



TOWN OF ORLEANS

STORMWATER MANAGEMENT

PLAN UPDATE

JUNE 2025





TABLE OF CONTENTS

| SECTION | PAGE No. |
|--|-----------------|
| 1. INTRODUCTION | 1 |
| 1.1 Regulatory Background and Requirements | 1 |
| 1.2 Eligibility Determination | 3 |
| 1.3 Special Eligibility Determination | 3 |
| 1.4 Permit Year Definitions | 4 |
| 2. TOWN OF ORLEANS REGULATED AREAS INFORMATION | 5 |
| 2.1 Town of Orleans Census Information | 5 |
| 2.2 Impaired Waterbodies | 6 |
| 2.3 Receiving Waterbodies | 13 |
| 2.4 Interconnected Separate Storm Sewer Systems | 13 |
| 2.5 Surface Public Drinking Water Supplies | 13 |
| 2.6 Increased Discharges | 13 |
| 3. BEST MANAGEMENT PRACTICES FOR MINIMUM CONTROL MEASURES | 15 |
| 3.1 Enhanced BMPs for Impaired Waterbodies | 15 |
| 3.1.1 Nitrogen Source Identification Report | 15 |
| 3.2 MCM 1: Public Education and Outreach | 15 |
| 3.2.1 BMP 1A Brochures for Residents and Businesses | 15 |
| 3.2.2 BMP 1B Website Updates for General Public | 16 |
| 3.2.3 BMP 1C Brochures for Developers | 16 |
| 3.2.4 BMP 1D Brochures for Industrial Facilities | 16 |
| 3.2.5 BMP 1E Brochures for Dog Owners | 16 |
| 3.2.6 BMP 1F Brochures for Septic System Owners | 17 |
| 3.2.7 BMP 1G Seasonal Messages | 17 |
| 3.2.8 BMP 1H Stormwater TV Broadcasts for General Public | 17 |
| 3.3 MCM 2: Public Involvement and Participation | 19 |
| 3.3.1 BMP 2A SWMP Public Review | 19 |
| 3.3.2 BMP 2B Catch Basin Stenciling | 19 |
| 3.3.3 BMP 2C Volunteer Outfall Monitoring Program | 19 |
| 3.3.4 BMP 2D Partnership – Advocacy Groups | 19 |
| 3.3.5 BMP 2E Waterbody Cleanup Events | 20 |
| 3.3.6 BMP 2F Household Hazardous Waste Collection Days | 20 |
| 3.4 MCM 3: Illicit Discharge and Detection Elimination | 22 |
| 3.4.1 BMP 3A Sanitary Sewer Overflow (SSO) Inventory | 22 |
| 3.4.2 BMP 3B Stormwater Sewer System Map | 22 |
| 3.4.3 BMP 3C Written IDDE Program | 22 |
| 3.4.4 BMP 3D Implement IDDE Program | 23 |



| | | |
|-----------|--|-----------|
| 3.4.5 | BMP 3E Employee Training | 23 |
| 3.4.6 | BMP 3F Conduct Dry Weather Screening | 23 |
| 3.4.7 | BMP 3G Conduct Wet Weather Sampling | 23 |
| 3.4.8 | BMP 3H Ongoing Screening | 24 |
| 3.5 | MCM 4: Construction Site Runoff Control | 27 |
| 3.5.1 | BMP 4A Site Inspection and Enforcement of Erosion and Sedimentation Control (ESC) Measures | 27 |
| 3.5.2 | BMP 4B Site Plan Review | 27 |
| 3.5.3 | BMP 4C Waste Control | 27 |
| 3.6 | MCM 5: Post-Construction Stormwater Management | 29 |
| 3.6.1 | BMP 5A As-Built Plan Submittal for Onsite Stormwater Control | 29 |
| 3.6.2 | BMP 5B Target Properties to Reduce Impervious Area | 29 |
| 3.6.3 | BMP 5C Allow Green Infrastructure | 29 |
| 3.6.4 | BMP 5D Street Design and Parking Lot Guidelines | 30 |
| 3.6.5 | BMP 5E Massachusetts Stormwater Handbook Compliance | 30 |
| 3.6.6 | BMP 5F Inspection | 30 |
| 3.7 | MCM 6: Pollution Prevention and Good Housekeeping | 32 |
| 3.7.1 | BMP 6A O&M Procedures | 32 |
| 3.7.2 | BMP 6B Inventory Town Facilities | 32 |
| 3.7.3 | BMP 6C Infrastructure O&M | 32 |
| 3.7.4 | BMP 6D Stormwater Pollution Prevention Plan Development | 32 |
| 3.7.5 | BMP 6E Catch Basin Cleaning | 33 |
| 3.7.6 | BMP 6F Street Sweeping Program | 33 |
| 3.7.7 | BMP 6G Road Salt Optimization Program | 33 |
| 3.7.8 | BMP 6H Stormwater Treatment Structures Inspections | 33 |
| 3.7.9 | BMP 6I Nitrogen Loading Reductions | 34 |
| 4. | PROGRAM MANAGEMENT, EVALUATION, RECORD KEEPING, AND REPORTING..... | 37 |
| 4.1 | Program Management | 37 |
| 4.2 | Program Evaluation | 37 |
| 4.3 | Record Keeping | 38 |
| 4.4 | Annual Reports | 38 |
| 5. | CERTIFICATION..... | 39 |

Appendices

| | |
|-------------|--|
| Appendix A: | 2016 General Permit with Appendices |
| Appendix B: | Stormwater Management Plan Revision Tracking Form |
| Appendix C: | Endangered Species Act and National Historic Preservation Act Review |
| Appendix D: | MS4 Permit-Related Standard Operating Procedures |
| Appendix E: | Separate Storm Sewer System Map |
| Appendix F: | Impaired Waters and Special Resource Waters |



List of Acronyms

| | |
|----------|---|
| BMP | Best Management Practices |
| DPW | Department of Public Works |
| DPW & NR | Department of Public Works and Natural Resources |
| EPA | Environmental Protection Agency |
| ESA | Endangered Species Act |
| ESC | Erosion and Sediment Control |
| GPS | Global Positioning System |
| HHW | Household Hazardous Waste |
| IDDE | Illicit Discharge Detection and Elimination |
| LID | Low Impact Development |
| MCM | Minimum Control Measures |
| MEP | Maximum Extent Practicable |
| MIS | Management Information Services |
| MS4 | Municipal Separate Storm Sewer System |
| MSGP | Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities |
| NHPA | National Historic Properties Preservation Act |
| NOI | Notice of Intent |
| NPDES | National Pollutant Discharge Elimination System |
| NRHP | National Register of Historic Places |
| OTS | On-site Treatment Systems |
| O&M | Operation and Maintenance |
| PY | Permit Year |
| SSO | Sanitary Sewer Overflow |
| SVF | System Vulnerability Factors |
| SWMP | Stormwater Management Plan |
| SWPPP | Stormwater Pollution Prevention Plan |
| T&E | Threatened and Endangered |
| TMDL | Total Maximum Daily Load |
| U.S. | United States |
| UA | Urban Areas |



1. INTRODUCTION

Stormwater runoff, defined by the United States Environmental Protection Agency as “the precipitation (rain and snowmelt) that flows over land or impervious surfaces (like roads and roofs) and doesn’t soak into the ground, carrying pollutants into surface waters”. Stormwater runoff can be harmful to the environment because it often transports pollutants commonly found on ground surfaces, like oil, nutrients, trash, and sediments, directly into waterbodies through stormwater infrastructure called the “MS4”.

MS4 stands for “municipal separate storm sewer system.” It is a series of municipally owned structures typically comprised of catch basins that collect stormwater runoff, connected by subsurface pipes accessed by manholes. These pipes transport untreated precipitation or melting snow to a discharge point, which is called an outfall. The discharge point often releases untreated stormwater runoff to a waterbody, like a lake, river, stream, pond, or ocean.

Stormwater drainage systems are usually constructed in developed areas to reduce flooding and infrastructure damage. Unfortunately, when precipitation falls on impervious surfaces like streets and parking lots it transports pollutants like oil, nutrients, trash, and sediments into the MS4 and, ultimately, a waterbody. Sometimes, wastewater from leaking septic systems or improperly plumbed sewage laterals connected to the MS4 can also contribute pollutants like sewage or detergents into the MS4.

1.1 REGULATORY BACKGROUND AND REQUIREMENTS

Stormwater discharges from the Town of Orleans, Massachusetts (“Town”, “Orleans”) MS4 are regulated under the Clean Water Act and require a “General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems” (“MS4 General Permit”, “Permit”). In Massachusetts, the MS4 General Permit is issued and managed jointly by the U.S. Environmental Protection Agency (EPA) and the State of Massachusetts Department of Environmental Protection (MassDEP). The MS4 General Permit was created to minimize or eliminate pollutants present in stormwater through the implementation of six Minimum Control Measures (MCM). The Town of Orleans is one of thousands of communities and institutions across the country that must comply with these regulations.

The MS4 General Permit was created to minimize or eliminate pollutants present in stormwater through the implementation of six Minimum Control Measures (MCMs). MCMs are categories of best management practices that are implemented to minimize or eliminate pollutants from stormwater runoff during activities typically associated with MS4 operation.

The Town has had MS4 General Permit coverage since 2003 under Permit No. MAR041146 and continued permit coverage under the MS4 General Permit that was reissued on April 4, 2016 (effective July 1, 2018). The Town is required to develop a written Stormwater Management Plan (SWMP) as part of the MS4 Permit requirements. This SWMP is a reference document that describes how the Town will implement the Permit’s MCM requirements. It also serves as a reference document providing the location of other permit-required documentation for public review.



The Town is required to keep records of and report on the activities and measures that are implemented and consistent with this Plan. MS4 General Permit requirements are summarized as follows:



Public Education and Outreach: This MCM raises public awareness about the types of activities that affect stormwater quality through the distribution of targeted messages and, in some cases, partnerships with local organizations or schools to deliver the messages. Messages usually include information about how the public can take steps to protect their local water resources.



Public Involvement/Participation: This MCM identifies and provides opportunities for the public to participate in activities and efforts to minimize stormwater pollution. At a minimum, the MS4 General Permit requires that Permittees make this Stormwater Management Plan publicly available for review.



Illicit Discharge Detection and Elimination (IDDE): The IDDE MCM requires Permittees to develop a program to systematically investigate the MS4 for evidence of illicit discharges and, if found, remove them. EPA defines an illicit discharge as “any discharge to a separate storm sewer system that is not composed entirely of stormwater”.



Construction Site Stormwater Runoff Control: Construction sites often disturb soil and use materials like concrete that can be harmful to waterbodies. Equipment containing oil and petroleum products and finishing products like paint can also spill onto ground surfaces and be transported to the MS4 in stormwater runoff. This MCM requires Permittees disturbing ≥ 1 acre of soil to develop policies and procedures to minimize construction site pollution, including making sure contractors develop stormwater pollution prevention plans and requiring installation of erosion and sediment controls to prevent pollutants from entering the MS4.



Post-Construction Stormwater Management: Development or redevelopment of properties often includes the creation of impervious areas that do not allow stormwater to infiltrate into the ground, which increases the potential for stormwater pollution. Under this MCM, Permittees that have developed or redeveloped a ≥ 1 -acre site are required to develop regulatory mechanisms to require the installation of stormwater control measures designed to treat runoff to remove pollutants.



Good Housekeeping and Pollution Prevention: Municipal operations can contribute to pollution in stormwater runoff. This MCM recognizes that municipal maintenance activities and facilities can impact water quality and focuses on requiring Permittees to maintain an inventory of their properties, understanding the potential for properties to impact stormwater quality, and implementing measures to minimize or eliminate those impacts. It also includes training municipal staff to identify and eliminate potential pollutant sources through regular inspections.



The Permit Year (PY) reference within this document corresponds to each regulatory year starting on July 1, 2018. Updates to the original version of this SWMP, dated June 24, 2019, and prepared by Wood of Chelmsford, Massachusetts, have been incorporated into this document to reflect the Town's stormwater management program updates and achievements through PY6 (ending June 30, 2024).

A copy of the original 2016 MS4 General Permit was previously included in Appendix A of the original version of this SWMP. Revisions to the MS4 General Permit became effective on January 6, 2021. On December 7, 2020, changes to the Permit were issued; these changes became effective on January 6, 2021, and have been incorporated into subsequent SWMP updates, where applicable. A link to the latest version of the MS4 General Permit is provided in **Appendix A**. The previous version of the MS4 General Permit and its appendices can be accessed on the EPA's website at <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>.

The MS4 Annual Report, which is submitted to the EPA and MassDEP by the end of September each year, provides additional information related to the stormwater management program's progress. A revision log tracking these updates is in **Appendix B**.

Appendix C has remained unchanged since the original version of this SWMP was published. Refer to the original SWMP document to view this appendix.

1.2 ELIGIBILITY DETERMINATION

Section 1.2.1 of the 2016 MS4 General Permit (reissued in 2020) states that an MS4 is eligible for coverage under this permit if the following criteria are met:

- The MS4 is a small MS4 located within the Commonwealth of Massachusetts. Orleans meets the definition of a small MS4 because the Town owns its separate storm sewer system infrastructure, and it has jurisdiction over the disposal of stormwater discharging to waters of the United States. The Town is not considered a medium or large MS4 because of its population. Medium or large MS4s, such as Worcester and Boston, are regulated under a different MS4 General Permit.
- Located either fully or partially within an urban area as determined by the latest Decennial Census by the Bureau of Census as of the effective date of the permit (2020 Census); or
- Located in a geographic area designated by EPA as requiring a permit.

Specifically, the town is a small MS4 that is almost entirely located within a Bureau of Census-defined urban area, so it is required to obtain MS4 General Permit coverage. The Bureau of the Census defines an urban area as a populated, densely developed territory with a minimum population of 2,500 people or 2,000 housing units.

1.3 SPECIAL ELIGIBILITY DETERMINATION

Section 1.9 of the MS4 General Permit requires special eligibility requirements for authorization. Discharges and discharge-related activities from the MS4 must be assessed to verify they don't impact federally listed threatened and endangered (T&E) species and designated critical habitat managed under the Endangered Species Act (ESA). The potential effect of MS4 discharges and discharge-related activities on historic properties listed on, or eligible for listing on, the National Register of Historic Places (NRHP) under the National Historic Preservation Act (NHPA) is also required to be assessed.



The Notice of Intent (NOI) to comply with Permit conditions and related documentation supporting ESA and NHPA eligibility determinations is provided in **Appendix C**.

1.4 PERMIT YEAR DEFINITIONS

Milestone dates for Permit requirement implementation are provided throughout this document. These dates are defined by Permit Year (PY) and are as follows:

- PY1: July 1, 2018 through June 30, 2019
- PY2: July 1, 2019 through June 30, 2020
- PY3: July 1, 2020 through June 30, 2021
- PY4: July 1, 2021 through June 30, 2022
- PY5: July 1, 2022 through June 30, 2023
- PY6: July 1, 2023 through June 30, 2024
- PY7: July 1, 2024 through June 30, 2025
- PY8: July 1, 2025 through June 30, 2026
- PY9: July 1, 2026 through June 30, 2027
- PY10: July 1, 2027 through June 30, 2028



2. TOWN OF ORLEANS REGULATED AREAS INFORMATION

2.1 TOWN OF ORLEANS CENSUS INFORMATION

The Town is located in Barnstable County, approximately 90 miles southeast of Boston. The Town of Eastham surrounds it to the north, the Atlantic Ocean to the east, the Town of Chatham to the south, and the Town of Brewster to the west. There are approximately 8.5 square miles of water within the 22.7 square miles of land area. According to the 2020 United States (U.S) Census, the Town's population is 6,307. The areas of the Town regulated under the MS4 General Permit, based on the 2020 urban areas (UAs), are shown in **Figure 1** in **Appendix E**.



2.2 IMPAIRED WATERBODIES

The waterbody impairments listed in **Table 1: Listed Waterbodies** and **Figure 2: Category 4A and 5 Waterbodies** from the original June 2019 SWMP and the Town's MS4 General Permit Notice of Intent (NOI) submission to the EPA are both based on the Final Massachusetts Year 2014 Integrated List of Waters. The "Final Massachusetts Integrated List of Waters for the Clean Water Act 2022 Reporting Cycle" (2022 Integrated List) was released in November 2021. **Table 1** and **Figure 2** have been updated to reflect the 2022 Integrated List. The updated **Table 1** is provided below, and the updated **Figure 2** is in **Appendix F**. Future reissuance and/or approval of the Massachusetts Integrated List of Waters may necessitate additional modifications to this Plan to maintain compliance with applicable requirements.



Table 1: 2022 Integrated List of Waterbodies

| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|-------------------|--------------------|------|----------|-----------------|-----------------------------|---|---|
| Cedar Pond | MA96-88 | No | 5 | SA | Fish Passage Barrier* | Habitat Modification | NMR** |
| | | | | | Chlorophyll-a | Unknown | Total Nitrogen |
| | | | | | Dissolved Oxygen Saturation | Unknown | Dissolved Oxygen |
| | | | | | Dissolved Oxygen | Unknown | Temperature BOD ₅ Total Nitrogen |
| Crystal Lake | MA96050 | No | 5 | B | Dissolved Oxygen | Internal Nutrient Recycling | Dissolved Oxygen Temperature BOD ₅ Total Phosphorus |
| Town Cove | MA96-68 | No | 5 | SA | Estuarine Bioassessments* | Unknown | NMR** |
| Uncle Harvey Pond | MA96319 | No | 5 | B | Excess Algal Growth | Unknown | Total Phosphorus |
| Rock Creek Harbor | MA96-16 | Yes | 4A | SA | Fish Passage Barrier* | Habitat Modification other than hydromodification | NMR** |
| | | | | | Fecal Coliform | Waste from Pets Waterfowl Discharges from MS4 Municipal Point Source Discharges On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) | Enterococcus (Fecal Coliform) |



| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|------------------------|--------------------|------|----------|-----------------|--|---|-------------------------------|
| Little Namskaket Creek | MA96-26 | Yes | 4A | SA | Fecal Coliform | Waterfowl Discharges From MS4 | Enterococcus (Fecal Coliform) |
| Namskaket Creek | MA96-27 | Yes | 4A | SA | Fecal Coliform | Unknown | Enterococcus (Fecal Coliform) |
| Baker Pond | MA96008 | Yes | 4A | B | Mercury in Fish Tissue* | Unknown Atmospheric Deposition - Toxics | NMR** |
| Areys Pond | MA96-70 | Yes | 5 | SA | Nutrient/Eutrophication Biological Indicators | Agriculture Discharges from MS4 On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Yard Maintenance Unrestricted Cattle Access | Total Nitrogen |
| | | | | SA | Total Nitrogen | Agriculture Discharges from MS4 On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Yard Maintenance Unrestricted Cattle Access | Total Nitrogen |
| Paw Wah Pond | MA96-72 | Yes | 4A | SA | Fecal Coliform | Unspecified Urban Stormwater Waste from Pets Waterfowl | Enterococcus (Fecal Coliform) |



| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|--------------|--------------------|------|----------|-----------------|---------------------------|---|-------------------------|
| | | | | | Estuarine Bioassessments | On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Urban Stormwater Yard Maintenance | NMR** |
| | | | | SA | Total Nitrogen | On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Yard Maintenance Unspecified Urban Stormwater Unknown | Total Nitrogen |
| Quanset Pond | MA96-74 | Yes | 4A | SA | Total Nitrogen | Unspecified Urban Stormwater Yard Maintenance Discharges from MS4 On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) | Total Nitrogen |
| Pleasant Bay | MA96-77 | No | 5 | SA | Estuarine Bioassessments* | Agriculture Unspecified Urban Stormwater Yard Maintenance Discharge from MS4 Golf Courses | NMR** |



| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|---------------------|--------------------|------|----------|-----------------|---------------------------|---|-------------------------|
| | | | 5 | | Total Nitrogen | Discharges from MS4 Agriculture Golf Courses Unspecified Urban Stormwater Yard Maintenance | Total Nitrogen |
| Little Pleasant Bay | MA96-78 | Yes | 4A | SA | Total Nitrogen | Unspecified Urban Stormwater Yard Maintenance Discharges from MS4 On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) | Total Nitrogen |
| Namequoit River | MA96-71 | Yes | 4A | SA | Estuarine Bioassessments* | Agriculture On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Urban Stormwater Yard Maintenance | NMR** |
| | | | | SA | Total Nitrogen | Agriculture On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Urban Stormwater Yard Maintenance | Total Nitrogen |



| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|-------------|--------------------|------|----------|-----------------|---------------------------|--|-------------------------------|
| Pochet Neck | MA96-73 | Yes | 4A | | Fecal Coliform | Unspecified Urban Stormwater Waterfowl Yard Maintenance | Enterococcus (Fecal Coliform) |
| | | | | SA | Estuarine Bioassessments* | Discharge from Biosolids (Sludge) Storage, Application or Disposal On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Urban Stormwater Yard Maintenance | NMR** |
| | | | | SA | Total Nitrogen | On-site Treatment Systems (Septic Systems and Similar Decentralized Systems) Unspecified Urban Stormwater Yard Maintenance Discharge from Biosolids (Sludge) Storage, Application or Disposal | Total Nitrogen |
| The River | MA96-76 | Yes | 4A | SA | Fecal Coliform | Discharges from MS4 Marina/boating Pumpout Releases Waterfowl | Enterococcus (Fecal Coliform) |
| | | | | | Total Nitrogen | Yard Maintenance Onsite Treatment Systems | Total Nitrogen |



| Waterbody | MassDEP Segment ID | TMDL | Category | Waterbody Class | Impairment Cause | Impairment Source | Monitoring Requirements |
|-----------|--------------------|------|----------|-----------------|------------------|------------------------------|-------------------------|
| | | | | | | Unspecified Urban Stormwater | |

1. *MassDEP has indicated no monitoring is required for this parameter.
2. **NMR = No monitoring required per communications with US EPA Region 1.
3. EPA has communicated that Enterococcus or E. Coli can be sampled in lieu of Fecal Coliform because it is more representative of potential human health risks in salt/brackish or freshwater waterbodies, respectively.



2.3 RECEIVING WATERBODIES

Per the requirements of Part 1.10.2 of the MS4 General Permit, a list of all Integrated List waterbody segments that receive discharge from the Town's MS4 is provided in **Table 1**, above. The Town's MS4 General Permit NOI submission to the EPA, dated September 26, 2018, included the estimated number of outfalls that discharge directly to each Integrated List waterbody segment. A copy of the original NOI is provided in **Appendix A** and can also be accessed on EPA's website at <https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>. There are no known direct discharges from the Town's MS4 to public surface drinking water supplies. Any updates to the waterbody segments receiving discharges from Orleans's MS4 will be included in future revisions of this document.

2.4 INTERCONNECTED SEPARATE STORM SEWER SYSTEMS

Per the requirements of Part 1.10.2 of the MS4 General Permit, all known interconnected MS4s and other separate storm sewer systems receiving a discharge from the Town's MS4, as well as the waterbody segment(s) that ultimately receive the discharge, are shown on the updated Separate Storm Sewer System Map in **Appendix E** and the Water Resources Map in **Appendix F**.

2.5 SURFACE PUBLIC DRINKING WATER SUPPLIES

The Town has no surface public drinking water supply sources or surface water supply watersheds within its Town boundary. A list of all known waterbody segments that receive discharge from Orleans MS4 is included in the Town's MS4 General Permit NOI submission to the EPA, dated September 26, 2018, which can be accessed on the EPA's website at <https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>. As detailed in the NOI, there are no known direct discharges to public surface drinking water supplies. Any updates to the waterbody segments receiving discharges from Orleans's MS4 will be included in future revisions of this document, if necessary.

2.6 INCREASED DISCHARGES

The Town shall comply with the provisions of 314 CMR 4.04 Massachusetts Surface Water Quality Standards, including information submittal requirements and obtaining authorization for increased discharges where appropriate. Any authorization of an increased discharge by MassDEP shall be incorporated within this SWMP.

There shall be no increased discharges, including increased pollutant loading(s) from the MS4 to impaired waters listed in categories 4A or 5 on the most recent Massachusetts Integrated Report of waters listed pursuant to Clean Water Act Section 303(d) and 305(b) unless the discharger demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired.

Unless otherwise determined by the EPA or by MassDEP, compliance with the Part 2.2.2 and 2.3.6 requirements of the MS4 General Permit, including all reporting and documentation requirements, are considered as demonstrating no net increase or increased discharge. Part 2.2.2 and 2.3.6 requirements were included in the Best Management Practices (BMPs) outlined in the June 2019 SWMP and any updates are provided in Section 3 of this SWMP Update.



If necessary, the Town will demonstrate compliance with this provision by either:

- Documenting that the pollutant(s) for which the waterbody is impaired are not present in the MS4's discharge and retaining documentation of this finding with the SWMP documents; or
- Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retaining documentation of this finding in the SWMP documents.



3. BEST MANAGEMENT PRACTICES FOR MINIMUM CONTROL MEASURES

The following sections detail the objectives from the MS4 General Permit and outline the selected best management practices (BMPs) provided in the Notice of Intent (NOI) and describe the implementation plan for each BMP. They also identify the party(ies) responsible for implementing BMPs and describe how the effectiveness of each BMP will be measured and evaluated. This section also provides a schedule showing the timeline for implementation of each BMP.

3.1 ENHANCED BMPS FOR IMPAIRED WATERBODIES

In addition to the general requirements to reduce the discharge of pollutants, the Town is required to verify that MS4 discharges do not cause or contribute to exceedances of water quality standards in waterbodies that have specific pollutant impairments or total maximum daily load (TMDL) provisions, to the maximum extent practicable (MEP). Pleasant Bay, which receives discharges from the Town's MS4, is subject to the requirements of the Cape Cod Watershed Pathogens TMDL and the Cape Cod Nitrogen and Pleasant Bay Nitrogen TMDLs. Specific TMDL requirements for nitrogen impairments are presented in Appendix F of the Permit and include the measures described in Section 3.1.1. MCM 1G and MCM 6F.

The Town is subject to additional requirements presented in Section 2.2.1, Appendix F, and Appendix H of the MS4 General Permit because the MS4 discharges to impaired and/or TMDL waterbodies.

3.1.1 Nitrogen Source Identification Report

In accordance with Appendix H of the MS4 General Permit, the Town of Orleans has developed a Nitrogen Source Identification Report (NSIR) for the Areys Pond and Pleasant Bay watersheds. A supplementary memorandum containing information about nitrogen reduction of stormwater control measures located in the Areys Pond and Pleasant Bay watersheds was prepared in PY7 to provide additional information about nitrogen reduction efforts undertaken by the Town.

A copy of the NSIR and Stormwater Control Measure Nitrogen Reduction Memorandum is available at the Department of Public Works & Natural Resources.

3.2 MCM 1: PUBLIC EDUCATION AND OUTREACH

The objective of the Public Education and Outreach MCM is to increase public knowledge about the detrimental stormwater runoff can have on water quality and change public behaviors to reduce pollutants in stormwater. The measurable goals of this program are listed in **Table 1** below for each BMP. The effectiveness of this program will be measured by its continued development and implementation of this program, as well as the increase of knowledge about stormwater pollution prevention and behavior changes over time. These metrics will be tracked using public feedback and surveys.

3.2.1 BMP 1A Brochures for Residents and Businesses

The Town will provide brochures to residents to educate them on proper waste disposal and proper lawn care. To comply with this requirement, the DPW & NR Director will oversee the development and distribution of brochures educating residents on the effects of outdoor lawn care techniques to help reduce pesticide, herbicide, and fertilizer pollution on water quality. The DPW & NR will make brochures available



for distribution at Town Hall and the DPW Administrative Office. The Management Information Services (MIS) Coordinator will also make the brochure available on the Town's stormwater webpage (BMP 1B). The DPW & NR Director will track the number of brochures distributed and taken from each public facility, and the number of digital views on the webpage to determine the public audience exposed to these educational messages during each Permit year.

Timeline: This BMP is ongoing and subject to the timelines presented in the MS4 General Permit. At a minimum, two educational messages will be distributed to target audiences during the Permit term.

3.2.2 BMP 1B Website Updates for General Public

The Town will update the stormwater webpage with new topics and information about the Stormwater program. The DPW & NR Director and the MIS Coordinator will update the Town's stormwater webpage annually or as needed to include educational messages targeting residents, developers, and industrial, institutional, and commercial facilities. The webpage will also include links to the EPA website about the MS4 Permit to promote information about the regulations governing the Town's stormwater program. The website will be updated annually to include an electronic copy of the SWMP for comment (BMP 2A), including a version with any revisions since the 2019 SWMP. The MS4 General Permit Annual Reports will also be made available online. The MIS Coordinator will track the hits to the webpage and number of digital downloads of the brochures, SWMP, and annual reports.

Timeline: This BMP is ongoing. Progress made toward updating the website will be reported in the annual report.

3.2.3 BMP 1C Brochures for Developers

The Town will provide brochures to construction developers to educate them on low impact development (LID) and sediment and erosion control management practices. The DPW & NR Director will oversee the development and distribution of brochures educating developers on LID in PY1 and PY3 and proper sediment and erosion control management in PY2 and PY4. The DPW & NR Director will provide the brochures to the Planning Department and the Building Department to distribute to developers during the permit request process and provide them on their counters. The number of brochures distributed by these departments will be tracked and reported to the DPW & NR Director at the end of each Permit year. The MIS Coordinator will also make the information available on the Town's stormwater webpage (BMP 1B).

Timeline: Brochures will be distributed according to the timeframes listed above. The number of brochures distributed will be tracked for the effectiveness assessment and reported in the annual report.

3.2.4 BMP 1D Brochures for Industrial Facilities

The DPW & NR Director will oversee the development of brochures that the MIS Coordinator make available on the Town's stormwater webpage (BMP 1B).

Timeline: Brochures will be distributed according to the timeframes listed above. The number of brochures distributed will be tracked for the effectiveness assessment and reported in the annual report.

3.2.5 BMP 1E Brochures for Dog Owners

The Town will provide brochures to dog owners to educate them on proper pet waste handling. The DPW



& NR Director, in coordination with the Town Clerk, will oversee the development of brochures with information about proper pet waste management and distribute them with the online dog license application to residents. The MIS Coordinator will also make the brochures available on the Town's stormwater webpage (BMP 1B). The DPW & NR Director will provide veterinary offices and pet stores with these brochures to make them available to pet owners. The Town Clerk and the DPW & NR Director will track the number of brochures distributed and, where applicable, taken, and report the quantities in the annual report.

Timeline: Brochures will be distributed according to the timeframes listed above. The number of brochures distributed will be tracked for the effectiveness assessment and reported in the annual report.

3.2.6 BMP 1F Brochures for Septic System Owners

The Town will provide brochures to septic system to educate them on proper septic tank maintenance. The Health Agent will distribute these brochures to septic system owners by mail twice per year. The Health Agent, with assistance from the MIS Coordinator, will post the brochures on the Town's stormwater webpage (BMP 1B), track the number of brochures mailed, and report this information to the DPW & NR Director for inclusion in the annual report.

Timeline: Brochures will be distributed according to the timeframes listed above. The number of brochures distributed will be tracked for the effectiveness assessment and reported in the annual report.

3.2.7 BMP 1G Seasonal Messages

In addition to the BMPs listed above, the Town will supplement its public education and outreach program by distributing messages in the spring, summer, and fall to residents, businesses, commercial, and institutional facilities about methods to minimize nitrogen loading into local waterways. To comply with this requirement, the DPW & NR Director will oversee the development of educational materials in the specified time frames with the following messages:

- Spring (April/May) – brochures encouraging the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers.
- Summer (June/July) – brochures encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
- Fall (August – October) – brochures encouraging the proper disposal of leaf litter.

Timeline: Brochures will be distributed according to the timeframes listed above. The number of brochures distributed will be tracked for the effectiveness assessment and reported in the annual report.

3.2.8 BMP 1H Stormwater TV Broadcasts for General Public

The Town will broadcast applicable selectboard meetings that include stormwater related topics on the local cable television channel. The DPW & NR Director will continue to provide quarterly updates on stormwater management activities during the televised Board of Selectmen meetings. Town officials will continue to broadcast applicable selectboard meetings.

Timeline: This BMP is ongoing. Dates of broadcasts will be documented and reported in the annual report.



Table 1: Minimum Control Measure 1 (Public Education and Outreach) BMPs and Implementation Actions

| BMP ID | BMP Media/Category | BMP Description | Targeted Audience | Responsible Personnel | Measurable Goal | PY6 | PY7 | PY8 | PY9 | PY10 |
|--------|---|---|--|--|---|---|---|---|---|---|
| 1A | Brochures/ Pamphlets | Educational information on stormwater pollution control issues | Residents | Department of Public Works (DPW) & Natural Resources (NR) Director; DPW & NR Deputy Director | Prepare and distribute stormwater messages targeted to residents annually | First message | Second message | First message | Second message | First message |
| 1B | Web Page | Stormwater webpage updated with stormwater management topics | General Public | DPW & NR Director; DPW & NR Deputy Director; Management Information Services (MIS) Coordinator | Promote stormwater awareness by posting relevant stormwater content. Track hits with goal of increasing hits annually | Update website as needed | Update website as needed | Update website as needed | Update website as needed | Update website as needed |
| 1C | Brochures/ Pamphlets | Brochures to educate developers on stormwater pollution and proper management of new and redevelopment projects | Developers | DPW & NR Director; DPW & NR Deputy Director; Planning Department | Prepare and distribute stormwater messages targeted to developers annually | First message | Second message | First message | Second message | First message |
| 1D | Brochures/ Pamphlets | Brochures to educate industrial facility staff about required stormwater regulations and use of appropriate BMPs | Industrial Facilities | DPW & NR Director; DPW & NR Deputy Director | Prepare and distribute stormwater messages targeted to industrial facilities annually | First message | Second message | First message | Second message | First message |
| 1E | Brochures/ Pamphlets | Pamphlets encouraging proper pet waste management | Residents | DPW & NR Director; DPW & NR Deputy Director; Town Clerk | Distribute messages at time of dog licensing | Distribute message annually | Distribute message annually | Distribute message annually | Distribute message annually | Distribute message annually |
| 1F | Brochures/ Pamphlets | Pamphlets describing proper septic system maintenance | Septic System Owners | Health Agent | Distribute messages to septic system owners | Distribute message biannually | Distribute message biannually | Distribute message biannually | Distribute message biannually | Distribute message biannually |
| 1G | Brochures/ Pamphlets and Public Announcement | Distribute brochures, pamphlets, and use other outreach methods as applicable to distribute spring, summer, and fall messages about how to minimize nitrogen loads in local waterways | Residential/ Business/ Commercial/ Institutions | DPW & NR Director; DPW & NR Deputy Director | Distribute three annual timed messages: grass clipping management and fertilizer application (spring); pet waste management (summer); and leaf litter management (fall) | Distribute messages annually seasonally | Distribute messages annually seasonally | Distribute messages annually seasonally | Distribute messages annually seasonally | Distribute messages annually seasonally |
| 1H | Meetings | Broadcast Board of Selectman (BOS) meetings that cover stormwater management topics on local cable TV | General Public | DPW & NR Director; DPW & NR Deputy Director; Board of Selectmen | Continue to provide cable coverage of quarterly stormwater updates at BOS meetings | Broadcast applicable meetings | Broadcast applicable meetings | Broadcast applicable meetings | Broadcast applicable meetings | Broadcast applicable meetings |



3.3 MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

The Public Involvement and Participation MCM objective provided in Part 2.3.3 of the MS4 General Permit requires Permittees to “provide opportunities to engage the public to participate in the review and implementation of the permittee’s Stormwater Management Plan”. The following BMPs describe the Town’s efforts to comply with this requirement.

The measurable goals of this program are listed in **Table 2** below for each BMP. The effectiveness of this program will be measured by the provision of the opportunity for the public review and submittal of comment on the SWMP. The Town voluntarily provides other opportunities for public involvement and participation, which are also listed below.

3.3.1 BMP 2A SWMP Public Review

The Town will make the SWMP available for public review and comment their stormwater management program documents webpage (<https://www.town.orleans.ma.us/448/Stormwater-Management-Program-Documents>) throughout the Permit Year. Appropriate comments and revisions will be incorporated into the SWMP, if needed, and posted to the Town’s webpage by the end of the relevant Permit year. Modifications, changes, or updates will be recorded in the amendment log provided in **Appendix B**.

Timeline: The SWMP will be posted and revised as needed based on comments from the public.

3.3.2 BMP 2B Catch Basin Stenciling

The Town will provide opportunities for public involvement through catch basin stenciling events. To comply with this requirement the Town will coordinate with local civic groups and volunteers to maintain or replace storm drain markers. The DPW & NR Director will track which drains have been marked or remarked in a database and provide this information in the annual report.

