IDDE program	Create written IDDE program	Department of Public Works	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	Department of Public Works	Complete 10 years after effective date of permit	2018
Employee training	Train employees on IDDE implementation	Department of Public Works	Train annually	2018
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Department of Public Works	Complete 3 years after effective date of permit	2019
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Department of Public Works	Complete 10 years after effective date of permit	2020
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Department of Public Works	Complete ongoing outfall screening upon completion of IDDE program	2028

[illegible]

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 Implementation
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Department of Public Works	Complete within 1 year of the effective date of permit	2018
Site plan review	Complete written procedures of site plan review and begin implementation	Department of Public Works	Complete within 1 year of the effective date of permit	2018
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Department of Public Works	Complete within 1 year of the effective date of permit	2018
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	Department of Public Works	Complete within 1 year of the effective date of permit	2018

[illegible]

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 Implementation
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	Department of Public Works	Require submission of as-built plans for completed projects	2018
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	Department of Public Works	Complete 4 years after effective date of permit and report annually on retrofitted properties	2021
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	Department of Public Works	Complete 4 years after effective date of permit and implement recommendations of report	2021
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.	Department of Public Works	Complete 4 years after effective date of permit and implement recommendations of report	2021

[illegible]

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 Implementation
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	Department of Public Works	Complete and implement 2 years after effective date of permit	2019
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	Department of Public Works	Complete 2 years after effective date of permit and implement annually	2019
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Department of Public Works	Complete 2 years after effective date of permit	2019
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	Department of Public Works	Complete and implement 2 years after effective date of permit	2019
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	Department of Public Works	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2018
Street sweeping program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	Department of Public Works	Sweep all streets and permittee-owned parking lots once per year in the spring	2019
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	Department of Public Works	Implement salt use optimization during deicing season	2019

[illegible]

Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

[illegible]

Actions for Meeting Requirements Related to Water Quality Limited Waters

[illegible]

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1 and 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.

* The "Beginning Year of Implementation" is assumed to be Calendar Year.

NATIONAL HISTORIC PRESERVATION ACT COMPLIANCE: The Town of Shrewsbury has completed their historic properties review in the previous permit, and the Town does not anticipate undertaking any activity involving less than an acre of subsurface land disturbance on those properties as a result of this permit.

Attached are the following documents:

Attachment 1: Documentation of Compliance with the Endangered Species Act

Attachment 2: Authorization for the Position of Director of Public Works as Duly Authorized Representative

Attachment 3: Town of Shrewsbury - List of Waterbody Segments & Number of Outfalls

Attachment 4: Town of Shrewsbury - Outfall Map

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

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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.

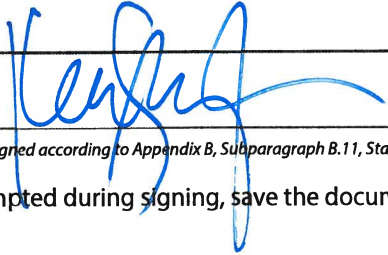
Name:

Kevin J. Mizikar

Title:

Town Manager

Signature:



Date:

09/28/18

[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

Attachment 1
Documentation of
Compliance with the
Endangered Species Act



TOWN OF SHREWSBURY

100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

National Pollutant Discharge Elimination System General Permit, effective July 1, 2018 Endangered Species Act Compliance September 28, 2018

In order for the United States Environmental Protection Agency (USEPA) to meet their obligations under the Clean Water Act and the Endangered Species Act (ESA), and to promote the goals of those Acts, the USEPA is seeking to ensure that the activities regulated by the National Pollutant Discharge Elimination System (NPDES) General Permit, effective July 1, 2018 (hereby known as the MS4-2018 Permit) does not adversely affect endangered or threatened species or critical habitat.

Applicants applying for coverage must assess the impacts of their stormwater discharges and discharge-related activities on federally listed endangered and threatened species and designated critical habitat to ensure that those goals are met.

The Town of Shrewsbury has determined that they do not anticipate any adverse effects to any endangered species or critical habitat within the Town's boundaries from stormwater discharge and discharge-related activities.

This determination was based on a preliminary determination that indicated federally listed species or designated critical habitats within the Town's boundaries from completing the Information, Planning, and Conservation (IPaC) online system process outlined in Appendix C in the USEPA-issued MS4-2018 Permit.

