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STORMWATER POLLUTION PREVENTION PLAN

MS4 GENERAL PERMIT COMPLIANCE

JULY 2023

TOWN OF
Burlington
MASSACHUSETTS

Department of Public Works Facility

1 GREAT MEADOW ROAD, BURLINGTON, MA 01803

SWPPP

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STORMWATER POLLUTION PREVENTION PLAN
DEPARTMENT OF PUBLIC WORKS

Facility Name: Burlington Department of Public Works

Facility Address: 1 Great Meadow Road, Burlington, MA 01803

1. STORMWATER POLLUTION PREVENTION PLAN (SWPPP) OVERVIEW

This Stormwater Pollution Prevention Plan:

- Identifies the SWPPP coordinator with a description of the coordinator's duties;
- Identifies members of the SWPPP team and lists their responsibilities;
- Describes the facility, with information on location and activities, a site map, and a description of the stormwater drainage system;
- Identifies potential stormwater contaminants;
- Describes stormwater management controls and various Best Management Practices (BMPs) needed to reduce pollutants in stormwater discharges;
- Describes the facility's monitoring plan; and,
- Describes the implementation schedule and provisions for amendment of the plan.

2. PLANNING AND ORGANIZATION

2.1. SWPPP Coordinator and Team

This is the member roster and list of responsibilities for the pollution prevention team. The team is responsible for implementing the Stormwater Pollution Prevention Plan.

Leader: Brian White Office Phone: 781-270-1670

Title: Department of Public Works Director

Responsibilities: Overall lead for plan development and implementation; responsible for certifying the completeness and accuracy of the SWPPP.

Member: Operations Manager Office Phone: 781-270-1670

Title: Operations Manager

Responsibilities: Oversees good housekeeping activities.

Member: Mike Desimone Office Phone: 781-270-1670

Title: Spill Response Coordinator

Responsibilities: Serves as spill response coordinator and maintains spill kits at the Burlington DPW.

Member: Kevin Keene Office Phone: 781-270-1677

Title: Highway Division Superintendent

Responsibilities: Coordinates quarterly SWPPP inspections and annual employee training.

Member: Matt Davis Office Phone: 781-270-1679

Title: Water and Sewer Superintendent

Responsibilities: Assists with the SWPPP inspection and training program.

3. ASSESSMENT

3.1 Site Inspection

The DPW facility was inspected on February 16, 2023 by Thea Reymann and Zachary Wallin. During the inspection, information pertaining to activities conducted on site, vehicles stored on site, fueling operations, material storage, transfer of waste materials and spill history was gathered. This information was evaluated to develop a stormwater pollution prevention plan for this facility.

3.2 Site Description

The Town of Burlington's Department of Public Works Garage Facility is located at 1 Great Meadow Road, Burlington, Massachusetts. The location of the site is shown on the map included in Appendix A. The 3.5-acre facility includes one building, two outdoor storage areas and parking areas. Table 1, below, includes the use, footprint, and location of the main building on the site.

Table 1: Buildings at the Burlington DPW Facility Site 2

Building Name	Building Footprint	Facility Use
DPW Garage Facility	40,088 SF	Three Shops with 1-Bay Garages, Vehicle Storage Area with 2-Bay Garage, Outdoor Covered Equipment Storage Area, Outdoor Bulk Material Stockpile Area, Administration Offices and Public Entrance, Visitor and Personal Vehicle Parking Areas

Stormwater runoff in the eastern portion of the site is collected by six (6) catch basins and is directed to hydrodynamic separators (WQU8320 and WQU8337) where flow is then conveyed to underground detention chambers near the eastern edge of the site before discharge to a modified rock fill stilling basin in the southeastern portion of the site at Outfall 8338. Stormwater runoff in the western portion of the site is collected by two (2) catch basins and is then directed to a hydrodynamic separator (WQU8334) which is conveyed to underground detention chambers near the western edge of the site that discharge to a modified rock fill stilling basin in the southwestern portion of the site through Outfall 8339. Stormwater runoff in the northern parking area is directed to a vegetated swale along the northern boundary of the lot and is collected by one (1) raised inlet structure and directed to a hydrodynamic separator (WQU8340) followed by underground detention chambers before discharge to a riprap stilling basin through Outfall 8342. Roof runoff is collected by downspouts on the northern, southern, and western sides of the building. The northern roof drain discharges to the east detention chambers, the western roof drain discharges to the west detention chambers, and the southern roof drain discharges to the modified rock fill stilling basin through Outfall 8339 on the southwestern edge of the site.