Timeline: This BMP is ongoing. Related activities will be summarized in the annual report.

3.3.3 BMP 2C Volunteer Outfall Monitoring Program

The Town will provide opportunities for public involvement through the volunteer outfall monitoring program. The DPW & NR Director and the Conservation Agent will continue to support the efforts of the Orleans Pond Coalition volunteers and the Marine and Fresh Water Quality Task Force in their continuing effort to perform water quality monitoring activities. The task force will track the number of volunteers each year and provide this information to the DPW & NR Director to include in the annual report.

Timeline: This BMP is ongoing. Related activities will be summarized in the annual report.

3.3.4 BMP 2D Partnership – Advocacy Groups

The Town will provide opportunities for public involvement through partnerships and volunteer groups. The Tree Department and the Conservation Trust will continue to seek opportunities to team with Ameri-Corps Cape Cod and evaluate projects/opportunities for Orleans Green Week. The Tree Department and Conservation Trust will document the activities and number of participants each year and provide this information to the DPW & NR Director to include in the annual report.

Timeline: This BMP is ongoing, including opportunities will be evaluated for partnership. Related activities will



be summarized in the annual report.

3.3.5 BMP 2E Waterbody Cleanup Events

The Town will provide opportunities for public involvement through cleanup events. The Conservation Agent and DPW & NR Director will continue to support the Orleans Pond Coalition's annual cleanup activities at Nauset Beach. The Orleans Pond Coalition will record the dates of activities and the number of attendees and provide this information to the DPW & NR Director to report in the annual report.

Timeline: This BMP is ongoing. Related activities will be summarized in the annual report.

3.3.6 BMP 2F Household Hazardous Waste Collection Days

The Town will provide opportunities for public involvement through the household hazardous waste collections. The DPW & NR Department hosts a household hazardous waste collection event in September of each Permit year. This event is promoted via flyers to residents, an announcement on the DPW & NR Department webpage, and the Town's website. The DPW & NR Director will document the date of the event and track the quantity and types of waste collected during the event for inclusion in the annual report.

Timeline: This BMP is ongoing. Related activities will be summarized in the annual report.



Table 2: Minimum Control Measure 2 (Public Involvement and Participation) BMPs and Implementation Actions

| BMP ID | BMP Media/Category | BMP Description | Responsible Personnel | Measurable Goal | PY6 | PY7 | PY8 | PY9 | PY10 |
|-----------|----------------------|---|---|--|--|--|--|--|--|
| 2A | Public Review | Posting and public SWMP review | DPW & NR Director, DPW & NR Deputy Director | Post online and notify the public of availability of the SWMP for review/comment. Provide a mechanism for receipt of public comments. Address comments and update annually. | Post SWMP and include revisions | Post SWMP and include revisions; provide a mechanism for public comment on the webpage | Post SWMP and include revisions; provide a mechanism for public comment on the webpage | Post SWMP and include revisions; provide a mechanism for public comment on the webpage | Post SWMP and include revisions; provide a mechanism for public comment on the webpage |
| 2B | Public Participation | Catch basin stencil/markers | DPW & NR Director, DPW & NR Deputy Director | Continue to install and maintain catch basin/storm drain stencils in cooperation with local volunteers | Support catch basin stenciling events | Support catch basin stenciling events | Support catch basin stenciling events | Support catch basin stenciling events | Support catch basin stenciling events |
| 2C | Public Participation | Volunteer outfall monitoring program | DPW & NR Director, DPW & NR Deputy Director, Conservation Agent | Continue to support efforts with the Orleans Pond Coalition volunteers to provide monitoring assistance. Goal is to increase the number of volunteers involved in water quality protection activities. | Support monitoring program | Support monitoring program | Support monitoring program | Support monitoring program | Support monitoring program |
| 2D | Public Participation | Partnership – Advocacy Groups | Tree Department and Conservation Trust | Continue to seek opportunities to team with volunteer groups and support water protection projects/opportunities for Orleans Green Week | Seek opportunities to sponsor cleanup events | Seek opportunities to sponsor cleanup events | Seek opportunities to sponsor cleanup events | Seek opportunities to sponsor cleanup events | Seek opportunities to sponsor cleanup events |
| 2E | Public Participation | Shoreline/Waterbody Cleanups | DPW & NR Director, DPW & NR Deputy Director, Conservation Agent | Support annual volunteer clean up at Nauset Beach. Track and report on the amount of waste collected | Support volunteer cleanups | Support volunteer cleanups | Support volunteer cleanups | Support volunteer cleanups | Support volunteer cleanups |
| 2F | Public Participation | Household hazardous waste (HHW)/used oil collection | DPW & NR Director, DPW & NR Deputy Director | Continue to support and promote regional HHW collections. Track and report on participation levels and materials collected. | Support and promote collections | Support and promote collections | Support and promote collections | Support and promote collections | Support and promote collections |



3.4 MCM 3: ILLICIT DISCHARGE AND DETECTION ELIMINATION

The Illicit Discharge Detection and Elimination (IDDE) MCM objective provided in Part 2.3.4 of the MS4 General Permit requires Permittees to “implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges”. The following BMPs describe the Town’s efforts to comply with this requirement.

The measurable results of IDDE program implementation are listed in **Table 3** for each BMP. The effectiveness of this program will be measured by the progress made toward implementation of the program and the effectiveness of identifying and eliminating illicit discharges.

A copy of the IDDE Program Plan, containing the BMPs described below, is available at the Department of Public Works and Natural Resources.

3.4.1 BMP 3A Sanitary Sewer Overflow (SSO) Inventory

The Town has recently or is in the process of installing sanitary sewer infrastructure throughout much of the developed area. There have been no SSOs reported since the inception of this MS4 General Permit requirement. The DPW & NR Director and Conservation Agent will track and report any future SSOs to MassDEP and develop an associated inventory of SSOs to include the Annual Report. The inventory will be maintained annually to include SSOs identified during a Permit year.

Timeline: This BMP is ongoing. Identified SSOs will be inventoried and included in a summary spreadsheet submitted with the annual report.

3.4.2 BMP 3B Stormwater Sewer System Map

The Town will develop an updated map of their MS4. The DPW & NR Director will oversee the gathering of additional data related to required mapping elements, as identified through IDDE field activities, opportunistic inspections or observations made by Town staff, and/or desktop evaluations, and integrate the information into their current MS4 map. The current MS4 map includes 135 outfalls, which has been updated from the 116 outfalls provided in the NOI. The MS4 map information currently resides and is updated in a geographic information system (GIS) geospatial database.

The Permit requires two phases of MS4 map updates. The first series of updates, prescribed in Part 2.3.4.5.a, were required to be completed by the end of Permit Year 2 and include the location of outfalls, receiving waters, open channel conveyances, interconnections, municipally-owned stormwater treatment structures, and initial catchment delineations.

The second phase of MS4 map updates is due by the end of Permit Year 10 and includes outfall spatial location within ± 30 feet, pipes, manholes, catch basins, refined catchment delineations, and municipal sanitary sewer system (if available). Permit Year 2 updates and most of the Permit Year 10 updates have been completed and are incorporated into the MS4 map presented in Appendix X.

Timeline: This BMP is ongoing and the MS4 map will be updated as revised or new information is identified.

3.4.3 BMP 3C Written IDDE Program

The methodology used to identify and eliminate illicit discharges is incorporated into a written IDDE



Program Plan containing the components required in Part 2.3.4. Amendments to the IDDE Program Plan have occurred since its creation based on completed field investigations. The most recent update to the IDDE Program Plan occurred during Permit Year 7 and includes an evaluation of System Vulnerability Factors (SVFs). The IDDE Program Plan was also updated to include additional water sample analytical procedures to determine sources of detected bacteria in water samples (e.g. human vs non-human sources).

Updates were made to the IDDE Program Plan in PY7. A copy of the IDDE Program Plan documents is available at the Department of Public Works & Natural Resources.

3.4.4 BMP 3D Implement IDDE Program

The Town has implemented or is currently tracking ongoing required elements associated with the IDDE Program within Permit timeframes, completing the following major requirements:

- SSO tracking (ongoing)
- Outfall/interconnection inventory and ranking (ongoing)
- Dry weather outfall screening and sampling (due Permit Year 3)
- Catchment investigations (due Permit Year 10)

The SWMP will be updated as new information related to the program becomes available, or additional IDDE related activities are completed.

Timeline: This BMP is ongoing. Related activities will be incorporated into the IDDE Program Plan and summarized in the annual report, as necessary.

3.4.5 BMP 3E Employee Training

The DPW & NR Director will oversee the delivery of training to Town staff engaged in work that may expose them to potential illicit discharges. The training will include how to recognize illicit discharges and SSOs, a general understanding of the implementation of the IDDE Program Plan components, the Town's authority to investigate and enforce IDDE activities, and relevant Town contacts to report suspected or actual illicit discharges. The training will also include the types of information required to report the process used from detection through elimination of illicit discharges to MassDEP and EPA through the annual reporting process. The Town will document the type of training and names of staff trained. This information will be provided in the annual report.

Timeline: This BMP occurs annually and as needed during new employee orientation. The types of trainings and municipal attendance metrics are reported in the annual report.

3.4.6 BMP 3F Conduct Dry Weather Screening

The Town completed dry weather inspections of their outfalls in PY3. In PY4, the Town began investigating catchments in the order of priority identified in the IDDE Program Manual addendum. These catchment investigations were completed in PY5.

Dry weather outfall screening and catchment investigation results are summarized in reports that are available at the Department of Public Works & Natural Resources.

3.4.7 BMP 3G Conduct Wet Weather Sampling



Wet weather sampling will occur at outfalls/interconnections in catchment areas with at least one SVF identified to determine whether wet weather induced high sanitary sewer flow and/or high groundwater in areas serviced by septic systems result in sanitary sewage discharges to the MS4. Wet weather sampling will occur after a storm that produces sufficient stormwater discharge from an outfall. At least one wet weather sampling will be conducted with samples collected for the same parameters as the dry weather samples. Findings and data collected as part of the wet weather sampling event will be recorded in a GIS-based database and reported in the annual report.

Timeline: This BMP is required to be implemented by the end of Permit Year 10. Required information will be summarized in the annual report.

3.4.8 BMP 3H Ongoing Screening

Catchments and/or outfall/interconnection data will be used to prioritize and reprioritize screening and sampling locations as information is collected and evaluated. IDDE investigations will occur on a rolling schedule every five years upon completion of catchment investigations, or when the MS4 General Permit is reissued with updated requirements.

Timeline: This BMP is ongoing. Required information will be summarized in the annual report and maintained in files located at the Department of Public Works & Natural Resources.



Table 3: Minimum Control Measure 3 (Illicit Discharge Detection and Elimination) BMPs and Implementation Actions

| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY10 |
|--------|---|--|---|---|---|--|---|-----|-----|-----|--|------|
| 3A | Sanitary sewer overflow (SSO) inventory | Develop SSO inventory containing Permit required elements | DPW & NR Director, DPW & NR Deputy Director, Health Agent | Develop by end of PY1; update as necessary to include 5 years of SSOs | Develop and report SSO inventory | Update and report SSO inventory as SSOs are identified (5-year inventory) | | | | | | |
| 3B | MS4 Map Development | Create and update MS4 map during IDDE program implementation | DPW & NR Director, DPW & NR Deputy Director | Conduct mapping updates required by PY 2 and PY10 | | MS4 map with Phase 1 required parameters | Update the Phase 1 MS4 map with Phase 2 parameters | | | | MS4 map with Phase 2 required parameters | |
| 3C | Written IDDE program | Update written IDDE program including appropriate regulatory references and address IDDE methods and analytical requirements, as necessary | DPW & NR Director, DPW & NR Deputy Director | Complete by end of PY1 and update as required | Develop IDDE program plan | Update IDDE program plan based on investigation results and changes to methodology, waterbody impairments and TMDLs of receiving waterbodies in MS4 areas. | | | | | | |
| 3D | Implement IDDE program | Conduct IDDE in accordance with Permit requirements and schedules | DPW & NR Director, DPW & NR Deputy Director, Health Agent | Complete investigations of the MS4 within timeframes specified in the Permit. Complete all investigations by the end of PY10. | See specific BMP implementation in BMPs 3A, 3B, 3E, 3F, 3G, and 3H | | | | | | | |
| 3E | Employee training | Train employees on how to recognize illicit discharges and SSOs, mechanisms available for investigation, enforcement, and mitigation | DPW & NR Director, DPW & NR Deputy Director | Train annually | Conduct annual IDDE training for staff involved in the IDDE program | | | | | | | |
| 3F | Conduct dry weather screening | Implement screening/sampling procedures in accordance with IDDE program | DPW & NR Director, DPW & NR Deputy Director | Complete dry weather outfall/interconnection screenings by the end of PY3. | Prioritize outfalls based on Permit prioritization parameters | Screen/sample outfalls/interconnections according to the prioritization list, starting with high priority structures | Update outfall/interconnection rankings based on screening/sampling results | | | | | |



| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY10 |
|-----------|-------------------------------|---|---|---|---|---|-----|-----------------------------------|-----|-----|---|--|
| | | | | | | Begin catchment investigations for Problem outfalls (30% by end of PY2) | | Continue catchment investigations | | | Complete Problem catchment investigations | Complete all catchment investigations |
| 3G | Conduct wet weather screening | Implement screening/sampling procedures in accordance with IDDE program | DPW & NR Director, DPW & NR Deputy Director | Complete wet weather outfall/interconnection sampling by the end of PY10. | Complete wet weather outfall/interconnection sampling upon completion of catchment investigations | | | | | | | |
| 3H | Ongoing screening | Conduct dry and/or wet weather screening as necessary | DPW & NR Director, DPW & NR Deputy Director | Evaluate screening/sampling results to determine priority investigation areas, as necessary | Ongoing | | | | | | | Ongoing screening at a frequency of 1x every 5 years once catchment investigations are completed by PY10 |



3.5 MCM 4: CONSTRUCTION SITE RUNOFF CONTROL

The Construction Site Runoff Control objective provided in Part 2.3.5 of the MS4 General Permit requires Permittees to develop a program for ≥ 1 acre construction sites or construction sites that are part of a common plan of development to minimize or eliminate erosion and maintain sediment on the site so it is not transported in stormwater to a water of the United States through the Permittee's MS4. The following BMPs describe the Town's efforts to comply with this requirement.

The measurable results of the Construction Site Runoff Control program implementation are listed in **Table 4** for each BMP. The effectiveness of this program will be measured by the progress made toward implementation of the program and the effectiveness of identifying and eliminating illicit discharges.

3.5.1 BMP 4A Site Inspection and Enforcement of Erosion and Sedimentation Control (ESC) Measures

The Department of Public Works & Natural Resources, in coordination with the Building Department and Conservation Commission, will enforce Chapter 88 "Drainage and Erosion and Sediment Control", which contains information about Departmental responsibilities for inspection and enforcement, potential sanctions for non-compliance, and the Town's authority to implement enforcement procedures.

Town personnel responsible for the implementation of ESC measures will be responsible for inspections of control measures in accordance with the inspection schedule outlined in the applicant's approved ESC plan. The inspections will be documented to track the number conducted and any follow-up actions performed by the Building Department.

Timeline: Ongoing as construction site inspections are conducted. The number of inspections per Permit year are provided in the annual report.

3.5.2 BMP 4B Site Plan Review

The Director of Planning and Community Development will track the number of site plan reviews conducted in accordance with Chapter 164-33 "Site Plan Review". Site plan reviews will be documented to track the number conducted during each Permit year.

Timeline: This BMP is ongoing as applicable site plans are submitted and reviewed. The number of site plan reviews per Permit year are provided in the annual report.

3.5.3 BMP 4C Waste Control

The Town requires construction site operators to control wastes control waste generated from construction sites under Chapter 148 "Illicit Discharges". Specifically, construction site wastes are defined as a pollutant and are prohibited from entering the Town's MS4. The Department of Public Works & Natural Resources is responsible for the implementation and enforcement of this bylaw.

Timeline: This BMP is ongoing, as necessary. The number and status of construction site-related enforcement activities conducted by the Town each Permit year are provided in the annual report, if applicable.



Table 4: MCM 4 (Construction Site Runoff Control) BMPs and Implementation Actions

| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2- PY10 |
|-----------|--|---|--|--|--|---------------------------------|
| 4A | Site inspection and enforcement of erosion and sediment control (ESC) measures | Complete written procedures for and conduct site inspections and enforcement of ESC measures | DPW & NR Director, DPW & NR Deputy Director, Director of Planning and Community Development, Conservation Commission | Development of regulatory mechanisms, regular inspections of active construction sites, and identification of and enforcement of non-compliant sites | Develop and implement ESC inspection and enforcement regulatory mechanisms | Implement regulatory mechanisms |
| 4B | Site plan review | Complete written procedures documenting site plan review components and implement site plan reviews | Director of Planning and Community Development | Development of procedures and documentation of reviews of applicable site plans | Develop and implement procedures for site plan reviews | Implement site plan reviews |
| 4C | Construction phase waste control | Enact requirements to control waste, including but not limited to discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste | Director of Planning and Community Development | Development of regulatory mechanisms and identification of and enforcement of non-compliant sites | Develop and implement regulatory mechanisms | Implement regulatory mechanisms |



3.6 MCM 5: POST-CONSTRUCTION STORMWATER MANAGEMENT

The Post-Construction Site Runoff Control objective provided in Part 2.3.6 of the MS4 General Permit requires Permittees to develop a program for ≥ 1 acre development or redevelopment sites to reduce the discharge of pollutants found in stormwater through retention or treatment. The following BMPs describe the Town's efforts to comply with this requirement.

The measurable results of the Post-Construction Site Runoff Control program implementation are listed in **Table 5** for each BMP. The effectiveness of this program will be measured by the progress made toward implementation of the program.

3.6.1 BMP 5A As-Built Plan Submittal for Onsite Stormwater Control

Amendments to the Town's "Drainage and Erosion and Sediment Control Bylaw" was approved in the Town Hall Meeting in May 2019 that incorporated requirements to submit as-built plans no later than two years after completion of construction. The amendments also require submittals of long-term operation and maintenance plans for stormwater site controls.

The "Drainage and Erosion and Sediment Control Bylaw" can be found online here: <https://ecode360.com/14198574#14198577>

This BMP has been updated to reflect the location of the "Drainage and Erosion and Sediment Control Bylaw".

3.6.2 BMP 5B Target Properties to Reduce Impervious Area

The Town identified properties that could be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area. The Town is proactive in the installation and retrofit of BMPs to manage stormwater and was able to identify several projects that meet the criteria to fulfill MS4 General Permit requirements. The Town continues to regularly identify and implement projects that reduce impervious area as part of capital improvement projects. The most recent Capital Improvement Plan is located here: <https://www.orleanspd.com/DocumentCenter/View/8484>.

Timeline: These projects are summarized in a memorandum that is located at the Department of Public Works & Natural Resources.

3.6.3 BMP 5C Allow Green Infrastructure

The Town is working to develop a report assessing its existing regulations to determine the feasibility of making green infrastructure practices allowable when appropriate conditions exist. To comply with this requirement, the Director of Planning and Development, in conjunction with the DPW & NR Director, will review existing regulations to determine what practices are allowed and not allowed. If practices are not allowed, the Town Planner, in conjunction with the DPW & NR Director, will determine what hinders the use of these practices, what changes in the regulations will be made, and provide a schedule for implementing the recommendations.

Timeline: This assessment is in progress. The Town continually assesses bylaws, regulations, and policies to facilitate environmentally conscious processes and practices.



3.6.4 BMP 5D Street Design and Parking Lot Guidelines

The Town is working to develop a report assessing current street design, parking lot guidelines, and other Town requirements that affect the creation of impervious cover. This assessment will be used to provide information to allow the Town to determine if changes to design standards for streets and parking lots can be made to support low-impact design options. To comply with this requirement, the Director of Planning and Community Development, in conjunction with the DPW & NR Director, will review current design guidelines and determine if changes should be made. If the assessment indicates that changes should be made, the assessment will include recommendations and proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover attributable to parking areas and street designs. The Director of Planning and Community Development, in conjunction with the DPW & NR Director, will implement recommendations, in accordance with the schedules contained in the assessment.

Timeline: This assessment is in progress. The Town continually assesses bylaws, regulations, and policies to facilitate environmentally conscious processes and practices.

3.6.5 BMP 5E Massachusetts Stormwater Handbook Compliance

The DPW & NR Director, in coordination with the Planning Department, will ensure that stormwater controls or management practices for new and redevelopment meet the retention and/or treatment requirements of the MS4 General Permit and applicable requirements in the Massachusetts Stormwater Handbook. To comply with this requirement, the DPW & NR Director, in coordination with the Planning Department, has modified the "Drainage and Erosion and Sediment Control Bylaw" to contain language regarding new and redevelopment requirements presented in the MS4 General Permit and appropriate Massachusetts Stormwater Handbook references.

The "Drainage and Erosion and Sediment Control Bylaw" can be found online here: <https://ecode360.com/14198574#14198577>

This BMP has been updated to reflect the location of the "Drainage and Erosion and Sediment Control Bylaw".

3.6.6 BMP 5F Inspection

The Town will inspect the post-construction BMPs located on Town-owned property as identified in the as-built plans to ensure that they are properly operated and maintained. To comply with this requirement, the DPW & NR Director will oversee the post-construction BMP inspections, track inspections in a database, and conduct follow-up inspections and/or identified corrective actions to facilitate BMP operations. A summary of this information will be provided in the annual report.

Timeline: This BMP is ongoing as the inventory is established, updated, and SCM inspections are conducted annually.



Table 5: Minimum Control Measure 5 (Post-Construction Stormwater Management) BMPs and Implementation Actions

| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 | PY9 | PY10 |
|--------|---|---|--|--|--|-----|--|-----|--|-----|-----|-----|-----|------|
| 5A | As-Built Plans for On-site Stormwater Control | Development of procedures to require submission of as-built drawings and ensure long-term operation and maintenance | Director of Planning and Community Development | Require submission of as-built plans and maintenance requirements for completed projects and track for annual report | As-built requirements | | Continue to require as-built submissions within 2 years of end of construction | | | | | | | |
| 5B | Target Properties to Reduce Impervious Area | Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually | DPW & NR Director | Complete 4 years after effective date of permit and report annually on retrofitted properties | Identify 5 properties | | | | Maintain an inventory of at least 5 permittee-owned properties that could be modified or retrofitted with BMPs | | | | | |
| 5C | 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 | Director of Planning and Community Development/DPW & NR Director | Complete 4 years after effective date of permit and implement recommendations of report | Develop report | | | | Implement recommendations made in report | | | | | |
| 5D | 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 | Director of Planning and Community Development/DPW & NR Director | Complete 4 years after effective date of permit and implement recommendations of report | Develop report | | | | Implement recommendations made in report | | | | | |
| 5E | Massachusetts Stormwater Handbook Compliance | Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements | Director of Planning and Community Development/DPW & NR Director | Complete 2 years after effective date of permit | Design standards compliance | | Enforce design standard requirements | | | | | | | |
| 5F | BMP Inspection | Establish inspection programs for post-construction BMPs | DPW & NR Director | Document and report on BMPs, inspections, and corrective actions | Establish and implement inspection program | | Conduct BMP inspections | | | | | | | |



3.7 MCM 6: POLLUTION PREVENTION AND GOOD HOUSEKEEPING

The Pollution Prevention and Good Housekeeping objective provided in Part 2.3.7 of the MS4 General Permit requires Permittees to implement an operation and maintenance program for permittee-owned operations to prevent or reduce pollutant runoff and protect water quality from permittee-owned operations. The following BMPs describe the Town's efforts to comply with this requirement.

The measurable results of the Pollution Prevention and Good Housekeeping program implementation are listed in **Table 6** for each BMP. The effectiveness of this program will be measured by the progress made toward implementation of the program.

3.7.1 BMP 6A O&M Procedures

The Town developed a written Clean Water Best Practices (CWBP) Manual consistent with the requirements of Part 2.3.7.a of the MS4 General Permit. The CWBMP provides procedures for Town-owned parks and open spaces, buildings and facilities, and vehicles and equipment. This CWBP Manual contains the required elements in Part 2.3.7a, which are encompassed in the BMPs below. Reference the contents of the CWBP Manual for additional information about the following BMPs.

The Town's Operation & Maintenance (O&M) procedures for parks and open spaces, vehicles and equipment, buildings, and facilities, and MS4 infrastructure is included in the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.2 BMP 6B Inventory Town Facilities

The Town has developed a Municipal Facility Inventory consistent with the requirements of Part 2.3.7.a.ii of the MS4 General Permit. This inventory includes parks and open spaces, buildings and facilities with pollutants exposed to stormwater runoff, including schools, town offices, police and fire stations, municipal parking lots, and areas that store vehicles and equipment.

The complete Facility Inventory is located in Appendix A of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.3 BMP 6C Infrastructure O&M

The Town has developed written O&M Standard Operating Procedures (SOPs) consistent with the requirements of Part 2.3.7.a of the MS4 General Permit. The SOPs are designed to ensure timely infrastructure maintenance to reduce the discharge of pollutants from the MS4.

The O&M SOPs are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources.

3.7.4 BMP 6D Stormwater Pollution Prevention Plan Development

The Town reviewed the need to develop and implement Stormwater Pollution Prevention Plans (SWPPPs) at Town-owned or operated facilities in accordance with Part 2.3.7.b of the MS4 General Permit. These facilities include the Department of Public Works and Natural Resources Facility and Transfer Station/Landfill sites. The Town determined that SWPPPs are not needed for these facilities since they do not discharge to the MS4 or surface water. The facilities have storm drain infrastructure that discharges to subsurface



infiltration systems with no off-site discharges for all applicable storm event design criteria.

3.7.5 BMP 6E Catch Basin Cleaning

Catch basin cleaning procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud (asset management software) to document inspection and cleaning activities, as well as identify maintenance needs. This information is incorporated into a database of inspected and cleaned catch basins, along with the volume or mass of material removed from the catch basins each fiscal year. Ongoing inspection results are used to determine future cleaning schedules.

Timeline: This BMP is ongoing and, as needed, with regular inspections to determine specific timing of cleaning actions.

3.7.6 BMP 6F Street Sweeping Program

Street sweeping procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud (asset management software) to document sweeping activities.

Timeline: This BMP is ongoing. The Town sweeps streets at a minimum of once per year, in the spring, following winter road maintenance activities, and in drainage areas around Areys Pond and Pleasant Bay on a more frequent schedule. Other areas will be swept depending on pollutant load reduction potential.

3.7.7 BMP 6G Road Salt Optimization Program

Winter road maintenance and road salt optimization procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The road salt optimization procedures include:

- Minimizing the use of sodium chloride and other salts;
- Evaluate the opportunities for the use of alternative materials; and
- Ensure that snow disposal activities do not result in disposal of snow into receiving waters.

Timeline: This BMP is ongoing and adjusted as needed.

3.7.8 BMP 6H Stormwater Treatment Structures Inspections

Stormwater treatment structure inspection procedures are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works and Natural Resources. The Town is in the process of developing an inspection form that will be used in Utility Cloud to document inspections and track maintenance needs. In the meantime, an SCM inspection form was developed in ArcGIS Field Maps to create a Town-owned SCM inventory and inspection form.

The Town completed annual inspections of municipally-owned SCMs in June 2025. Several structures formerly identified as SCMs were removed from the Town's SCM inventory because they were determined to be catch basins and drainage manholes discharging to leaching pits or emergency discharge treatment systems, which are excluded from SCM inspection and maintenance programs under MS4 General Permit Part 2.3.7.a.iii.6. These leaching systems are maintained as part of the Town's Catch Basin Cleaning Program.



A copy of the Orleans PY7 SCM Inventory and Inspection Memorandum can be accessed at the Department of Public Works.

3.7.9 BMP 6I Nitrogen Loading Reductions

The Town currently has requirements for the use of slow-release fertilizers on Town-owned property that currently uses fertilizer. These requirements contain procedures to properly manage grass cuttings and leaf litter on Town property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces. The Town has also increased street sweeping frequencies of Town-owned streets and parking lots to a minimum of two times a year: once in the spring following winter road maintenance activities, and once in fall following leaf dropping.

In addition to these requirements, the Town has adopted a Bylaw, Chapter 103, "Fertilizer Nitrogen and Phosphorus Control" (<https://ecode360.com/28460572>). This Bylaw restricts the use of nitrogen and phosphorus-based fertilizers through provisions such as prohibition of application between October 14 and April 15; no application before or during heavy rain; and no application within 100-feet of resource areas like wetlands or waterbodies.

Timeline: This BMP is ongoing and adjusted as needed.



Table 6: Minimum Control Measure 6 (Pollution Prevention and Good Housekeeping) BMPs and Implementation Actions

| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 | PY9 | PY10 |
|--------|---|---|---------------------------------------|--|---|---|-----|-----|-----|-----|-----|-----|-----|------|
| 6A | Operation and Maintenance (O&M) for Municipal Activities | 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. | DPW & NR Director | Complete written O&M procedures for municipal activities and implement 2 years after the effective date of the permit | Develop O&M procedures | Implement O&M procedures | | | | | | | | |
| 6B | Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment storage locations | Create inventory | DPW & NR Director/Planning Department | Complete 2 years after the effective date of the permit and update annually | Develop Town-owned facilities inventory | Update inventory as facilities are added or removed | | | | | | | | |
| 6C | Infrastructure O&M | Establish and implement a program for the repair and rehabilitation of MS4 infrastructure | DPW & NR Director | Continue MS4 infrastructure O&M activities. Update the program plan within 2 years after the effective date of the permit | Develop O&M for MS4 infrastructure | Implement O&M procedures | | | | | | | | |
| 6D | Stormwater Pollution Prevention Plan (SWPPP) | Create SWPPPs for maintenance garages, transfer stations, and/or other waste handling facilities | DPW & NR Director | Complete and implement 2 years after the effective date of the permit | This requirement was determined to not be applicable to the Town because stormwater generated from these types of sites is directly infiltrated into subsurface stormwater systems. | | | | | | | | | |
| 6E | Catch Basin Cleaning | Establish a schedule for catch basin cleaning such that each catch basin is no more than 50% full, and clean catch basins on that schedule | DPW & NR Director | Continue cleaning catch basins and update the schedule as needed. Report the number of catch basins inspected and cleaned and the volume of material removed annually. | Develop and implement catch basin cleaning procedures | Implement catch basin cleaning procedures annually | | | | | | | | |
| 6F | Street Sweeping Program | Sweep all streets and permittee-owned parking lots in accordance with permit conditions | DPW & NR Director | Sweep all permittee-owned streets and parking lots at least twice a year in the spring and fall | Develop street and parking lot sweeping | Implement street and parking lot sweeping procedures twice annually | | | | | | | | |



| BMP ID | BMP Category | BMP Description | Responsible Personnel | Measurable Goal | PY1 | PY2 | PY3 | PY4 | PY5 | PY6 | PY7 | PY8 | PY9 | PY10 |
|--------|---|--|-----------------------|--|--|---|-----|-----|-----|---|-----|-----|-----|------|
| | | | | | procedures | | | | | | | | | |
| 6G | Road Salt Use Optimization Program | Establish and implement a program to minimize the use of road salt | DPW & NR Director | Implement salt use optimization during the deicing season | Develop winter road maintenance procedures | Implement road maintenance procedures during the winter | | | | | | | | |
| 6H | Inspection and Maintenance of Stormwater Treatment Structures | Establish and implement inspection and maintenance procedures and frequencies | DPW & NR Director | Inspect and maintain Town-owned treatment structures annually | Develop stormwater treatment structure inspection procedures | Conduct treatment structure inspections annually | | | | | | | | |
| 6I | Nitrogen Loading Reductions | Update procedures and requirements for fertilizer use and organic waste management | DPW & NR Director | Continue nitrogen reducing activities, including adding requirements on the use of slow-release fertilizers (as applicable) within 2 years of the effective date of permit | Develop nitrogen reduction procedures and requirements | | | | | Implement nitrogen reduction procedures | | | | |



4. PROGRAM MANAGEMENT, EVALUATION, RECORD KEEPING, AND REPORTING

4.1 PROGRAM MANAGEMENT

To effectively implement a coordinated stormwater program, the Town will have an overarching program management element. The DPW & NR Director will be responsible for overseeing the implementation of the SWMP, but will require assistance from other Town departments, boards, and committees. The entities listed in this SWMP will meet with the DPW as needed to coordinate on the development, implementation, or completion of the BMP. The following town departments, boards, committees, and titles that will be the contacts for BMP development, implementation, record, and information keeping are outlined in **Table 7**. These responsible parties will submit information to the DPW & NR Director on the status or completion of BMPs to include in the Annual Report.

Table 7: BMP Implementation Responsible Parties

| Town Department, Board, or Committee | Title |
|--------------------------------------|--------------------------------------|
| DPW & NR | DPW Director |
| Management Information Services | MIS Coordinator |
| Planning Department | Director of Planning and Development |
| Site Plan Review Committee | Committee Chair |
| Town Clerk | Town Clerk |
| Health Department | Health Agent |
| Conservation Trust | Conservation Agent |
| Conservation Commission | Conservation Agent |
| Building Department | Principal Clerk |

4.2 PROGRAM EVALUATION

The Town conducts annual evaluations of its program compliance, the appropriateness of its identified BMPs, whether it's meeting new Permit requirements, and progress towards achieving its identified measurable goals, which include reducing the discharge of pollutants to the maximum extent practicable



("MEP"). The Town documents the findings of these annual evaluations in its MS4 Program annual report, submitted to the EPA and MassDEP by the end of September.

Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI; however, this information will be included in the Town's annual reports and SWMP updates.

4.3 RECORDKEEPING

The Town will keep records required by the MS4 General Permit for at least five years after they are generated. Records include but are not limited to: information used in the development of any written (hardcopy or electronic) program required by this permit, any monitoring results, copies of reports, records of screening, follow-up, and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the NOI, SWMP, SWPPP, and annual reports. Records will be available for public observation as requested. Records will be submitted to the EPA or MassDEP as requested. These records may include the following documents, but are not limited to this list:

- Dry and wet weather monitoring results, copies of reports, records of screening, follow-up, and elimination of illicit discharges;
- Maintenance records;
- Inspection records; and
- Data used in the development of the notice of intent, SWMP, and annual reports.

4.4 ANNUAL REPORTS

The DPW & NR Director will oversee the development of an annual report, approved and signed by the Town Administrator or their designee, at the end of each permit year. Annual reports are due to the EPA and MassDEP each year within 90 days of the close of the permit year. The MS4 Annual Report shall include the following content:

- Self-assessment review of compliance with permit conditions;
- An assessment/evaluation of:
 - The appropriateness of the identified BMPs,
 - Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP,
 - The identified measurable goals for each of the MCMs;
- All outfall screening and sampling results;
- Summary of stormwater activities planned to be undertaken during the next reporting cycle;
- Any change in identified BMPs or measurable goals and justification for those changes; and
- The information specified under the reporting requirements for each MCM.

Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI, however, this information will be included in the Town's annual reports and SWMP updates. Annual reports are also made available for public access on the EPA's website at [Regulated MS4 in Massachusetts Communities | US EPA](https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities) (<https://www.epa.gov/npdes-permits/regulated-ms4-massachusetts-communities>).



5. 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 gathered and evaluated the information submitted. Based on my inquiry about the person or persons who manage the system, or those persons directly responsible for gathering the information, 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 a fine and imprisonment for knowing violations."

Signature

Date

Printed Name



Appendices



APPENDIX A: 2016 GENERAL PERMIT (REVISED 2020) WITH APPENDICES



A copy of the original 2016 MS4 General Permit was included in Appendix A of the original version of this SWMP. On December 7, 2020, changes to the Permit were issued; these changes became effective on January 6, 2021. The modified 2016 MS4 General Permit and its appendices can be accessed on the EPA's website, at <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>.



