

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? 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? <i>(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)</i>	Yes	Effective Date or Estimated Date of Adoption (MM/DD/YY):	03/27/12
Construction/Erosion and Sediment Control (ESC) Authority Adopted? <i>(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit)</i>	Yes	Effective Date or Estimated Date of Adoption (MM/DD/YY):	03/27/12
Post- Construction Stormwater Management Adopted? <i>(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)</i>	Yes	Effective Date or Estimated Date of Adoption (MM/DD/YY):	03/27/12

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 list of impaired waters: *Massachusetts 2014 List of Impaired Waters* - http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf](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
Beaver Brook	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Concord River (MA82A-07)	7	☐	☐	☐	☐	☐	☒	☐	☐	☐	Fecal Coliform, Mercury in Fish Tissue
Elm Brook (MA83-05)	21	☐	☐	☐	☐	☐	☐	☒	☐	☐	Fecal Coliform
Fawn Lake (MA83004)	1	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Mill Brook	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Mill Pond	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Mongo Brook	20	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Peppergrass Brook	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Shawsheen River (MA83-01)	21	☐	☐	☒	☐	☐	☐	☒	☐	☐	Fecal Coliform
Shawsheen River (MA83-08)	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fecal Coliform
Shawsheen River (MA83-17)	14	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fecal Coliform
Spring Brook (MA83-14)	11	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fecal Coliform
Vine Brook (MA83-06)	3	☐	☐	☐	☐	☐	☐	☐	☐	☐	Fecal Coliform
Unnamed Ditch/Swale/Detention Basin	25	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Intermittent Stream	77	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Perennial Stream	2	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Pond	12	☐	☐	☐	☐	☐	☐	☐	☐	☐	
Unnamed Wet Area	72	☐	☐	☐	☐	☐	☐	☐	☐	☐	

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 Implementation
Special Events/Festivals/Fairs	Purchase give-away materials to distribute at Bedford Day, including pet waste bags with proper disposal information, and display boards with stormwater pollution education	Residents	Department of Public Works & Town Clerk	Distribute and Display a minimum of two educational stormwater messages spaced at least a year apart; annually at Bedford Day. Goal is to distribute a minimum of 400 rolls of pet waste bags annually.	2018
Web Page	Stormwater website with education and outreach including lawn maintenance and proper management of parking lots.	Businesses, Institutions and Commercial Facilities	Department of Public Works & Conservation	Distribute a minimum of two educational stormwater messages over the permit term. Goal is to track visitors to the website and increase 10% annually.	2020
Brochures/Pamphlets	Distribute brochures to developers including erosion control and LID design principles.	Developers (construction)	Department of Public Works & Code Enforcement	Distribute a minimum of two educational stormwater messages over the permit term.	2019

[illegible]

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

Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

[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	DPW Operations	Complete within 1 year of effective date of permit	2019
Storm sewer system map	Revise completed MS4 map with permit requirements	Department of Public Works/Engineering & GIS	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	2019
Assessment and Priority Ranking of Outfalls/Interconnections	Complete initial inventory and ranking to assess illicit discharge potential	Department of Public Works & Conservation	Complete within 1 year of effective date of permit	2019
Employee training	Train employees on IDDE implementation	DPW Operations	Annually train employees and inspectors	2019
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. Goal is to complete 50% screening by permit year 2.	2019
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Department of Public Works	Complete 10 years after effective date of permit	2022

[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 Sediment and Erosion Control measures	Complete written procedures of site inspections and enforcement procedures	DPW Engineering/Conservation	Complete within 1 year of the effective date of permit	2019
Site plan review and inspection and enforcement	Complete written procedures of site plan review and begin implementation	DPW Engineering/Planning/Zoning/Conservation	Complete within 1 year of the effective date of permit	2019
Bylaw and regulations for construction site stormwater runoff control	Modify local bylaw if necessary and establish regulations that require use of sediment and erosion control practices at construction sites	Department of Public Works	Review current program and modify if necessary within 1 year of the effective date of permit	2019
Waste Control	Require contractors to manage proper disposal of building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Code Enforcement	Implement within 1 year of the effective date of the permit	2019