Southeast Outfall 8338


Southwest Outfall 8339


North Outfall 8342

3.3 Site Map

Appendix C includes a detailed site map of the facility showing identified potential sources of pollution. The following items are shown on the map:

- Footprint for the DPW Facility
- Surface area types
- Direction of stormwater flow on site
- Location of all stormwater structures, including catch basins, manhole covers, structural BMPs, and applicable outfalls
- Approximate location of all sanitary sewer structures, including the oil-water separator and manhole covers
- Access Roads
- Locations of the following activities exposed to precipitation or runoff:
  - Vehicle and equipment storage areas
  - Exposed significant material
  - Waste storage and disposal area
  - Area for loading/unloading material

3.4 Receiving Waters

Stormwater runoff from this facility discharges to Outfalls 8338, 8339, and 8342, which are all tributary to Vine Brook (MA83-06). Vine Brook discharges to the Shawsheen River in Bedford, Massachusetts, which flows north before discharging to the Merrimack River in Lawrence, Massachusetts. Vine Brook is listed on the Draft 2022 Massachusetts Integrated List of Waters as impaired for Curly-leaf Pondweed, Benthic Macroinvertebrates, Chloride, Dissolved Oxygen, Escherichia Coli (E. Coli), and Turbidity. All of these impairments are new on the 2022 list with the exception of Dissolved Oxygen and E. Coli, which were included on the Final 2018/2020 Integrated

List of Waters. The Town is subject to the requirements of both Appendix F and Appendix H of the 2016 MS4 Permit, which outlines requirements related to discharges to water quality limited water bodies with and without a Total Maximum Daily Load (TMDL). The Bacteria TMDL for the Shawsheen River Basin is applicable to Burlington's Vine Brook. Category 5 of the 303(d) List of Impaired Waters identifies water bodies that are impaired for one or more designated uses and require the development of a TMDL. Apart from Curly-leaf Pondweed and E. Coli, the pollutants in the Draft 2022 Integrated List all require the development of a Total Maximum Daily Load (TMDL). The chloride impairment in Vine Brook requires the Town to comply with the requirements of Appendix H of the MS4 Permit, which lists additional requirements for discharges to certain water quality limited waterbodies where there is no existing TMDL already in place, but a TMDL is required to be developed. Additionally, since the portion of the Merrimack River (MA84A-04) that the Shawsheen River discharges to is impaired for phosphorus on the Final 2018/2020 and the Draft 2022 Integrated Lists, Vine Brook is subject to Appendix H requirements for phosphorus.

3.5 Significant Material Inventory

A full list of vehicles and equipment stored, operated, and maintained at the DPW facility is included in Appendix B. Materials stored at the facility are shown on the site map in Appendix C. A complete inventory of these materials as well as their likelihood to of encountering stormwater and their potential to cause an impact on surrounding water bodies can be found in Appendix D. The most significant materials and activities are discussed in detail in Sections 3.6-3.12.

3.6 Stockpile Storage

Potential Pollutant Risk and Best Management Practices

Stockpiled materials such as gravel, loam, sand, and crushed rock contain similar sources of pollution. When unprotected or outdoors, sand piles and material stockpiles are exposed to precipitation and can erode while contributing significant sediment loads to stormwater runoff. If eroded material enters the storm drain system, the sediment can quickly fill the sumps of catch basins or clog other stormwater treatment structures, rendering them ineffective. This may result in increased sediment loads in receiving waterways.

To avoid contamination of stormwater by sand and other stockpiled material, erosion and sediment control measures should be implemented at each storage site. A relatively level site away from slopes and water features should be used as a stockpile location.

If stockpiles are expected to remain exposed for more than two weeks, they should be stabilized by seeding or mulching or covered with impermeable sheeting to protect the material from rainwater. If the stockpile location becomes a permanent storage site, a roofed structure should be considered to reduce erosion.

Sediment barriers should be placed around the perimeter of the stockpile area to prevent any runoff carrying sand or other materials from entering storm drains and surface waters. If the weather becomes dry and windy, regular light watering of the stockpile and surrounding area will provide

effective dust control.

The stockpile storage area should be swept regularly and kept clean.