APPENDIX B: STORMWATER MANAGEMENT PLAN REVISION TRACKING FORM





Stormwater Management Plan Revision Tracking Form

| Revision No. | Revision Date | Section of SWMP | Revision(s) Made/Reasoning |
|--------------|---------------|---|--|
| 00 | 6/24/2019 | -- | -- |
| 01 | 6/19/2020 | 1. | Introduction to the Town's stormwater program and adding reference to the original SWMP prepared by Wood. |
| | | 2.1 | Note added to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP |
| | | 2.2 | NEW SECTION: Added language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA |
| | | 2.3 | NEW SECTION: Added language to reflect that interconnections are shown on the updated Separate Storm Sewer System Map in Appendix E |
| | | 2.4 | NEW SECTION: Added language to reflect that the Town has no surface public drinking water supply sources |
| | | 2.5 | NEW SECTION: Added language to reflect that the Town will comply with proper provisions to authorize any future increased discharges |
| | | 3.2 | Added language to reflect that education and outreach materials shall note any existing Town regulations where appropriate. |
| | | 3.3.1.2 | Added an update on the Town's catch basin stenciling program and drainage manhole cover design |
| | | 3.4.1.2 | Revised language to reflect that a copy of the Separate Storm Sewer System Map will be updated annually and included in Appendix E |
| | | 3.4.1.6 | Added an update on the Town's IDDE program |
| | | 3.6.1.5 | Added language to reflect that the deadline to assess and update Town regulations has been extended by one year |
| | | 3.7.1.1 – 3.7.1.3 and 3.7.1.5 – 3.7.1.9 | Revised language to reflect that a Clean Water Best Practices Manual has been prepared for the Town and contains all required inventories and procedures to complete BMPs 6A – 6C and 6E – 6I; |
| | | 3.7.1.4 | Revised language to reflect that the Town does not need to prepare SWPPPs for its Department of Public Works and Natural Resources Facility and Transfer Station/Landfill |



| Revision No. | Revision Date | Section of SWMP | Revision(s) Made/Reasoning |
|--------------|---------------|-------------------------------|--|
| | | | sites |
| | | 4.2 | Revised language to reflect that the Town's annual program evaluations can be found in their MS4 annual reports |
| | | 4.4 | Added a link to access the Town's annual reports on the EPA website |
| | | Appendix E | NEW SECTION: Added Separate Storm Sewer System Map |
| 02 | 6/22/2021 | 2.1 | Updated Table 1: Listed Waterbodies to reflect approved 2016 Massachusetts Integrated List of Waters |
| | | 2.2 | Revised language to reflect that Figure 2 was updated in PY3; added reference to the addition of Uncle Harvey Pond to the Integrated List and the number of outfalls discharging to the waterbody |
| | | 3.2.1 | Updated Table 2: MCM1 BMPs and Implementation Actions to reflect the development of new educational messages and changes to the Town's anticipated distribution schedule of each educational message |
| | | 3.2.1.1 and 3.2.1.3 – 3.2.1.5 | Revised language to reflect the topics of educational messages and changes to the Town's message distribution schedule |
| | | 3.2.1.9 | Revised language to reflect that the Town's Effectiveness Assessment Surveys have been discontinued |
| | | 3.4.1.6 | Added an update on the Town's IDDE program |
| | | Appendix E | Revised Separate Storm Sewer System Map |
| | | Appendix F | NEW SECTION: Added Impaired Waters Map to replace Figure 2: Impaired Waterbodies in the original SWMP |
| 03 | 6/29/2022 | 2.1 | Updated Table 1: Listed Waterbodies |
| | | 3.4.1.3 | Updated language to reflect issuance of the IDDE Program Manual Addendum. |
| | | 3.6.1.2 | Updated language to reflect identification of impervious area reduction projects on municipally owned properties in the FY23-FY27 Capital Improvement Plan |
| | | 3.6.1.3 | Updated language to reflect the status of the Green Infrastructure assessment. |
| | | 3.6.1.4 | Updated language to reflect the status of the Street Design and Parking Lot Guidelines assessment. |
| | | 3.7.1.5 | Updated language to reflect the status of the Utility Cloud module development. |
| | | 3.7.1.6 | Updated language to reflect the status of the Utility Cloud module development. |



| Revision No. | Revision Date | Section of SWMP | Revision(s) Made/Reasoning |
|--------------|---------------|-------------------|---|
| | | 3.7.1.8 | Updated language to reflect the status of the Utility Cloud module development. |
| | | 4.3 | Updated language to reflect how the Town keeps their MS4 records for at least 5 years |
| | | 4.4 | Updated language to summarize the annual reporting process |
| 04 | 6/24/2024 | 2.1 | Updated Table 1: Listed Waterbodies to reflect approved 2022 Massachusetts Integrated List of Waters |
| | | 2.1.1 | NEW SECTION: Added section to reflect completion of NSIR for Areys Pond and Pleasant Bay watersheds |
| | | 3.4.1.2 | Updated language to reflect IDDE Program Manual update |
| | | 3.7.1.8 | Updated language to reflect completion of SCM inventory/inspections |
| | | 3.4.1.6 | Updated language to reflect status of dry weather screening program |
| | | Appendix E | Updated Separate Storm Sewer System Map |
| | | Appendix F | Updated Impaired Waters Map |
| 05 | 6/30/2025 | Multiple Sections | The SWMP was extensively updated to include information removed during previous updates that provides context for implementation of BMPs. The update was made to provide readers with a comprehensive framework for SWMP requirements and implementation. |



APPENDIX C: ENDANGERED SPECIES ACT AND NATIONAL HISTORIC PRESERVATION ACT REVIEW

Technical Memo

To: Town of Orleans

From: Rich Niles, Wood; Jean Haggerty, Wood

Date: June 19, 2019

Re. Municipal Separate Storm Sewer System Permit Endangered Species and Historic Cultural Review

Wood Environment & Infrastructure Solutions, Inc. (Wood) understands that the Town of Orleans, Massachusetts is seeking coverage under the April 4, 2016 National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) General Permit (GP) administered by the U.S. Environmental Protection Agency (USEPA) and as part of this permit approval process, needs to evaluate the GP eligibility criteria related to the Endangered Species Act (ESA) and National Historic Preservation Act (NHPA). These requirements are outlined in Part 1.9 of the MS4 GP and the preliminary results of the special eligibility determinations were documented in Part I of the Notice of Intent (NOI) that needs to be submitted to the USEPA by September 26, 2018.

This memo updates the findings and the supporting documentation of compliance with Part 1.9 of the MS4 GP and will be included in the Stormwater Management Plan (SWMP), as required by the GP. Since the submittal of the NOI, the results of the special eligibility determinations were reviewed with the most up to date U.S. Fish and Wildlife Service (USFWS) Information for Planning and Conservation (IPaC) online-database output for Orleans and Massachusetts Historical Commission (MHC) inventory results. The most current inventories are included in the attachments.

As you are aware, owners and operators of MS4s are required to develop, implement, and enforce a SWMP per the NPDES MS4 GP requirements. Applicants applying for permit coverage must assess the impacts of their stormwater discharges and discharge-related activities on federally listed threatened and endangered (T&E) species and designated critical habitat under the ESA, as well as the effect on historic properties that are either listed on, or are eligible for listing on, the National Register of Historic Places (NRHP) under the NHPA. The following provides information related to T&E species, critical habitat, and historic properties in Orleans and the procedures required to ensure compliance with the ESA and NRHP, as specified in Appendices C and D in the MS4 GP. Definitions of the ESA and NHPA eligibility criteria are provided in

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Attachment A. A figure identifying stormwater infrastructure, the 2010 Urbanized Area¹, and historic properties in Orleans is provided in **Attachment B**.

Endangered Species Act Compliance

The Cape Cod Commission contacted the USFWS for a project review request, dated August 17, 2018, for the MS4 GP on behalf of the Towns in Barnstable County. The proposed action consists of regular operation (discharges from), inspection, and maintenance of existing stormwater infrastructure owned by the Towns in Barnstable County. The project review request determined that the federally-listed T&E species in Barnstable County are: the threatened Northern Long-eared Bat (NLEB), threatened Piping Plover, endangered Roseate Tern, threatened Red Knot, endangered Plymouth Redbelly Turtle, threatened Northeastern Beach Tiger Beetle, endangered Rusty Patched Bumble Bee, and endangered Sandplain Gerardia (see Project Review Consultation and USFWS IPaC Resource List for Barnstable County in **Attachment C**). The USFWS response to the project review (**Attachment C**), dated September 24, 2018, provided guidance and concurrence that the towns would meet the eligibility regarding the ESA under Criterion B.

The USFWS key to determining whether federally regulated actions may cause incidental or prohibited take of the NLEB is provided as **Attachment D**.

Evaluation of USFWS Criteria for MS4 GP Eligibility

Criterion A cannot be used to certify eligibility consistent with Appendix C of the MS4 GP because the NLEB is listed statewide and therefore throughout the action area in Orleans.

Criterion B can be met if during the course of the permit term, installation of any structural Best Management Practices (BMPs) within the Urbanized Area are screened for impacts to federal T&E species and the USFWS is consulted if activities "may affect" or are "not likely to adversely affect" T&E species. For instance, if tree removal was required for construction of a stormwater basin or to gain access to an existing outfall, consultation with the USFWS would be required (see consultation options below). However, activities which would not impact the NLEB or its habitat such as maintenance (with no tree clearing) of an existing outfall would not require consultation with the USFWS.

Criterion C would only be applicable if one or more of the following species were found in Orleans: Northern Long-eared Bat, Sandplain gerardia, Small whorled Pogonia and/or American burying beetle and **none of these species** were found in Orleans: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Northern Red-bellied cooter, Bog Turtle, Roseate Tern, Puritan tiger beetle, and Northeastern Beach Tiger beetle? Since both the Northern Long-eared Bat and the Northeastern Beach Tiger beetle can be found in Orleans, then Criterion C cannot be used.

Criterion B, therefore, is the appropriate criterion for the Town of Orleans to cite for ESA compliance in the NOI and the SWMP for the MS4 GP.

¹ As outlined in Part 1.2.1 of the MS4 GP: "If the small MS4 is not located entirely within an urbanized area, only the portion of the MS4 that is located within the urbanized area is regulated under 40 CFR §122.32(a) (1)". The special eligibility determinations of the MS4 GP, therefore, only apply to activities within the Urbanized Area of Orleans. It is important to note that the Urbanized Area will likely expand following the next US Census. The Town may wish to establish a policy for MS4 project reviews that applies town-wide to ensure consistency the ESA and NHPA requirements and enhance natural and historic resource protection.

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USFWS Consultation Guidance for the NLEB (for future reference)

In general, the following activities that may affect the NLEB or its habitat are not eligible for the streamlined Section 7 ESA consultation and are typically deemed as having the potential to affect the NLEB:

- Purposeful take (non-incidental take) The USFWS key to determining whether federally regulated actions may cause incidental or prohibited take of the NLEB is provided as **Attachment D**;
- Direct impact to caves or hibernaculum, or their entrance, where NLEBs are known to hibernate;
- Removal of a NLEB known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31; and
- Removal of any trees within 0.25 miles of NLEB hibernaculum at any time of year.

The USFWS has relied on state agencies to identify the locations of known NLEB hibernacula and maternity roost trees for compliance with these requirements. The USFWS does not require surveys for NLEB maternity roost trees or hibernacula, but recommend they be conducted, if possible. The Massachusetts Natural Heritage and Endangered Species Program (NHESP) has mapped all known hibernacula and maternity roost trees in the state, which is available online at <http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/rare-mammals/northern-long-eared-bat.html>.

As of the latest map update on June 4, 2019, there are no known NLEB maternity roost trees mapped in Orleans and there are no known NLEB hibernacula in Orleans. The USFWS 4(d) Rule Streamlined Consultation Form is included as **Attachment E** as it identifies the type of information the USFWS will require for consultation for activities that qualify for streamlined consultation within the Urbanized Area. This will be relevant for any future stormwater projects that involve construction of new stormwater infrastructure or substantial maintenance or rehabilitation of existing stormwater infrastructure within the Urbanized Area and where the limit of work extends beyond the existing footprint and involves tree clearing.

National Historic Preservation Act Compliance

Section 106 of the NHPA requires projects with a federal action to take into account the effects of “undertakings” on historic properties that are either listed on, or eligible for listing on, the NRHP. Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the NRHP. Coordination with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officers (THPOs) and others may be required to determine effects of discharges on historic properties.

Evaluation of NHPA Criteria for MS4 GP Eligibility

The USEPA has stated in Appendix D of the MS4 GP that authorized discharges confined to existing channels, outfalls, or natural drainage areas are deemed to not have the potential to cause effects on historical properties. These activities meet Criteria A in Appendix D of the MS4 GP, as they do not have the potential to cause effects on historic properties. MS4 GP eligibility under Criterion A is discussed further below. Existing information regarding historic properties provided by the MHC and the NRHP was utilized

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Continued...

to determine the presence and extent of historic properties. Historic surveys were not conducted; therefore, Criterion B in Appendix D of the MS4 GP does not apply.

Certain activities such as the construction and/or installation of stormwater control measures that involve subsurface disturbance of less than one acre of land may have the potential to have an effect on historic properties. For these activities within the Urbanized Area, the Town of Orleans will need to ensure that historic properties will not be impacted or that they are in compliance with a written agreement with the SHPO, THPO, or other tribal representative that outlines all measures the Town will carry out to mitigate or prevent any adverse effects on historic properties. Note that ground disturbance greater than one acre requires coverage under the USEPA NPDES Construction General Permit (CGP), which contains the same permit eligibility requirements with respect to the NHPA.

The Sea Call Farm is listed on the NRHP and contains numerous historic properties as shown on the figure in **Attachment B** and the list of property information in **Attachment F**. There is currently no storm drain outlets/outfalls, one catch basin, and one manhole located within the Sea Call Farm property. Additional historic or potentially historic properties in the state inventory which may be eligible or could become eligible for the NRHP are also shown on the figures in Attachment A and listed in Attachment E. **Wood understands that the Town is not currently undertaking any activity involving subsurface land disturbance less than one acre (associated with the storm drain system); therefore, the Town meets Criterion A in Appendix D of the MS4 GP.**

SHPO and THPO Consultation Guidance (for future reference)

Future activities within the Sea Call Farm property, all of which is within the Urbanized Area, that involve subsurface disturbance in areas that have not already been disturbed (so as to preclude the possibility of containing historic properties) will need to be reviewed to determine if consultation with the SHPO and THPOs are required. If consultation with the SHPO and THPOs is necessary, a Project Notification Form (PNF) must be submitted to the Massachusetts Historic Commission (a copy is provided as **Attachment G** for reference).

List of Attachments

- Attachment A: ESA and NHPA Eligibility Criteria
- Attachment B: Figure
- Attachment C: Project Review Request and Federally Listed Endangered and Threatened Species in Massachusetts, and USFWS Response
- Attachment D: Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats
- Attachment E: USFWS 4(d) Rule Streamlined Consultation Form (blank)
- Attachment F: MACRIS List of Properties in Orleans on the National Register of Historic Places and Massachusetts State Inventory
- Attachment G: Massachusetts Historical Commission Project Notification Form (blank)

Wood Environment & Infrastructure Solutions, Inc.

271 Mill Road, 3rd Floor
Chelmsford, MA 01824
T: +1 978-692-9090
www.woodplc.com

Attachment A:

ESA and NHPA Eligibility Criteria

Endangered Species Guidance:

- **USFWS Criterion A:** No endangered or threatened species or critical habitat are in proximity to the stormwater discharges or discharge related activities.
- **USFWS Criterion B:** In the course of formal or informal consultation with the Fish and Wildlife Service, under section 7 of the ESA, the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the stormwater discharges and discharge related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation).
- **USFWS Criterion C:** Using the best scientific and commercial data available, the effect of the stormwater discharge and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the stormwater discharges and discharge related activities will have “no affect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

National Historic Preservation Act Guidance:

- **Criterion A:** The discharges do not have the potential to cause effects on historic properties.
- **Criterion B:** A historic survey was conducted. The survey concluded that no historic properties are present. Discharges do not have the potential to cause effects on historic properties.
- **Criterion C:** The discharges and discharge related activities have the potential to have an effect on historic properties, and the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Attachment B:








Figure



Historic Properties in Orleans

Orleans, MA

Legend

-  Town of Orleans
-  Outfalls
-  Manholes
-  Catch Basins
-  National Register - Historic Property
-  National Register - Individual Property
-  Town Boundary

Town Location



Notes & Sources

Source:
 "Massachusetts Historical Commission Historic Inventory"
 Modified 2019-02-07
 From MassGIS



wood.

Wood Environment & Infrastructure Solutions, Inc.
 271 Mill Road
 Chelmsford, MA 01824
 (978) 692-9090



FIGURE

1

Attachment C:

Project Review Request and Federally Listed Endangered and Threatened Species in
Massachusetts, and USFWS Response

From: Timothy Pasakarnis
Cape Cod Commission
3225 Main St. P.O. Box 226
Barnstable, MA 02630

To: U.S. Fish and Wildlife Service
New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301

August 17, 2018

Re: Project Review Request, 2016 Massachusetts Small Municipal MS4 Permit Eligible Municipalities, Barnstable County, MA

We have reviewed the referenced project using the Environmental Protection Agency's (EPA) project review process for our Municipal Separate Storm Sewer System (MS4) and have followed all guidance and instructions in completing the review. We completed our review on August 13, 2018 and are submitting our project package in accordance with the instructions for further review. The U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) species list indicated these species may be present within the regulated areas on Cape Cod, which includes the municipalities of Barnstable, Bourne, Brewster, Chatham, Dennis, Eastham, Falmouth, Harwich, Mashpee, Orleans, Sandwich and Yarmouth: (1) Northern Long-eared Bat (2) Piping Plover (3) Roseate Tern (4) Red Knot (5) Plymouth Redbelly Turtle (6) Northeastern Beach Tiger Beetle (7) Rusty Patched Bumble Bee (8) Sandplain Gerardia. We are submitting this letter as a non-Federal representative of the EPA pursuant to the requirements of the EPA's process for NPDES/MS4 permits.

Our proposed action consists of: regular operation (discharge from), inspection, and maintenance of existing stormwater infrastructure owned by the towns.

The location action area is identified on the enclosed map.

Permit implementation will begin in the fall of 2018 and the permit has an expiration date of June 30, 2022.

This is a request for review by the Service pursuant to section 7 of the Endangered Species Act. We determined that the project may affect, but is not likely to adversely affect the above listed species, because:

- Of the identified species, permit activities are expected to have no effect on the (1) Northern Long-eared Bat, (7) Rusty Patched Bumble Bee, or (8) Sandplain Gerardia because no clearing, new construction, or land disturbance is planned; and (6) Northeastern Beach Tiger Beetle because the habitat for the Northeastern Beach Tiger Beetle within Barnstable County is outside the MS4 permit regulated area.

- (2-4) Piping Plover, Roseate Tern, and Red Knot: The general inspection and maintenance of existing stormwater infrastructure does not include new construction or landscape alteration, therefore these activities are not expected to impact these species' habitats. Although discharges from the project may reach the coastal habitats and feeding grounds used by all three species, the project implements BMPs to reduce pollutants to the extent that the discharges are not known to have measurable impacts on the species, their habitat, or their food sources.
- (5) Plymouth Redbelly Turtle: Similar to above, inspection and maintenance of existing infrastructure is not expected to impact the Plymouth Redbelly Turtle or its habitat. Discharges from the project may reach the pond/lake habitats utilized by this species, however the project implements BMPs to reduce pollutants to the extent that the discharges are not known to have measurable impacts on the species, its habitat, or its food sources.

The enclosed project package provides the information about the species and/or critical habitat considered in our review, and we identified our determinations for the resources that may be affected by the project. We request you concur with our determination that the project may affect, but is not likely to adversely affect the species described above.

For additional information, please contact Timothy Pasakarnis at the address listed above, by phone at (508) 744-1214, or tim.pasakarnis@capecodcommission.org.

Sincerely,




Timothy Pasakarnis
Water Resource Analyst

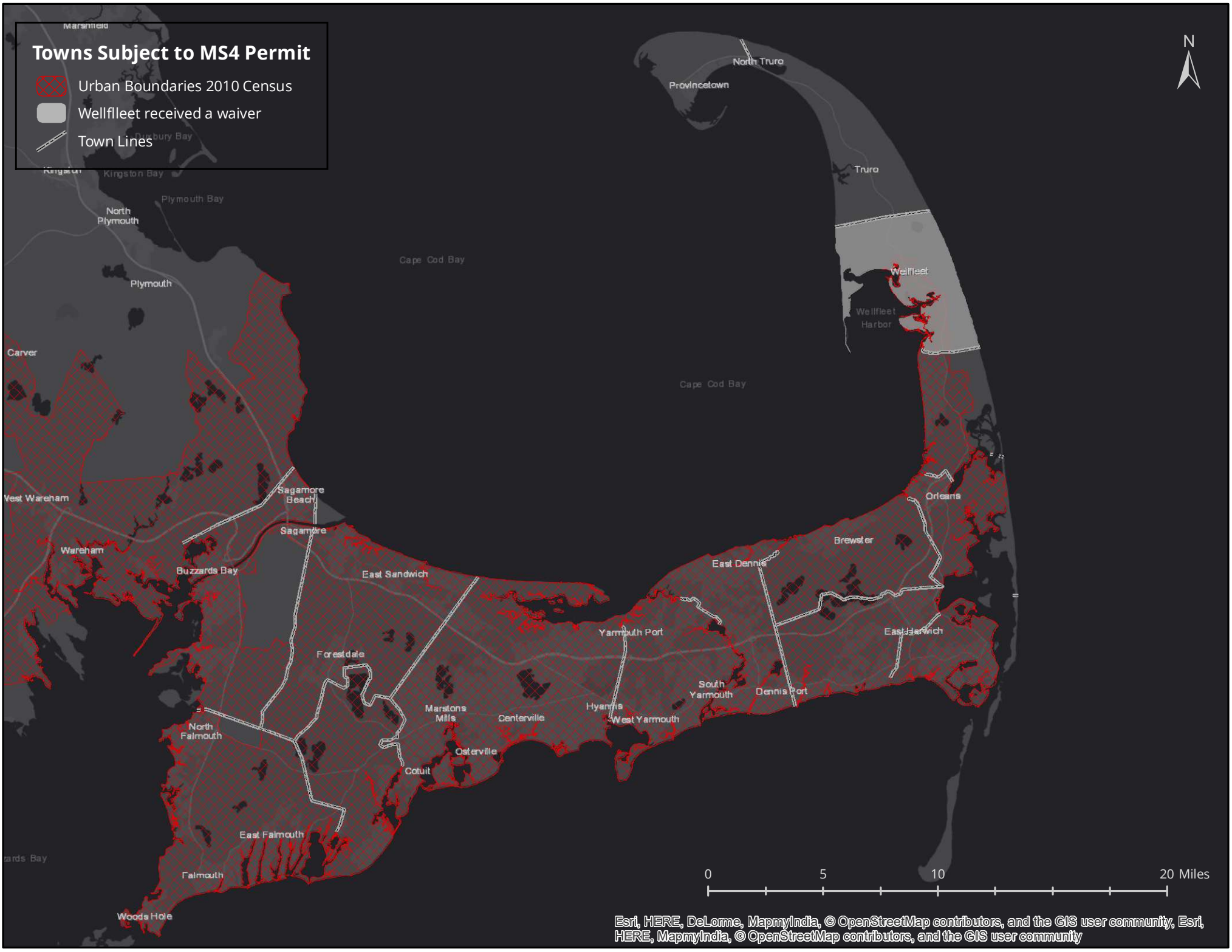
Enclosures:

- 1) Project review request
- 2) Map of regulated areas where MS4 activities will occur
- 3) Information for Planning and Consultation (IPaC) resource list

Attachment 1: Map of Cape Cod MS4 Regulated Areas

Towns Subject to MS4 Permit

-  Urban Boundaries 2010 Census
-  Wellfleet received a waiver
-  Town Lines



Attachment 2: Information for Planning and Consultation (IPaC) resource list

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.

Project information

NAME

Barnstable County 2016 MS4 Permit

LOCATION

Barnstable County, Massachusetts



DESCRIPTION

Operation and maintenance of existing municipal separate storm sewer systems in accordance with the 2016 Massachusetts Small MS4 General Permit

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>

NOT FOR CONSULTATION

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species

¹ 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 |
|---|------------|
| Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045 | Threatened |

Birds

| NAME | STATUS |
|---|------------|
| Piping Plover <i>Charadrius melodus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039 | Threatened |
| Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1864 | Threatened |
| Roseate Tern <i>Sterna dougallii dougallii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2083 | Endangered |

Reptiles

| NAME | STATUS |
|---|------------|
| Plymouth Redbelly Turtle <i>Pseudemys rubriventris bangsi</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/451 | Endangered |

Insects

| NAME | STATUS |
|--|------------|
| Northeastern Beach Tiger Beetle <i>Cicindela dorsalis dorsalis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8105 | Threatened |
| Rusty Patched Bumble Bee <i>Bombus affinis</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9383 | Endangered |

Flowering Plants

NAME

STATUS

Sandplain Gerardia Agalinis acuta

Endangered

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/8128>

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection 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

MIGRATORY BIRD INFORMATION IS NOT AVAILABLE AT THIS TIME

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

Wildlife refuges and fish hatcheries

REFUGE AND FISH HATCHERY INFORMATION IS NOT AVAILABLE AT THIS TIME

Wetlands in the National Wetlands Inventory

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of](#)

[Engineers District.](#)

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

This location overlaps the following wetlands:

The area of this project is too large for IPaC to load all NWI wetlands in the area. The list below may be incomplete. Please contact the local U.S. Fish and Wildlife Service office or visit the [NWI map](#) for a full list.

ESTUARINE AND MARINE DEEPWATER

[E1UBL](#)

[E1ABL](#)

[M1ABL](#)

[E1UBLx6](#)

[E1UBLx](#)

[E1UBL6](#)

ESTUARINE AND MARINE WETLAND

[E2EM1P](#)

[E2EM1Pd](#)

[M2USM](#)

[M2USP](#)

[E2USM](#)

[M2USN](#)

[E2USN](#)

[E2USP](#)

[E2EM1N](#)

[E2SS1P](#)

[E2EM1/SS1P](#)

[E2EM1Nx](#)

FRESHWATER EMERGENT WETLAND

[PEM1R](#)

[PEM1E](#)

[PEM1F](#)

[PEM1Ed](#)

[PEM1Fh](#)

[PEM1/SS1Rd](#)

[PEM1A](#)

[PEM1C](#)

[PEM1/SS1R](#)

[PEM1Fd](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1E](#)

[PSS1E](#)

[PFO1/4E](#)
[PSS1R](#)
[PFO1R](#)
[PFO4E](#)
[PFO4Eg](#)
[PFO1/4R](#)
[PSS1/4Eg](#)
[PFO1/4Eg](#)
[PSS1Ed](#)
[PFO4R](#)
[PSS1/FO1E](#)
[PFO1A](#)
[PFO1F](#)
[PFO1/SS1E](#)
[PFO1Rd](#)
[PFO1C](#)
[PFO1/4B](#)
[PSS1C](#)
[PSS1Ex](#)
[PFO4A](#)
[PFO1Ed](#)
[PSS1F](#)
[PSS1Fx](#)
[PSS1A](#)

FRESHWATER POND

[PABF](#)
[PABH](#)
[PABHh](#)
[PABKx](#)
[PUBHh](#)
[PUBH](#)
[PUBHx](#)

LAKE

[L1UBH](#)

OTHER

[Pf](#)

RIVERINE

[R4SBC](#)
[R5UBFx](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

Data limitations

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

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

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

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or 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.

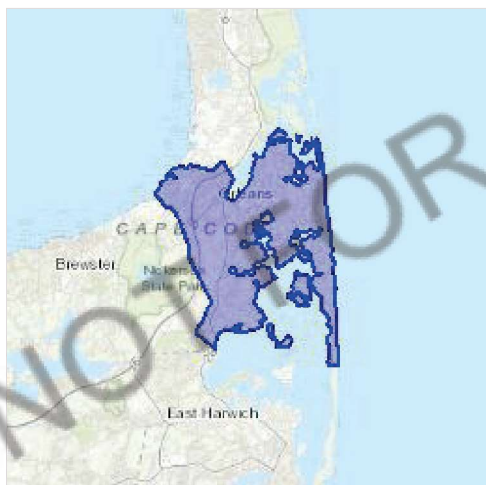
IPaC resource list

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

Barnstable 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

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

Birds

| NAME | STATUS |
|---|------------|
| Piping Plover <i>Charadrius melodus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039 | Threatened |
| Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1864 | Threatened |
| Roseate Tern <i>Sterna dougallii dougallii</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2083 | Endangered |

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.)

American Oystercatcher *Haematopus palliatus*

Breeds Apr 15 to Aug 31

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

<https://ecos.fws.gov/ecp/species/8935>

Arctic Tern *Sterna paradisaea*

Breeds May 20 to Aug 15

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.

| | |
|---|-------------------------|
| Atlantic Puffin <i>Fratercula arctica</i> 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/8943 | Breeds Apr 15 to Aug 15 |
| Bald Eagle <i>Haliaeetus leucocephalus</i> 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 Guillemot <i>Cephus grylle</i> 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. | Breeds May 15 to Sep 10 |
| Black Scoter <i>Melanitta nigra</i> 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. | Breeds elsewhere |
| Black Skimmer <i>Rynchops niger</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234 | Breeds May 20 to Sep 15 |
| Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 |
| Black-legged Kittiwake <i>Rissa tridactyla</i> 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. | Breeds elsewhere |
| Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 20 to Jul 31 |

Bonaparte's Gull *Chroicocephalus philadelphia*

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.

Breeds elsewhere

Brown Pelican *Pelecanus occidentalis*

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/6034>

Breeds Jan 15 to Sep 30

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

Clapper Rail *Rallus crepitans*

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

Breeds Apr 10 to Oct 31

Common Eider *Somateria mollissima*

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.

Breeds Jun 1 to Sep 30

Common Loon *gavia immer*

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/4464>

Breeds Apr 15 to Oct 31

Common Tern *Sterna hirundo*

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/4963>

Breeds May 10 to Sep 10

Cory's Shearwater *Calonectris diomedea*

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.

Breeds elsewhere

Double-crested Cormorant *phalacrocorax auritus*

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.

Breeds Apr 20 to Aug 31

<https://ecos.fws.gov/ecp/species/3478>

Dovekie *Alle alle*

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.

Breeds elsewhere

<https://ecos.fws.gov/ecp/species/6041>

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

Great Black-backed Gull *Larus marinus*

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.

Breeds Apr 15 to Aug 20

Great Shearwater *Puffinus gravis*

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.

Breeds elsewhere

Gull-billed Tern *Gelochelidon nilotica*

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

Breeds May 1 to Jul 31

<https://ecos.fws.gov/ecp/species/9501>

| | |
|---|-------------------------|
| <p>Herring Gull <i>Larus argentatus</i> 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.</p> | Breeds Apr 20 to Aug 31 |
| <p>Hudsonian Godwit <i>Limosa haemastica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> | Breeds elsewhere |
| <p>Leach's Storm-petrel <i>Oceanodroma leucorhoa</i> 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.</p> | Breeds May 15 to Nov 20 |
| <p>Least Tern <i>Sterna antillarum</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p> | Breeds Apr 20 to Sep 10 |
| <p>Lesser Yellowlegs <i>Tringa flavipes</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679</p> | Breeds elsewhere |
| <p>Long-tailed Duck <i>Clangula hyemalis</i> 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/7238</p> | Breeds elsewhere |
| <p>Manx Shearwater <i>Puffinus puffinus</i> 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.</p> | Breeds Apr 15 to Oct 31 |
| <p>Nelson's Sparrow <i>Ammodramus nelsoni</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p> | Breeds May 15 to Sep 5 |
| <p>Northern Fulmar <i>Fulmarus glacialis</i> 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.</p> | Breeds elsewhere |

| | |
|--|-------------------------|
| Northern Gannet <i>Morus bassanus</i> 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. | Breeds elsewhere |
| Parasitic Jaeger <i>Stercorarius parasiticus</i> 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. | Breeds elsewhere |
| Pomarine Jaeger <i>Stercorarius pomarinus</i> 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. | Breeds elsewhere |
| Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds May 1 to Jul 31 |
| Purple Sandpiper <i>Calidris maritima</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |
| Razorbill <i>Alca torda</i> 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. | Breeds Jun 15 to Sep 10 |
| Red-breasted Merganser <i>Mergus serrator</i> 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. | Breeds elsewhere |
| Red-necked Phalarope <i>Phalaropus lobatus</i> 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. | Breeds elsewhere |
| Red-throated Loon <i>Gavia stellata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. | Breeds elsewhere |

Ring-billed Gull *Larus delawarensis*

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.

Breeds elsewhere

Roseate Tern *Sterna dougallii*

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.

Breeds May 10 to Aug 31

Royal Tern *Thalasseus maximus*

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.

Breeds Apr 15 to Aug 31

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

Seaside Sparrow *Ammodramus maritimus*

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

Breeds May 10 to Aug 20

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*

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

Breeds elsewhere

Surf Scoter *Melanitta perspicillata*

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.

Breeds elsewhere

Thick-billed Murre *Uria lomvia*

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.

Breeds Apr 15 to Aug 15

Whimbrel *Numenius phaeopus*

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

<https://ecos.fws.gov/ecp/species/9483>

Breeds elsewhere

White-winged Scoter *Melanitta fusca*

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.

Breeds elsewhere

Willet *Tringa semipalmata*

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

Breeds Apr 20 to Aug 5

Wilson's Storm-petrel *Oceanites oceanicus*

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.

Breeds elsewhere

Wood Thrush *Hylocichla mustelina*

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

Breeds May 10 to Aug 31

Probability of Presence Summary

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

Probability of Presence (■)

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

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

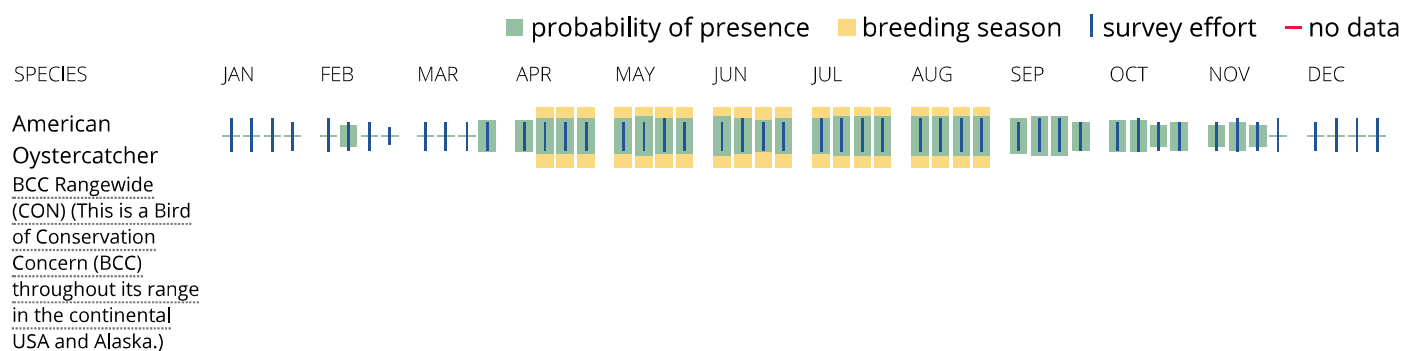
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

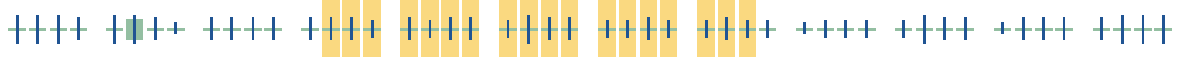
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Arctic Tern
 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.)



Atlantic Puffin
 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.)



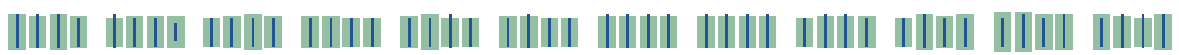
Bald Eagle
 Non-BCC Vulnerable
 (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Black Guillemot
 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 Scoter
 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.)



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Black Skimmer

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



Black-billed Cuckoo

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



Black-legged Kittiwake

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.)