[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
Bylaw and regulations for post-construction stormwater management	Modify local bylaw if necessary and establish regulations to meet provisions of section 2.3.6.a. Regulations will require infiltration of roof runoff from new buildings.	Department of Public Works	Review current program and modify if necessary within 2 years of the effective date of permit. Provide infiltration for a minimum of 20,000 sf of roof area annually.	2019
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	DPW Engineering/Planning/Conservation	Complete 4 years after effective date of permit and report annually on retrofitted properties. Report reduction of impervious area in Annual Report, targeting 1,000 s.f. minimum per year.	2021
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 part of SWMP	Department of Public Works/Planning/Code/Conservation	Require submission of as-built plans for completed projects within 2 years after effective date of permit	2019

[illegible]

[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
Operation & Maintenance Program	Develop 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 and include in SWMP	Department of Public Works	Complete and implement within 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/Recreation Department	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	DPW Engineering and Highway Department	Complete 2 years after effective date of permit. Goal of repairing a minimum of 10 failing catch basins annually.	2019
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	DPW Engineering	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	DPW Operations	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material removed annually. Goal to clean catch basins in critical areas such as commercial districts and at the bottom of steep slopes annually.	2019

[illegible]

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.**

[illegible]

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.**

[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.

With regard to the Endangered Species Act Determination under Criterion C in Part I, the Town of Bedford agrees that stormwater discharges and actions planned under the permit will have no effect on the Northern Long Eared Bat and also that US Fish & Wildlife will be consulted as needed during the permit term on any future best management practices.

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:

Michael Rosen

Title:

Asst. Town Manager (Acting Town Manager)

Signature:

Date:

09/20/18

[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

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

Page 19 of 19

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Name:

Michael Rosen

Title:

Asst. Town Manager (Acting Town Manager)

Signature:

Michael Rosen

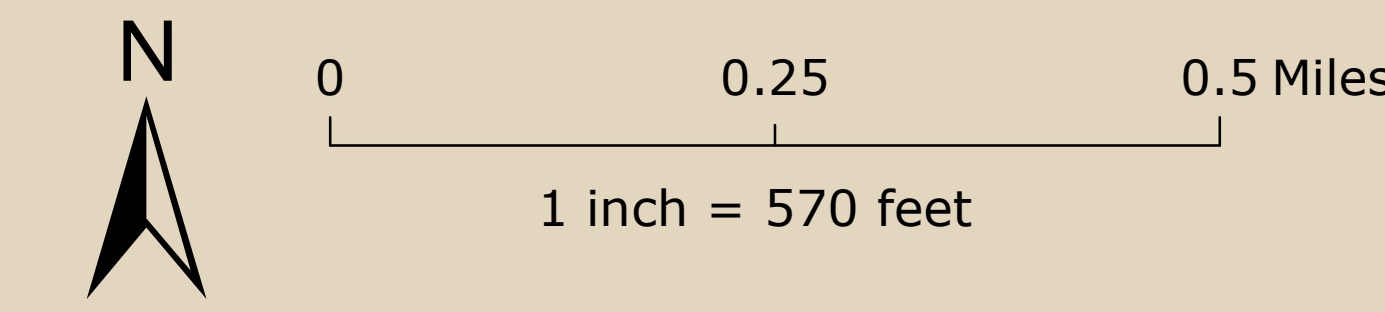
Date:

9/20/18

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

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Drainage Outfalls

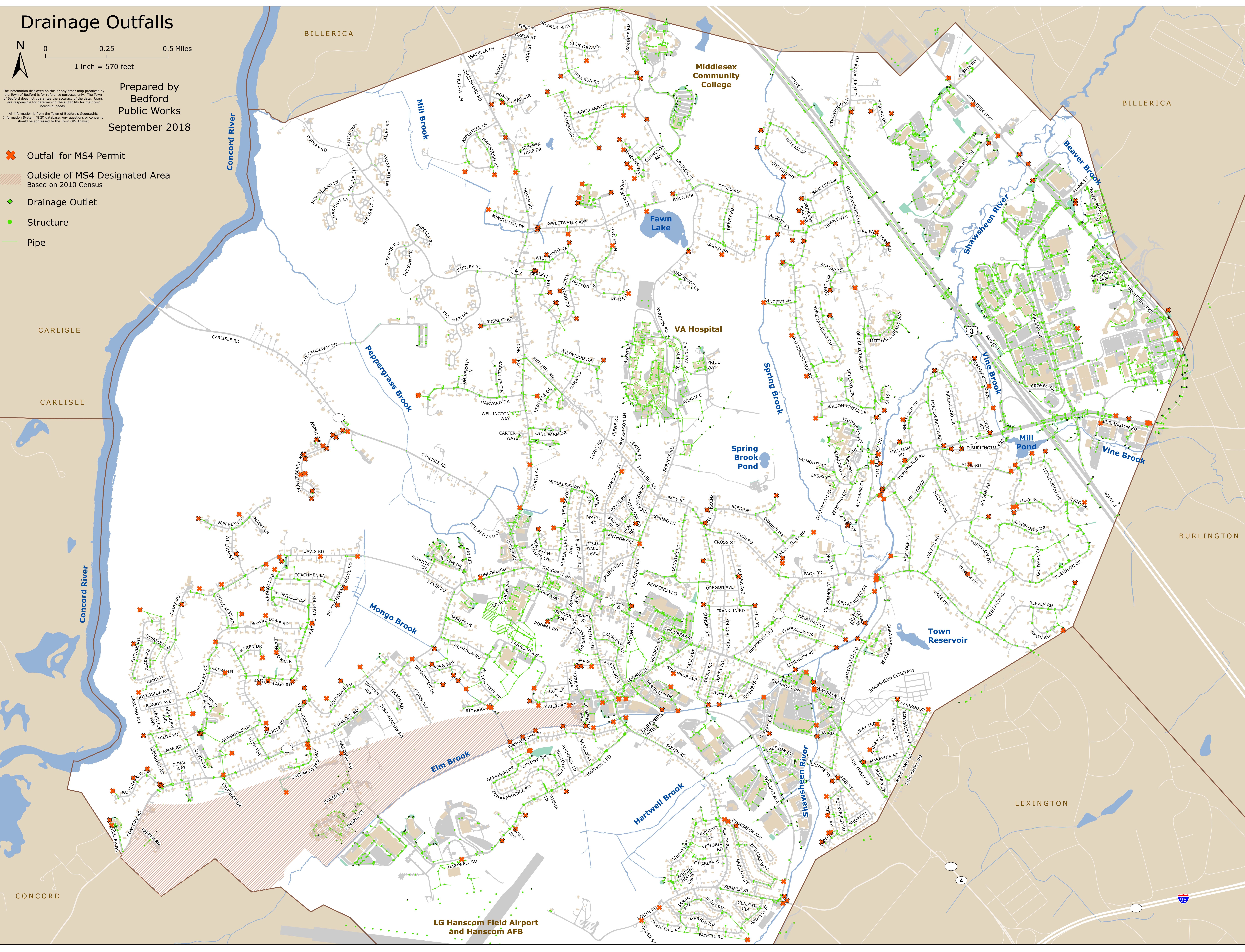


The information displayed on this or any other map produced by the Town of Bedford is for reference purposes only. The Town of Bedford does not guarantee the accuracy of the data. Users are responsible for determining the suitability for their own individual needs.

All information is from the Town of Bedford's Geographic Information System (GIS) database. Any questions or concerns should be addressed to the Town GIS Analyst.

Prepared by
Bedford
Public Works
September 2018

- ✖ Outfall for MS4 Permit
- ▨ Outside of MS4 Designated Area Based on 2010 Census
- ◆ Drainage Outlet
- Structure
- Pipe



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

Page 17 of 18

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.

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IPaC resource

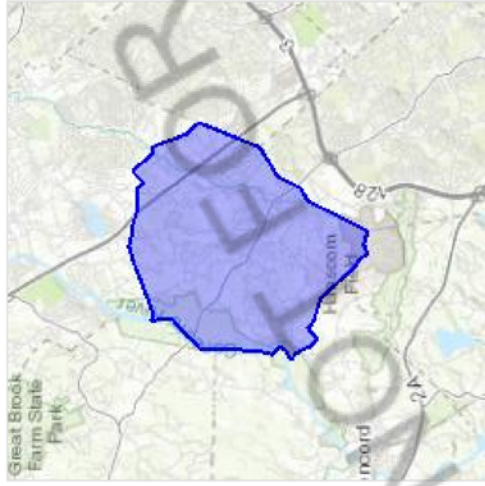
This report is an attempt to generate information about the resources and their relationships to a habitat (the type referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be in or near the project area referenced below. The statement may also include estimates of the project area, but that does not prevent a wide diversity of effects to be attributed to 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.