Current Practices and Recommendations

The bulk material stockpile area along the northeastern boundary of the site is intended for permanent stockpiles of different materials but paving of this area was not complete at the time of inspection. Equipment such as trailers, and other truck appurtenances were temporarily stored in these areas at the time of inspection. When paving is complete in the Spring of 2023, it is anticipated that materials such as sand, gravel, and loam will be stored in the constructed concrete storage areas. No salt will be stored at the site. The stockpile area is not covered but each area is contained on three sides by concrete barriers. The stockpile area drains to one catch basin near the eastern gate, from which stormwater would flow to a hydrodynamic separator before discharge to the eastern detention chambers, as shown on the site map in Appendix C.

When permanent stockpiles are kept at the facility, they should be covered and contained to reduce the chances that stockpiled materials will be conveyed to the drainage system during a storm event. The stockpile area should be swept occasionally, especially after material exchange. Employees at the DPW facility shall implement the practices outlined above and in Section 4.0 to minimize contributions to stormwater pollution from stockpiled material.

Stockpile Storage Area

3.7 Vehicle and Equipment Storage

Potential Pollution Risk and Best Management Practices

Vehicle and equipment storage activities are a potential source of pollution due to the fuel, oil, hydraulic fluid, antifreeze and other hazardous materials the machinery may contain. Vehicles and equipment may also pick up pollutants during offsite activities and then track these pollutants into the storage facility.

Regular visual inspection and maintenance of vehicles and equipment can greatly reduce the potential for pollution by finding and addressing leaks before these hazardous materials can enter the environment. When in storage, vehicles and equipment should be kept on a covered slab or in a building with a common drain. Discharges to this drain shall be managed by an oil/ water separator to remove oils and gasoline. The oil-water separator must discharge to the sanitary sewer or to a holding tank that is pumped and disposed of as needed by qualified personnel.

No equipment should be kept in an area where leaks could result in pollutants entering catch basins, channels leading to outfalls, or the engineered storm drain system. If vehicles and equipment are stored outdoors, catch basins or engineered drainage system structures should include devices intended to remove oils and sediments prior to entering the system. These treatment devices should be inspected and replaced at the frequency recommended by the manufacturer.

Current Practices and Recommendations

Most vehicles and equipment are stored indoors at the DPW facility in the storage garage portion of the building. Two (2) of the five (5) entrance bays of the facility access the storage garage. Some vehicles and equipment are also kept in the shop areas, which can be accessed through the other three (3) entrance bays. The storage garage and shop portions of the building are equipped with floor drains, which discharge to an oil-water separator located under the pavement north of the building. The oil-water separator discharges to the sanitary sewer. The parking at the site is used for personnel vehicles during work hours, not for long term storage. At the time of inspection, there were a few vehicles and pieces of equipment stored uncovered and outdoors at the facility. A few vehicles, trailers, and other truck appurtenances were observed parked along the building. The DPW should consider storing as many vehicles and vehicle components as possible inside its existing garages and covered areas. This will minimize the exposure of vehicles, equipment, and any associated hazardous materials to stormwater runoff. The oil-water separator should be inspected and pumped once per quarter or as necessary to prevent backups or overflows.

Outdoor Canopy

Indoor Vehicle and Equipment Storage

3.8 Solid Waste Management

Potential Pollutant Risk and Best Management Practices

The handling and storage of solid waste can contaminate stormwater with nutrients, pathogens,metals, and sediments. Solid waste, which encompasses agricultural, construction and demolition,
household, industrial, municipal, and tire waste, can be classified as both hazardous and non-hazardous. Each waste storage location shall be properly labeled, covered, and contained, and all storage containers shall be routinely inspected for signs of spills, leaks, corrosion, or general deterioration. If stormwater runoff encounters improperly stored solid waste, it may carry any pollutants found in the waste to the storm drain system or nearby receiving waters.

Employees shall be properly trained in correct solid waste management practices and shall be knowledgeable of the potential hazards associated with solid waste handling and storage.

Current Practices and Recommendations

There is one dumpster at the DPW Facility for trash and litter. The dumpster was located adjacent to the building at the time of inspection but will be relocated to a concrete pad contained by a fence next to the stockpile areas once paving is complete. The dumpster is emptied weekly. The dumpster shall be kept closed to prevent stormwater contamination and the site shall be swept as needed.

Trash Dumpster Location

3.9 Spills and Leaks

There have been no significant spills or chronic leaks at the DPW facility since completion of construction of the facility in 2022. Any future significant spills and/or chronic leaks shall be recorded on the list provided in Appendix E.

3.10 Structural Stormwater Treatment Structures

Structural stormwater treatment structures (or structural BMPs) are used to treat or pretreat stormwater runoff. Examples of structural BMPs include settling basins, drainage swales, infiltration basins and bioretention areas. These can significantly reduce the pollutant loads that enter receiving waterbodies.