Bobolink

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



Bonaparte's Gull

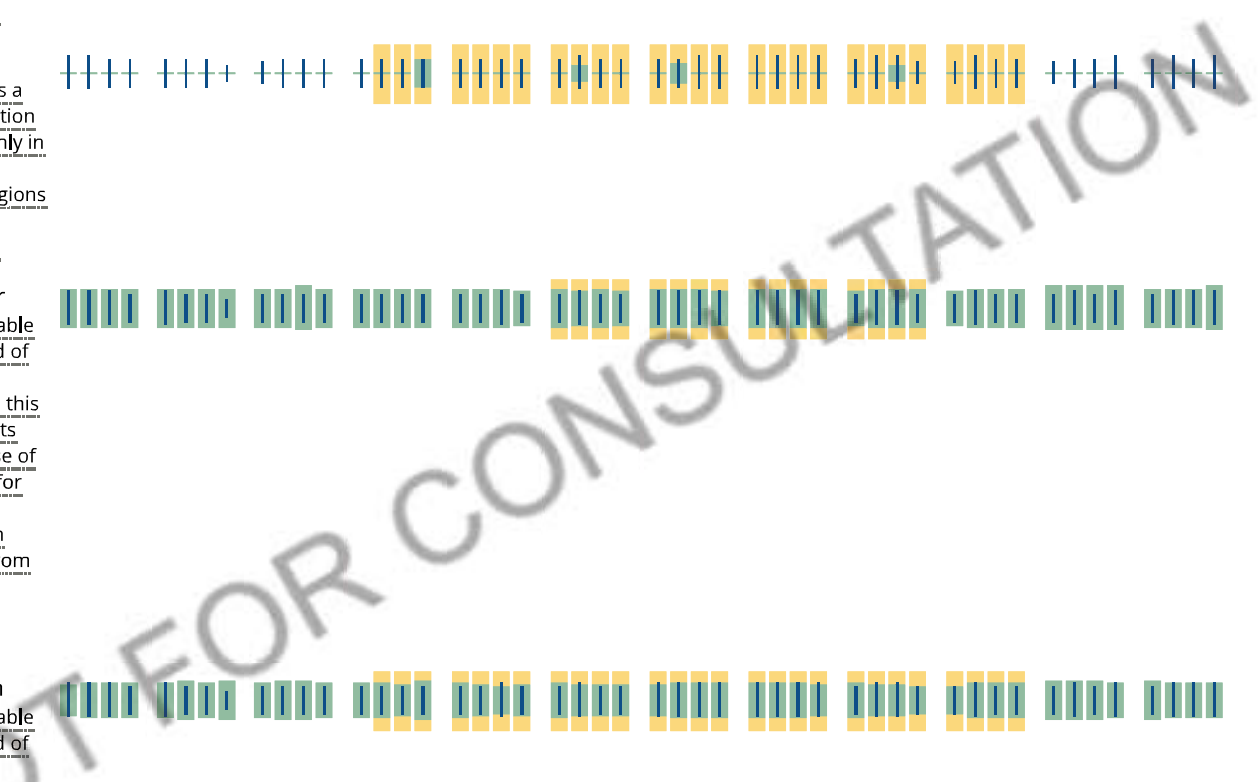
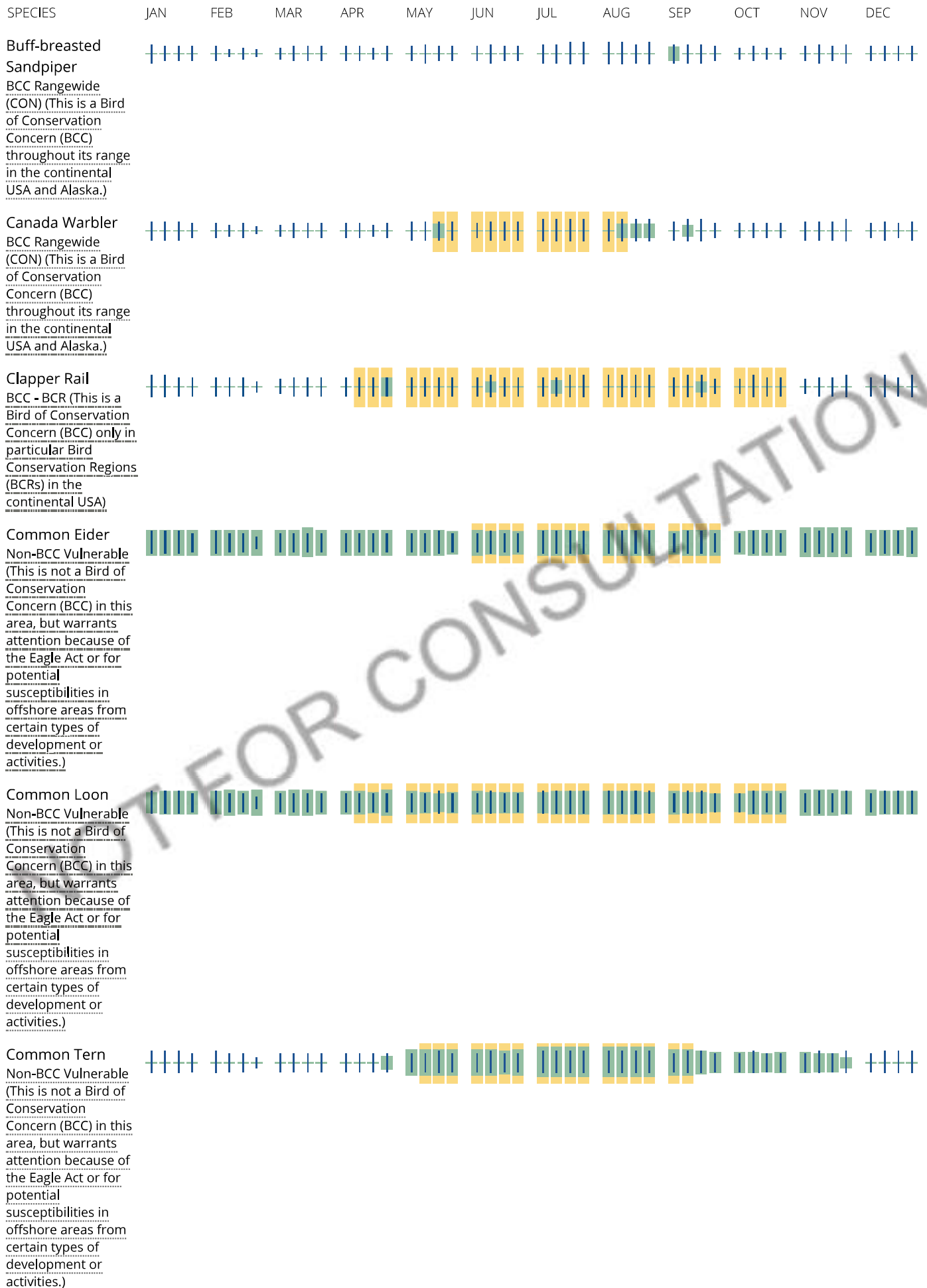
Non-BCC Vulnerable
(This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Brown Pelican

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.)





Cory's Shearwater
 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.)



Double-crested Cormorant
 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.)



Dovekie
 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.)



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

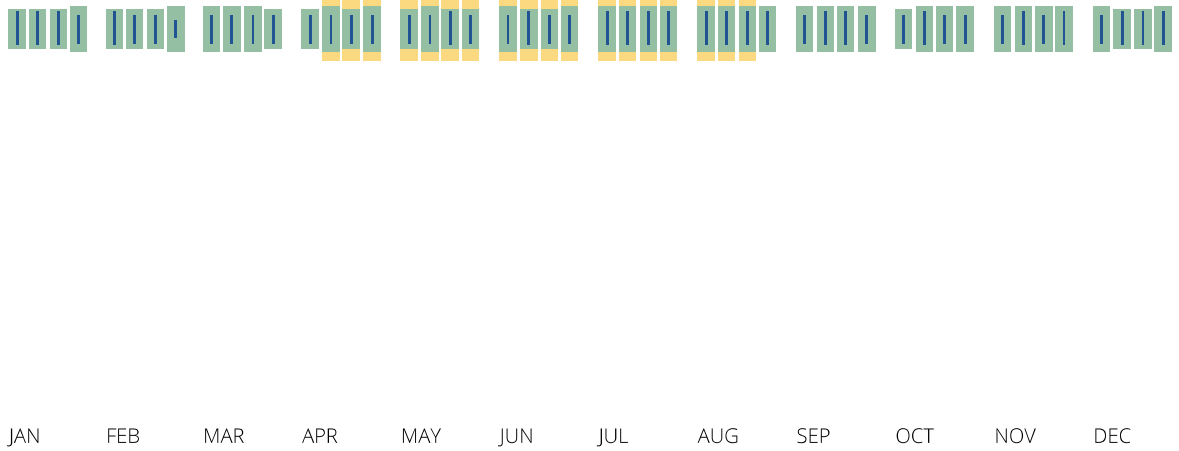


Eastern Whip-poor-will
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

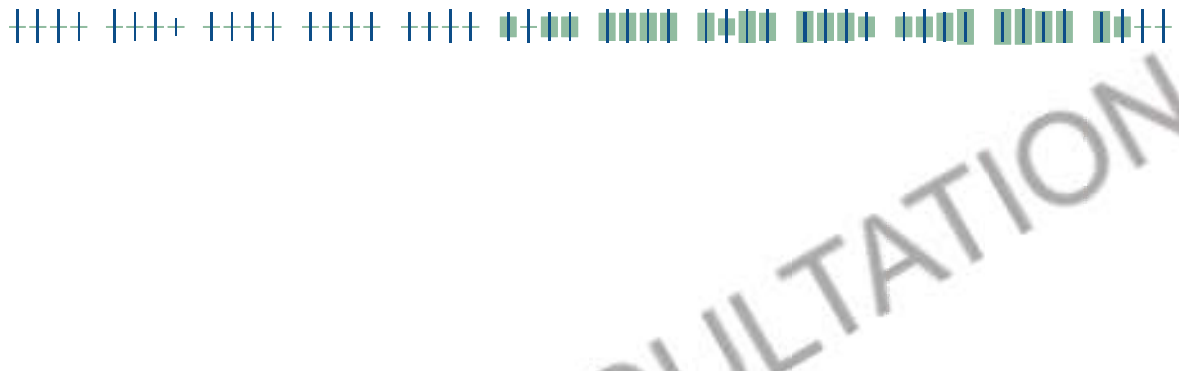


NOT FOR CONSULTATION

Great Black-backed Gull
 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.)



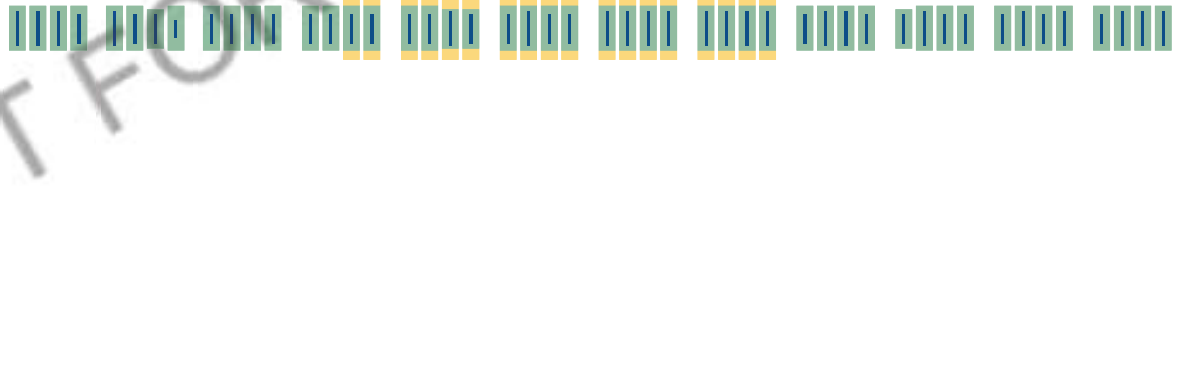
Great Shearwater
 Non-BCC Vulnerable
 (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



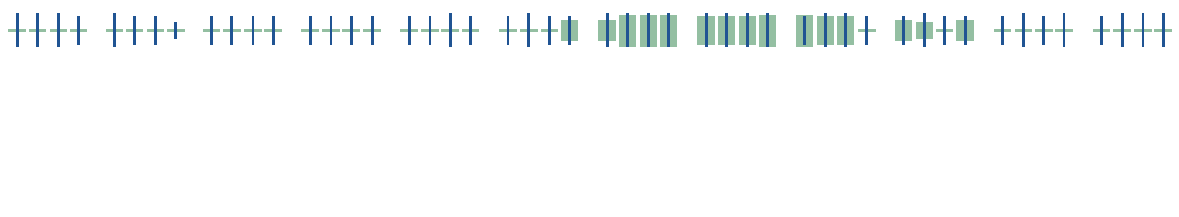
Gull-billed Tern
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Herring Gull
 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.)



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



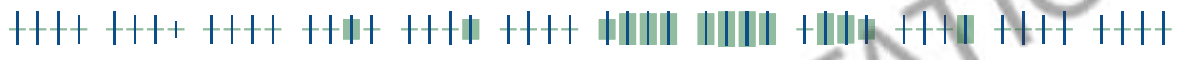
Leach's Storm-petrel
 Non-BCC Vulnerable
 (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



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



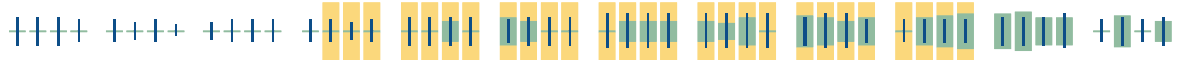
Lesser Yellowlegs
 BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



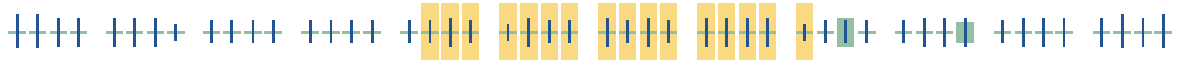
Long-tailed Duck
 Non-BCC Vulnerable
 (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)



Manx Shearwater
 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.)



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



NOT FOR CONSULTATION

Northern Fulmar
 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.)



Northern Gannet
 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.)



SPECIES

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

Parasitic Jaeger
 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.)



Pomarine Jaeger
 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.)



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



DRAFT FOR CONSULTATION

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



Razorbill
 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.)



Red-breasted
 Merganser
 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.)



Red-necked
 Phalarope
 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.)



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



NOT FOR CONSULTATION

Ring-billed Gull
 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.)



Roseate Tern
 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.)



Royal Tern
 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.)



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



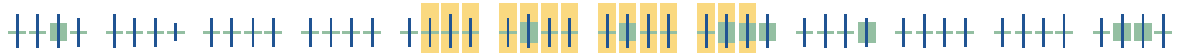
SPECIES

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

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



Seaside Sparrow
 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.)

Surf Scoter



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.)

Thick-billed Murre

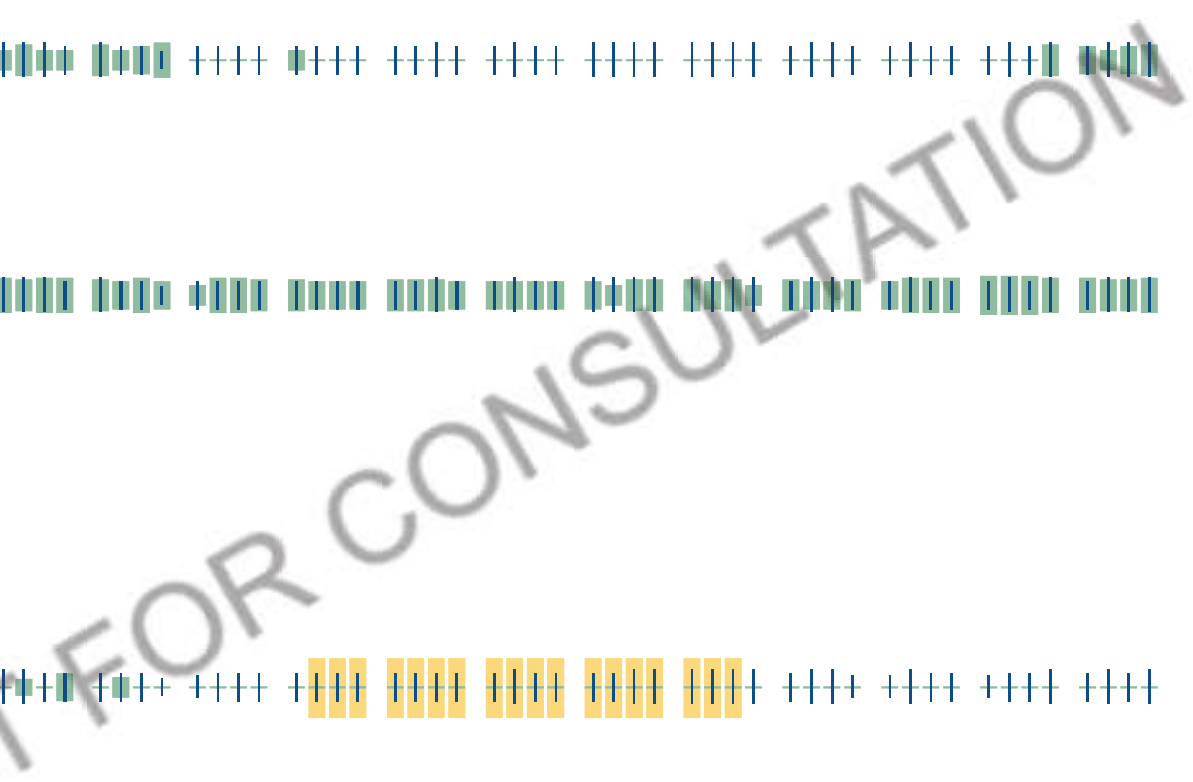


Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Whimbrel



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



White-winged

Scoter

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.)



Willet

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



Wilson's Storm-petrel

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.)



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 [AKN Phenology 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 to 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:

ESTUARINE AND MARINE DEEPWATER

[M1UBL](#)

[E1UBL](#)

[E1ABL](#)

[E1AB3L](#)

[E1UBLx](#)

[E1UBLx6](#)

ESTUARINE AND MARINE WETLAND

[E2US2N](#)

[E2EM1P](#)

[E2EM1N](#)

[E2EM1Pd](#)

[E2USM](#)

[M2USP](#)

[M2US2P](#)

[E2USP](#)

[E2US2P](#)

[E2USN](#)

[M2USN](#)

[E2EM1Pd6](#)

[E2EM1/SS1P](#)

FRESHWATER EMERGENT WETLAND

[PEM1E](#)

[PEM1R](#)

[PEM1Rd](#)

[PEM1F](#)

[PEM1Tx](#)

[PEM1C](#)

[PEM1/FO1E](#)

[PEM1Fx](#)

FRESHWATER FORESTED/SHRUB WETLAND

[PSS1E](#)

[PFO1E](#)

[PFO1/4E](#)

[PSS1R](#)

[PFO4E](#)
[PFO1R](#)
[PSS1Ed](#)
[PSS1C](#)
[PSS1F](#)
[PSSE](#)
[PFO4Eg](#)
[PSS4/FO4E](#)
[PSS1Ex](#)
[PSS1/4E](#)
[PFO1C](#)
[PFO1/4A](#)
[PFO4Ed](#)
[PFO1/4R](#)
[PSS3B](#)
[PSS1A](#)
[PFO1A](#)
[PSS4C](#)

FRESHWATER POND

[PUBH](#)
[PUBHh](#)
[PUBHx](#)
[PABH](#)
[PABF](#)
[PABHx](#)
[PUBV](#)
[PABHh](#)

LAKE

[L1UBH](#)

OTHER

[Pf](#)

RIVERINE

[R5UBH](#)
[R1UBV](#)
[R2UBH](#)
[R2UBHx](#)
[R5UBFx](#)
[R1UBVx](#)
[R4SBC](#)

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.

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN
MASSACHUSETTS**

| COUNTY | SPECIES | FEDERAL STATUS | GENERAL LOCATION/HABITAT | TOWNS |
|---------------|---------------------------------|----------------------------|---|---|
| Barnstable | Piping Plover | Threatened | Coastal Beaches | All Towns |
| | Roseate Tern | Endangered | Coastal beaches and the Atlantic Ocean | All Towns |
| | Northeastern beach tiger beetle | Threatened | Coastal Beaches | Chatham |
| | Sandplain gerardia | Endangered | Open areas with sandy soils. | Sandwich and Falmouth. |
| | Northern Red-bellied Cooter | Endangered | Inland Ponds and Rivers | Bourne (north of the Cape Cod Canal) |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Berkshire | Bog Turtle | Threatened | Wetlands | Egremont and Sheffield |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Bristol | Piping Plover | Threatened | Coastal Beaches | Fairhaven, Dartmouth, Westport |
| | Roseate Tern | Endangered | Coastal beaches and the Atlantic Ocean | Fairhaven, New Bedford, Dartmouth, Westport |
| | Northern Red-bellied Cooter | Endangered | Inland Ponds and Rivers | Taunton |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Dukes | Roseate Tern | Endangered | Coastal beaches and the Atlantic Ocean | All Towns |
| | Piping Plover | Threatened | Coastal Beaches | All Towns |
| | Northeastern beach tiger beetle | Threatened | Coastal Beaches | Aquinnah and Chilmark |
| | Sandplain gerardia | Endangered | Open areas with sandy soils. | West Tisbury |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS**

| COUNTY | SPECIES | FEDERAL STATUS | GENERAL LOCATION/HABITAT | TOWNS |
|-----------|-------------------------|----------------------------|---|--|
| Essex | Small whorled Pogonia | Threatened | Forests with somewhat poorly drained soils and/or a seasonally high water table | Gloucester, Essex and Manchester |
| | Piping Plover | Threatened | Coastal Beaches | Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Franklin | Northeastern bulrush | Endangered | Wetlands | Montague, Warwick |
| | Dwarf wedgemussel | Endangered | Mill River | Whately |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Hampshire | Small whorled Pogonia | Threatened | Forests with somewhat poorly drained soils and/or a seasonally high water table | Hadley |
| | Puritan tiger beetle | Threatened | Sandy beaches along the Connecticut River | Northampton and Hadley |
| | Dwarf wedgemussel | Endangered | Rivers and Streams. | Hatfield, Amherst and Northampton |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Hampden | Small whorled Pogonia | Threatened | Forests with somewhat poorly drained soils and/or a seasonally high water table | Southwick |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Middlesex | Small whorled Pogonia | Threatened | Forests with somewhat poorly drained soils and/or a seasonally high water table | Groton |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Nantucket | Piping Plover | Threatened | Coastal Beaches | Nantucket |
| | Roseate Tern | Endangered | Coastal beaches and the Atlantic Ocean | Nantucket |
| | American burying beetle | Endangered | Upland grassy meadows | Nantucket |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN MASSACHUSETTS**

| COUNTY | SPECIES | FEDERAL STATUS | GENERAL LOCATION/HABITAT | TOWNS |
|---------------|-----------------------------|----------------------------|---|---|
| Plymouth | Piping Plover | Threatened | Coastal Beaches | Scituate, Marshfield, Duxbury, Plymouth, Wareham and Mattapoissett |
| | Northern Red-bellied Cooter | Endangered | Inland Ponds and Rivers | Kingston, Middleborough, Carver, Plymouth, Bourne, Wareham, Halifax, and Pembroke |
| | Roseate Tern | Endangered | Coastal beaches and the Atlantic Ocean | Plymouth, Marion, Wareham, and Mattapoissett. |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Suffolk | Piping Plover | Threatened | Coastal Beaches | Revere, Winthrop |
| | Red Knot ¹ | Threatened | Coastal Beaches and Rocky Shores, sand and mud flats | Coastal Towns |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |
| Worcester | Small whorled Pogonia | Threatened | Forests with somewhat poorly drained soils and/or a seasonally high water table | Leominster |
| | Northern Long-eared Bat | Threatened Final 4(d) Rule | Winter- mines and caves, Summer – wide variety of forested habitats | Statewide |

¹Migratory only, scattered along the coast in small numbers

-Eastern cougar and gray wolf are considered extirpated in Massachusetts.

-Endangered gray wolves are not known to be present in Massachusetts, but dispersing individuals from source populations in Canada may occur statewide.

-Critical habitat for the Northern Red-bellied Cooter is present in Plymouth County.



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial St, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

September 24, 2018

To whom it may concern:

The U.S. Fish and Wildlife Service (USFWS) reviewed the stormwater discharge activities associated with the 2016 National Pollutant Discharge and Elimination System (NPDES) Massachusetts (MA) Small Municipal Separate Storm Sewer System (MS4) general permit (MA MS4 General Permit) issued by the Environmental Protection Agency (EPA). We determined those activities may affect, but are not likely to adversely affect, certain species listed under the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) when specific conditions are met. When these conditions are met, we do not need to review individual projects. These comments are provided in accordance with section 7 of the ESA and complement existing 2016 MA MS4 General Permit Appendix C Guidance. We understand the applicant is acting as a non-Federal representative of the EPA for the purpose of consultation under section 7. **This letter provides additional guidance for meeting Criterion B and should be submitted as part of your application package to the EPA.**

If the USFWS Information for Planning and Consultation website (<https://ecos.fws.gov/ipac/>) indicates your MA MS4 General Permit project action area may contain one or more of the following federally listed endangered species: roseate tern (*Sterna dougallii*), northern red-bellied cooter (*Pseudemys rubriventris*), dwarf wedgemussel (*Alasmidonta heterodon*), rusty patched bumble bee (*Bombus affinis*), northeastern bulrush (*Scirpus ancistrochaetus*), or American chaffseed (*Schwalbea americana*); threatened species: piping plover (*Charadrius melodus*), bog turtle (*Glyptemys muhlenbergii*), Puritan tiger beetle (*Cicindela puritana*), northeastern beach tiger beetle (*Cicindela dorsalis*), or red knot (*Calidris canutus rufa*); or their federally designated critical habitat; and the specific conditions listed below are met, you may submit this letter to complete the **MA MS4 General Permit Appendix C: Step 4** in place of a concurrence letter for informal consultation as documentation of ESA eligibility for **USFWS Criterion B**.

In addition, this letter also satisfies the requirement in the **MA MS4 General Permit Appendix C: Step 2 (3)** to contact the USFWS and obtain a concurrence letter, if you have not yet done so. If your project action area includes one or more of the above-listed species *and* one or more of the

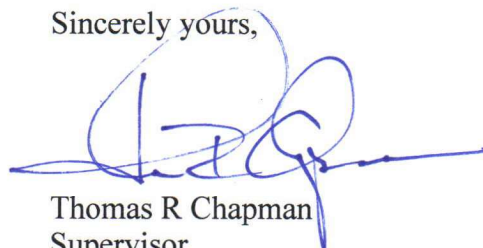
species listed under **Criterion C**,¹ you may still use this letter to certify under **Criterion B**. All existing guidance regarding requirements for certifying eligibility according to the USFWS Criterion A, B, or C for coverage by the 2016 MS4 Permit (see MA MS4 General Permit Appendix C – Endangered Species Guidance) remains unchanged.

We have determined that proposed stormwater discharge activities covered under the 2016 MS4 Permit *may affect, but are not likely to adversely affect*, the above-listed species and the species' critical habitat when the following are true:

1. all stormwater discharges are pre-existing or previously permitted by EPA;
2. any planned operations and maintenance work covered by this permit will only affect previously disturbed areas where stormwater controls are already installed. In these situations the chance of encountering any of the subject species is discountable;
3. the project implements EPA MS4 Best Management Practices (BMPs) and meets Clean Water Act and Massachusetts Water Quality Standards. Although permitted discharges may reach the environment used by these species, BMPs reduce pollutants to the extent that discharges are not known to have measurable impacts on these species or their habitat;
4. no new construction or structural BMPs are proposed under this permit at this time; and
5. you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the Notice of Intent (NOI), you will re-initiate consultation with the USFWS as necessary (see **MA MS4 General Permit Appendix C: Step 2 (5)**).

If the above criteria are met, further consultation with the USFWS under section 7 of the ESA is not required at this time; however, if the proposed action changes in any way such that it may affect a listed species in a manner not previously analyzed or if new information reveals the presence of additional listed species that may be affected by the project, the applicant or the EPA should contact us immediately and suspend activities that may affect those species until the appropriate level of consultation is completed with our office. Thank you for your cooperation, and please contact David Simmons of this office at (603) 227-6425 if you have questions or need further assistance.

Sincerely yours,



Thomas R Chapman
Supervisor
New England Field Office

¹ Criterion C includes guidance for project action areas that may contain species for which EPA has already made a determination. These species include the northern long-eared bat (*Myotis septentrionalis*), sandplain gerardia (*Agalinis acuta*), small whorled pogonia (*Isotria medeoloides*), and/or American burying beetle (*Nicrophorus americanus*) (MA MS4 General Permit Appendix C: Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C).

Attachment D:

Key to the Northern Long-Eared Bat 4(d)
Rule for Federal Actions that May Affect Northern Long-Eared Bats



Key to the Northern Long-Eared Bat 4(d) Rule for Federal Actions that May Affect Northern Long-Eared Bats

A separate key is available for non-federal activities

Federal agency actions that involve incidental take not prohibited under the final 4(d) rule may result in effects to individual northern long-eared bats. Per section 7 of the Act, if a federal agency's action may affect a listed species, consultation with the Service is required. This requirement does not change when a 4(d) rule is implemented. However, for this 4(d) rule, the Service proposed a framework to streamline section 7 consultations when federal actions may affect the northern long-eared bat but will not cause prohibited take. Federal agencies have the option to rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities by using the framework. This key will help federal agencies determine if their actions may cause prohibited incidental take of northern long-eared bats as defined in the 4(d) rule under the Endangered Species Act and if separate section 7 consultation may be necessary. Also, the framework for streamlining northern long-eared bat section 7 consultation is provided.

1. Have you determined that the proposed action will have “no effect” on the northern long-eared bat?

Yes, the proposed action will have “no effect” on the northern long-eared bat.

When the action agency determines its proposed action will not affect a listed species, there is no need to coordinate further with the Service. If the northern long-eared bat will not be exposed directly or indirectly to the proposed action or any resulting environmental changes, an agency should conclude "no effect" and document the finding and this completes the section 7 process. For example, if suitable habitat is not present in the action area and the project does not otherwise present a risk to the species, conclude "species not present" and document your finding.

No, the proposed action “may affect” the northern long-eared bat or individual northern long-eared bats.

Continue to #2

2. Will your activity purposefully take (see Definitions below) northern long-eared bats? For example, are you removing bats from a human structure or capturing bats for research?

Yes, my activity includes purposefully taking northern long-eared bats.

- Removing bats from human structures is not prohibited and take of northern long-eared bats as required for public health monitoring (disease testing) is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is

optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

- Research that involves handling bats does require a permit after May 4, 2016; if you are conducting research that includes capturing and handling northern long-eared bats, you should contact the U.S. Fish and Wildlife Service to apply for a permit. www.fws.gov/angered/regions
- Other purposeful take (see Definitions below) of northern long-eared bats is prohibited. You should contact the U.S. Fish and Wildlife Service as the standard section 7 consultation procedures apply.

No, my activity does not include purposefully taking northern long-eared bats.

Continue to #3.

3. Is the action area (i.e., the area affected by all direct and indirect project effects) located wholly outside the White-nose Syndrome Zone? For the most current version of the White-nose Syndrome Zone map, please see

www.fws.gov/midwest/angered/mammals/nleb/pdf/WNSZone.pdf

Yes, the action area is located wholly outside the white-nose syndrome zone.

Incidental take (see Definitions below) of northern long-eared bats is not prohibited in areas outside the White-nose Syndrome Zone. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

No, the action area is located partially or wholly inside the white-nose syndrome zone.

Continue to #4

4. Will the action take affect caves or mines where northern long-eared bats are known to hibernate (i.e., hibernaculum) or could it alter the entrance or the environment (physical or other alteration) of a hibernaculum?

Yes, the action will affect a northern long-eared bat hibernaculum or it could alter the entrance or the environment (physical or other alteration) of a hibernaculum.

Take (see Definitions below) of northern long-eared bats within hibernacula is prohibited, including actions that may change the nature of the hibernaculum's environment or entrance to it, even when the bats are not present. If your activity includes work in a hibernaculum or it could alter its entrance or environment, please contact the Service's Ecological Services Field Office located nearest to the project area. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices.

No, the action will not take place within a northern long-eared bat hibernaculum or alter its entrance or environment.

Continue to #5

5. Will the action involve tree removal (see definition below)?

No, the action does not include tree removal.

[Incidental take](#) (see Definitions below) from activities that do not involve tree removal and do not take place within hibernacula or would not alter the hibernaculum's entrance or environment (see Question #4), is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

Yes, the action involves tree removal.

Continue to #6

6. Is the action the removal of hazardous trees for protection of human life or property?

Yes, the action is removing hazardous trees.

[Incidental take](#) (see Definitions below) of northern long-eared bats as a result of hazardous tree removal is not prohibited. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

No, the action is not removing hazardous trees.

Continue to #7

7. Will the action include one or both of the following: 1) removing a northern long-eared bat known occupied maternity roost tree or any trees within 150 feet of a known occupied maternity roost tree from June 1 through July 31; or 2) removing any trees within 0.25 miles of a northern long-eared bat hibernaculum at any time of year?

No

[Incidental take](#) (see Definitions below) from tree removal activities is not prohibited unless it results from removing a known occupied maternity roost tree or from tree removal activities within 150 feet of a known occupied maternity roost tree from June 1 through July 31 or results from tree removal activities within 0.25 mile of a hibernaculum at any time. The federal agency can rely upon the finding of the programmatic biological opinion for the final 4(d) rule to fulfill their project-specific section 7 responsibilities if they use the framework described below. This framework is optional, if the federal agency chooses not to follow the framework, standard section 7 consultation procedures apply.

Yes

Incidental take (see Definitions below) of northern long-eared bats is prohibited if it occurs as a result of removing a known occupied maternity roost tree or removing trees within 150 feet of a known occupied maternity roost tree during the pup season from June 1 through July 31 or as a result of removing trees from within 0.25 mile of a hibernaculum at any time of year. This does not mean that you cannot conduct your action; however, standard section 7 consultation procedures apply. Please contact your nearest Ecological Services Field Office. To find contact information for the Ecological Services Field Offices, please see www.fws.gov/offices

How do I know if there is a maternity roost tree or hibernacula in the action area?

We acknowledge that it can be difficult to determine if a maternity roost tree or a hibernaculum is in your project area. Location information for both resources is generally kept in state Natural Heritage Inventory databases – the availability of this data varies state-by-state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited. A web page with links to state Natural Heritage Inventory databases is available at www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html.

When looking for information on the presence of maternity roost trees or hibernacula within your project area, our expectation is that the federal action agency will complete due diligence to determine if data is available. If information is not available, document your attempt to find the information and send it with your determination under step 1 of the framework (see below).

We do not require federal agencies to conduct surveys; however, we recommend that surveys be conducted whenever possible. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat. In addition, should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could have greater flexibility under section 7(a)(2) of the Act. Recommended survey methods are available at www.fws.gov/midwest/endangered/mammals/nleb.

Definitions

“Incidental take” is defined by the Endangered Species Act as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." For example, harvesting trees can kill bats that are roosting in the trees, but the purpose of the activity is not to kill bats.

“Known hibernacula” are defined as locations where one or more northern long-eared bats have been detected during hibernation or at the entrance during fall swarming or spring emergence. Given the challenges of surveying for northern long-eared bats in the winter, any hibernacula with northern long-eared bats observed at least once, will continue to be considered “known hibernacula” as long as the hibernacula remains suitable for northern long-eared bat.

“Known occupied maternity roost trees” is defined in the 4(d) rule as trees that have had female northern long-eared bats or juvenile bats tracked to them or the presence of female or juvenile bats is known as a result of other methods. Once documented, northern-long eared bats are known to continue to use the same roosting areas. Therefore, a tree will be considered to be a “known occupied maternity roost” as long as the tree and surrounding habitat remain suitable for northern long-eared bat. The incidental take prohibition for known occupied maternity roosts trees applies only during the during the pup season (June 1 through July 31).

“Purposeful take” is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and putting bands on bats is a form of purposeful take. Intentionally killing or harming bats is also purposeful take and is prohibited.

“Take” is defined by the ESA as ‘to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect’ any endangered species. Purposeful take is when the reason for the activity or action is to conduct some form of take. For instance, conducting a research project that includes collecting and putting bands on bats is a form of purposeful take.

“Tree removal” is defined in the 4(d) rule as cutting down, harvesting, destroying, trimming, or manipulating in any other way the trees, saplings, snags, or any other form of woody vegetation likely to be used by northern long-eared bats.