WS W

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



Location

New England and Eastern Service Field Office

☎ (603) 223-2541

📠 (603) 223-0104

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

<http://www.fws.gov/newengland>

Endangered e e

his resource list is for informational purposes only and does not constitute an analysis of v project le el 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 v 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 c ntact [NOAA Fisheries](#) f v [species under the rjur sd ct n](#).

1. Species listed under the [Endangered Species Act](#) are threatened r endangered PaC als sh ws species that are cand dates, or proposed, for l st ng. See the [list ng 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 v

NAME

STATUS v

North ern L ng-eared Bat *Myotis septentrionalis*
No critical a itat a een de igned f r t i pecie . R
<http://ec.fws.gov/ecp/pecie/9045>

Threatened R

Critical a itat

tential effect t critical a itat() in t i l cati n mu t e analyzed al ng wit t e endangered R
pecie t emselve .

THE EA ENO C ITICAL HABITATS AT THIS LOCATION. R

Migratory birds R

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 bird listed below are of particular concern either because they occur in the [USFWS Bird f C n ervati n C ncern](#) (BCC) list or warrant special attention in your project location. To learn more about the level of concern for bird species and what is likely generated, see the [FAQ el w](#). The information you may find in this category, is a guarantee at every bird number listed will be found in your project area. To see exact location where order and the general public are invited in and around your project area, visit the [E-ird data mapping t l](#) (Tip: enter your location, desired date range and a species you wish to). For project at current Atlantic Coast, additional map and model detailing the relative occurrence and abundance of bird species you wish to are available. Link to additional information about Atlantic Coast bird, and the important information about your migratory bird list, including what properly interpret and R ue your migratory bird report, can be found [el w](#).

For guidance on how to submit your list, please refer to the project website. The project website is located at www.fws.gov/ecp/species/1626. The project website is located at www.fws.gov/ecp/species/1626. The project website is located at www.fws.gov/ecp/species/1626.

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

Chestnut-backed Cuckoo *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

Dunlin *Calidris alpina arctica*

This is a Bird of Conservation Concern (BCC) only in the Arctic. This is a Bird of Conservation Concern (BCC) only in the Arctic.

Breeds in the Arctic

Eastern s s a B r of on s r v a t i o n (B) t r o g o t t s r a n g e n d t e c o n t n e n t a l U S A a n A l a s k a .	Breeds May 1 to Aug 20 d
Evening Grosbeak <i>Coccothraustes vespertinus</i> T s s a B r of Conservation Concern (BCC) throughout its range in t e c o n t n e n t a l U S A a n A l a s k a .	Breeds elsewhere d
Gol en Eagle <i>Aquila chrysaetos</i> T s s n o t a B r of Conservation Concern (BCC) n t s a r e a , b u t w a r r a n t s a t t e n t i o n b e c a u s e o f t e E a g l e A c t o r f o r o t e n t a l s u s c e p t i b i l i t e s . n o f f s . o r e a r e a s f r o m c e r t a i n t y p e s o f a c t i v i t y , m e n t o r a c t i v i t i e s . https://ecos.fws.gov/ecp/species/1680	Breeds elsewhere d
King Rail <i>Rallus elegans</i> d T h i s i s a B i r d o f C o n s e r v a t i o n C o n c e r n (B C C) t h r o u g h o u t i t s r a n g e i n t h e c o n t i n e n t a l U S A a n d A l a s k a . https://ecos.fws.gov/ecp/species/8936	Breeds May 1 to Sep 5 d
Lesser Yellowlegs <i>Tringa flavipes</i> T h i s i s a B i r d o f C o n s e r v a t i o n C o n c e r n (B C C) t h r o u g h o u t i t s r a n g e i n t h e c o n t i n e n t a l U S A a n d A l a s k a . https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Nelson's Sparrow <i>Ammodramus nelsoni</i> T h i s i s a B i r d o f C o n s e r v a t i o n C o n c e r n (B C C) t h r o u g h o u t i t s r a n g e i n t h e c o n t i n e n t a l U S A a n d A l a s k a .	Breeds May 15 to Sep 5
Prairie Warbler <i>Dendroica discolor</i> T h i s i s a B i r d o f C o n s e r v a t i o n C o n c e r n (B C C) t h r o u g h o u t i t s r a n g e i n t h e c o n t i n e n t a l U S A a n d A l a s k a .	Breeds May 1 to Jul 31
Prothonotary Warbler <i>Protonotaria citrea</i> T h i s i s a B i r d o f C o n s e r v a t i o n C o n c e r n (B C C) t h r o u g h o u t i t s r a n g e i n t e c o n t n e n t a l U S A a n A l a s k a	Breeds Apr 1 to Jul 31
Rea e o ecker <i>Melanerpes erythrocephalus</i> T s s a B r of Conservation Concern (BCC) throughout its range in t e c o n t n e n t a l U S A a n A l a s k a .	Breeds May 10 to Sep 10
Re t roate Loon <i>Gavia stellata</i> T s s a B r of Conservation Concern (BCC) throughout its range in t e c o n t n e n t a l U S A a n A l a s k a .	Breeds elsewhere d