There are four (4) hydrodynamic separators on site discharging to three underground detention chambers, located in the east, west, and northeastern corners of the site. There is also a vegetated swale along the most northern portion of the site. The hydrodynamic separators, the infiltration chambers and the swale treat runoff from the eastern, western and northern portions of the facility, respectively, slowing the flow enough to allow larger debris and sediment as well as buoyant materials (oil and grease) to settle out before they discharge to their respective outfalls and the settling basins located in the southeastern, southwestern, and northeastern portions of the site.

3.11 Allowable Non-Stormwater Discharges

Certain non-stormwater discharges to the storm drain system or surface waters are allowable under

the Town's MS4 Permit, such as potable water, compressor condensate, irrigation drainage, landscape watering, pavement washing without detergents, and uncontaminated groundwater. To be allowable, these non-stormwater sources must be identified in the SWPPP. No allowable non-stormwater discharges have been identified at this Burlington DPW facility.

3.12 Existing Stormwater Monitoring Data

This Burlington DPW facility has no previous data regarding existing stormwater monitoring. No flow was observed discharging from the outfalls during the site inspection which occurred during a period of dry weather. No sampling was conducted during the initial site inspection.

3.13 Site Summary (Sources of pollution with a high risk of contaminating stormwater)

This section identifies the areas, activities and/or materials at the DPW Facility that pose the highest risk of contaminating stormwater. There were no potential high-risk sources of contamination identified at the site, but the following areas are medium-risk sources of contamination:

- Material Stockpile. At the time of inspection, no materials were kept in the stockpile areas. However, runoff from this area could result in sediment and pollutants entering the drainage system on site.

- Vehicle & Equipment Storage. At the time of inspection, some vehicles and equipment were stored outdoors in the eastern gated portion of the facility. Any fluid leaks from these vehicles and equipment could result in pollutants entering the drainage system on the site.

- Solid Waste. The dumpster on site is confined but not covered. If left open, runoff from the dumpster can carry pollutants into the drainage system on the site.

4. IMPLEMENTATION

This section describes practices that are in place or that will be implemented to control pollutants with the potential to contaminate stormwater. Implementing these practices at this facility may reduce stormwater pollution and will save money by determining problems in equipment and structures before they fail.

4.1 Good Housekeeping

Good housekeeping practices are the most effective first step towards preventing pollution in stormwater. These activities are usually done daily to maintain a clean facility and prevent future pollution problems. The following is a list of good housekeeping practices:

- No washing of equipment or vehicles is allowed at this facility. Washing is to be performed indoors only at DPW Facility Site 1, where wash water is collected and discharged to an oil-water separator before discharge to the sewer system.
- No vehicle maintenance is allowed at this facility. All vehicle maintenance is performed indoors at DPW Facility Site 1, where any spills or leaks from changing of fluids may be collected and pumped to the Waste Oil Tank.
- Spillage occurring during the addition or removal of material from the stockpiles is promptly cleaned up.
- No fertilizers, herbicides, or pesticides are stored or used at the facility.
- Storage drums and containers are not located close to storm drain inlets.
- Oil/water separators, hydrodynamic separators and catch basins are maintained regularly and properly.

4.2 Preventive Maintenance

Preventative Maintenance can minimize stormwater pollution by addressing potential issues before they become problems. This facility shall develop a preventive maintenance program that involves inspections and maintenance of stormwater management controls and routine inspections of facility operations to detect faulty equipment. Equipment, such as tanks, vehicles containers and drums, should be checked regularly for signs of deterioration and leaks. Structural stormwater controls should be regularly maintained to prevent inadequate performance during storm events.

This facility does not have a written spill prevention control and countermeasure (SPCC) plan because oil storage at the facility does not meet the threshold requirements of the United States Code of Federal Regulations Part 112.1. The following is a list of preventive maintenance procedures practiced at this facility:

- Catch basins, hydrodynamic separators and sediment chambers are inspected and cleaned as needed.
- Hydraulic equipment is kept in good repair to prevent leaks.
- Vehicle storage areas are inspected frequently for evidence of leaking oil.

- All material and bulk deliveries are monitored by facility employees.

The following is a list of preventive maintenance measures that will be implemented and the date by which they will be implemented.