Optional Framework to Streamline Section 7 Consultation for the Northern Long-Eared Bat

The primary objective of the framework is to provide an efficient means for U.S. Fish and Wildlife Service verification of federal agency determinations that their proposed actions are consistent with those evaluated in the programmatic intra-Service consultation for the final 4(d) rule and do not require separate consultation. Such verification is necessary because incidental take is prohibited in the vicinity of known hibernacula and known roosts, and these locations are continuously updated. Federal agencies may rely on this Biological Opinion to fulfill their project-specific section 7(a)(2) responsibilities under the following framework:

1. For all federal activities that may affect the northern long-eared bat, the action agency will provide project-level documentation describing the activities that are excepted from incidental take prohibitions and addressed in this consultation. The federal agency must provide written documentation to the appropriate Service Field Office when it is determined their action may affect (i.e., not likely to adversely affect or likely to adversely affect) the northern long-eared bat, but would not cause prohibited incidental take. This documentation must follow these procedures:
 - a. In coordination with the appropriate Service Field Office, each action agency must make a determination as to whether their activity is excepted from incidental taking prohibitions in the final 4(d) rule. Activities that will occur within 0.25 mile of a known hibernacula or within 150 feet of known, occupied maternity roost trees during the pup season (June 1 to July 31) are not excepted pursuant to the final 4(d) rule. This determination must be updated annually for multi-year activities.
 - b. At least 30 days in advance of funding, authorizing, or carrying out an action, the federal agency must provide written notification of their determination to the appropriate Service Field Office.
 - c. For this determination, the action agency will rely on the definitions of prohibited activities provided in the final 4(d) rule and the activities considered in this consultation.
 - d. The determination must include a description of the proposed project and the action area (the area affected by all direct and indirect project effects) with sufficient detail to support the determination.
 - e. The action agency must provide its determination as part of a request for coordination or consultation for other listed species or separately if no other species may be affected.
 - f. Service concurrence with the action agency determination is not required, but the Service may advise the action agency whether additional information indicates consultation for the northern long-eared bat is required; i.e., where the proposed project includes an activity not covered by the 4(d) rule and thus not addressed in the Biological Opinion and is subject to additional consultation.

- g. If the Service does not respond within 30 days under (f) above, the action agency may presume its determination is informed by best available information and consider its project responsibilities under section 7(a)(2) with respect to the northern long-eared bat fulfilled through this programmatic Biological Opinion.

2. Reporting

- a. For monitoring purposes, the Service will assume all activities are conducted as described. If an agency does not conduct an activity as described, it must promptly report and describe such departures to the appropriate Service Field Office.
- b. The action agency must provide the results of any surveys for the northern long-eared bat to the appropriate Service Field Office within their jurisdiction.
- c. Parties finding a dead, injured, or sick northern long-eared bat must promptly notify the appropriate Service Field Office.

If a Federal action agency chooses not to follow this framework, standard section 7 consultation procedures will apply.

Section 7(a)(1) of the Act directs Federal agencies, in consultation with and with the assistance of the Secretary (a function delegated to the Service), to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Service Headquarters provides to federal action agencies who choose to implement the framework described above several conservation recommendations for exercising their 7(a)(1) responsibility in this context. Conservation recommendations are discretionary federal agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. Service Headquarters recommends that the following conservation measures to all Federal agencies whose actions may affect the northern long-eared bat:

1. Perform northern long-eared bat surveys according to the most recent Range-wide Indiana Bat/ northern long-eared bat Summer Survey Guidelines. Benefits from agencies voluntarily performing northern long-eared bat surveys include:
 - a. Surveys will help federal agencies meet their responsibilities under section 7(a)(1) of the Act. The Service and partners will use the survey data to better understand habitat use and distribution of northern long-eared bats, track the status of the species, evaluate threats and impacts, and develop effective conservation and recovery actions. Active participation of federal agencies in survey efforts will lead to a more effective conservation strategy for the northern long-eared bat.
 - b. Should the Service reclassify the species as endangered in the future, an agency with a good understanding of how the species uses habitat based on surveys within its action areas could inform greater flexibility under section 7(a)(2) of the Act. Such information could facilitate an expedited consultation and incidental take statement that may, for example, exempt taking associated with tree removal during the active season, but outside of the pup season, in known occupied habitat.

2. Apply additional voluntary conservation measures, where appropriate, to reduce the impacts of activities on northern long-eared bats. Conservation measures include:
 - a. Conduct tree removal activities outside of the northern long-eared bat pup season (June 1 to July 31) and/or the active season (April 1 to October 31). This will minimize impacts to pups at roosts not yet identified.
 - b. Avoid clearing suitable spring staging and fall swarming habitat within a 5-mile radius of known or assumed northern long-eared bat hibernacula during the staging and swarming seasons (April 1 to May 15 and August 15 to November 14, respectively).
 - c. Manage forests to ensure a continual supply of snags and other suitable maternity roost trees.
 - d. Conduct prescribed burns outside of the pup season (June 1 to July 31) and/or the active season (April 1 to October 31). Avoid high-intensity burns (causing tree scorch higher than northern long-eared bat roosting heights) during the summer maternity season to minimize direct impacts to northern long-eared bat.
 - e. Perform any bridge repair, retrofit, maintenance, and/or rehabilitation work outside of the northern long-eared bat active season (April 1 to October 31) in areas where northern long-eared bats are known to roost on bridges or where such use is likely.
 - f. Do not use military smoke and obscurants within forested suitable northern long-eared bat habitat during the pup season (June 1 to July 31) and/or the active season (April 1 to October 31).
 - g. Minimize use of herbicides and pesticides. If necessary, spot treatment is preferred over aerial application.
 - h. Evaluate the use of outdoor lighting during the active season and seek to minimize light pollution by angling lights downward or via other light minimization measures.
 - i. Participate in actions to manage and reduce the impacts of white-nose syndrome on northern long-eared bat. Actions needed to investigate and manage white-nose syndrome are described in a national plan the Service developed in coordination with other state and federal agencies.

Attachment E:

USFWS 4(d) Rule Streamlined Consultation Form (blank)

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A

MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: _____

Location / Address: _____

City / Town: _____

Project Proponent

Name: _____

Address: _____

City/Town/Zip/Telephone: _____

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Project Description (narrative):

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

What is the total acreage of the project area?

| | | | |
|------------------|-------|-----------------------------|-------|
| Woodland _____ | acres | Productive Resources: | |
| Wetland _____ | acres | Agriculture _____ | acres |
| Floodplain _____ | acres | Forestry _____ | acres |
| Open space _____ | acres | Mining/Extraction _____ | acres |
| Developed _____ | acres | Total Project Acreage _____ | acres |

What is the acreage of the proposed new construction? _____ acres

What is the present land use of the project area?

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: _____ Date: _____

Name: _____

Address: _____

City/Town/Zip: _____

Telephone: _____

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.

Attachment F:

MACRIS List of Properties in Orleans on the National Register of Historic Places and
Massachusetts State Inventory