udd Turn ton Arenaria interpres morinella Q

Br d l wh r

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

Ru t Blackbird Euphagus carolinus

Br d l wh r Q

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

Saltmarsh Sparrow Ammodramus caudatus

Br d Ma 15 to Sep 5 Q

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

Semipalmated Sandpiper Calidris pusilla

Breeds elsewhere

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

Short-billed Dowitcher Limnodromus griseus

Breeds elsewhere

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

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

Snowy Owl Bubo scandiacus

Breeds elsewhere

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

Willet Tringa semipalmata

Breeds Apr 20 to Aug 5

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 graph below provides our best understanding of where birds of conservation concern are most likely to be present in our project area. This information can be used to tailor and channel our project activities to avoid or minimize impact to birds. Please make our advertisement and understand that a "Proprietary Interpretation and Use of Your Migratory Bird Report" by our consulting firm is required to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell (our project overlap during a particular week) of the area. (A relative probability of 124-week month.) A taller bar indicates a higher probability of presence. The survey effort (below) can be Q

used to establish a level of confidence in the presence score. One can have high confidence in the presence score if the corresponding uncertainty is also high.

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

1. The probability of presence for each week is calculated as the number of surveys in the week when the species was detected divided by the total number of surveys that week. For example, if in week 12 there were 20 surveys 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 populate the pattern of presence across the area, 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, if the probability of presence in week 20 is 0.25 and the probability of presence in week 12 (0.25) is the maximum, then 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.

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.

SPECIES	■ probability of presence 🟡 breeding season survey effort — no data											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



Bald Eagle
B Vulnerable
(This is a Bird of
service)
cer (B) i this
area but warms
attention because f
the Eagle Act r f r
potential
susceptibilities i
sh re areas fr m
certain types f
development r
activities.)



Black billed
cuckoo
B Range wide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



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



Buff-breasted
Sandpiper
BCC Range wide
(CON) (This is a Bird
of Conservation
Concern (BCC)
throughout its range
in the continental
USA and Alaska.)



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



Dunlin
B BCR (This is a Bird
of Conservation
Concern (BCC)
particular Bird
service Regis
(BCCs) i the
continental USA)



Eastern Whip
poor-will
B Range wide
(CON) (This is a Bird
of service
cer (B)
through its range
in the continental
USA and Alaska.)

Evening G e k
BCC R ngewide
(CON)(Thi i Bi d
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C nce n(BCC)
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Susceptibilities in
offshore areas from
certain types of S
development or
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King Rail
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.)



Nelson's Sparrow
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 OCTS NOV DEC

Prairie Warbler
BCC Rangewide
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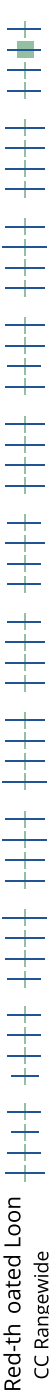


P Sth n t y
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BCC R ngewide
(CON)(Thi i Bi d
fC n e v t i n
C nce n(BCC)
th ugh ut it nge S
in the c ntinent I
U A nd Al k .)





CC Rangewide
(CON) (This is a bird of conservation concern (BCC) throughout its range in the continental US and Alaska.)



CC Rangewide
(CON) (This is a bird of conservation concern (BCC) throughout its range in the continental US and Alaska.)



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



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



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



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



BCC Rangewide
(CON) (This is a bird of conservation concern (BCC) throughout its range in the continental US and Alaska.)

Snowy Owl
 n ewide
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Willet
 n ewide
 (ON)(This is ird
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 throu hout its r ne
 in the continent l
 USA nd Al sk)



Wood Thrush
 BCC Rangelwide
 (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.