As such, the Town of Shrewsbury is certifying eligibility for Criterion C on their Notice of Intent for coverage under the USEPA's MS4-2018 Permit.

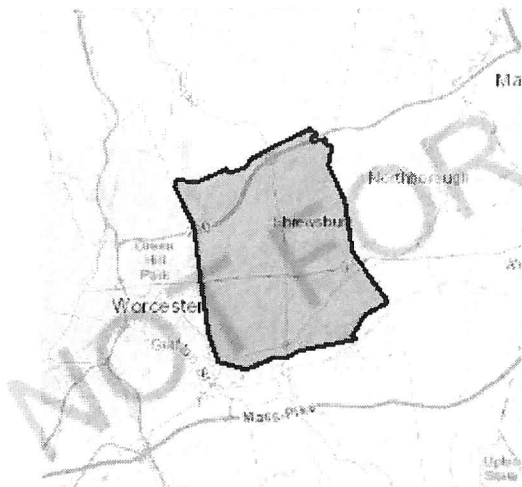
IPaC resource list

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

Worcester 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 species¹ 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 Fisheries²).

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

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9045>

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 Act¹ and the Bald and Golden Eagle Protection Act².

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 erythrophthalmus*

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

Buff-breasted Sandpiper *Calidris subruficollis*

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

<https://ecos.fws.gov/ecp/species/9488>

Breeds elsewhere

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 arctica*

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

Evening Grosbeak *Coccothraustes vespertinus*

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

Breeds elsewhere

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

Ruddy Turnstone *Arenaria interpres morinella*

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

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

Short-billed Dowitcher *Limnodromus griseus*

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

<https://ecos.fws.gov/ecp/species/9480>

Breeds elsewhere

Snowy Owl *Bubo scandiacus*

Breeds elsewhere

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

Wood Thrush *Hylocichla mustelina*

Breeds May 10 to Aug 31

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

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 (I)

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.

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.)

Buff-breasted Sandpiper
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.)

probability of presence breeding season | survey effort — no data

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.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Evening Grosbeak BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Lesser Yellowlegs BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Prairie Warbler BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
Red-headed Woodpecker BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++	++++
SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC

Red-throated Loon BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	
Ruddy Turnstone BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)	
Rusty Blackbird BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	
Semipalmated Sandpiper BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	
Short-billed Dowitcher BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	
Snowy Owl BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)	
Wood Thrush 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 project 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

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

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

PEM1C

PEM1E

PEM1F

FRESHWATER FORESTED/SHRUB WETLAND

PFO1E

PSS1E

PFO1C

PSS1C

PFO1/4E

PSS1/4E

FRESHWATER POND

PUBH

PABH

PUBHh

PUBHx

LAKE

L1UBH

L2ABH

RIVERINE

R5UBH

R4SBC

R2UBH

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 tubercid 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
Authorization for the
Position of
Director of Public Works as
Duly Authorized Representative



TOWN OF SHREWSBURY

Richard D. Carney Municipal Office Building
100 Maple Avenue
Shrewsbury, Massachusetts 01545-5338

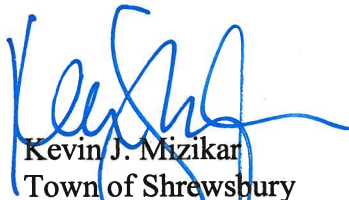
September 27, 2018

United States Environmental Protection Agency
Stormwater and Construction Permit Section (OEP06-1)
Five Post Office Square, Suite 100
Boston, MA 02109

RE: National Pollutant Discharge Elimination System (NPDES) General Permit (effective July 1, 2018)
Director of Public Works as Authorized Representative of NPDES General Permit

To whom it may concern:

I, as the principal executive officer as defined in Appendix B Subparagraph B.11 of the National Pollutant Discharge Elimination System (NPDES) Permit (effective July 1, 2018), hereby authorize the position of the Director of Public Works as the duly authorized representative having responsibility for compliance with the above permit.