- The oil-water separator should be inspected and pumped once per quarter or as necessary to prevent backups or overflows.
- The hydrodynamic separators should be inspected and cleaned once per quarter or whenever the depth of the deposits is greater than 6 inches.
- Within 90 days, Speedi Dri (or similar absorbent) and/or a spill response kit will be kept on site.
- Within 90 days, staff will be trained on the spill prevention control and countermeasure plan applicable to Site 1.

4.3 Best Management Practices (BMPs)

The following is a list of existing and planned Best Management Practices. When implemented, each BMP will prevent or reduce the discharge of potential pollutants in stormwater runoff for the areas of concern listed in the Site Summary.

- Loading and unloading are done inside where possible.
- Hazardous materials that are in easily ripped or breakable containers (such as bags, plastic pails) are not loaded or unloaded outside when it rains.
- A staff member is present during loading and unloading operations.
- Minimize the volume of gasoline stored within the buildings and on the site.
- Clean up any oil spills observed in the parking lot, garages, or other surfaces in a timely manner.
- Monitor all material deliveries.
- All floor drains present within garage bays drain to an oil/water separator.
- The dumpster lid shall be kept closed.
- All impervious areas on the site shall be swept at least twice per year in accordance with Appendix H of the 2016 MS4 Permit which includes requirements for phosphorus impairments.

4.4 Sediment and Erosion Control

The following erosion and sedimentation controls shall be implemented on those portions of the site where loose material such as sand, fill, salt, or gravel is stored.

- The edges of permanent and temporary stockpile areas shall be confined with jersey barriers or silt fence to prevent sediment tracking out of the stockpile area.
- Catch basins in the vicinity of stockpile areas shall be equipped with inlet protection. Inlet protection shall be inspected and replaced at the frequency specified by the manufacturer.

- Stockpiles or stockpile areas shall be covered wherever possible.

There are no steep, unvegetated areas at the site—most of the property is paved, with vegetation and significant amounts of stone providing erosion control for any runoff between the building and northern parking area that are adjacent to wetland areas. None of the outfalls displayed evidence of erosion at the time of inspection.

4.5 Management of Stormwater Runoff

As explained in Section 3.2, stormwater runoff from the eastern, western, and northern portions of the site is managed separately.

- Stormwater runoff in the eastern portion of the site is collected by six (6) catch basins and directed to hydrodynamic separators followed by underground detention chambers near the eastern edge of the site before discharge to a modified rock fill stilling basin in the southeastern portion of the site through Outfall 8338.
- Stormwater runoff in the western portion of the site is collected by two (2) catch basins and is then directed to a hydrodynamic separator followed by underground detention chambers near the western edge of the site which discharges to a modified rock fill stilling basin in the southwestern portion of the site through Outfall 8339.
- Stormwater runoff in the northern parking area is directed to a vegetated swale along the northern boundary of the lot and is collected by one (1) raised inlet structure and directed to a hydrodynamic separator followed by underground detention chambers before discharge to a riprap stilling basin through Outfall 8342.
- Roof runoff is collected by downspouts on the northern, southern, and western sides of the building. The northern roof drain discharges to the east detention chambers, the western roof drain discharges to the west detention chambers, and the southern roof drain discharges to Outfall 8339 at the modified rock fill stilling basin on the southwestern edge of the site.

4.6 Spill Prevention and Response

This facility does not require a Spill Prevention Control and Countermeasure Plan as detailed in Section 4.2. The Department of Public Works Facility Site 1 has a complete Spill Control and Countermeasure Plan, developed by Weston & Sampson in 2023, which can be found in Appendix E of that facility's SWPPP. In the case of any spills of hazardous materials or regulated materials at Site 2, the procedures in this plan shall be followed.

4.7 Employee Training

Regular employee training is required for employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the

SWPPP, including all members of the Pollution Prevention Team.

The Burlington Department of Public Works is responsible for stormwater management training for their employees. The Department will coordinate training related to stormwater management on an annual basis to review specific responsibilities for implementing this SWPPP, including but not limited to BMP implementation, Good Housekeeping, Spill Prevention and O&M procedures. Members of the Pollution Prevention Team will meet at least twice yearly to discuss the effectiveness of and improvements to the SWPPP.

Documentation for these training sessions is included in Appendix F. Documentation includes attendance sheets; the instructor's name and affiliation; the date, time, and location of training; and the presentation that was used.