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Orleans; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|--------------|---------|--------|
| ORL.A | Rock Harbor | | Orleans | |
| ORL.B | Namskaket Area | | Orleans | |
| ORL.C | Orleans Town Center | | Orleans | |
| ORL.D | Main Street, East Area | | Orleans | |
| ORL.E | Old King's Highway Regional Historic District | | Orleans | |
| ORL.F | Bridge - Dyer Prince Roads Area | | Orleans | |
| ORL.G | Sea Call Farm | | Orleans | |
| ORL.H | Orleans Village | | Orleans | |
| ORL.I | Nauset Beach Camps | | Orleans | |
| ORL.J | Nauset Heights | | Orleans | |
| ORL.K | Pochet Island | | Orleans | |
| ORL.L | Tonset Bluffs - Weeset Point | | Orleans | |
| ORL.923 | Oak Ridge Prehistoric Site | | Orleans | |
| ORL.948 | Cape Cod Rail Trail - Old Colony Railroad | | Orleans | 1975 |
| ORL.144 | French Atlantic Cable Station Worker Housing | 2 Academy Pl | Orleans | c 1880 |
| ORL.908 | Orleans World War I Monument | 5 Academy Pl | Orleans | |
| ORL.910 | Orleans World War II Memorial | 5 Academy Pl | Orleans | 1954 |
| ORL.911 | Orleans Korean and Vietnam War Monument | 5 Academy Pl | Orleans | 1981 |
| ORL.145 | Knowles, Richard House | 8 Academy Pl | Orleans | 1752 |
| ORL.1214 | | 3 Alden Rd | Orleans | 1954 |
| ORL.1215 | | 4 Alden Rd | Orleans | 1980 |
| ORL.1216 | | 7 Alden Rd | Orleans | 1992 |
| ORL.1217 | | 8 Alden Rd | Orleans | 1955 |
| ORL.1218 | | 8 Alden Rd | Orleans | 1955 |
| ORL.1219 | | 8 Alden Rd | Orleans | 1955 |
| ORL.1220 | | 8 Alden Rd | Orleans | 1955 |
| ORL.1221 | | 8 Alden Rd | Orleans | 1955 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-----------------------------------|-------------------|---------|--------|
| ORL.1222 | | 13 Alden Rd | Orleans | 1952 |
| ORL.1223 | | 14 Alden Rd | Orleans | 1957 |
| ORL.1224 | | 15 Alden Rd | Orleans | 1973 |
| ORL.1225 | | 20 Alden Rd | Orleans | 1950 |
| ORL.1226 | | 21 Alden Rd | Orleans | 1982 |
| ORL.1227 | | 22 Alden Rd | Orleans | 1955 |
| ORL.1228 | | 23 Alden Rd | Orleans | 1961 |
| ORL.1229 | | 24 Alden Rd | Orleans | 1969 |
| ORL.1230 | | 25 Alden Rd | Orleans | 1954 |
| ORL.1231 | | 26 Alden Rd | Orleans | 1984 |
| ORL.1232 | Flutery | 28 Alden Rd | Orleans | r 1920 |
| ORL.1233 | | 30 Alden Rd | Orleans | 1956 |
| ORL.1234 | | 32 Alden Rd | Orleans | 1970 |
| ORL.1235 | | 33 Alden Rd | Orleans | 1950 |
| ORL.1236 | | 33 Alden Rd | Orleans | 1950 |
| ORL.1237 | | 33 Alden Rd | Orleans | 1950 |
| ORL.1238 | | 35 Alden Rd | Orleans | 1950 |
| ORL.1239 | | 35 Alden Rd | Orleans | c 2005 |
| ORL.1240 | | 36 Alden Rd | Orleans | 1968 |
| ORL.436 | | 3 Anchor Dr | Orleans | 1964 |
| ORL.437 | | 7 Anchor Dr | Orleans | 1966 |
| ORL.439 | | 9 Anchor Dr | Orleans | 1989 |
| ORL.440 | | 10 Anchor Dr | Orleans | 1985 |
| ORL.441 | | 11 Anchor Dr | Orleans | 1970 |
| ORL.442 | | 14 Anchor Dr | Orleans | 2004 |
| ORL.443 | | 16 Anchor Dr | Orleans | 1967 |
| ORL.444 | | 17 Anchor Dr | Orleans | 1962 |
| ORL.445 | | 18 Anchor Dr | Orleans | 2000 |
| ORL.446 | | 20 Anchor Dr | Orleans | 1980 |
| ORL.447 | | 21 Anchor Dr | Orleans | 1970 |
| ORL.448 | | 34 Anchor Dr | Orleans | 1960 |
| ORL.449 | | 38 Anchor Dr | Orleans | 1960 |
| ORL.438 | | 8 Anchor Dr. | Orleans | 1956 |
| ORL.720 | | 3 Anthony Dr | Orleans | 2006 |
| ORL.411 | Harwood - Bevans, George E. House | 3 Archer Ln | Orleans | c 1926 |
| ORL.367 | Lockwood, R. Wilton House | 23 Arey's Ln | Orleans | c 1800 |
| ORL.284 | Snow, Edmund House | 30 Barley Neck Rd | Orleans | c 1750 |
| ORL.258 | Taylor House | 54 Barley Neck Rd | Orleans | c 1830 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|--------------------|---------|--------|
| ORL.287 | Mayo, William C. House | 67 Barley Neck Rd | Orleans | c 1780 |
| ORL.412 | Plimpton, Margery and Edna House | 76 Barley Neck Rd | Orleans | 1925 |
| ORL.282 | Snow, David House | 77 Barley Neck Rd | Orleans | c 1850 |
| ORL.292 | Linnell, Edmund House | 88 Barley Neck Rd | Orleans | c 1845 |
| ORL.293 | Walker, Arthur House | 97 Barley Neck Rd | Orleans | c 1875 |
| ORL.294 | Cole, Elisha Jr. House | 100 Barley Neck Rd | Orleans | c 1852 |
| ORL.283 | Mayo, I. House | 113 Barley Neck Rd | Orleans | c 1770 |
| ORL.296 | Cole, Elisha House and Windmill | 114 Barley Neck Rd | Orleans | c 1800 |
| ORL.297 | Cole Guest House | 114 Barley Neck Rd | Orleans | |
| ORL.413 | Linnell, Dean S. - Garner, Stephen H. House | 120 Barley Neck Rd | Orleans | c 1886 |
| ORL.285 | Rogers, James R. House | 127 Barley Neck Rd | Orleans | r 1845 |
| ORL.301 | Truro House | 136 Barley Neck Rd | Orleans | c 1770 |
| ORL.414 | Rogers, Thomas House | 144 Barley Neck Rd | Orleans | c 1820 |
| ORL.286 | Mayo, W. - Wendell, E. House | 145 Barley Neck Rd | Orleans | c 1700 |
| ORL.415 | Linnell, Elkanah House | 164 Barley Neck Rd | Orleans | c 1817 |
| ORL.416 | Linnell, Captain Dean Gray Barn | 164 Barley Neck Rd | Orleans | r 1865 |
| ORL.289 | Linnell, Capt. Dean Gray House | 170 Barley Neck Rd | Orleans | c 1820 |
| ORL.306 | Linnell, Capt. Ebenezer Harding House | 177 Barley Neck Rd | Orleans | c 1820 |
| ORL.309 | Knowles, Paul House | 181 Barley Neck Rd | Orleans | c 1873 |
| ORL.323 | Pochet Meeting House Parsonage | 197 Barley Neck Rd | Orleans | 1805 |
| ORL.627 | | 2 Beach Plum Ln | Orleans | 1954 |
| ORL.223 | Doane, Issac S. - Taylor, Capt. Joseph D. House | 1 Beach Rd | Orleans | c 1857 |
| ORL.245 | Crosby, Joshua - Higgins, Silvanus House | 2 Beach Rd | Orleans | r 1800 |
| ORL.325 | Young, Zenus House | 16 Beach Rd | Orleans | c 1850 |
| ORL.326 | Cole, Josiah S. House | 22 Beach Rd | Orleans | c 1860 |
| ORL.327 | Cummings, George W. - Hull, Thomas House | 26 Beach Rd | Orleans | c 1840 |
| ORL.417 | Sparrow, Jesse - Mayo House | 38 Beach Rd | Orleans | c 1780 |
| ORL.418 | Chase, Ezra Leon House | 39 Beach Rd | Orleans | c 1917 |
| ORL.419 | Chase, Ezra Leon Garage | 39 Beach Rd | Orleans | c 1917 |
| ORL.329 | Sparrow, Richard House | 42 Beach Rd | Orleans | c 1830 |
| ORL.420 | Kingsley, Eva House | 43 Beach Rd | Orleans | c 1920 |
| ORL.421 | Cummings, Willis J. House | 51 Beach Rd | Orleans | c 1920 |
| ORL.331 | Snow, Capt. Elkanah House | 74 Beach Rd | Orleans | c 1810 |
| ORL.251 | Doane, John House | 99 Beach Rd | Orleans | c 1776 |
| ORL.335 | Doane, John - Cummings, Daniel House | 121 Beach Rd | Orleans | c 1795 |
| ORL.334 | Mayo, Roland L. House | 130 Beach Rd | Orleans | c 1908 |
| ORL.337 | Sparrow, Joshua House | 141-143 Beach Rd | Orleans | 1837 |
| ORL.422 | Rogers, Howard M. House | 156 Beach Rd | Orleans | 1953 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|------------------------------------|-----------------------|---------|--------|
| ORL.338 | Mayo, Benjamin House | 163 Beach Rd | Orleans | c 1868 |
| ORL.339 | Mayo, Walter H. House | 178 Beach Rd | Orleans | c 1868 |
| ORL.340 | Snow, Freeman House | 186 Beach Rd | Orleans | c 1820 |
| ORL.256 | Mayo, Walter H. House | 187 Beach Rd | Orleans | c 1910 |
| ORL.423 | Burns, Maria J. and Alice I. House | 220 Beach Rd | Orleans | c 1923 |
| ORL.134 | Nauset Knolls Motel - Unit 2 | 237 Beach Rd | Orleans | r 1955 |
| ORL.135 | Nauset Knolls Motel - Unit 1 | 237 Beach Rd | Orleans | r 1950 |
| ORL.136 | Nauset Knolls Motel Garage | 237 Beach Rd | Orleans | r 1955 |
| ORL.137 | Nauset Knolls Motel - House | 237 Beach Rd | Orleans | r 1950 |
| ORL.138 | Nauset Knolls Motel Office | 237 Beach Rd | Orleans | r 1955 |
| ORL.139 | Nauset Knolls Motel - Ice House | 237 Beach Rd | Orleans | r 1955 |
| ORL.140 | Nauset Knolls Motel - Unit #3 | 237 Beach Rd | Orleans | r 1955 |
| ORL.721 | | 10 Bevan Way | Orleans | 2014 |
| ORL.722 | | 12 Bevan Way | Orleans | 2013 |
| ORL.723 | | 14 Bevan Way | Orleans | 2013 |
| ORL.724 | | 16 Bevan Way | Orleans | 2013 |
| ORL.725 | | 18 Bevan Way | Orleans | 2013 |
| ORL.726 | | 19 Bevan Way | Orleans | 2014 |
| ORL.405 | Taber, Gladys Bagg House | 17 Blue Rock Rd | Orleans | 1954 |
| ORL.628 | | 3 Blueberry Island Rd | Orleans | 1950 |
| ORL.46 | Chace, Nathan House | 24 Boas Dr | Orleans | 1800 |
| ORL.450 | | 5 Bonnell Ln | Orleans | 1964 |
| ORL.451 | | 10 Bonnell Ln | Orleans | 1972 |
| ORL.452 | | 11 Bonnell Ln | Orleans | 1960 |
| ORL.453 | | 13 Bonnell Ln | Orleans | 1850 |
| ORL.1241 | | 27 Bradford Rd | Orleans | 1977 |
| ORL.1367 | | 1 Bramblewood Ln | Orleans | 1983 |
| ORL.1368 | | 2 Bramblewood Ln | Orleans | 1980 |
| ORL.1369 | | 3 Bramblewood Ln | Orleans | 1981 |
| ORL.727 | | 7 Brewster Cross Rd | Orleans | 1960 |
| ORL.127 | Smith House | 14 Brewster Cross Rd | Orleans | c 1790 |
| ORL.728 | | 18 Brewster Cross Rd | Orleans | 1910 |
| ORL.729 | | 19 Brewster Cross Rd | Orleans | 1984 |
| ORL.730 | | 21 Brewster Cross Rd | Orleans | 2011 |
| ORL.731 | | 23 Brewster Cross Rd | Orleans | 1960 |
| ORL.732 | | 27 Brewster Cross Rd | Orleans | 1924 |
| ORL.257 | Higgins, Robert House | 29 Brick Hill Rd | Orleans | c 1827 |
| ORL.250 | Sparrow - Hopkins, Francis House | 73 Brick Hill Rd | Orleans | c 1850 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|----------------------------------|-------------------|---------|--------|
| ORL.410 | Sparrow - Hopkins, Francis Barn | 73 Brick Hill Rd | Orleans | r 1865 |
| ORL.252 | Sparrow, Capt. Benjamin C. House | 85 Brick Hill Rd | Orleans | c 1870 |
| ORL.254 | Sparrow, Samuel Jr. House | 135 Brick Hill Rd | Orleans | c 1840 |
| ORL.259 | Snow, Elnathan House | 163 Brick Hill Rd | Orleans | 1755 |
| ORL.921 | Snow, Isaac House Marker | 179 Brick Hill Rd | Orleans | 1976 |
| ORL.260 | Snow, Thatcher House | 180 Brick Hill Rd | Orleans | c 1825 |
| ORL.261 | Freeman, Elisha P. House | 181 Brick Hill Rd | Orleans | c 1810 |
| ORL.1370 | | 205 Brick Hill Rd | Orleans | 1977 |
| ORL.1371 | | 207 Brick Hill Rd | Orleans | 1982 |
| ORL.1372 | | 211 Brick Hill Rd | Orleans | 1987 |
| ORL.262 | Snow, Aaron House | 212 Brick Hill Rd | Orleans | 1790 |
| ORL.1373 | | 214 Brick Hill Rd | Orleans | 1980 |
| ORL.1374 | | 214 Brick Hill Rd | Orleans | 1960 |
| ORL.1375 | | 220 Brick Hill Rd | Orleans | 2009 |
| ORL.263 | Snow, Willis House | 225 Brick Hill Rd | Orleans | c 1830 |
| ORL.1376 | | 225 Brick Hill Rd | Orleans | 1950 |
| ORL.1377 | | 226 Brick Hill Rd | Orleans | 1962 |
| ORL.1378 | | 229 Brick Hill Rd | Orleans | 1920 |
| ORL.1379 | | 229 Brick Hill Rd | Orleans | 1920 |
| ORL.1380 | | 229 Brick Hill Rd | Orleans | 1920 |
| ORL.264 | Taylor, Solomon House | 230 Brick Hill Rd | Orleans | c 1860 |
| ORL.1381 | | 230 Brick Hill Rd | Orleans | c 1860 |
| ORL.1382 | | 233 Brick Hill Rd | Orleans | 1920 |
| ORL.265 | Hopkins, Davis House | 237 Brick Hill Rd | Orleans | c 1850 |
| ORL.1383 | Hopkins, Davis Barn | 237 Brick Hill Rd | Orleans | c 1850 |
| ORL.266 | Snow, Aaron Grocery Store | 240 Brick Hill Rd | Orleans | c 1850 |
| ORL.1384 | | 240 Brick Hill Rd | Orleans | 2008 |
| ORL.267 | Snow, Elkanah House | 242 Brick Hill Rd | Orleans | c 1862 |
| ORL.1385 | | 242 Brick Hill Rd | Orleans | 1920 |
| ORL.1386 | | 246 Brick Hill Rd | Orleans | 1926 |
| ORL.1387 | | 251 Brick Hill Rd | Orleans | 1960 |
| ORL.1388 | | 252 Brick Hill Rd | Orleans | 1875 |
| ORL.399 | Walker, M. House | 38 Bridge Rd | Orleans | 1880 |
| ORL.454 | | 38 Bridge Rd | Orleans | 1964 |
| ORL.32 | Komando, Dr. Edward W. House | 42 Bridge Rd | Orleans | 1820 |
| ORL.455 | | 42 Bridge Rd | Orleans | 1880 |
| ORL.29 | Miller, Hope - Cole, R. House | 45 Bridge Rd | Orleans | 1850 |
| ORL.456 | | 45 Bridge Rd | Orleans | 1880 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|-------------------|---------|--------|
| ORL.400 | | 46 Bridge Rd | Orleans | 1925 |
| ORL.401 | | 48 Bridge Rd | Orleans | 1950 |
| ORL.402 | | 49 Bridge Rd | Orleans | 1920 |
| ORL.397 | | 50 Bridge Rd | Orleans | 1900 |
| ORL.457 | | 50 Bridge Rd | Orleans | 2005 |
| ORL.398 | | 53 Bridge Rd | Orleans | 1942 |
| ORL.403 | | 54 Bridge Rd | Orleans | 1950 |
| ORL.404 | | 55 Bridge Rd | Orleans | 1815 |
| ORL.458 | | 55 Bridge Rd | Orleans | c 1850 |
| ORL.31 | Mayo, Ira - Sparrow, Jabez House | 58 Bridge Rd | Orleans | c 1834 |
| ORL.30 | Eldredge, Clayton House | 59 Bridge Rd | Orleans | 1750 |
| ORL.1242 | | 8 Callanans Pass | Orleans | 1995 |
| ORL.1243 | | 18 Callanans Pass | Orleans | 1985 |
| ORL.1389 | | 11 Camp Rd | Orleans | 1994 |
| ORL.1390 | | 18 Camp Rd | Orleans | 1976 |
| ORL.1391 | | 20 Camp Rd | Orleans | 1951 |
| ORL.1392 | | 21 Camp Rd | Orleans | 1951 |
| ORL.1393 | | 23 Camp Rd | Orleans | 1966 |
| ORL.1394 | | 23 Camp Rd | Orleans | 2013 |
| ORL.1395 | | 24 Camp Rd | Orleans | 1982 |
| ORL.1396 | | 24 Camp Rd | Orleans | c 2015 |
| ORL.901 | Jeremiah's Gutter | Canal Rd | Orleans | 1804 |
| ORL.902 | Jeremiah's Gutter Site Marker | Canal Rd | Orleans | 1976 |
| ORL.903 | Orleans Oldest House Marker | Canal Rd | Orleans | 1976 |
| ORL.459 | | 5 Canal Rd | Orleans | 1979 |
| ORL.460 | | 8 Canal Rd | Orleans | 1973 |
| ORL.461 | | 8 Canal Rd | Orleans | 1968 |
| ORL.37 | Cummings and Howes Oilskin Factory | 15 Canal Rd | Orleans | c 1880 |
| ORL.462 | | 15 Canal Rd | Orleans | 2004 |
| ORL.463 | | 24 Canal Rd | Orleans | 1963 |
| ORL.464 | | 25 Canal Rd | Orleans | 1980 |
| ORL.465 | | 25 Canal Rd | Orleans | 1955 |
| ORL.36 | Snow, Lt. Prence - Snow, Jonathan House | 31 Canal Rd | Orleans | 1723 |
| ORL.466 | | 38 Canal Rd | Orleans | 1963 |
| ORL.35 | Swain, Eunice - Winchester, S. Coleman House | 43 Canal Rd | Orleans | 1790 |
| ORL.733 | | 61 Canal Rd | Orleans | 1990 |
| ORL.734 | | 63 Canal Rd | Orleans | 1980 |
| ORL.735 | | 68 Canal Rd | Orleans | 1985 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|-----------------------|---------|--------|
| ORL.114 | French Atlantic Cable Station Superintendent House | 71 Canal Rd | Orleans | 1880 |
| ORL.629 | | 3 Capt. Linnell Rd | Orleans | 2004 |
| ORL.22 | Doane, Capt. Benjamin House | 4 Captain Doanes Way | Orleans | 1800 |
| ORL.477 | | 9 Captain Doanes Way | Orleans | 1982 |
| ORL.478 | | 12 Captain Doanes Way | Orleans | 1965 |
| ORL.479 | | 13 Captain Doanes Way | Orleans | 1950 |
| ORL.480 | | 17 Captain Doanes Way | Orleans | 1987 |
| ORL.481 | | 18 Captain Doanes Way | Orleans | 1971 |
| ORL.482 | | 19 Captain Doanes Way | Orleans | 2005 |
| ORL.483 | | 20 Captain Doanes Way | Orleans | 1979 |
| ORL.484 | | 24 Captain Doanes Way | Orleans | 1966 |
| ORL.485 | | 25 Captain Doanes Way | Orleans | 1970 |
| ORL.486 | | 26 Captain Doanes Way | Orleans | 1978 |
| ORL.487 | | 27 Captain Doanes Way | Orleans | 1973 |
| ORL.630 | | 4 Captain Linnell Rd | Orleans | 1950 |
| ORL.631 | | 5 Captain Linnell Rd | Orleans | 1984 |
| ORL.632 | | 8 Captain Linnell Rd | Orleans | 1974 |
| ORL.633 | | 9 Captain Linnell Rd | Orleans | 1987 |
| ORL.634 | | 10 Captain Linnell Rd | Orleans | 1955 |
| ORL.635 | | 11 Captain Linnell Rd | Orleans | 1955 |
| ORL.636 | | 20 Captain Linnell Rd | Orleans | 1949 |
| ORL.467 | | 3 Captains Row | Orleans | 2003 |
| ORL.468 | | 5 Captains Row | Orleans | 1979 |
| ORL.469 | | 8 Captains Row | Orleans | 1974 |
| ORL.470 | | 9 Captains Row | Orleans | 1999 |
| ORL.471 | | 11 Captains Row | Orleans | 1977 |
| ORL.472 | | 14 Captains Row | Orleans | 1979 |
| ORL.473 | | 15 Captains Row | Orleans | 1981 |
| ORL.474 | | 21 Captains Row | Orleans | 1980 |
| ORL.475 | | 22 Captains Row | Orleans | 2000 |
| ORL.476 | | 23 Captains Row | Orleans | 1984 |
| ORL.736 | | 8 Cardinal Ln | Orleans | 1987 |
| ORL.300 | Linnell, Abner F. House | 12 Carriage Pl | Orleans | c 1820 |
| ORL.1244 | | 1 Carver Rd | Orleans | 1972 |
| ORL.1245 | | 3 Carver Rd | Orleans | 1961 |
| ORL.1246 | | 4 Carver Rd | Orleans | 1995 |
| ORL.1247 | | 9 Carver Rd | Orleans | 1927 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|------------------|---------|--------|
| ORL.1248 | | 10 Carver Rd | Orleans | 1927 |
| ORL.290 | Doane, B. Willis House | 47 Cedar Land Rd | Orleans | 1878 |
| ORL.291 | Sparrow, Charles E. House | 54 Cedar Land Rd | Orleans | c 1910 |
| ORL.488 | | 7 Cedar Pond Rd | Orleans | 1950 |
| ORL.737 | | 22 Center Pl | Orleans | 1981 |
| ORL.1397 | | 4 Champlain Rd | Orleans | 1984 |
| ORL.1398 | | 8 Champlain Rd | Orleans | 1940 |
| ORL.271 | Snow, Jonathan - Potter, Will House | 23 Champlain Rd | Orleans | c 1830 |
| ORL.1399 | | 23 Champlain Rd | Orleans | 1938 |
| ORL.273 | Snow, James - Gould, Capt. Daniel House | 25 Champlain Rd | Orleans | c 1860 |
| ORL.1400 | | 25 Champlain Rd | Orleans | 1950 |
| ORL.1401 | | 25 Champlain Rd | Orleans | 1950 |
| ORL.1402 | | 26 Champlain Rd | Orleans | 1965 |
| ORL.274 | Pierce, Marcus M. House | 27 Champlain Rd | Orleans | c 1865 |
| ORL.275 | Pierce, Sadie Summer General Store | 27 Champlain Rd | Orleans | c 1865 |
| ORL.276 | Crosby, John House | 30 Champlain Rd | Orleans | c 1872 |
| ORL.1403 | | 33 Champlain Rd | Orleans | 1952 |
| ORL.1404 | | 34 Champlain Rd | Orleans | 1967 |
| ORL.1405 | | 36 Champlain Rd | Orleans | 1968 |
| ORL.1406 | | 39 Champlain Rd | Orleans | 1850 |
| ORL.1407 | | 39 Champlain Rd | Orleans | 1970 |
| ORL.277 | Baker, Benoni House | 40 Champlain Rd | Orleans | c 1850 |
| ORL.1408 | | 41 Champlain Rd | Orleans | 1991 |
| ORL.1409 | | 41 Champlain Rd | Orleans | c 1950 |
| ORL.1410 | | 43 Champlain Rd | Orleans | 1880 |
| ORL.1411 | | 43 Champlain Rd | Orleans | 1940 |
| ORL.1412 | | 47 Champlain Rd | Orleans | 1978 |
| ORL.1413 | | 50 Champlain Rd | Orleans | 1986 |
| ORL.1414 | | 51 Champlain Rd | Orleans | 1968 |
| ORL.1415 | | 54 Champlain Rd | Orleans | 1920 |
| ORL.1416 | | 57 Champlain Rd | Orleans | 1995 |
| ORL.1417 | | 58 Champlain Rd | Orleans | 2004 |
| ORL.1418 | | 60 Champlain Rd | Orleans | 1900 |
| ORL.1419 | | 60 Champlain Rd | Orleans | 1940 |
| ORL.1420 | | 64 Champlain Rd | Orleans | 1930 |
| ORL.1422 | | 65 Champlain Rd | Orleans | 1876 |
| ORL.1423 | | 67 Champlain Rd | Orleans | 1914 |
| ORL.1424 | | 67 Champlain Rd | Orleans | 1914 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|------------------------------------|-------------------------|---------|--------|
| ORL.1425 | | 69 Champlain Rd | Orleans | 1914 |
| ORL.1426 | | 69 Champlain Rd | Orleans | 1914 |
| ORL.1427 | | 70 Champlain Rd | Orleans | 1978 |
| ORL.1421 | | 64 Chanplain Rd | Orleans | 1930 |
| ORL.637 | | 5 Chase Ln | Orleans | 1983 |
| ORL.638 | | 8 Chase Ln | Orleans | 1958 |
| ORL.738 | | 9 Child's Homestead Rd | Orleans | 1950 |
| ORL.739 | | 10 Child's Homestead Rd | Orleans | 1950 |
| ORL.72 | Cummings, George House | 12 Child's Homestead Rd | Orleans | c 1870 |
| ORL.740 | | 15 Child's Homestead Rd | Orleans | 1944 |
| ORL.741 | | 16 Child's Homestead Rd | Orleans | 1950 |
| ORL.742 | | 17 Child's Homestead Rd | Orleans | 1950 |
| ORL.743 | | 22 Child's Homestead Rd | Orleans | 1955 |
| ORL.744 | | 25 Child's Homestead Rd | Orleans | 1981 |
| ORL.745 | | 27 Child's Homestead Rd | Orleans | 2009 |
| ORL.746 | | 29 Child's Homestead Rd | Orleans | 1987 |
| ORL.747 | | 31 Child's Homestead Rd | Orleans | 1980 |
| ORL.748 | | 33 Child's Homestead Rd | Orleans | 1984 |
| ORL.749 | | 5 Cottage St | Orleans | 1940 |
| ORL.750 | | 5 Cottage St | Orleans | 1930 |
| ORL.751 | | 15 Cottage St | Orleans | 1923 |
| ORL.752 | | 23 Cottage St | Orleans | 1933 |
| ORL.106 | Knowles, Clarence Bakery | 6 Cove Rd | Orleans | c 1890 |
| ORL.105 | Smith, T. A. - Ellis, Lloyd Market | 8 Cove Rd | Orleans | 1870 |
| ORL.753 | | 9 Cove Rd | Orleans | 1924 |
| ORL.754 | | 11 Cove Rd | Orleans | 1972 |
| ORL.104 | Orleans Methodist Chapel | 12 Cove Rd | Orleans | 1840 |
| ORL.101 | Knowles, Clarence Two-Family House | 14 Cove Rd | Orleans | c 1890 |
| ORL.755 | | 14 Cove Rd | Orleans | 1900 |
| ORL.756 | | 14 Cove Rd | Orleans | 1970 |
| ORL.757 | | 15 Cove Rd | Orleans | 1968 |
| ORL.102 | | 17 Cove Rd | Orleans | 1900 |
| ORL.100 | Myrick, Richard House | 19 Cove Rd | Orleans | 1894 |
| ORL.758 | | 19 Cove Rd | Orleans | 1987 |
| ORL.759 | | 29 Cove Rd | Orleans | 1966 |
| ORL.760 | | 31 Cove Rd | Orleans | 1926 |
| ORL.761 | | 31 Cove Rd | Orleans | 1966 |
| ORL.762 | | 33 Cove Rd | Orleans | 2009 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|-------------------|---------|--------|
| ORL.763 | | 10 Cranberry Hwy | Orleans | 1971 |
| ORL.764 | | 16 Cranberry Hwy | Orleans | 1984 |
| ORL.765 | | 28 Cranberry Hwy | Orleans | 1954 |
| ORL.906 | Young, Jonathan Windmill | 33 Cranberry Hwy | Orleans | c 1793 |
| ORL.766 | | 34 Cranberry Hwy | Orleans | 1954 |
| ORL.767 | | 36 Cranberry Hwy | Orleans | 1950 |
| ORL.768 | | 37 Cranberry Hwy | Orleans | 1940 |
| ORL.769 | | 38 Cranberry Hwy | Orleans | 1930 |
| ORL.108 | Nickerson - Fulcher, Alfred Double House | 41 Cranberry Hwy | Orleans | 1820 |
| ORL.770 | | 41A Cranberry Hwy | Orleans | r 1924 |
| ORL.771 | | 41B Cranberry Hwy | Orleans | r 1880 |
| ORL.772 | | 42 Cranberry Hwy | Orleans | 1962 |
| ORL.773 | | 43 Cranberry Hwy | Orleans | 1940 |
| ORL.774 | | 45 Cranberry Hwy | Orleans | 1968 |
| ORL.775 | | 46 Cranberry Hwy | Orleans | 1965 |
| ORL.776 | | 47 Cranberry Hwy | Orleans | 1920 |
| ORL.110 | Tew, Helen House | 51 Cranberry Hwy | Orleans | 1820 |
| ORL.777 | | 51 Cranberry Hwy | Orleans | 1980 |
| ORL.778 | | 52 Cranberry Hwy | Orleans | 1965 |
| ORL.113 | Young, David House | 54 Cranberry Hwy | Orleans | c 1858 |
| ORL.111 | Snow Double House | 57 Cranberry Hwy | Orleans | 1800 |
| ORL.779 | | 57 Cranberry Hwy | Orleans | 1978 |
| ORL.115 | Young, Jonathan Jr. House | 60 Cranberry Hwy | Orleans | 1875 |
| ORL.780 | | 62 Cranberry Hwy | Orleans | 1988 |
| ORL.116 | Howard Johnson Restaurant | 63 Cranberry Hwy | Orleans | 1935 |
| ORL.781 | | 68 Cranberry Hwy | Orleans | 1959 |
| ORL.782 | | 76 Cranberry Hwy | Orleans | 1950 |
| ORL.783 | | 78 Cranberry Hwy | Orleans | 1915 |
| ORL.784 | Telephone Office | 79 Cranberry Hwy | Orleans | 1961 |
| ORL.117 | Davis, Dr. S. T. House | 80 Cranberry Hwy | Orleans | c 1880 |
| ORL.785 | Davis, Dr. T. S. Office and Store | 80 Cranberry Hwy | Orleans | 1880 |
| ORL.787 | | 80 Cranberry Hwy | Orleans | 1986 |
| ORL.788 | | 80 Cranberry Hwy | Orleans | 1986 |
| ORL.118 | Lake, Leander Houses | 81 Cranberry Hwy | Orleans | 1900 |
| ORL.789 | | 81 Cranberry Hwy | Orleans | 1945 |
| ORL.790 | | 81 Cranberry Hwy | Orleans | 1945 |
| ORL.786 | Davis, Dr. T. S. Carriage House | 82 Cranberry Hwy | Orleans | 1880 |
| ORL.791 | | 83 Cranberry Hwy | Orleans | 1952 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|-------------------|---------|--------|
| ORL.792 | | 84 Cranberry Hwy | Orleans | 1940 |
| ORL.119 | Cummings, Ebenezer House | 85 Cranberry Hwy | Orleans | c 1880 |
| ORL.793 | | 85 Cranberry Hwy | Orleans | 1957 |
| ORL.794 | | 86A Cranberry Hwy | Orleans | 1900 |
| ORL.795 | | 86B Cranberry Hwy | Orleans | 1900 |
| ORL.121 | Howes, William House | 87 Cranberry Hwy | Orleans | c 1900 |
| ORL.796 | | 87 Cranberry Hwy | Orleans | 1957 |
| ORL.797 | | 88 Cranberry Hwy | Orleans | 1920 |
| ORL.798 | | 90 Cranberry Hwy | Orleans | 1920 |
| ORL.120 | Nickerson, Eugene House | 94 Cranberry Hwy | Orleans | c 1900 |
| ORL.799 | | 96 Cranberry Hwy | Orleans | 1940 |
| ORL.1000 | | 97 Cranberry Hwy | Orleans | 1961 |
| ORL.1001 | | 98 Cranberry Hwy | Orleans | 1974 |
| ORL.1002 | | 99 Cranberry Hwy | Orleans | 1955 |
| ORL.1003 | | 100 Cranberry Hwy | Orleans | 1945 |
| ORL.1004 | | 101 Cranberry Hwy | Orleans | 1954 |
| ORL.1005 | | 103 Cranberry Hwy | Orleans | 1945 |
| ORL.1006 | | 108 Cranberry Hwy | Orleans | 1930 |
| ORL.1007 | | 109 Cranberry Hwy | Orleans | 2003 |
| ORL.122 | Shattuck, Abigail House | 111 Cranberry Hwy | Orleans | 1874 |
| ORL.1008 | | 114 Cranberry Hwy | Orleans | 1920 |
| ORL.1009 | | 115 Cranberry Hwy | Orleans | 1968 |
| ORL.125 | Bassett, Albert House | 116 Cranberry Hwy | Orleans | r 1885 |
| ORL.1010 | | 116 Cranberry Hwy | Orleans | r 1950 |
| ORL.123 | Young, Jonathan Store | 117 Cranberry Hwy | Orleans | c 1858 |
| ORL.1011 | | 119 Cranberry Hwy | Orleans | 1965 |
| ORL.126 | Mayo, J. C. - Percival, Joseph W. House | 120 Cranberry Hwy | Orleans | c 1852 |
| ORL.124 | Snow, Joe Jesse House | 121 Cranberry Hwy | Orleans | 1900 |
| ORL.1012 | | 129 Cranberry Hwy | Orleans | 1945 |
| ORL.1013 | | 130 Cranberry Hwy | Orleans | 1965 |
| ORL.1014 | | 133 Cranberry Hwy | Orleans | 1984 |
| ORL.128 | Hohn, F. Tailor Shop | 139 Cranberry Hwy | Orleans | c 1800 |
| ORL.1015 | | 140 Cranberry Hwy | Orleans | 1962 |
| ORL.129 | Higgins, Simeon House - Shattuck, Abel Tavern | 143 Cranberry Hwy | Orleans | c 1750 |
| ORL.1016 | | 144 Cranberry Hwy | Orleans | 1984 |
| ORL.1017 | | 147 Cranberry Hwy | Orleans | 1948 |
| ORL.130 | Higgins, Simeon Tavern Wing | 151 Cranberry Hwy | Orleans | 1829 |
| ORL.1018 | | 152 Cranberry Hwy | Orleans | 1960 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-------------------------------------|-------------------|---------|--------|
| ORL.907 | Higgins Tavern Site Marker | 154 Cranberry Hwy | Orleans | 1976 |
| ORL.1019 | | 154 Cranberry Hwy | Orleans | 1967 |
| ORL.131 | | 157 Cranberry Hwy | Orleans | 1880 |
| ORL.1020 | | 158 Cranberry Hwy | Orleans | 1940 |
| ORL.1021 | | 161 Cranberry Hwy | Orleans | r 1982 |
| ORL.1022 | | 162 Cranberry Hwy | Orleans | 1884 |
| ORL.132 | Kingman, Seth House | 164 Cranberry Hwy | Orleans | 1798 |
| ORL.1023 | | 165 Cranberry Hwy | Orleans | 1984 |
| ORL.1024 | | 167 Cranberry Hwy | Orleans | 1920 |
| ORL.1025 | | 167 Cranberry Hwy | Orleans | 2013 |
| ORL.1026 | | 168 Cranberry Hwy | Orleans | 1950 |
| ORL.1027 | | 169 Cranberry Hwy | Orleans | 1920 |
| ORL.1028 | | 169 Cranberry Hwy | Orleans | 1979 |
| ORL.1029 | | 170 Cranberry Hwy | Orleans | 1924 |
| ORL.1030 | | 173 Cranberry Hwy | Orleans | 1987 |
| ORL.1031 | | 174 Cranberry Hwy | Orleans | 1945 |
| ORL.1032 | | 175 Cranberry Hwy | Orleans | 1930 |
| ORL.1033 | | 177 Cranberry Hwy | Orleans | 1935 |
| ORL.1034 | | 179 Cranberry Hwy | Orleans | 1985 |
| ORL.1035 | | 180 Cranberry Hwy | Orleans | 1974 |
| ORL.1036 | | 190 Cranberry Hwy | Orleans | r 1982 |
| ORL.1037 | | 191 Cranberry Hwy | Orleans | 1960 |
| ORL.1038 | | 193 Cranberry Hwy | Orleans | 1984 |
| ORL.1039 | | 195 Cranberry Hwy | Orleans | 1970 |
| ORL.1040 | First Citizens Federal Credit Union | 198 Cranberry Hwy | Orleans | 1977 |
| ORL.1041 | NSTAR Electric Company | 199 Cranberry Hwy | Orleans | |
| ORL.1042 | | 199 Cranberry Hwy | Orleans | 1999 |
| ORL.295 | | 3 Cross Rd | Orleans | r 1780 |
| ORL.388 | Higgins, A. House | 4 Cross Rd | Orleans | c 1850 |
| ORL.298 | Higgins, Hastel House | 5 Cross Rd | Orleans | c 1850 |
| ORL.299 | Rogers, David Crowell House | 16 Cross Rd | Orleans | c 1830 |
| ORL.1043 | | 5 Cummings Rd | Orleans | 1973 |
| ORL.1044 | | 8 Cummings Rd | Orleans | 1950 |
| ORL.1045 | | 10 Cummings Rd | Orleans | 1982 |
| ORL.1046 | | 12 Cummings Rd | Orleans | 2001 |
| ORL.1047 | | 17 Cummings Rd | Orleans | 1945 |
| ORL.489 | | 3 Defiance Ln | Orleans | 1975 |
| ORL.490 | | 5 Defiance Ln | Orleans | 1987 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|------------------------------------|----------------|---------|------|
| ORL.6 | Hall, Fletcher House and Duck Camp | 6 Defiance Ln | Orleans | 1890 |
| ORL.491 | | 6 Defiance Ln | Orleans | 1945 |
| ORL.492 | | 9 Defiance Ln | Orleans | 1960 |
| ORL.8 | Northup, Capt. Luther House | 12 Defiance Ln | Orleans | 1842 |
| ORL.493 | | 15 Defiance Ln | Orleans | 1975 |
| ORL.494 | | 16 Defiance Ln | Orleans | 1940 |
| ORL.495 | | 20 Defiance Ln | Orleans | 1938 |
| ORL.496 | | 21 Defiance Ln | Orleans | 1982 |
| ORL.497 | | 26 Defiance Ln | Orleans | 1979 |
| ORL.498 | | 32 Defiance Ln | Orleans | 1975 |
| ORL.499 | | 36 Defiance Ln | Orleans | 1977 |
| ORL.500 | | 41 Defiance Ln | Orleans | 1980 |
| ORL.7 | | 46 Defiance Ln | Orleans | 1824 |
| ORL.501 | | 48 Defiance Ln | Orleans | 1991 |
| ORL.502 | | 50 Defiance Ln | Orleans | 1978 |
| ORL.503 | | 65 Defiance Ln | Orleans | 1983 |
| ORL.504 | | 71 Defiance Ln | Orleans | 1972 |
| ORL.1249 | | 7 Doane Rd | Orleans | 1920 |
| ORL.1250 | | 8 Doane Rd | Orleans | 1967 |
| ORL.1251 | | 9 Doane Rd | Orleans | 1960 |
| ORL.1252 | | 10 Doane Rd | Orleans | 1925 |
| ORL.1253 | | 12 Doane Rd | Orleans | 1960 |
| ORL.1254 | | 14 Doane Rd | Orleans | 1960 |
| ORL.1255 | | 15 Doane Rd | Orleans | 1950 |
| ORL.1256 | | 17 Doane Rd | Orleans | 1950 |
| ORL.1257 | | 18 Doane Rd | Orleans | 1922 |
| ORL.1258 | | 19 Doane Rd | Orleans | 1954 |
| ORL.1259 | | 23 Doane Rd | Orleans | 1950 |
| ORL.1260 | | 24 Doane Rd | Orleans | 2012 |
| ORL.1261 | | 25 Doane Rd | Orleans | 1955 |
| ORL.1262 | | 25 Doane Rd | Orleans | 1955 |
| ORL.1263 | | 25 Doane Rd | Orleans | 1955 |
| ORL.1264 | | 25 Doane Rd | Orleans | 1955 |
| ORL.1265 | | 25 Doane Rd | Orleans | 1955 |
| ORL.1266 | | 26 Doane Rd | Orleans | 1950 |
| ORL.1267 | | 28 Doane Rd | Orleans | 1998 |
| ORL.1268 | | 30 Doane Rd | Orleans | 1949 |
| ORL.1269 | | 31 Doane Rd | Orleans | 1980 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|---------------------|---------|--------|
| ORL.1270 | | 32 Doane Rd | Orleans | 1950 |
| ORL.103 | Smith, Warren House | 3 Doane Terr | Orleans | c 1800 |
| ORL.1049 | | 4 Doane Terr | Orleans | 1935 |
| ORL.918 | Tide-Water Grist Mill Marker | Doane Way | Orleans | 1976 |
| ORL.1048 | | 2 Doanne Terr | Orleans | 1959 |
| ORL.1050 | Town of Orleans Chamber of Commerce | 8 Eldredge Park Wy | Orleans | 1999 |
| ORL.932 | Eldredge Park | 80 Eldredge Park Wy | Orleans | 1913 |
| ORL.933 | Eldredge Park - Orleans Firebirds Baseball Field with dugouts | 80 Eldredge Park Wy | Orleans | 1967 |
| ORL.934 | Eldredge Park - Press Box | 80 Eldredge Park Wy | Orleans | 1982 |
| ORL.935 | Eldredge Park - Terraced Lawn Seating | 80 Eldredge Park Wy | Orleans | 1985 |
| ORL.936 | Eldredge Park - Moore, Charles F. Jr. Field House and Bandstand | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.937 | Eldredge Park - Tennis Court 1 | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.938 | Eldredge Park - Tennis Court 2 | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.939 | Eldredge Park - Tennis Court 3 | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.940 | Eldredge Park - Playground | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.941 | Eldredge Park - Handball Court | 80 Eldredge Park Wy | Orleans | c 1970 |
| ORL.942 | Eldredge Park - Historical Marker | 80 Eldredge Park Wy | Orleans | 1966 |
| ORL.943 | Eldredge Park - Utility Shed 1 | 80 Eldredge Park Wy | Orleans | r 1982 |
| ORL.944 | Eldredge Park - Utility Shed 2 | 80 Eldredge Park Wy | Orleans | r 1982 |
| ORL.371 | Higgins, Seneca House | 4 Eli Rogers Rd | Orleans | c 1800 |
| ORL.639 | | 3 Ellis Rd | Orleans | 1960 |
| ORL.378 | Rice, Charles G. House | 2 Ewing Dr | Orleans | 1915 |
| ORL.302 | Rogers, V. House | 3 Ewing Dr | Orleans | c 1840 |
| ORL.351 | Ward, Benjamin House | 101-105 Finlay Rd | Orleans | c 1820 |
| ORL.640 | | 2 Franz Rd | Orleans | 1976 |
| ORL.1428 | | 4 Freeman Ln | Orleans | 1815 |
| ORL.1429 | | 10 Freeman Ln | Orleans | 1976 |
| ORL.1430 | | 11 Freeman Ln | Orleans | 1988 |
| ORL.1431 | | 12 Freeman Ln | Orleans | 1950 |
| ORL.1432 | | 15 Freeman Ln | Orleans | 1996 |
| ORL.1433 | | 21 Freeman Ln | Orleans | 1974 |
| ORL.1434 | | 27 Freeman Ln | Orleans | 1973 |
| ORL.1435 | | 31 Freeman Ln | Orleans | 1999 |
| ORL.1436 | | 32 Freeman Ln | Orleans | 1888 |
| ORL.1437 | | 32 Freeman Ln | Orleans | 1870 |
| ORL.1438 | | 35 Freeman Ln | Orleans | 1935 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|--------------------|---------|--------|
| ORL.1439 | | 35 Freeman Ln | Orleans | 1935 |
| ORL.1440 | | 37 Freeman Ln | Orleans | 1994 |
| ORL.181 | Higgins, Arseno Barn | 7 Gesner Rd | Orleans | 1875 |
| ORL.424 | Orleans Association - Peirson, Edward L. House | 64 Gosnold Rd | Orleans | 1925 |
| ORL.1441 | | 4 Grassy Knoll Way | Orleans | 1989 |
| ORL.1442 | | 5 Grassy Knoll Way | Orleans | 1900 |
| ORL.214 | Atkins, Edward B. House | 6 Great Oak Rd | Orleans | c 1820 |
| ORL.215 | Small, Godfrey M. House | 18 Great Oak Rd | Orleans | c 1900 |
| ORL.217 | | 21 Great Oak Rd | Orleans | 1810 |
| ORL.216 | Crosby, Isaiah House | 22 Great Oak Rd | Orleans | c 1845 |
| ORL.218 | Nickerson, Z. House | 36 Great Oak Rd | Orleans | c 1855 |
| ORL.246 | Baker, Abijah Jr. House | 38 Great Oak Rd | Orleans | c 1810 |
| ORL.247 | Doane, Seth P. House | 52 Great Oak Rd | Orleans | c 1790 |
| ORL.304 | Whitman House | 56 Great Oak Rd | Orleans | c 1800 |
| ORL.248 | Cummings, George Washington House | 94 Great Oak Rd | Orleans | c 1850 |
| ORL.249 | Cummings, Daniel House | 96 Great Oak Rd | Orleans | 1803 |
| ORL.60 | Knowles, E. House | 2 Gull Ln | Orleans | 1780 |
| ORL.641 | | 9 Gull Ln | Orleans | 1965 |
| ORL.642 | | 11 Gull Ln | Orleans | 1971 |
| ORL.643 | | 12 Gull Ln | Orleans | 1968 |
| ORL.644 | | 16 Gull Ln | Orleans | 1990 |
| ORL.645 | | 17 Gull Ln | Orleans | 1996 |
| ORL.646 | | 18 Gull Ln | Orleans | 1971 |
| ORL.647 | | 21 Gull Ln | Orleans | 1969 |
| ORL.648 | | 23 Gull Ln | Orleans | 1970 |
| ORL.649 | | 25 Gull Ln | Orleans | 1970 |
| ORL.650 | | 29 Gull Ln | Orleans | 1960 |
| ORL.61 | Smith, Ralph House | 30 Gull Ln | Orleans | 1787 |
| ORL.651 | | 36 Gull Ln | Orleans | 1971 |
| ORL.379 | Mayo, J. R. House | 1 Half Cape Way | Orleans | c 1840 |
| ORL.505 | | 2 Harbor Hill Dr | Orleans | 1968 |
| ORL.506 | | 8 Harbor Hill Dr | Orleans | 1968 |
| ORL.507 | | 11 Harbor Hill Dr | Orleans | 1979 |
| ORL.508 | | 12 Harbor Hill Dr | Orleans | 1966 |
| ORL.509 | | 15 Harbor Hill Dr | Orleans | 1972 |
| ORL.510 | | 16 Harbor Hill Dr | Orleans | 1974 |
| ORL.511 | | 19 Harbor Hill Dr | Orleans | 1967 |
| ORL.512 | | 20 Harbor Hill Dr | Orleans | 1967 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|----------------------|---------|--------|
| ORL.1553 | | 23 Harbor Hill Dr | Orleans | 1967 |
| ORL.513 | | 24 Harbor Hill Dr | Orleans | 1970 |
| ORL.514 | | 27 Harbor Hill Dr | Orleans | 1969 |
| ORL.515 | | 28 Harbor Hill Dr | Orleans | 2005 |
| ORL.516 | | 29 Harbor Hill Dr | Orleans | 1974 |
| ORL.517 | | 30 Harbor Hill Dr | Orleans | 1974 |
| ORL.1443 | | 23 Harbor Rd | Orleans | 2005 |
| ORL.253 | Sparrow, Samuel House | 7 Harbor View Ln | Orleans | c 1820 |
| ORL.288 | Sparrow, Harvey - Cole, A. House | 24 Harvey's Ln | Orleans | c 1810 |
| ORL.802 | Rogers Family Burial Ground | Harwich Rd | Orleans | 1829 |
| ORL.392 | Linnell, O. - Rogers, John G. House | 39 Harwich Rd | Orleans | c 1850 |
| ORL.391 | Linnell, O. N. House | 53 Harwich Rd | Orleans | c 1840 |
| ORL.389 | Rogers, J. and I. - Long, Nelson House | 73 Harwich Rd | Orleans | c 1820 |
| ORL.390 | Rogers, Alden House | 103 Harwich Rd | Orleans | c 1750 |
| ORL.305 | Doane, Capt. Lewis E. House | 121 Harwich Rd | Orleans | c 1849 |
| ORL.182 | Percival, Lizzie House | 9 Henson's Way | Orleans | 1780 |
| ORL.183 | Higgins, Hanson House | 29 Henson's Way | Orleans | 1797 |
| ORL.307 | | 3 Herring Brook Way | Orleans | c 1800 |
| ORL.358 | Sparrow, Vickery House | 25 Herring Brook Way | Orleans | c 1861 |
| ORL.652 | | 9 Honeysuckle Ln | Orleans | 1984 |
| ORL.653 | | 11 Honeysuckle Ln | Orleans | 1989 |
| ORL.654 | | 12 Honeysuckle Ln | Orleans | 2009 |
| ORL.655 | | 15 Honeysuckle Ln | Orleans | 1981 |
| ORL.66 | Freeman, J. House | 16 Honeysuckle Ln | Orleans | c 1820 |
| ORL.656 | | 17 Honeysuckle Ln | Orleans | 1974 |
| ORL.425 | Baker, Abijah - Small, Isaac H. House | 105 Hopkins Ln | Orleans | c 1807 |
| ORL.308 | Hopkins, E. House | 124 Hopkins Ln | Orleans | c 1800 |
| ORL.255 | Hopkins, Sylvester House | 148 Hopkins Ln | Orleans | c 1830 |
| ORL.657 | | 7 Hurley Way | Orleans | 1997 |
| ORL.1271 | Carien House | 2 Iyanough Rd | Orleans | 1927 |
| ORL.1272 | | 2 Iyanough Rd | Orleans | 1927 |
| ORL.1273 | | 4 Iyanough Rd | Orleans | 1958 |
| ORL.1274 | | 10 Iyanough Rd | Orleans | 2000 |
| ORL.1275 | | 11 Iyanough Rd | Orleans | 1995 |
| ORL.1276 | | 14 Iyanough Rd | Orleans | 1955 |
| ORL.34 | | 6 Jones Rd | Orleans | 1779 |
| ORL.518 | | 7 Jones Rd | Orleans | 1979 |
| ORL.33 | Hurd, Bangs House | 11 Jones Rd | Orleans | 1830 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-----------------------------|---------------------|---------|--------|
| ORL.519 | | 11 Jones Rd | Orleans | 1920 |
| ORL.109 | Young, David General Store | 8 Judah's Way | Orleans | c 1858 |
| ORL.1444 | | 4 Juniper Hill Ln | Orleans | 1960 |
| ORL.1445 | | 8 Juniper Hill Ln | Orleans | 1990 |
| ORL.1446 | | 12 Juniper Hill Ln | Orleans | 1805 |
| ORL.1447 | | 13 Juniper Hill Ln | Orleans | 1850 |
| ORL.1448 | | 16 Juniper Hill Ln | Orleans | 2000 |
| ORL.1449 | | 17 Juniper Hill Ln | Orleans | 2003 |
| ORL.312 | | 8 Kescayogansett Rd | Orleans | c 1790 |
| ORL.315 | Thygeson, Rev. Hanson House | 35 Keziah's Ln | Orleans | 1848 |
| ORL.1051 | | 4 King's Way | Orleans | 1984 |
| ORL.1052 | | 9 King's Way | Orleans | 1963 |
| ORL.1053 | | 11 King's Way | Orleans | 2013 |
| ORL.1054 | | 14 King's Way | Orleans | 1975 |
| ORL.1055 | | 16 King's Way | Orleans | 1974 |
| ORL.1056 | | 17 King's Way | Orleans | 1980 |
| ORL.1057 | | 18 King's Way | Orleans | 1983 |
| ORL.1058 | | 19 King's Way | Orleans | 1980 |
| ORL.1059 | | 21 King's Way | Orleans | 1983 |
| ORL.1060 | | 22 King's Way | Orleans | 1980 |
| ORL.1061 | | 24 King's Way | Orleans | 1980 |
| ORL.1062 | | 26 King's Way | Orleans | 1984 |
| ORL.1063 | | 27 King's Way | Orleans | 1984 |
| ORL.1064 | | 28 King's Way | Orleans | 1982 |
| ORL.1065 | | 29 King's Way | Orleans | 1991 |
| ORL.1066 | | 30 King's Way | Orleans | 1986 |
| ORL.1067 | | 31 King's Way | Orleans | 1984 |
| ORL.520 | | 4 Knowles Way | Orleans | 1972 |
| ORL.521 | | 5 Knowles Way | Orleans | 1965 |
| ORL.330 | Hopkins, Norman C. House | 3 Larboard Ln | Orleans | c 1920 |
| ORL.522 | | 2 Liberty Ln | Orleans | c 1980 |
| ORL.1450 | | 7 Linda's Ln | Orleans | 2015 |
| ORL.1451 | | 13 Linda's Ln | Orleans | 1963 |
| ORL.1452 | | 14 Linda's Ln | Orleans | 1979 |
| ORL.360 | Eastham House | 12 Linnell Ln | Orleans | 1821 |
| ORL.69 | Knowles House | 5 Locust Rd | Orleans | 1875 |
| ORL.68 | Knowles House | 9 Locust Rd | Orleans | c 1850 |
| ORL.1068 | | 10 Locust Rd | Orleans | 2006 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|--------------|---------|--------|
| ORL.1069 | | 12 Locust Rd | Orleans | 2006 |
| ORL.523 | | 14 Locust Rd | Orleans | 1950 |
| ORL.43 | Smith, E. House | 15 Locust Rd | Orleans | 1875 |
| ORL.524 | | 15 Locust Rd | Orleans | 1980 |
| ORL.525 | | 16 Locust Rd | Orleans | 1988 |
| ORL.526 | | 20 Locust Rd | Orleans | 1965 |
| ORL.527 | | 26 Locust Rd | Orleans | 1960 |
| ORL.528 | | 27 Locust Rd | Orleans | 1964 |
| ORL.529 | | 30 Locust Rd | Orleans | 1928 |
| ORL.530 | | 33 Locust Rd | Orleans | 1969 |
| ORL.531 | | 34 Locust Rd | Orleans | 1970 |
| ORL.532 | | 37 Locust Rd | Orleans | 1971 |
| ORL.533 | | 38 Locust Rd | Orleans | 1950 |
| ORL.42 | Peter House | 39 Locust Rd | Orleans | 1827 |
| ORL.534 | | 42 Locust Rd | Orleans | 1960 |
| ORL.535 | | 46 Locust Rd | Orleans | 1954 |
| ORL.536 | | 48 Locust Rd | Orleans | 1958 |
| ORL.537 | | 49 Locust Rd | Orleans | 1965 |
| ORL.41 | Mayo, Josuah - Myrick, Capt. Josiah House | 52 Locust Rd | Orleans | c 1788 |
| ORL.538 | | 53 Locust Rd | Orleans | 1930 |
| ORL.539 | | 56 Locust Rd | Orleans | 1967 |
| ORL.540 | | 57 Locust Rd | Orleans | 1958 |
| ORL.40 | | 58 Locust Rd | Orleans | 1820 |
| ORL.541 | | 62 Locust Rd | Orleans | 1950 |
| ORL.39 | Baker, Cal House | 63 Locust Rd | Orleans | 1890 |
| ORL.38 | Hurd, Seth House | 64 Locust Rd | Orleans | c 1812 |
| ORL.904 | Doane, John House Site Marker | Main St | Orleans | 1976 |
| ORL.85 | Sparrow, Joel House | 4 Main St | Orleans | 1850 |
| ORL.1070 | | 4 Main St | Orleans | 1998 |
| ORL.1071 | | 8 Main St | Orleans | 1988 |
| ORL.1072 | | 9 Main St | Orleans | 1978 |
| ORL.86 | Vanasse, Clarence Guest House | 12 Main St | Orleans | 1875 |
| ORL.1073 | | 14 Main St | Orleans | 1960 |
| ORL.1074 | | 15 Main St | Orleans | 1954 |
| ORL.1075 | | 22 Main St | Orleans | 1971 |
| ORL.1076 | | 26 Main St | Orleans | 1980 |
| ORL.87 | Rogers, Prince Dry Goods Store | 28 Main St | Orleans | 1875 |
| ORL.1077 | | 29 Main St | Orleans | 1980 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|-------------|---------|--------|
| ORL.1078 | | 30 Main St | Orleans | 1934 |
| ORL.1079 | | 30 Main St | Orleans | 2004 |
| ORL.88 | U. S. Post Office - Orleans Branch | 31 Main St | Orleans | 1858 |
| ORL.1080 | | 32 Main St | Orleans | r 1919 |
| ORL.803 | Methodist Burial Ground | 33 Main St | Orleans | 1828 |
| ORL.1081 | | 34A Main St | Orleans | r 1933 |
| ORL.1082 | Watson's Menswear | 34B Main St | Orleans | r 1933 |
| ORL.1083 | | 34C Main St | Orleans | 1960 |
| ORL.1084 | | 35 Main St | Orleans | 1970 |
| ORL.1085 | | 38 Main St | Orleans | 1974 |
| ORL.1086 | | 40 Main St | Orleans | 1953 |
| ORL.1087 | | 41 Main St | Orleans | 1958 |
| ORL.1088 | | 42 Main St | Orleans | 1930 |
| ORL.1089 | | 44 Main St | Orleans | 1935 |
| ORL.89 | Davis and Chase Drugstore | 46 Main St | Orleans | 1890 |
| ORL.1090 | | 47 Main St | Orleans | 1936 |
| ORL.1091 | | 48 Main St | Orleans | 1900 |
| ORL.1092 | | 50 Main St | Orleans | 1960 |
| ORL.1093 | | 51 Main St | Orleans | 1969 |
| ORL.1094 | | 54 Main St | Orleans | 1946 |
| ORL.1095 | | 56 Main St | Orleans | 1999 |
| ORL.1096 | | 57 Main St | Orleans | 1956 |
| ORL.1097 | | 64 Main St | Orleans | 1955 |
| ORL.1098 | Snow Library | 67 Main St | Orleans | 1976 |
| ORL.1099 | | 70 Main St | Orleans | 1954 |
| ORL.193 | Orleans Methodist Episcopal Church | 73 Main St | Orleans | 1838 |
| ORL.146 | Mayo, Capt. Simeon House | 80 Main St | Orleans | 1851 |
| ORL.148 | Paine, Rueben House | 81 Main St | Orleans | 1847 |
| ORL.147 | Snow, Thomas Spencer House | 82 Main St | Orleans | 1837 |
| ORL.149 | Gould, Joseph K. House | 83 Main St | Orleans | 1835 |
| ORL.150 | Gould, Sally Crosby House | 93 Main St | Orleans | c 1840 |
| ORL.151 | Snow, Calvin - Hurd, Davis House | 94 Main St | Orleans | 1840 |
| ORL.156 | Chapman, Calvin House | 96 Main St | Orleans | c 1835 |
| ORL.157 | Hopkins, Thomas A. House | 100 Main St | Orleans | c 1870 |
| ORL.152 | Snow, Capt. Jesse House | 101 Main St | Orleans | c 1840 |
| ORL.158 | Rogers, Ensign B. House | 102 Main St | Orleans | c 1860 |
| ORL.159 | Edson, Eliphalet - Crosby, Winthrop M. House | 106 Main St | Orleans | c 1855 |
| ORL.160 | Higgins, Solomon House | 112 Main St | Orleans | c 1850 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|-----------------|---------|--------|
| ORL.161 | Orleans Baptist Church | 113 Main St | Orleans | c 1850 |
| ORL.162 | Smith - Bangs, Hiram B. House | 119 Main St | Orleans | c 1865 |
| ORL.163 | Orleans Old Town Hall | 120 Main St | Orleans | 1873 |
| ORL.164 | Crosby, Solomon - Seabury, B. F. House | 124 Main St | Orleans | 1818 |
| ORL.909 | Orleans Civil War Monument | 125 Main St | Orleans | c 1880 |
| ORL.165 | Rogers, Olive S. House | 130 Main St | Orleans | c 1881 |
| ORL.1178 | | 130 Main St | Orleans | r 1950 |
| ORL.1179 | | 131 Main St | Orleans | 2005 |
| ORL.1180 | | 132 Main St | Orleans | 1936 |
| ORL.195 | Orleans Universalist Church Parsonage | 136 Main St | Orleans | c 1835 |
| ORL.1181 | | 136 Main St | Orleans | r 1920 |
| ORL.1182 | Scout Hut - American Legion Post | 137 Main St | Orleans | c 1930 |
| ORL.1183 | Orleans Department of Public Works | 139 Main St | Orleans | r 1982 |
| ORL.800 | Orleans Cemetery | 144-154 Main St | Orleans | c 1723 |
| ORL.914 | Orleans Civil War Marker | 147 Main St | Orleans | r 1950 |
| ORL.1184 | | 157 Main St | Orleans | 1930 |
| ORL.1185 | | 157 Main St | Orleans | r 1935 |
| ORL.196 | South Parish Church | 162 Main St | Orleans | 1829 |
| ORL.1187 | | 165 Main St | Orleans | 1966 |
| ORL.801 | Eastern Cemetery | 166 Main St | Orleans | 1836 |
| ORL.1188 | | 168 Main St | Orleans | 1925 |
| ORL.197 | Rogers, Ebenezer House | 169 Main St | Orleans | 1870 |
| ORL.198 | Mayo, Joseph Blacksmith Shop | 170 Main St | Orleans | 1870 |
| ORL.199 | Freeman, Orrin House | 172 Main St | Orleans | 1895 |
| ORL.200 | Snow, Jesse - Mayo, Freeman House | 174 Main St | Orleans | c 1835 |
| ORL.204 | Hopkins, Capt. John House | 175 Main St | Orleans | 1850 |
| ORL.203 | Mayo, Freeman House | 178 Main St | Orleans | 1900 |
| ORL.207 | Linnell, Solomon House | 184 Main St | Orleans | c 1870 |
| ORL.205 | Snow, Winsor House | 185 Main St | Orleans | c 1853 |
| ORL.206 | Mayo, Joseph House | 187 Main St | Orleans | 1850 |
| ORL.208 | Crosby, Mary S. House | 190 Main St | Orleans | c 1890 |
| ORL.210 | Crosby, Leander House | 193 Main St | Orleans | c 1865 |
| ORL.209 | Doane, Capt. Seth P. House - Ivy Lodge | 194 Main St | Orleans | c 1870 |
| ORL.211 | Doane, Capt. Truman House | 195 Main St | Orleans | c 1855 |
| ORL.212 | Kenrick, Alexander House | 199 Main St | Orleans | c 1860 |
| ORL.213 | East Orleans Congregational Church Parsonage | 202 Main St | Orleans | 1835 |
| ORL.202 | East Orleans Congregational Church Parsonage | 204 Main St | Orleans | c 1911 |
| ORL.219 | Sparrow, Jesse C. Jr. House | 209 Main St | Orleans | c 1855 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|-----------------|---------|--------|
| ORL.220 | Doane, Freeman House | 216 Main St | Orleans | c 1860 |
| ORL.221 | Myrick, William General Store | 217 Main St | Orleans | c 1830 |
| ORL.912 | East Orleans Country Store Marker | 217 Main St | Orleans | 1976 |
| ORL.222 | Percival, Augustus House | 219 Main St | Orleans | c 1860 |
| ORL.1453 | | 10 Mill Pond Rd | Orleans | 1950 |
| ORL.166 | Taylor, John Jr. House | 1 Monument Rd | Orleans | c 1760 |
| ORL.1189 | | 1 Monument Rd | Orleans | c 1970 |
| ORL.1190 | | 6 Monument Rd | Orleans | 1952 |
| ORL.1191 | | 12 Monument Rd | Orleans | 1971 |
| ORL.1192 | | 15 Monument Rd | Orleans | 1986 |
| ORL.167 | Orleans Universalist Church Parsonage | 19 Monument Rd | Orleans | c 1850 |
| ORL.1193 | | 19 Monument Rd | Orleans | r 1865 |
| ORL.1194 | | 23 Monument Rd | Orleans | 1985 |
| ORL.1195 | | 24 Monument Rd | Orleans | 1939 |
| ORL.170 | Hurd, Theophilus H. House | 27 Monument Rd | Orleans | c 1850 |
| ORL.168 | Higgins, Daniel - Crosby, Edmund House | 30 Monument Rd | Orleans | c 1850 |
| ORL.169 | Taylor, Joseph and Waters House | 32 Monument Rd | Orleans | c 1800 |
| ORL.171 | Higgins, John H. House | 33 Monument Rd | Orleans | 1800 |
| ORL.175 | Taylor, Waters House | 38 Monument Rd | Orleans | c 1845 |
| ORL.176 | Higgins House | 40 Monument Rd | Orleans | c 1830 |
| ORL.177 | Higgins, John H. House | 41 Monument Rd | Orleans | c 1750 |
| ORL.178 | Sherman, William House | 44 Monument Rd | Orleans | c 1870 |
| ORL.179 | Higgins, Jonathan House | 47 Monument Rd | Orleans | c 1750 |
| ORL.180 | Sherman, Samuel House | 51 Monument Rd | Orleans | c 1750 |
| ORL.184 | Arey, James H. House | 63 Monument Rd | Orleans | c 1820 |
| ORL.185 | Sherman, Samuel Jr. House | 70 Monument Rd | Orleans | c 1855 |
| ORL.186 | Linnell, Gould House | 71 Monument Rd | Orleans | c 1845 |
| ORL.314 | | 81 Monument Rd | Orleans | c 1880 |
| ORL.187 | Mayo, Theophilus House | 82 Monument Rd | Orleans | c 1845 |
| ORL.313 | | 100 Monument Rd | Orleans | c 1770 |
| ORL.317 | | 142 Monument Rd | Orleans | c 1820 |
| ORL.372 | Doane, Dea. John House | 145 Monument Rd | Orleans | c 1820 |
| ORL.318 | | 154 Monument Rd | Orleans | c 1960 |
| ORL.426 | Sparrow, Jabez House | 155 Monument Rd | Orleans | c 1790 |
| ORL.427 | Sparrow, Dean Wellhouse | 155 Monument Rd | Orleans | r 1880 |
| ORL.364 | Higgins, Thomas House | 158 Monument Rd | Orleans | c 1870 |
| ORL.365 | Orleans Episcopal Church of the Holy Spirit | 188 Monument Rd | Orleans | 1933 |
| ORL.319 | Rogers, A. C. House | 88 Namequoit Rd | Orleans | c 1820 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-----------------------------|----------------------|---------|--------|
| ORL.320 | Lockwood, Wilton Art Studio | 127 Namequoit Rd | Orleans | c 1830 |
| ORL.71 | Freeman, William House | Namskaket Rd | Orleans | c 1775 |
| ORL.1100 | | 1 Namskaket Rd | Orleans | 1950 |
| ORL.70 | Northwest Schoolhouse | 2 Namskaket Rd | Orleans | 1875 |
| ORL.1101 | | 3 Namskaket Rd | Orleans | 1975 |
| ORL.1102 | | 5 Namskaket Rd | Orleans | 1953 |
| ORL.1103 | | 5 Namskaket Rd | Orleans | 1987 |
| ORL.1104 | | 15 Namskaket Rd | Orleans | r 1850 |
| ORL.1105 | | 19 Namskaket Rd | Orleans | 1980 |
| ORL.1106 | | 20 Namskaket Rd | Orleans | 1923 |
| ORL.1107 | | 21 Namskaket Rd | Orleans | 1924 |
| ORL.1108 | | 24 Namskaket Rd | Orleans | 1965 |
| ORL.1109 | | 25 Namskaket Rd | Orleans | 1951 |
| ORL.1110 | | 28 Namskaket Rd | Orleans | 1935 |
| ORL.73 | Young, Lorenzo D. House | 31 Namskaket Rd | Orleans | c 1850 |
| ORL.74 | Young, Lorenzo D. House | 34 Namskaket Rd | Orleans | 1850 |
| ORL.1111 | | 36 Namskaket Rd | Orleans | 1976 |
| ORL.1112 | | 43 Namskaket Rd | Orleans | 1925 |
| ORL.75 | Heaney - McKenzie House | 46 Namskaket Rd | Orleans | c 1800 |
| ORL.1113 | | 47 Namskaket Rd | Orleans | 1927 |
| ORL.919 | Nauset Beach Marker | Nauset Beach | Orleans | 1976 |
| ORL.1202 | Duck Inn | 0 Nauset Beach | Orleans | 1945 |
| ORL.1203 | Camp Plover | 0 Nauset Beach | Orleans | 2010 |
| ORL.1204 | Duck Shack | 0 Nauset Beach | Orleans | c 1968 |
| ORL.1205 | Black Duck Camp | 0 Nauset Beach | Orleans | 1947 |
| ORL.1206 | Bagdad | 0 Nauset Beach | Orleans | 1928 |
| ORL.1207 | Hide-a-way | 0 Nauset Beach | Orleans | c 1938 |
| ORL.1208 | Taylor - Rice Camp | 0 Nauset Beach | Orleans | 1940 |
| ORL.1209 | Fort Frederick | 0 Nauset Beach | Orleans | 1936 |
| ORL.1210 | Coasties Retreat | 0 Nauset Beach | Orleans | 1955 |
| ORL.1211 | Camp Nauset | 0 Nauset Beach | Orleans | 1942 |
| ORL.1212 | Cupola Camp | 0 Nauset Beach | Orleans | 1946 |
| ORL.1213 | Time-Out | 0 Nauset Beach | Orleans | c 1935 |
| ORL.328 | Merritt, Charles House | 25 Nauset Heights Rd | Orleans | c 1800 |
| ORL.429 | Mamath, Walter Edward House | 34 Nauset Heights Rd | Orleans | c 1930 |
| ORL.430 | DeVore, John Garage | 34 Nauset Heights Rd | Orleans | 1935 |
| ORL.344 | Harris, Clifford L. House | 44 Nauset Heights Rd | Orleans | c 1910 |
| ORL.1294 | | 73 Nauset Heights Rd | Orleans | 1977 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|----------------------|---------|--------|
| ORL.1295 | | 75 Nauset Heights Rd | Orleans | 1977 |
| ORL.1296 | | 82 Nauset Heights Rd | Orleans | 1999 |
| ORL.1297 | | 84 Nauset Heights Rd | Orleans | 1964 |
| ORL.1298 | Bennet, William and Louisa Cottage | 85 Nauset Heights Rd | Orleans | c 1914 |
| ORL.1299 | | 85 Nauset Heights Rd | Orleans | c 1920 |
| ORL.1300 | | 86 Nauset Heights Rd | Orleans | 2005 |
| ORL.1301 | | 86 Nauset Heights Rd | Orleans | 1960 |
| ORL.1302 | | 87 Nauset Heights Rd | Orleans | 1935 |
| ORL.1303 | | 88 Nauset Heights Rd | Orleans | 1930 |
| ORL.1304 | | 89 Nauset Heights Rd | Orleans | 2013 |
| ORL.1305 | Atwood Cottage | 90 Nauset Heights Rd | Orleans | c 1935 |
| ORL.1306 | | 93 Nauset Heights Rd | Orleans | 1964 |
| ORL.428 | O'Flynn, Thomas F. House | 9 Nauset Rd | Orleans | c 1925 |
| ORL.1277 | | 26 Nauset Rd | Orleans | 1971 |
| ORL.1278 | | 29 Nauset Rd | Orleans | 1985 |
| ORL.1279 | Roxhall - The Dog House | 30 Nauset Rd | Orleans | 1906 |
| ORL.1280 | | 30 Nauset Rd | Orleans | r 1950 |
| ORL.321 | Tred-y-Noch - Onsville Farnham Cottage | 31 Nauset Rd | Orleans | c 1900 |
| ORL.1281 | | 31 Nauset Rd | Orleans | 1950 |
| ORL.1282 | Smith - Maloney Cottage | 33 Nauset Rd | Orleans | 1903 |
| ORL.1283 | Teft - Stewart Cottage | 36 Nauset Rd | Orleans | c 1921 |
| ORL.1284 | | 37 Nauset Rd | Orleans | 1940 |
| ORL.1285 | | 38 Nauset Rd | Orleans | |
| ORL.1286 | | 38 Nauset Rd | Orleans | 1950 |
| ORL.1287 | Jarvis Cottage | 41 Nauset Rd | Orleans | c 1913 |
| ORL.1288 | | 41 Nauset Rd | Orleans | c 1920 |
| ORL.1289 | Taylor Cottage | 46 Nauset Rd | Orleans | c 1911 |
| ORL.1290 | | 46 Nauset Rd | Orleans | c 1911 |
| ORL.1291 | Marvel - Rollins Cottage | 48 Nauset Rd | Orleans | r 1920 |
| ORL.1292 | Young, David L. Cottage | 51 Nauset Rd | Orleans | 2016 |
| ORL.322 | Green - Richardson Cottage | 56 Nauset Rd | Orleans | 1901 |
| ORL.1293 | | 56 Nauset Rd | Orleans | r 1920 |
| ORL.324 | Bain - Croll Cottage | 95 Nauset Rd | Orleans | c 1922 |
| ORL.1307 | Bain - Croll Garage | 95 Nauset Rd | Orleans | c 1922 |
| ORL.310 | Linnell, T. - Nichols, B. House | 10 Nichols Rd | Orleans | c 1790 |
| ORL.311 | Nichols, Arthur Boylston House | 43 Nichols Rd | Orleans | 1912 |
| ORL.1454 | | 15 Norsemans Dr | Orleans | 1998 |
| ORL.1114 | | 1 North Cottage St | Orleans | 1960 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-----------------------|---------------------|---------|--------|
| ORL.1115 | | 2 North Cottage St | Orleans | 1920 |
| ORL.1116 | | 4 North Cottage St | Orleans | 1987 |
| ORL.112 | Snow, Joseph C. House | 5 North Cottage St | Orleans | 1900 |
| ORL.1117 | | 10 North Cottage St | Orleans | 1920 |
| ORL.1118 | | 5 Old Colony Way | Orleans | 1946 |
| ORL.1119 | | 18 Old Colony Way | Orleans | 1976 |
| ORL.1120 | | 55 Old Colony Way | Orleans | 1984 |
| ORL.1121 | | 60 Old Colony Way | Orleans | 1971 |
| ORL.1122 | | 65 Old Colony Way | Orleans | 2012 |
| ORL.1123 | | 73 Old Colony Way | Orleans | 1984 |
| ORL.1124 | | 81 Old Colony Way | Orleans | 1971 |
| ORL.1125 | | 83 Old Colony Way | Orleans | 1978 |
| ORL.1126 | | 89 Old Colony Way | Orleans | 1960 |
| ORL.107 | Snow, Aaron House | 3 Old County Rd | Orleans | 1881 |
| ORL.1127 | | 6 Old Tote Rd | Orleans | 1960 |
| ORL.1128 | | 7 Old Tote Rd | Orleans | 1960 |
| ORL.1129 | | 8 Old Tote Rd | Orleans | 1940 |
| ORL.1130 | | 9 Old Tote Rd | Orleans | 1968 |
| ORL.1131 | | 10 Old Tote Rd | Orleans | 2013 |
| ORL.1132 | | 11 Old Tote Rd | Orleans | 1962 |
| ORL.1133 | | 14 Old Tote Rd | Orleans | r 1982 |
| ORL.1134 | | 19 Old Tote Rd | Orleans | 1956 |
| ORL.1135 | | 21 Old Tote Rd | Orleans | 1955 |
| ORL.1136 | | 22 Old Tote Rd | Orleans | 2005 |
| ORL.1137 | | 24 Old Tote Rd | Orleans | 1949 |
| ORL.1138 | | 28 Old Tote Rd | Orleans | 1945 |
| ORL.345 | Doane, Lewis House | 15 Olivers Way | Orleans | c 1830 |
| ORL.1196 | | 3 Owl's View Rd | Orleans | 1966 |
| ORL.542 | | 2 Penny Ln | Orleans | 1955 |
| ORL.543 | | 5 Penny Ln | Orleans | 1988 |
| ORL.544 | | 6 Penny Ln | Orleans | 1955 |
| ORL.545 | | 7 Penny Ln | Orleans | 1950 |
| ORL.546 | | 10 Penny Ln | Orleans | 1955 |
| ORL.547 | | 11 Penny Ln | Orleans | 1955 |
| ORL.548 | | 12 Penny Ln | Orleans | 1955 |
| ORL.658 | | 6 Pheobes Close | Orleans | 1986 |
| ORL.659 | | 9 Pheobes Close | Orleans | 1997 |
| ORL.660 | | 11 Pheobes Close | Orleans | 1987 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|---------------------|---------|--------|
| ORL.661 | | 12 Pheobes Close | Orleans | 2000 |
| ORL.662 | | 14 Pheobes Close | Orleans | 1986 |
| ORL.951 | Pochet Island Rowboat and Racquet Association Court | 1 Pochet Island | Orleans | r 1950 |
| ORL.1355 | Payson, Gilbert R. House | 1 Pochet Island | Orleans | 1887 |
| ORL.1356 | Pochet Island - Shed and Shower | 1 Pochet Island | Orleans | r 1920 |
| ORL.1357 | Pochet Island - Shed | 1 Pochet Island | Orleans | r 1950 |
| ORL.1358 | Pochet Island - Boathouse 1 | 1 Pochet Island | Orleans | r 1950 |
| ORL.1360 | Pochet Island - Old House | 1 Pochet Island | Orleans | c 1740 |
| ORL.1361 | Pochet Island - Shed | 1 Pochet Island | Orleans | r 1950 |
| ORL.1362 | Pochet Island - Shed | 1 Pochet Island | Orleans | r 1950 |
| ORL.1363 | Pochet Island - Cottage 2 | 1 Pochet Island | Orleans | c 1910 |
| ORL.1364 | Pochet Island - Boathouse 2 | 1 Pochet Island | Orleans | r 1920 |
| ORL.1365 | Pochet Island - Cottage 3 | 1 Pochet Island | Orleans | 1931 |
| ORL.1366 | Pochet Island - Shed and Shower | 1 Pochet Island | Orleans | r 1950 |
| ORL.950 | Pochet Island - Dock | 1 Pochet Rd | Orleans | r 1965 |
| ORL.1359 | Pochet Island - Cottage 1 | 1 Pochet Rd | Orleans | 1940 |
| ORL.316 | Doane, J. S. House | 12 Pochet Rd | Orleans | c 1800 |
| ORL.431 | Baxter, Caroline N. House | 41 Pochet Rd | Orleans | c 1920 |
| ORL.333 | Smith, S. - Lyon, E. House | 46 Pochet Rd | Orleans | c 1880 |
| ORL.336 | Sparrow, David G. House | 66 Pochet Rd | Orleans | c 1800 |
| ORL.332 | Young, Jedediah - Wiles, Benjamin House | 84 Pochet Rd | Orleans | c 1830 |
| ORL.341 | Mayo, Asa F. House | 167 Pochet Rd | Orleans | 1835 |
| ORL.174 | Taylor, James House | 14 Pond Rd | Orleans | c 1810 |
| ORL.173 | Higgins, Willard House | 26 Pond Rd | Orleans | c 1830 |
| ORL.172 | Taylor, Louise A. House | 54 Pond Rd | Orleans | 1903 |
| ORL.342 | Rogers, Charles E. House | 72 Portanimicut Rd | Orleans | c 1885 |
| ORL.343 | Rogers, Freeman E. House | 89 Portanimicut Rd | Orleans | c 1840 |
| ORL.346 | Rogers, E. House | 102 Portanimicut Rd | Orleans | c 1860 |
| ORL.373 | Rogers, George W. House | 107 Portanimicut Rd | Orleans | c 1875 |
| ORL.347 | Higgins, Eli S. House | 116 Portanimicut Rd | Orleans | c 1860 |
| ORL.1139 | | 3 Prence Ln | Orleans | 1960 |
| ORL.1140 | | 7 Prence Ln | Orleans | 1969 |
| ORL.549 | | 2 Preservation Path | Orleans | 1998 |
| ORL.550 | | 6 Preservation Path | Orleans | 1989 |
| ORL.1308 | Windward | 1 Priscilla Rd | Orleans | 1918 |
| ORL.1309 | | 4 Priscilla Rd | Orleans | 2011 |
| ORL.1310 | | 4 Priscilla Rd | Orleans | 1950 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|------------------|---------|--------|
| ORL.1311 | | 8 Priscilla Rd | Orleans | 1955 |
| ORL.1312 | | 9 Priscilla Rd | Orleans | 2008 |
| ORL.1313 | | 10 Priscilla Rd | Orleans | 1940 |
| ORL.1314 | | 11 Priscilla Rd | Orleans | 2008 |
| ORL.1315 | | 13 Priscilla Rd | Orleans | 2008 |
| ORL.1316 | | 14 Priscilla Rd | Orleans | 1950 |
| ORL.1317 | | 15 Priscilla Rd | Orleans | 1956 |
| ORL.1318 | | 16 Priscilla Rd | Orleans | 2016 |
| ORL.1319 | | 18 Priscilla Rd | Orleans | 1935 |
| ORL.1320 | | 19 Priscilla Rd | Orleans | 1948 |
| ORL.1321 | | 21 Priscilla Rd | Orleans | 1950 |
| ORL.1322 | | 23 Priscilla Rd | Orleans | 2008 |
| ORL.1323 | | 24 Priscilla Rd | Orleans | 1967 |
| ORL.1324 | | 24 Priscilla Rd | Orleans | 1960 |
| ORL.1325 | | 25 Priscilla Rd | Orleans | 1971 |
| ORL.1326 | | 28 Priscilla Rd | Orleans | 1950 |
| ORL.1327 | | 29 Priscilla Rd | Orleans | 1930 |
| ORL.374 | Mayo - Hammett, E. A. W. House | 106 Quanset Rd | Orleans | c 1830 |
| ORL.375 | Mayo House | 110 Quanset Rd | Orleans | c 1865 |
| ORL.376 | Brooks, Rev. John G. House | 162 Quanset Rd | Orleans | 1898 |
| ORL.377 | Brooks, Rev. John G. House | 162 Quanset Rd | Orleans | 1908 |
| ORL.551 | | 7 Richardson Ln | Orleans | 1950 |
| ORL.552 | | 10 Richardson Ln | Orleans | 2005 |
| ORL.553 | | 11 Richardson Ln | Orleans | 1986 |
| ORL.554 | | 15 Richardson Ln | Orleans | 1991 |
| ORL.913 | Packet Landing Site Marker | River Rd | Orleans | 1976 |
| ORL.188 | Universalist Society Meetinghouse | 3 River Rd | Orleans | 1834 |
| ORL.1197 | Hurd Chapel | 3 River Rd | Orleans | 1939 |
| ORL.1198 | | 10 River Rd | Orleans | 2015 |
| ORL.190 | Rock Harbor Academy | 19 River Rd | Orleans | 1800 |
| ORL.192 | Orleans Congregational Church Parsonage | 38 River Rd | Orleans | c 1800 |
| ORL.191 | Higgins, Jonathan House | 39 River Rd | Orleans | c 1840 |
| ORL.194 | Higgins, Thomas House | 67 River Rd | Orleans | 1820 |
| ORL.900 | War of 1812 Marker | Rock Harbor | Orleans | 1979 |
| ORL.924 | Coast Guard Motor Lifeboat CG 36500 | Rock Harbor | Orleans | 1946 |
| ORL.84 | Harding, Eliza House | 2 Rock Harbor Rd | Orleans | 1850 |
| ORL.83 | | 6 Rock Harbor Rd | Orleans | c 1875 |
| ORL.1141 | | 6 Rock Harbor Rd | Orleans | r 1880 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-------------------------|--------------------|---------|--------|
| ORL.1142 | | 8 Rock Harbor Rd | Orleans | 1925 |
| ORL.82 | | 10 Rock Harbor Rd | Orleans | c 1800 |
| ORL.81 | | 12 Rock Harbor Rd | Orleans | 1880 |
| ORL.1143 | | 15 Rock Harbor Rd | Orleans | 1950 |
| ORL.1144 | | 17 Rock Harbor Rd | Orleans | 1938 |
| ORL.80 | | 20 Rock Harbor Rd | Orleans | 1803 |
| ORL.79 | | 23 Rock Harbor Rd | Orleans | c 1800 |
| ORL.1145 | | 29 Rock Harbor Rd | Orleans | 1945 |
| ORL.1146 | | 31 Rock Harbor Rd | Orleans | 2011 |
| ORL.1147 | | 40 Rock Harbor Rd | Orleans | 2007 |
| ORL.556 | | 50 Rock Harbor Rd | Orleans | 1909 |
| ORL.557 | | 55 Rock Harbor Rd | Orleans | 1975 |
| ORL.1 | Nickerson, Winsor House | 60 Rock Harbor Rd | Orleans | 1820 |
| ORL.558 | | 64 Rock Harbor Rd | Orleans | 1951 |
| ORL.559 | | 66 Rock Harbor Rd | Orleans | 1949 |
| ORL.560 | | 69 Rock Harbor Rd | Orleans | 1945 |
| ORL.2 | Smith, S. K. House | 70 Rock Harbor Rd | Orleans | 1770 |
| ORL.5 | Hurd, Edward House | 75 Rock Harbor Rd | Orleans | 1843 |
| ORL.561 | Hurd, Edward Barn | 75 Rock Harbor Rd | Orleans | c 1850 |
| ORL.562 | | 76 Rock Harbor Rd | Orleans | 1936 |
| ORL.3 | Smith, Freeman S. House | 78 Rock Harbor Rd | Orleans | 1820 |
| ORL.563 | | 80 Rock Harbor Rd | Orleans | 1960 |
| ORL.4 | Sherman, Frank House | 84 Rock Harbor Rd | Orleans | 1858 |
| ORL.564 | | 86 Rock Harbor Rd | Orleans | 1930 |
| ORL.565 | | 88 Rock Harbor Rd | Orleans | 1925 |
| ORL.566 | | 89 Rock Harbor Rd | Orleans | 1950 |
| ORL.567 | | 92 Rock Harbor Rd | Orleans | 1956 |
| ORL.9 | Snow, J. House | 96 Rock Harbor Rd | Orleans | c 1800 |
| ORL.10 | Sloan, J. G. House | 97 Rock Harbor Rd | Orleans | 1800 |
| ORL.568 | | 100 Rock Harbor Rd | Orleans | 1949 |
| ORL.569 | | 104 Rock Harbor Rd | Orleans | 1962 |
| ORL.11 | | 107 Rock Harbor Rd | Orleans | 1935 |
| ORL.570 | | 107 Rock Harbor Rd | Orleans | 1960 |
| ORL.571 | | 108 Rock Harbor Rd | Orleans | 1930 |
| ORL.572 | | 109 Rock Harbor Rd | Orleans | 1984 |
| ORL.14 | Young, F. House | 111 Rock Harbor Rd | Orleans | 1810 |
| ORL.12 | Stevens House | 112 Rock Harbor Rd | Orleans | 1820 |
| ORL.13 | Smith, T. House | 114 Rock Harbor Rd | Orleans | 1850 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|----------------------------------|--------------------|---------|------|
| ORL.573 | | 115 Rock Harbor Rd | Orleans | 1960 |
| ORL.574 | Capt Cass - Rock Harbor Seafood | 117 Rock Harbor Rd | Orleans | 1930 |
| ORL.575 | | 119 Rock Harbor Rd | Orleans | 1965 |
| ORL.576 | | 121 Rock Harbor Rd | Orleans | 1930 |
| ORL.15 | Rogers, Charles House | 122 Rock Harbor Rd | Orleans | 1850 |
| ORL.17 | Hopkins, J. House | 123 Rock Harbor Rd | Orleans | 1840 |
| ORL.16 | Rogers House | 124 Rock Harbor Rd | Orleans | 1810 |
| ORL.578 | | 128 Rock Harbor Rd | Orleans | 1925 |
| ORL.18 | | 129 Rock Harbor Rd | Orleans | 1800 |
| ORL.579 | | 133 Rock Harbor Rd | Orleans | 1950 |
| ORL.580 | | 134 Rock Harbor Rd | Orleans | 1911 |
| ORL.19 | Smith, Capt. Elmer C. House | 137 Rock Harbor Rd | Orleans | 1818 |
| ORL.581 | | 137 Rock Harbor Rd | Orleans | 1941 |
| ORL.582 | | 137 Rock Harbor Rd | Orleans | 1972 |
| ORL.583 | | 137 Rock Harbor Rd | Orleans | 1941 |
| ORL.584 | | 137 Rock Harbor Rd | Orleans | 1941 |
| ORL.585 | | 137 Rock Harbor Rd | Orleans | 1941 |
| ORL.586 | | 137 Rock Harbor Rd | Orleans | 1941 |
| ORL.587 | | 140 Rock Harbor Rd | Orleans | 1984 |
| ORL.588 | | 141 Rock Harbor Rd | Orleans | 1949 |
| ORL.589 | | 142 Rock Harbor Rd | Orleans | 1920 |
| ORL.590 | | 142 Rock Harbor Rd | Orleans | 1900 |
| ORL.591 | | 144 Rock Harbor Rd | Orleans | 1915 |
| ORL.592 | | 145 Rock Harbor Rd | Orleans | 1950 |
| ORL.593 | Town of Orleans Community Center | 150 Rock Harbor Rd | Orleans | 1983 |
| ORL.594 | | 151 Rock Harbor Rd | Orleans | 1920 |
| ORL.595 | | 155 Rock Harbor Rd | Orleans | 1980 |
| ORL.596 | | 156 Rock Harbor Rd | Orleans | 1900 |
| ORL.20 | | 168 Rock Harbor Rd | Orleans | 1805 |
| ORL.597 | | 170 Rock Harbor Rd | Orleans | 1970 |
| ORL.21 | Smith, A. F. House | 172 Rock Harbor Rd | Orleans | 1850 |
| ORL.598 | | 174 Rock Harbor Rd | Orleans | 1999 |
| ORL.599 | | 181 Rock Harbor Rd | Orleans | 1949 |
| ORL.600 | | 184 Rock Harbor Rd | Orleans | 1966 |
| ORL.601 | | 185 Rock Harbor Rd | Orleans | 1950 |
| ORL.23 | Sparrow, Jabez House | 188 Rock Harbor Rd | Orleans | 1830 |
| ORL.602 | | 190 Rock Harbor Rd | Orleans | 2003 |
| ORL.603 | | 191 Rock Harbor Rd | Orleans | 1984 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|--------------------|---------|--------|
| ORL.604 | | 192 Rock Harbor Rd | Orleans | 1840 |
| ORL.24 | | 196 Rock Harbor Rd | Orleans | 1840 |
| ORL.605 | | 198 Rock Harbor Rd | Orleans | 1965 |
| ORL.606 | | 200 Rock Harbor Rd | Orleans | 1955 |
| ORL.25 | | 202 Rock Harbor Rd | Orleans | 1790 |
| ORL.607 | | 205 Rock Harbor Rd | Orleans | 2002 |
| ORL.608 | | 205 Rock Harbor Rd | Orleans | 1950 |
| ORL.609 | | 206 Rock Harbor Rd | Orleans | 2006 |
| ORL.27 | Smith House | 210 Rock Harbor Rd | Orleans | 1790 |
| ORL.610 | | 211 Rock Harbor Rd | Orleans | 1960 |
| ORL.26 | Cummings, Capt. Joseph House | 217 Rock Harbor Rd | Orleans | 1830 |
| ORL.611 | Cummings, Captain Joseph Barn | 217 Rock Harbor Rd | Orleans | c 1850 |
| ORL.612 | | 221 Rock Harbor Rd | Orleans | 1951 |
| ORL.613 | | 223 Rock Harbor Rd | Orleans | 1972 |
| ORL.614 | | 225 Rock Harbor Rd | Orleans | 1972 |
| ORL.28 | Rose, J. L. House | 227 Rock Harbor Rd | Orleans | c 1830 |
| ORL.615 | | 227 Rock Harbor Rd | Orleans | 1940 |
| ORL.616 | Barnstable County Courthouse | 237 Rock Harbor Rd | Orleans | 1970 |
| ORL.617 | | 257 Rock Harbor Rd | Orleans | 1920 |
| ORL.922 | Route 6 Bridge over Route 6A | Rt 6 | Orleans | 1957 |
| ORL.303 | Goodwin, Florence Moore - Dacey, John P. House | 2 Sages Way | Orleans | c 1830 |
| ORL.1455 | | 2 Sages Way | Orleans | 1999 |
| ORL.1456 | | 7 Sages Way | Orleans | 1960 |
| ORL.47 | Atwood, Joseph - Hurley, Henry W. House | 1 Salty Ridge Rd | Orleans | c 1845 |
| ORL.663 | | 5 Salty Ridge Rd | Orleans | 1957 |
| ORL.45 | Chace, Charles House | 9 Salty Ridge Rd | Orleans | 1895 |
| ORL.664 | | 10 Salty Ridge Rd | Orleans | 1930 |
| ORL.665 | | 11 Salty Ridge Rd | Orleans | 1932 |
| ORL.44 | | 15 Salty Ridge Rd | Orleans | 1890 |
| ORL.666 | | 21 Salty Ridge Rd | Orleans | 1987 |
| ORL.667 | | 23 Salty Ridge Rd | Orleans | 1972 |
| ORL.1199 | | 5 School Rd | Orleans | 1989 |
| ORL.1200 | | 9 School Rd | Orleans | 1978 |
| ORL.189 | Orleans Primary School | 19 School Rd | Orleans | 1923 |
| ORL.949 | Dunham, Earl "Whitey" Jr. Little League Field | 19 School Rd | Orleans | 1981 |
| ORL.1201 | | 23 School Rd | Orleans | 1935 |
| ORL.1457 | | 4 Seal Ln | Orleans | 1960 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------------------------------|---------------------|---------|--------|
| ORL.1458 | | 7 Seal Ln | Orleans | 1982 |
| ORL.1459 | | 9 Seal Ln | Orleans | 1986 |
| ORL.1460 | | 2 Seaview Rd | Orleans | 1987 |
| ORL.348 | | 4 Seaview Rd | Orleans | c 1915 |
| ORL.1461 | | 4 Seaview Rd | Orleans | 1935 |
| ORL.1462 | | 4 Seaview Rd | Orleans | 1930 |
| ORL.1463 | | 4 Seaview Rd | Orleans | 1940 |
| ORL.1464 | | 4 Seaview Rd | Orleans | 1930 |
| ORL.1465 | | 4 Seaview Rd | Orleans | 1930 |
| ORL.1466 | | 12 Seaview Rd | Orleans | 1966 |
| ORL.1467 | | 16 Seaview Rd | Orleans | 1972 |
| ORL.1468 | | 20 Seaview Rd | Orleans | 2004 |
| ORL.618 | | 2 Shell Ln | Orleans | 1956 |
| ORL.619 | | 6 Shell Ln | Orleans | 1953 |
| ORL.53 | Doane, Isaac House | 55 Skaket Beach Rd | Orleans | 1800 |
| ORL.55 | Ellis, Frank House | 70 Skaket Beach Rd | Orleans | 1840 |
| ORL.669 | | 70 Skaket Beach Rd | Orleans | 1970 |
| ORL.54 | Freeman, Joshua House | 71 Skaket Beach Rd | Orleans | 1870 |
| ORL.670 | | 74 Skaket Beach Rd | Orleans | 1961 |
| ORL.671 | | 87 Skaket Beach Rd | Orleans | 2006 |
| ORL.56 | Smith, Joshua House | 88 Skaket Beach Rd | Orleans | 1825 |
| ORL.672 | | 88 Skaket Beach Rd | Orleans | r 1850 |
| ORL.57 | Mayo, William House | 93 Skaket Beach Rd | Orleans | c 1850 |
| ORL.673 | | 95 Skaket Beach Rd | Orleans | 1947 |
| ORL.674 | | 96 Skaket Beach Rd | Orleans | 1965 |
| ORL.58 | Gould, Benjamin - Knowles, Seth House | 101 Skaket Beach Rd | Orleans | 1780 |
| ORL.675 | | 101 Skaket Beach Rd | Orleans | r 1850 |
| ORL.59 | Brown, T. House | 102 Skaket Beach Rd | Orleans | c 1850 |
| ORL.676 | | 105 Skaket Beach Rd | Orleans | 1962 |
| ORL.677 | | 108 Skaket Beach Rd | Orleans | 1850 |
| ORL.62 | Rogers, T. House | 122 Skaket Beach Rd | Orleans | c 1750 |
| ORL.678 | | 122 Skaket Beach Rd | Orleans | r 1850 |
| ORL.679 | | 126 Skaket Beach Rd | Orleans | 1970 |
| ORL.680 | | 126 Skaket Beach Rd | Orleans | 2006 |
| ORL.64 | Rogers, Marshall House | 131 Skaket Beach Rd | Orleans | c 1800 |
| ORL.681 | | 135 Skaket Beach Rd | Orleans | 1986 |
| ORL.63 | Linnell, Capt. Ebenezer Harding House | 137 Skaket Beach Rd | Orleans | 1851 |
| ORL.65 | | 157 Skaket Beach Rd | Orleans | c 1790 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------------------------|---------------------|---------|--------|
| ORL.682 | | 172 Skaket Beach Rd | Orleans | 1927 |
| ORL.683 | | 176 Skaket Beach Rd | Orleans | 1959 |
| ORL.684 | | 179 Skaket Beach Rd | Orleans | 1960 |
| ORL.685 | | 180 Skaket Beach Rd | Orleans | 1988 |
| ORL.67 | Freeman, Nathaniel House | 185 Skaket Beach Rd | Orleans | c 1820 |
| ORL.686 | | 186 Skaket Beach Rd | Orleans | 1976 |
| ORL.687 | | 189 Skaket Beach Rd | Orleans | 1950 |
| ORL.688 | | 193 Skaket Beach Rd | Orleans | 1955 |
| ORL.689 | | 193 Skaket Beach Rd | Orleans | 1961 |
| ORL.690 | | 193 Skaket Beach Rd | Orleans | 1961 |
| ORL.1148 | | 10 Skaket Corners | Orleans | 1978 |
| ORL.668 | | 3 Skaket Cr | Orleans | 1973 |
| ORL.1328 | | 1 Skunks Bluff | Orleans | 2013 |
| ORL.1329 | | 2 Skunks Bluff | Orleans | 1979 |
| ORL.1330 | | 2 Skunks Bluff | Orleans | 1990 |
| ORL.620 | | 5 Smith Bros. Way | Orleans | 1971 |
| ORL.621 | | 8 Smiths Bros. Way | Orleans | 1970 |
| ORL.915 | Fighting Chance Marker | Snow Shore Rd | Orleans | |
| ORL.952 | Snow Shore Marker | Snow Shore Rd | Orleans | 1976 |
| ORL.1469 | | 5 Snow Shore Rd | Orleans | 1952 |
| ORL.1470 | | 6 Snow Shore Rd | Orleans | 1984 |
| ORL.1471 | | 8 Snow Shore Rd | Orleans | 2005 |
| ORL.1472 | | 9 Snow Shore Rd | Orleans | 1950 |
| ORL.1473 | | 10 Snow Shore Rd | Orleans | 1960 |
| ORL.1474 | | 11 Snow Shore Rd | Orleans | 1951 |
| ORL.1475 | | 14 Snow Shore Rd | Orleans | 1918 |
| ORL.1476 | | 18 Snow Shore Rd | Orleans | 2012 |
| ORL.1477 | | 20 Snow Shore Rd | Orleans | 1990 |
| ORL.1478 | | 22 Snow Shore Rd | Orleans | 1911 |
| ORL.1479 | | 24 Snow Shore Rd | Orleans | 2001 |
| ORL.1480 | | 31 Snow Shore Rd | Orleans | 1940 |
| ORL.1481 | | 33 Snow Shore Rd | Orleans | 1930 |
| ORL.1482 | | 35 Snow Shore Rd | Orleans | c 1930 |
| ORL.917 | Pleasant Bay Marker | South Orleans Rd | Orleans | 1976 |
| ORL.281 | Boy Scout's Boat House | 0 South Orleans Rd | Orleans | c 1950 |
| ORL.1149 | | 1 South Orleans Rd | Orleans | 1979 |
| ORL.96 | Higgins - Norgeot, Gaston House | 5 South Orleans Rd | Orleans | 1874 |
| ORL.95 | | 7 South Orleans Rd | Orleans | 1890 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|----------------------|---------|--------|
| ORL.1150 | | 10 South Orleans Rd | Orleans | 1983 |
| ORL.94 | | 11 South Orleans Rd | Orleans | 1880 |
| ORL.1151 | | 11 South Orleans Rd | Orleans | 1930 |
| ORL.1152 | | 13 South Orleans Rd | Orleans | 1959 |
| ORL.97 | Higgins, Benjamin House | 16 South Orleans Rd | Orleans | c 1861 |
| ORL.396 | Higgins, Benjamin Barn | 16 South Orleans Rd | Orleans | 1875 |
| ORL.1153 | | 19 South Orleans Rd | Orleans | 1920 |
| ORL.98 | Swain, Captain Joseph House | 20 South Orleans Rd | Orleans | r 1872 |
| ORL.93 | Nickerson, Winsor House | 21 South Orleans Rd | Orleans | 1840 |
| ORL.1154 | | 23 South Orleans Rd | Orleans | 1961 |
| ORL.1155 | | 24 South Orleans Rd | Orleans | 1970 |
| ORL.1156 | | 25 South Orleans Rd | Orleans | 1945 |
| ORL.1157 | | 27 South Orleans Rd | Orleans | 2014 |
| ORL.1158 | | 28 South Orleans Rd | Orleans | 1977 |
| ORL.1159 | | 30 South Orleans Rd | Orleans | 1982 |
| ORL.92 | Newcomb, Capt. Thomas Snow | 35 South Orleans Rd | Orleans | 1850 |
| ORL.1160 | | 37 South Orleans Rd | Orleans | 1960 |
| ORL.1161 | | 39 South Orleans Rd | Orleans | 1925 |
| ORL.91 | French Cable Station | 41 South Orleans Rd | Orleans | 1891 |
| ORL.905 | French Atlantic Cable Station Marker | 41 South Orleans Rd | Orleans | 1976 |
| ORL.99 | Upham, Edgar H. House | 42 South Orleans Rd | Orleans | 1911 |
| ORL.1162 | | 43 South Orleans Rd | Orleans | 1976 |
| ORL.1163 | | 44 South Orleans Rd | Orleans | 1950 |
| ORL.90 | Horton, E. R. - Belcher House | 45 South Orleans Rd | Orleans | c 1880 |
| ORL.1164 | | 45 South Orleans Rd | Orleans | 1920 |
| ORL.1165 | | 46 South Orleans Rd | Orleans | 1985 |
| ORL.201 | Collins, Sylvanus House | 67 South Orleans Rd | Orleans | c 1895 |
| ORL.141 | Fiske, Augusta E. House | 69 South Orleans Rd | Orleans | c 1893 |
| ORL.432 | Orleans Junior-Senior High School | 70 South Orleans Rd | Orleans | 1938 |
| ORL.433 | Nauset Public Schools Administrative Building | 70 South Orleans Rd | Orleans | r 1978 |
| ORL.945 | Orleans Junior-Senior High School - Greenhouse | 70 South Orleans Rd | Orleans | 2015 |
| ORL.946 | Orleans Junior-Senior High School - Athletic Field | 70 South Orleans Rd | Orleans | 1958 |
| ORL.947 | Orleans Junior-Senior High School - Finch Skate Park | 70 South Orleans Rd | Orleans | r 1978 |
| ORL.142 | Edwards, Christopher House | 109 South Orleans Rd | Orleans | c 1875 |
| ORL.143 | Mayo, Alexander House | 128 South Orleans Rd | Orleans | c 1850 |
| ORL.349 | Gould, Frank House | 268 South Orleans Rd | Orleans | c 1790 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---|-----------------------|---------|--------|
| ORL.366 | Nickerson, E. C. House | 286 South Orleans Rd | Orleans | c 1875 |
| ORL.368 | Atkins, J. - Small, Frank G. House | 309 South Orleans Rd | Orleans | c 1850 |
| ORL.350 | Smith, A. House | 310 South Orleans Rd | Orleans | c 1830 |
| ORL.352 | Gould, J. - Linnell, Isaiah House | 313 South Orleans Rd | Orleans | c 1825 |
| ORL.353 | Murdock, John House | 317A South Orleans Rd | Orleans | r 1815 |
| ORL.369 | Sparrow, H. F. House | 332 South Orleans Rd | Orleans | c 1850 |
| ORL.354 | Sparrow, Capt. Seth House | 341 South Orleans Rd | Orleans | c 1850 |
| ORL.355 | Kenrick, Capt. John - Sparrow, Arthur House | 353 South Orleans Rd | Orleans | c 1800 |
| ORL.370 | Kendrick, Capt. Jonathan House | 388 South Orleans Rd | Orleans | 1792 |
| ORL.916 | South Orleans District School Marker | 411 South Orleans Rd | Orleans | |
| ORL.434 | Rogers, Joseph R. House | 412 South Orleans Rd | Orleans | c 1920 |
| ORL.435 | Rogers, Joseph R. Garage | 412 South Orleans Rd | Orleans | c 1920 |
| ORL.395 | Rogers, George S. House | 489 South Orleans Rd | Orleans | c 1850 |
| ORL.356 | Mayo, Joseph K. - Holmes, Abner H. House | 509 South Orleans Rd | Orleans | c 1850 |
| ORL.380 | Nickerson, W. - Eldredge, Elnathan E. House | 540 South Orleans Rd | Orleans | c 1875 |
| ORL.381 | Rogers, Ezekiel H. House | 545 South Orleans Rd | Orleans | c 1865 |
| ORL.382 | Rogers, Capt. Zenas Jr. House | 556 South Orleans Rd | Orleans | c 1855 |
| ORL.357 | | 560 South Orleans Rd | Orleans | c 1800 |
| ORL.359 | Winslow, Sidney House | 564 South Orleans Rd | Orleans | c 1800 |
| ORL.383 | Eldredge, Ziba House | 588 South Orleans Rd | Orleans | c 1800 |
| ORL.361 | Eldridge Homestead Place - Poor, Charles F. House | 610 South Orleans Rd | Orleans | c 1800 |
| ORL.362 | Poor, Charles F. Boathouse | 615 South Orleans Rd | Orleans | c 1900 |
| ORL.384 | Smith, James House - Fairview | 626 South Orleans Rd | Orleans | c 1830 |
| ORL.363 | | 646 South Orleans Rd | Orleans | c 1920 |
| ORL.280 | | 654 South Orleans Rd | Orleans | c 1800 |
| ORL.1331 | Bowley, Annie Cottage | 1 Standish Rd | Orleans | c 1925 |
| ORL.1332 | | 3 Standish Rd | Orleans | 1980 |
| ORL.1333 | Martson - Williams Cottage | 4 Standish Rd | Orleans | 1924 |
| ORL.1334 | | 4 Standish Rd | Orleans | c 1935 |
| ORL.1335 | | 4 Standish Rd | Orleans | c 1945 |
| ORL.1336 | | 5 Standish Rd | Orleans | 1993 |
| ORL.1337 | | 8 Standish Rd | Orleans | 1920 |
| ORL.1338 | | 8 Standish Rd | Orleans | c 1920 |
| ORL.1339 | Howe, Arthur and Gertrude House | 9 Standish Rd | Orleans | 1940 |
| ORL.1340 | | 9 Standish Rd | Orleans | 1925 |
| ORL.1341 | | 9 Standish Rd | Orleans | 1920 |
| ORL.1342 | | 10 Standish Rd | Orleans | 1998 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|--|--------------------|---------|--------|
| ORL.1343 | | 13 Standish Rd | Orleans | 2004 |
| ORL.1344 | | 14 Standish Rd | Orleans | 1923 |
| ORL.1345 | | 15 Standish Rd | Orleans | 1972 |
| ORL.1346 | | 15B Standish Rd | Orleans | 1940 |
| ORL.1347 | | 15 Standish Rd | Orleans | 1970 |
| ORL.1348 | | 18 Standish Rd | Orleans | 1940 |
| ORL.1349 | Bixby Cottage | 21 Standish Rd | Orleans | 1915 |
| ORL.1350 | Bixby Garage | 21 Standish Rd | Orleans | 1915 |
| ORL.1351 | Warner Cottage | 23 Standish Rd | Orleans | 1920 |
| ORL.1352 | Warner Garage | 23 Standish Rd | Orleans | 1920 |
| ORL.1353 | | 26 Standish Rd | Orleans | 1973 |
| ORL.1354 | | 27 Standish Rd | Orleans | 2011 |
| ORL.1483 | | 3 Stony Island Way | Orleans | 1988 |
| ORL.1484 | | 6 Stony Island Way | Orleans | 1982 |
| ORL.1485 | | 8 Stony Island Way | Orleans | 1987 |
| ORL.691 | | 4 Susans' Ln | Orleans | 1975 |
| ORL.692 | | 5 Susans' Ln | Orleans | 1840 |
| ORL.387 | | 12 Tar Kiln Rd | Orleans | c 1910 |
| ORL.386 | Bessom, Richard House | 38 Tar Kiln Rd | Orleans | 1880 |
| ORL.279 | | 50 Tar Kiln Rd | Orleans | c 1860 |
| ORL.385 | Snow House | 66 Tar Kiln Rd | Orleans | c 1800 |
| ORL.278 | | 85 Tar Kiln Rd | Orleans | c 1800 |
| ORL.272 | Snow, Capt. Russell House | 66 Tides End Ln | Orleans | c 1800 |
| ORL.153 | Smith, Johnny Bakery | 9 Tonset Rd | Orleans | c 1880 |
| ORL.154 | | 14 Tonset Rd | Orleans | 1900 |
| ORL.155 | | 21 Tonset Rd | Orleans | c 1900 |
| ORL.224 | Seabury, Dr. Benjamin F. House | 44 Tonset Rd | Orleans | 1858 |
| ORL.225 | Seabury, Dr. Benjamin F. Barn | 44 Tonset Rd | Orleans | 1858 |
| ORL.920 | Hopkins, Giles Homestead Marker | 50 Tonset Rd | Orleans | 1976 |
| ORL.226 | French Atlantic Cable Station Superintendent House | 58 Tonset Rd | Orleans | c 1879 |
| ORL.227 | Poland, James W. - Crosby, Soloman House | 66 Tonset Rd | Orleans | 1869 |
| ORL.406 | Sea Call Farm House | 82 Tonset Rd | Orleans | 1921 |
| ORL.407 | Sea Call Farm Garage | 82 Tonset Rd | Orleans | c 1931 |
| ORL.408 | Sea Call Farm Greenhouse | 82 Tonset Rd | Orleans | c 1931 |
| ORL.925 | Sea Call Farm Spruce Tree Windbreak | 82 Tonset Rd | Orleans | 1928 |
| ORL.926 | Sea Call Farm Orchard | 82 Tonset Rd | Orleans | c 1935 |
| ORL.927 | Sea Call Farm Meadow | 82 Tonset Rd | Orleans | c 1935 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------------------------|---------------|---------|--------|
| ORL.928 | Sea Call Farm Native Forest | 82 Tonset Rd | Orleans | |
| ORL.929 | Sea Call Farm Hedgerow | 82 Tonset Rd | Orleans | r 1935 |
| ORL.930 | Sea Call Farm - Town Cove Trail | 82 Tonset Rd | Orleans | |
| ORL.931 | Sea Call Farm Community Gardens | 82 Tonset Rd | Orleans | r 1995 |
| ORL.228 | | 169 Tonset Rd | Orleans | 1876 |
| ORL.229 | Hopkins, Elisha House | 175 Tonset Rd | Orleans | c 1850 |
| ORL.230 | Hopkins, Sylvenus L. House | 214 Tonset Rd | Orleans | c 1850 |
| ORL.231 | Hopkins, Asa House | 226 Tonset Rd | Orleans | c 1812 |
| ORL.232 | Hopkins, Josiah House | 239 Tonset Rd | Orleans | c 1840 |
| ORL.409 | Hopkins, Thankful Paine Shed | 239 Tonset Rd | Orleans | r 1865 |
| ORL.1554 | Hopkins, Josiah Pump House | 239 Tonset Rd | Orleans | r 1865 |
| ORL.233 | Crosby, Solomon House | 248 Tonset Rd | Orleans | c 1710 |
| ORL.234 | Freeman, A. House | 251 Tonset Rd | Orleans | c 1865 |
| ORL.235 | Hopkins, John M. House | 260 Tonset Rd | Orleans | c 1820 |
| ORL.236 | Snow, Willis Second House | 261 Tonset Rd | Orleans | c 1860 |
| ORL.237 | Hayden, Freeman Jr. House | 299 Tonset Rd | Orleans | c 1860 |
| ORL.238 | Hayden, Caleb House | 301 Tonset Rd | Orleans | c 1860 |
| ORL.1486 | | 303 Tonset Rd | Orleans | 1999 |
| ORL.1487 | | 305 Tonset Rd | Orleans | 1960 |
| ORL.1488 | | 307 Tonset Rd | Orleans | 1960 |
| ORL.1489 | | 307 Tonset Rd | Orleans | 2003 |
| ORL.1490 | | 307 Tonset Rd | Orleans | 1960 |
| ORL.1491 | | 307 Tonset Rd | Orleans | 2001 |
| ORL.239 | Crosby, Joshua House | 311 Tonset Rd | Orleans | c 1840 |
| ORL.393 | Freeman, Maj. John Shed | 311 Tonset Rd | Orleans | c 1680 |
| ORL.1492 | | 315 Tonset Rd | Orleans | 1996 |
| ORL.1493 | | 317 Tonset Rd | Orleans | 1950 |
| ORL.1494 | | 317 Tonset Rd | Orleans | 1950 |
| ORL.1495 | | 317 Tonset Rd | Orleans | 1997 |
| ORL.1496 | | 320 Tonset Rd | Orleans | 2006 |
| ORL.1497 | | 321 Tonset Rd | Orleans | 1850 |
| ORL.1498 | | 321 Tonset Rd | Orleans | 1880 |
| ORL.1499 | | 325 Tonset Rd | Orleans | 1946 |
| ORL.240 | Freeman, J. House | 328 Tonset Rd | Orleans | c 1776 |
| ORL.1500 | | 328 Tonset Rd | Orleans | 2008 |
| ORL.1501 | | 332 Tonset Rd | Orleans | 2008 |
| ORL.1502 | | 334 Tonset Rd | Orleans | 1920 |
| ORL.1503 | | 335 Tonset Rd | Orleans | 1953 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|-----------------------------------|------------------------|---------|--------|
| ORL.1504 | | 338 Tonset Rd | Orleans | 2015 |
| ORL.1505 | | 340 Tonset Rd | Orleans | 1935 |
| ORL.1506 | | 342 Tonset Rd | Orleans | 1850 |
| ORL.1507 | | 342 Tonset Rd | Orleans | 1850 |
| ORL.241 | Crosby, Capt. Joshua House | 343 Tonset Rd | Orleans | c 1780 |
| ORL.1508 | | 343 Tonset Rd | Orleans | 1973 |
| ORL.1509 | | 343 Tonset Rd | Orleans | c 1940 |
| ORL.242 | Moulton, Charles C. House | 345 Tonset Rd | Orleans | 1881 |
| ORL.1510 | | 346 Tonset Rd | Orleans | 2003 |
| ORL.1511 | | 347 Tonset Rd | Orleans | 1955 |
| ORL.1512 | | 349 Tonset Rd | Orleans | 1921 |
| ORL.1513 | | 349 Tonset Rd | Orleans | 1995 |
| ORL.243 | Freeman, Frank House | 350 Tonset Rd | Orleans | c 1776 |
| ORL.244 | Lowe, H. Alice House | 351 Tonset Rd | Orleans | c 1923 |
| ORL.1514 | | 355 Tonset Rd | Orleans | 1905 |
| ORL.1515 | | 355 Tonset Rd | Orleans | 1946 |
| ORL.1516 | | 357 Tonset Rd | Orleans | 1870 |
| ORL.1517 | | 361 Tonset Rd | Orleans | 1964 |
| ORL.1518 | | 364 Tonset Rd | Orleans | 1955 |
| ORL.1519 | | 364 Tonset Rd | Orleans | 2004 |
| ORL.1520 | | 365 Tonset Rd | Orleans | 1950 |
| ORL.1521 | | 365 Tonset Rd | Orleans | 2006 |
| ORL.1522 | | 370 Tonset Rd | Orleans | 1990 |
| ORL.1523 | | 371 Tonset Rd | Orleans | 1950 |
| ORL.1524 | | 372 Tonset Rd | Orleans | 1775 |
| ORL.1525 | | 372 Tonset Rd | Orleans | r 1920 |
| ORL.1526 | | 374 Tonset Rd | Orleans | 1916 |
| ORL.1527 | | 374 Tonset Rd | Orleans | 1900 |
| ORL.270 | Winslow, Sidney W. Carriage House | 23 Towhee Ln | Orleans | 1916 |
| ORL.269 | Winslow, Sidney W. House | 43 Towhee Ln | Orleans | 1915 |
| ORL.1528 | | 3 Twitchknot Farm Way | Orleans | 2005 |
| ORL.1529 | | 6 Twitchknot Farm Way | Orleans | 1979 |
| ORL.1530 | | 7 Twitchknot Farm Way | Orleans | 1986 |
| ORL.1531 | | 8 Twitchknot Farm Way | Orleans | 2003 |
| ORL.1532 | | 11 Twitchknot Farm Way | Orleans | r 1980 |
| ORL.1533 | | 14 Twitchknot Farm Way | Orleans | 1920 |
| ORL.1534 | | 14 Twitchknot Farm Way | Orleans | 1920 |
| ORL.1535 | | 14 Twitchknot Farm Way | Orleans | 1920 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|------------------------|---------------------------|---------|--------|
| ORL.622 | | 16 Uncle Bens Way | Orleans | 1971 |
| ORL.623 | | 17 Uncle Bens Way | Orleans | 1965 |
| ORL.624 | | 20 Uncle Bens Way | Orleans | 1968 |
| ORL.625 | | 21 Uncle Bens Way | Orleans | 1982 |
| ORL.1536 | | 9 Uncle Mark's Way | Orleans | 1968 |
| ORL.1537 | | 17 Uncle Mark's Way | Orleans | 1947 |
| ORL.1538 | | 17 Uncle Mark's Way | Orleans | 2000 |
| ORL.1539 | | 24 Uncle Mark's Way | Orleans | 1920 |
| ORL.1540 | | 28 Uncle Mark's Way | Orleans | 1988 |
| ORL.1541 | | 29 Uncle Mark's Way | Orleans | 1950 |
| ORL.1542 | | 34 Uncle Mark's Way | Orleans | 1918 |
| ORL.1543 | | 34 Uncle Mark's Way | Orleans | 1918 |
| ORL.1544 | | 12 Weeset Proprietors Way | Orleans | 1923 |
| ORL.1545 | | 12 Weeset Proprietors Way | Orleans | 1923 |
| ORL.1546 | | 13 Weeset Proprietors Way | Orleans | 1945 |
| ORL.1547 | | 17 Weeset Proprietors Way | Orleans | 1956 |
| ORL.1548 | | 18 Weeset Proprietors Way | Orleans | 1930 |
| ORL.1549 | | 18 Weeset Proprietors Way | Orleans | 1930 |
| ORL.1550 | | 18 Weeset Proprietors Way | Orleans | 1930 |
| ORL.1551 | | 24 Weeset Proprietors Way | Orleans | 1960 |
| ORL.1552 | | 25 Weeset Proprietors Way | Orleans | 2013 |
| ORL.1166 | | 6 West Rd | Orleans | 1970 |
| ORL.78 | Long, M. House | 12 West Rd | Orleans | c 1795 |
| ORL.1167 | | 16 West Rd | Orleans | 1970 |
| ORL.1168 | | 18 West Rd | Orleans | 2005 |
| ORL.1169 | | 20 West Rd | Orleans | 2005 |
| ORL.1170 | | 23 West Rd | Orleans | 1920 |
| ORL.1171 | | 24 West Rd | Orleans | 1962 |
| ORL.77 | Orleans Jail | 28 West Rd | Orleans | c 1770 |
| ORL.1172 | | 28 West Rd | Orleans | 1984 |
| ORL.1173 | | 29 West Rd | Orleans | 1970 |
| ORL.1174 | | 33 West Rd | Orleans | 1984 |
| ORL.1175 | | 34 West Rd | Orleans | 1927 |
| ORL.76 | Gould, Nathaniel House | 36 West Rd | Orleans | c 1830 |
| ORL.1176 | | 37 West Rd | Orleans | 1950 |
| ORL.1177 | | 45 West Rd | Orleans | 1984 |
| ORL.693 | | 62 West Rd | Orleans | 1850 |
| ORL.694 | | 79 West Rd | Orleans | 1950 |