Kevin J. Mizikar
Town of Shrewsbury
Town Manager

/dcs

Cc:
Frederick Civian, Stormwater Coordinator
Massachusetts Department of Environmental Protection
One Winter Street - 5th Floor
Boston, MA 02108

Attachment 3
Town of Shrewsbury
List of Waterbody Segments &
Number of Outfalls



TOWN OF SHREWSBURY

100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

The following table is a list of waterbody segments within the Town of Shrewsbury that receives flow from the Town along with the number of outfalls that segment receives.

Each waterbody segment is attributed to an ID used by the Town to identify different unnamed tributaries.

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment
MA51125__Lake Quinsigamond	38
92113__Unnamed trib to Hop Brook	25
96335__Unnamed trib to Big Bummet Brook	22
95955__Unnamed trib to Hop Brook S of Main Blvd	15
104122__Unnamed trib to Lake Quinsigamond	15
51196__Shirley Street Pond	13
92593__Rawson Hill Brook	12
51050__Flint Pond (N.B.)	11
94378__Unnamed trib to Dean Park Pond	10
82004__Unnamed trib to wetland to Assabet River Reservoir	10
96061__Unnamed trib to West Brook	9
51188__Flint Pond (S.B.)	9
95646__Unnamed trib W of South St	9
101288__Unnamed trib to Big Bummet Brook	9
95646__Unnamed trib to Hop Brook E of Francis Ave	9
92335__Unnamed trib to Flint Pond (N.B.)	8
88458__Rawson Hill Brook	7
102944__Unnamed trib to Little Bummet Brook E of Cherry St	7
92509__Unnamed trib to Rawson Hill Brook	7
94125__Unnamed trib to Lake Quinsigamond	7
82026__Dean Park Pond	7
86170__Unnamed trib to Rawson Hill Brook	6
82222__Rawson Hill Brook	6
86390__Hop Brook	6
92289__Unnamed trib to Hop Brook	6
102491__Unnamed trib to Little Bummet Brook N of Brook St	6

99429__ Unnamed trib to Lake Quinsigamond	6
88362__ Unnamed to Rawson Hill Brook	6
100390__ Unnamed trib to Meadow Brook E of Crescent St	6
51110__ Unnamed trib to Newton Pond	6
100390__ Unnamed trib to Meadow Brook	6
101070__ Unnamed trib to Big Bummet Brook	5
92315__ Unnamed trib to Rawson Hill Brook	5
104080__ Unnamed trib to Hop Brook W of South St	5
90173__ Unnamed trib to Meadow Brook	5
51105__ Mill Pond	5
100680__ Unnamed trib to Summet Brook	4
100303__ West Brook	4
101102__ Unnamed trib to Mill Pond	4
95685__ Unnamed trib to West Brook	4
97520__ Hop Brook	4
105307__ Unnamed trib to Meadow Brook	4
51196__ Unnamed trib to Worc Sand -Shirley Street Pond	4
96105__ Unnamed trib to Hop Brook	4
80528__ Unnamed trib to West Brook	4
101646__ Unnamed trib to West Brook	4
104080__ Unnamed trib to Hop Brook crossing Floral St	3
99304__ Unnamed trib to Hop Brook crossing Walnut St	3
92026__ Unnamed trib to West Brook	3
101003__ Unnamed trib to Hop Brook	3
96223__ Unnamed trib to Big Bummet Brook	3
__ Unnamed trib to Hop Brook	3
92600__ Unnamed trib to Rawson Hill Brook	3
88144__ Unnamed trib to Rawson Hill Brook	3
92599__ Unnamed trib to Rawson Hill Brook	3
102128__ Unnamed trib to Big Bummet Brook	3
102128__ Unnamed trib to Big Bummet Brook E of Sheryl Dr	3
102255__ Unnamed trib to Rawson Hill Brook	3
102475__ Unnamed trib to Hop Brook crossing Floral St	2
97144__ Unnamed trib to Hop Brook	2
100698__ Unnamed trib to Lake Quinsigamond	2
95919__ Unnamed trib to Hop Brook	2
105183__ Meadow Brook	2
97184__ Unnamed trib to Bummet Brook - Smith Pond Northboro	2
89172__ Meadow Brook	2