In the Migratory Bird Resource List, only a subset of birds that may occur in your project area are listed. 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 successful data is continuous! b ing u dat d as n w and b tt r in or mation b comes availabl . To l ar n mor about how th robabilit o r s nc gra h s ar roduc d and how to int r r th m, go th Probabilit o Pr s nc Summar and th n click on th "T ll me about th s gra hs" link.

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

To see what an article about a particular bird's range in our 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), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on our migratory birds checklist has a breeding season associated with it, i.e., that bird does occur in our project area, then many birds are not at some point within the time ranges cited. If "Breeds w/Is where" is indicated, then the bird likely does not breed in our project area.

What are the levels of concern for migratory birds? why?

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? why?

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 given is not a list of all birds in our project area, only a subset of birds of prior concern. To learn more about how our list is given, read, and see options or identifying what other birds may be in our project area, please see the FAQ "What do SIPaC users tell us about migratory birds of national occurrence in my checklist location". Please be aware that this report provides the "robability of presence" of birds within the 10 km grid cells that overlap our project; not our exact project footprint. On the grounds provided, please also look at

carefully a e ur eyeffor (indica ed by e black er ical bar) and for e exi ence of e “no da a” indica or (a red orizon al bar). A ig ur eyeffor i e key componen . f e ur eyeffor i ig , en e probabili y of pre ence core can be iewed a more dependable. n con ra , a lo ur eyeffor bar or no da a bar mean a lack of da a and, erefore, a lack of cer ain y about pre ence of e pecie . T i li i no perfec ; i imply a ar ing poin for iden ifying wha bird of concern a e po en ial o be in your projec area, when ey mig be ere, and if ey mig be breeding (whic mean ne mig be pre en). T eli elp you know wha o look for o confirm pre ence, and elp guide you in knowing when o implemen con er a ion mea ure o a oid or minimize po en ial impac from your projec ac i i ie , ould pre ence be confirmed. To learn more about con er a ion mea ure , i i e FAQ “Tell me about con er a ion mea ure can implemen o a oid or minimize I impac o migra ory bird ” a e bo om of your migra ory bird ru re ource 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.

This location overlaps the following National Wildlife Refuge lands:

LAND	ACRES
 (978) 443-4661 (978) 443-2898 MAILING ADDRESS C/o Eastern Massachusetts Nwr Complex 73 Weir Hill Road Sudbury, MA 01776-1420 PHYSICAL ADDRESS Great Meadows Nwr 73 Weir Hill Road Sudbury, MA 01776-1420 <td>1,528.29 acres</td>	1,528.29 acres

[p ://www.f .go /refuge /profile /index.cfm?id=53511](#)

Fi a c erie l

THERE ARE NO FISH HATCHERIES AT THIS LOCATION. I

Wetlands n t e at n al Wetlands Invent ry

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

[PEM1/SS1E](#)
[PEM1E](#)
[PEM1C](#)
[PEM1Cd](#)
[PEM1Ed](#)
[PEM1Eg](#)
[PEM1/UBF](#)
[PEM1/UBFx](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1E](#)
[PFO1Ed](#)
[PSS1E](#)
[PFO1Eg](#)
[PFO1/4E](#)
[PFO1/4Ed](#)
[PSS1Ed](#)
[PFO1/4Eg](#)
[PFO1/SS1Ed](#)
[PFO4Eg](#)
[PFO1/4Eb](#)
[PFO1C](#)
[PFO4Eb](#)
[PFO1/EM1E](#)
[PFO1/EM1E](#)
[PFO1Eb](#)
[PFO1A](#)
[PSS1Eb d](#)
[PFO4E](#)
[PSS1/EM1E](#)
[PFO1Fb](#)
[PFO4C](#)

FRESHWATER PO ND

[P_BH_](#)
[P_BH](#)
[PUBHx](#)
[PUBHb](#)

LAKE

[L1UBH](#)

RIVERINE

[R2UBH](#)
[R2UBHX](#)
[R4SBCx](#)
[R4SBC](#)
[R5UBH](#)
[R4SBA](#)

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 tubercfid worm reefs) have also been excluded from the inventory.

Some habitats, because of their depth, location and by aerial imagery.

Data precautions

Field data, state, and local regulatory agencies with jurisdiction over wetlands may find and describe wetlands in a different manner than that used in this inventory. There is no attempt, in this report, to sign or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographic scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetlands and associated lands should seek appropriate field data, state, or local agency consultation regarding regulatory programs and proprietary jurisdictions that may affect such activities.