| Inv. No. | Property Name | Street | Town | Year |
|----------|---------------------------------|---------------------|---------|--------|
| ORL.695 | | 81 West Rd | Orleans | 1950 |
| ORL.696 | | 83 West Rd | Orleans | 1948 |
| ORL.48 | Howes, S. House | 84 West Rd | Orleans | 1850 |
| ORL.697 | | 84 West Rd | Orleans | 2012 |
| ORL.698 | | 86 West Rd | Orleans | 1957 |
| ORL.699 | | 88 West Rd | Orleans | 1958 |
| ORL.49 | Ellis, Ed House | 89 West Rd | Orleans | c 1870 |
| ORL.700 | | 90 West Rd | Orleans | 1955 |
| ORL.50 | Kendrick, Alfred Carriage House | 94 West Rd | Orleans | r 1840 |
| ORL.51 | Atwood, Willie House | 95 West Rd | Orleans | c 1850 |
| ORL.701 | Atwod, Willie Carriage House | 95 West Rd | Orleans | r 1850 |
| ORL.52 | Kendricks, Capt. Alfred House | 98 West Rd | Orleans | c 1830 |
| ORL.394 | | 4 Westwood Rd | Orleans | r 1750 |
| ORL.702 | | 7 Wildflower Ln | Orleans | 1966 |
| ORL.703 | | 16 Wildflower Ln | Orleans | 1986 |
| ORL.704 | | 17 Wildflower Ln | Orleans | 1960 |
| ORL.705 | | 17 Wildflower Ln | Orleans | 1960 |
| ORL.706 | | 5 Willie Atwood Rd | Orleans | 1989 |
| ORL.707 | | 8 Willie Atwood Rd | Orleans | 1945 |
| ORL.708 | | 13 Willie Atwood Rd | Orleans | 1965 |
| ORL.709 | | 16 Willie Atwood Rd | Orleans | 1960 |
| ORL.710 | | 17 Willie Atwood Rd | Orleans | 1950 |
| ORL.711 | | 22 Willie Atwood Rd | Orleans | 1960 |
| ORL.712 | | 26 Willie Atwood Rd | Orleans | 1970 |
| ORL.713 | | 30 Willie Atwood Rd | Orleans | 1966 |
| ORL.714 | | 31 Willie Atwood Rd | Orleans | 1925 |
| ORL.715 | | 42 Willie Atwood Rd | Orleans | 1975 |
| ORL.716 | | 47 Willie Atwood Rd | Orleans | 1937 |
| ORL.717 | | 48 Willie Atwood Rd | Orleans | 1977 |
| ORL.718 | | 51 Willie Atwood Rd | Orleans | 1997 |
| ORL.719 | | 52 Willie Atwood Rd | Orleans | 1975 |
| ORL.268 | Mayo, Asa Barn | 1 Woodsneck Rd | Orleans | 1800 |
| ORL.626 | | 1 Zion Way | Orleans | 1970 |