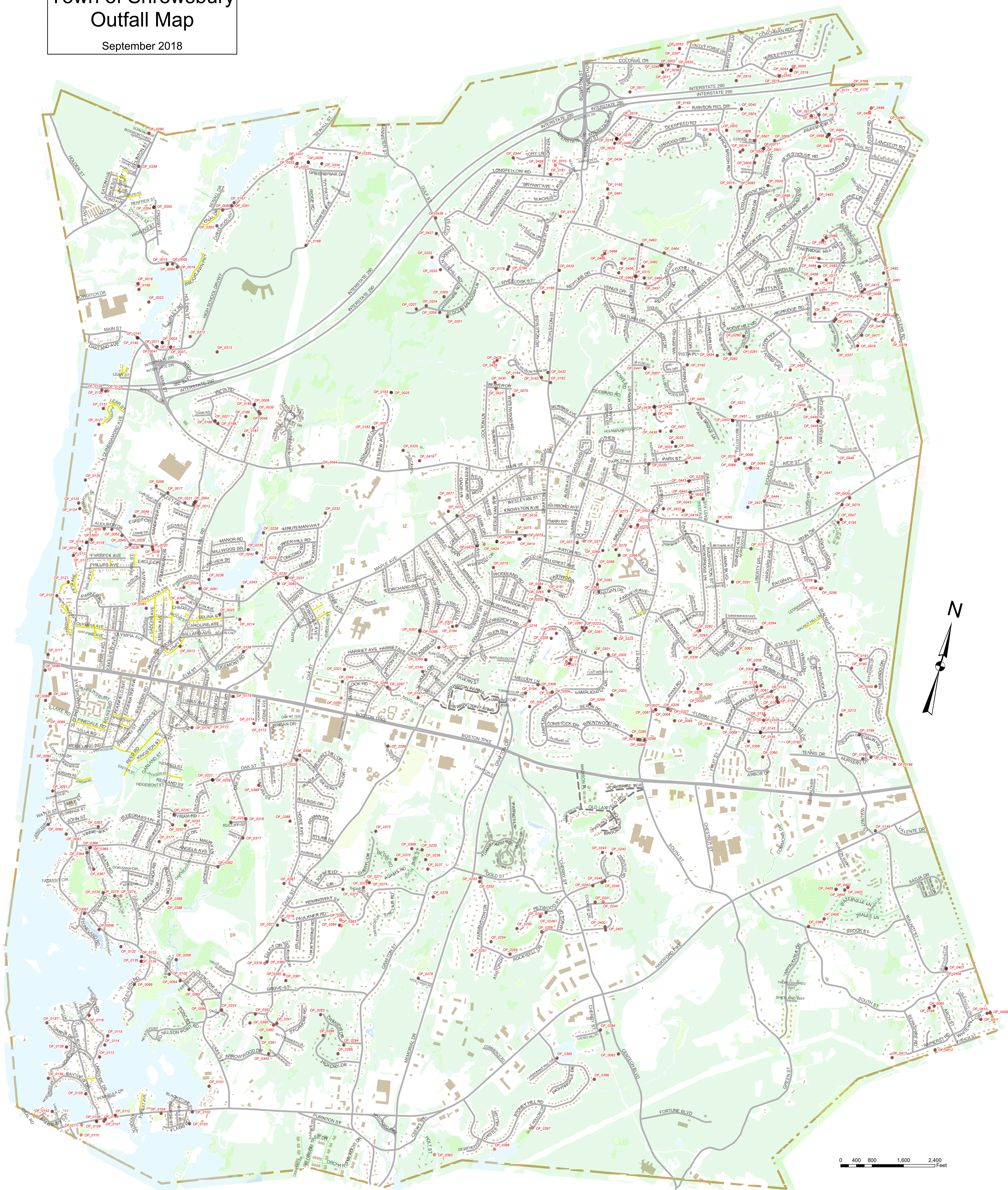
__ Unnamed trib to Big Bummet Brook	2
103017__ Unnamed trib to Big Bummet Brook E of Cherry St	2
90169__ Unnamed trib to Flint Pond (N.B.)	2
92354__ Unnamed trib to Flint Pond (N.B.)	2
94209__ Unnamed trib to West Brook	2
94176__ Unnamed trib to Dean Park Pond	2
97559__ Unnamed trib to West Brook W of Westview Ave	2
105250__ Unnamed trib to Eaton Pond	2
77797__ Rawson Hill Brook	2
102347__ Unnamed trib to Little Bummet Brook at Hillando Dr	2
88362__ Rawson Hill Brook	2
97127__ Unnamed trib to Big Bummet Brook	2
97559__ Unnamed trib to West Brook	2
95718__ Unnamed trib E of Crescent St	2
99441__ Meadow Brook	2
104590__ Unnamed trib to Flint Pond (N.B.)	2
99196__ Unnamed trib to Flint Pond (N.B.)	2
77634__ Rawson Hill Brook	2
28849__ Unnamed trib crossing Floral St	2
51110__ Newton Pond	2
32902__ Unnamed trib crossing Floral St	2
51078__ Jordan Pond	2
51078__ Unnamed trib to Jordan Pond E of Harrington Ave	1
51-17__ Poor Farm Brook	1
99735__ Newton Pond Stream	1
97280__ Unnamed trib to Hop Brook crossing Floral St	1
100078__ Little Bummet Brook	1
103682__ Unnamed trib to Meadow Brook at Edgemont Rd	1
100390__ Meadow Brook	1
106633__ Meadow Brook	1
103877__ Unnamed trib to Bummet Brook - Smith Pond Northboro	1
99420__ Unnamed trib to Bummet Brook - Smith Pond Northboro	1
92121__ Unnamed trib to Flint Pond (N.B.)	1
102256__ Unnamed trib to Eaton Pond E of Seneca St	1
95818__ Unnamed trib to S of Main Blvd	1
102431__ Unnamed trib to Big Bummet Brook E of Hemingway St	1
90438__ Unnamed trib to Summet Brook	1
89430__ Summet Brook	1
103768__ Hop Brook	1

100900__ Unnamed trib to Hop Brook - N of Main St	1
94538__ Unnamed trib to Northboro Reservoir	1
106778__ Unnamed trib to West Brook	1
100698__ Unnnamed trib to Lake Quinsigamond	1
106633__ Unnamed trib to Meadow Brook	1
104082__ Unnamed trib to Bummet Brook N of Tennis Dr	1
100553__ Unnamed trib to Flint Pond (N.B.)	1
99420__ Unnamed trib to Little Bummet Brook	1
97392__ West Brook	1
98741__ Unnamed trib to West Brook	1
103709__ Unnamed trib to Meadow Brook	1
105601__ Unnamed trib to Big Bummet Brook	1
90185__ Unnamed trib to Flint Pond (N.B.)	1
99999__ Unknown - Isolated	1
92466__ Unnamed trib to West Brook	1
100390__ Unnmaed trib to Meadow Brook	1
51078__ Unnamed trib to Jordan Pond	1
92335__ Unnamed trib to Flint Pond (N.B.)	1
95927__ Summet Brook	1
102613__ Unnamed trib to Hop Brook E of Bonnie Dell Ln	1
95769__ Rawson Hill Brook	1
31792__ Unnamed trib crossing Floral St	1
26502__ Unnamed trib to Bummet Brook - Smith Pond Northboro	1
32341__ Unnamed trib to Big Bummet Brook	1
51108__ Mud Pond	1

Attachment 4
Town of Shrewsbury
Outfall Map

Town of Shrewsbury Outfall Map

September 2018





TOWN OF SHREWSBURY
100 MAPLE AVENUE
SHREWSBURY, MASSACHUSETTS 01545-5398

February 11, 2019

United States Environmental Protection Agency
Stormwater Construction Permits Section (OEP06-1)
Five Post Office Square, Suite 100
Boston, MA 02109

Dear USEPA,

The Town of Shrewsbury amends Part III of their Small MS4 NOI, submitted on October 1, 2018, such that the Town will adhere to Part II of Appendix H of the MS4-2016 Permit to the following waterbodies and its tributaries (as listed in Part II of Appendix F of the MS4-2016 Permit):

- ❖ Lake Quinsigamond
- ❖ Flint Pond
- ❖ Jordan Pond
- ❖ Mill Pond
- ❖ Shirley Street Pond
- ❖ Newton Pond

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeffrey W. Howland", is written over the printed name.

Jeffrey W. Howland, P.E.

Director of Public Works

Copy to: Frederick Civian, MassDEP