Attachment G:

Massachusetts Historical Commission Project Notification Form (blank)

Northern Long-Eared Bat 4(d) Rule Streamlined Consultation Form

Federal agencies should use this form for the optional streamlined consultation framework for the northern long-eared bat (NLEB). This framework allows federal agencies to rely upon the U.S. Fish and Wildlife Service's (USFWS) January 5, 2016, intra-Service Programmatic Biological Opinion (BO) on the final 4(d) rule for the NLEB for section 7(a)(2) compliance by: (1) notifying the USFWS that an action agency will use the streamlined framework; (2) describing the project with sufficient detail to support the required determination; and (3) enabling the USFWS to track effects and determine if reinitiation of consultation is required per 50 CFR 402.16.

This form is not necessary if an agency determines that a proposed action will have no effect to the NLEB or if the USFWS has concurred in writing with an agency's determination that a proposed action may affect, but is not likely to adversely affect the NLEB (i.e., the standard informal consultation process). Actions that may cause prohibited incidental take require separate formal consultation. Providing this information does not address section 7(a)(2) compliance for any other listed species.

Information to Determine 4(d) Rule Compliance:

YES NO

| Information to Determine 4(d) Rule Compliance: | YES | NO |
|--|--------------------------|--------------------------|
| 1. Does the project occur wholly outside of the WNS Zone ¹ ? | <input type="checkbox"/> | <input type="checkbox"/> |
| 2. Have you contacted the appropriate agency ² to determine if your project is near known hibernacula or maternity roost trees? | <input type="checkbox"/> | <input type="checkbox"/> |
| 3. Could the project disturb hibernating NLEBs in a known hibernaculum? | <input type="checkbox"/> | <input type="checkbox"/> |
| 4. Could the project alter the entrance or interior environment of a known hibernaculum? | <input type="checkbox"/> | <input type="checkbox"/> |
| 5. Does the project remove any trees within 0.25 miles of a known hibernaculum at any time of year? | <input type="checkbox"/> | <input type="checkbox"/> |
| 6. Would the project cut or destroy known occupied maternity roost trees, or any other trees within a 150-foot radius from the maternity roost tree from June 1 through July 31. | <input type="checkbox"/> | <input type="checkbox"/> |

You are eligible to use this form if you have answered yes to question #1 **or** yes to question #2 **and** no to questions 3, 4, 5 and 6. The remainder of the form will be used by the USFWS to track our assumptions in the BO.

Agency and Applicant³ (Name, Email, Phone No.):

Project Name:

Project Location (include coordinates if known):

Basic Project Description (provide narrative below or attach additional information):

¹ <http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/WNSZone.pdf>

² See <http://www.fws.gov/midwest/endangered/mammals/nleb/nhisites.html>

³ If applicable - only needed for federal actions with applicants (e.g., for a permit, etc.) who are party to the consultation.

| General Project Information | YES | NO |
|--|--------------------------|--------------------------|
| Does the project occur within 0.25 miles of a known hibernaculum? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the project occur within 150 feet of a known maternity roost tree? | <input type="checkbox"/> | <input type="checkbox"/> |
| Does the project include forest conversion ⁴ ? (if yes, report acreage below) | <input type="checkbox"/> | <input type="checkbox"/> |
| Estimated total acres of forest conversion | | |
| If known, estimated acres ⁵ of forest conversion from April 1 to October 31 | | |
| If known, estimated acres of forest conversion from June 1 to July 31 ⁶ | | |
| Does the project include timber harvest? (if yes, report acreage below) | <input type="checkbox"/> | <input type="checkbox"/> |
| Estimated total acres of timber harvest | | |
| If known, estimated acres of timber harvest from April 1 to October 31 | | |
| If known, estimated acres of timber harvest from June 1 to July 31 | | |
| Does the project include prescribed fire? (if yes, report acreage below) | <input type="checkbox"/> | <input type="checkbox"/> |
| Estimated total acres of prescribed fire | | |
| If known, estimated acres of prescribed fire from April 1 to October 31 | | |
| If known, estimated acres of prescribed fire from June 1 to July 31 | | |
| Does the project install new wind turbines? (if yes, report capacity in MW below) | <input type="checkbox"/> | <input type="checkbox"/> |
| Estimated wind capacity (MW) | | |

Agency Determination:

By signing this form, the action agency determines that this project may affect the NLEB, but that any resulting incidental take of the NLEB is not prohibited by the final 4(d) rule.

If the USFWS does not respond within 30 days from submittal of this form, the action agency may presume that its determination is informed by the best available information and that its project responsibilities under 7(a)(2) with respect to the NLEB are fulfilled through the USFWS January 5, 2016, Programmatic BO. The action agency will update this determination annually for multi-year activities.

The action agency understands that the USFWS presumes that all activities are implemented as described herein. The action agency will promptly report any departures from the described activities to the appropriate USFWS Field Office. The action agency will provide the appropriate USFWS Field Office with the results of any surveys conducted for the NLEB. Involved parties will promptly notify the appropriate USFWS Field Office upon finding a dead, injured, or sick NLEB.

Signature: _____

Date Submitted: _____

⁴ Any activity that temporarily or permanently removes suitable forested habitat, including, but not limited to, tree removal from development, energy production and transmission, mining, agriculture, etc. (see page 48 of the BO).

⁵ If the project removes less than 10 trees and the acreage is unknown, report the acreage as less than 0.1 acre.

⁶ If the activity includes tree clearing in June and July, also include those acreage in April to October.



APPENDIX D: MS4 PERMIT-RELATED STANDARD OPERATING PROCEDURES





Finalized MS4 permit-related standard operating procedures (SOPs) are located in Appendix B of the Town's Clean Water Best Practice Manual, which can be found at the Department of Public Works and Natural Resources. These include the following:

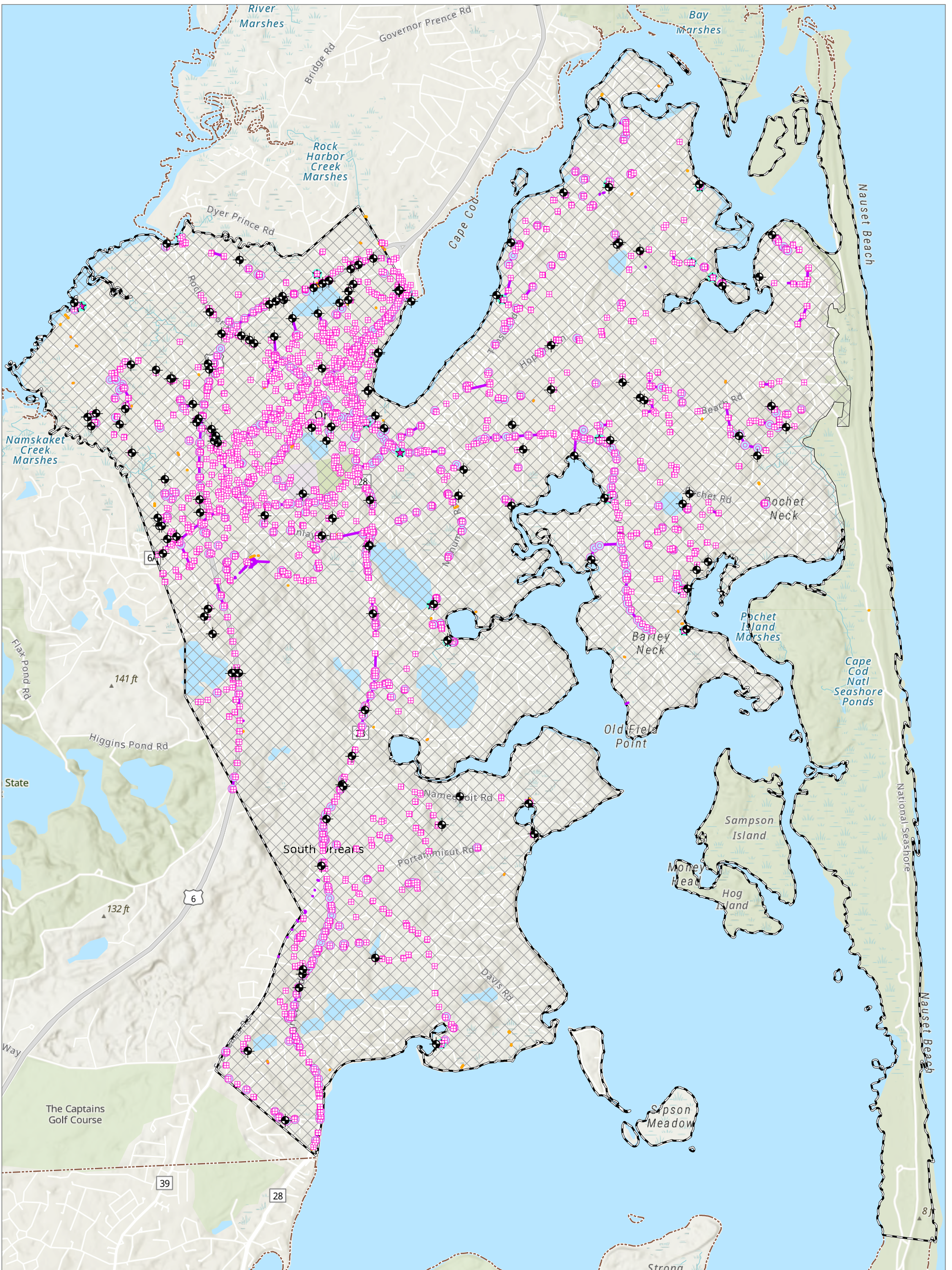
- Winter Road Maintenance
- Catch Basin Inspection and Cleaning
- Street Sweeping
- Stormwater Treatment Structure Inspections



APPENDIX E: SEPARATE STORM SEWER SYSTEM MAP







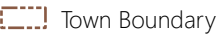

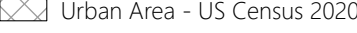


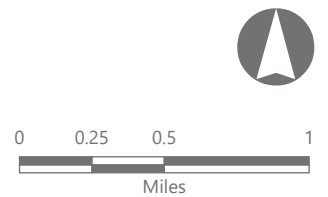
Figure 1. Stormwater Collection System Overview



**Town of Orleans
Stormwater
Management Plan**

Town of Orleans, Barnstable County
Massachusetts

-  Stormwater Outfall
-  Stormwater Catch Basin
-  Stormwater Control Measure
-  Stormwater Manhole
-  Stormwater Drain Pipe
-  Culverts
-  Town Boundary
-  Town of Orleans Boundary
-  Urban Area - US Census 2020

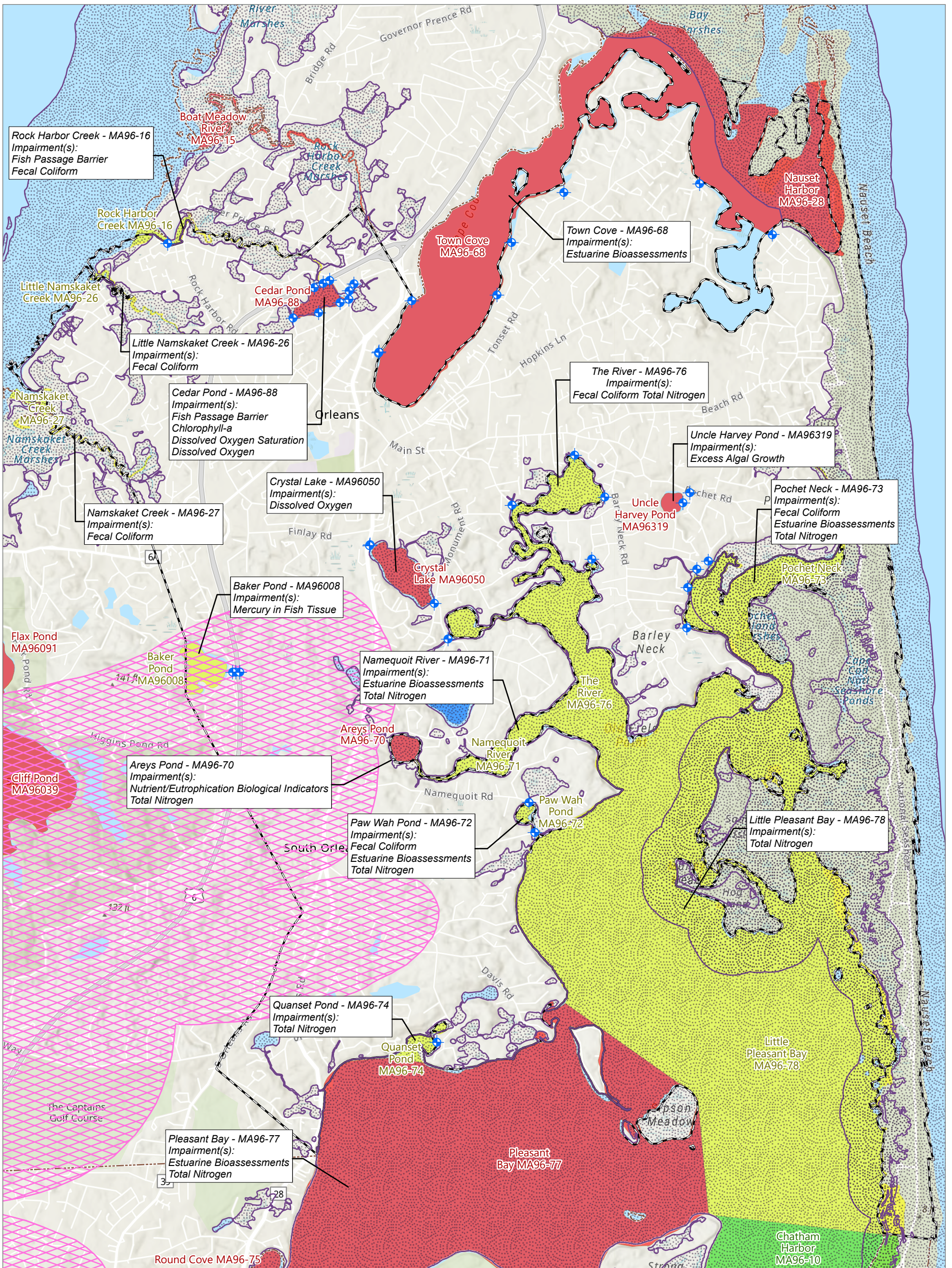




APPENDIX F: IMPAIRED WATERS AND SPECIAL RESOURCE WATERS



Figure 2. Water Resources



**Town of Orleans
Stormwater
Management Plan**

Town of Orleans, Barnstable County
Massachusetts

- + Outfalls with Direct Discharge to Impaired Waters
- Outstanding Resource Waters
- DEP Approved Zone II
- Town Boundary
- 2022 Integrated List Data - 305(b)/314/303(d)
- 2 - Attaining some uses; other uses not assessed
- 3 - No uses assessed
- 4A - Impaired - TMDL is completed
- 5 - Impaired - TMDL required
- Town of Orleans Boundary