5. EVALUATION

5.1 Site Inspection Requirements

All stormwater pollution control measures and stormwater discharge points at the facility must be inspected quarterly. A minimum of one (1) of these quarterly inspections must occur during a wet weather event. A visual examination must be made during daylight hours and within 30 minutes after stormwater begins to runoff. The inspection must check for evidence of pollution, evaluate non-structural controls in place at this site, and inspect equipment. The inspection report must include:

- The inspection time and date.
- The name of the inspector(s).
- Weather information and a description of any discharge occurring at the time of inspection.
- Identification of any previously unidentified discharges from the site.
- Any control measures needing maintenance or repair.
- Any failed control measures that need replacement.
- Any SWPPP changes required as a result of the inspection.
- A signed certification statement with the following Certification Language: "This Compliance Evaluation Report has been prepared by qualified personnel who properly gathered and evaluated information submitted for this Report. The information in this Report, to the best of my knowledge, is accurate and complete."

The inspection form for these inspections and all previously completed inspections can be found in Appendix G.

Corrective action may be necessary based on evidence of past stormwater pollution or the high potential for future stormwater pollution to occur. Any information about these issues and the corrective action taken against them must be included in a Compliance Evaluation report. The permittee must repair or replace control measures in need of repair or replacement before the next anticipated storm event, or as soon as practicable. In the interim, the permittee shall have back-up measures in place. The Compliance Evaluation report must be kept with the SWPPP and must state the problem, the solution, and when the solution was implemented.

5.2 Recordkeeping and Reporting

The permittee must keep a written record (hardcopy or electronic) of all activities required by the SWPPP. This includes but is not limited to maintenance, inspection, and training for a period of at least five (5) years. These records will be made available to state or federal inspectors and to the general public upon request.

Quarterly inspections of this Public Works Facility should be described in the Town's MS4 Annual Report, including any corrective actions taken. Inspection and employee training records demonstrate that the operation of this Department of Public Works Facility is in compliance with the 2016 Massachusetts MS4 Permit.

5.3 Plan Revisions

The Burlington DPW shall review this SWPPP regularly to determine if any update or revision is required. Changes that may trigger revision include:

- An increase in the quantity of any potential pollutant stored at the facility;
- The addition of any new potential pollutant (not already addressed in this SWPPP) to the list of materials stored or used at the facility;
- Physical changes to the facility that expose any potential pollutant (not presently exposed) to stormwater;
- Presence of a new authorized non-stormwater discharge at the facility; or
- Addition of an activity that introduces a new potential pollutant.

Changes in activity may include but are not limited to an expansion of operations, or changes in any significant material handling or storage practices which could impact stormwater.

The amended SWPPP will describe any new activities that might contribute to increased pollution, as well as any control measures that have been implemented to minimize the potential for pollution.

This Plan must also be amended if a state or federal inspector determines that it is not effectively controlling pollutants in stormwater discharges.

6. ENDANGERED SPECIES

The 2016 MS4 Permit requires that the facility in question demonstrates that all activities taking place on this premises will not adversely impact endangered and threatened species or critical habitat.

Through consultation with the US Fish & Wildlife Service (USFWS), it was determined that the only threatened species within Burlington is the northern long-eared bat. Current activities at this facility will not affect this species. Therefore, the Town has determined that it can certify eligibility under USFWS Criterion C for coverage under the permit. Prior to construction of any structural BMPs, the Town will consult with USFWS to confirm that the proposed project will not impact the northern long-eared bat or any other endangered or threatened species that may be identified in the future.

This site is adjacent to a Natural Heritage & Endangered Species Program (NHESP) priority habitat area. The Massachusetts Endangered Species Act (MESA) requires regulatory review of any proposed projects or activities in an estimated or priority habitat by the Massachusetts Division of Fisheries & Wildlife. The division was contacted prior to construction of the facility, notifying them that the project would be outside of the NHESP habitat, but since stormwater from the site will eventually enter the unnamed tributary to Vine Brook which falls within the NHESP mapping, improved stormwater runoff and management would be installed and implemented at the site. The division determined that the new DPW facility project did not occur within Estimated Habitat of Wildlife or Priority Habitat and strongly recommended that the highest water quality standards for sedimentation controls be implemented at the site.

7. HISTORIC PLACES

The 2016 MS4 Permit requires that the facility in question demonstrate that all activities taking place on this premises will not adversely impact federal historic properties on the National Register of Historic Properties (NRHP). Under the Historic Preservation Act, Burlington can certify eligibility under Criterion A on their Notice of Intent for coverage under the permit because the Town was previously covered under the 2003 MS4 Permit, and conditions have not changed since that determination.

The Town does have multiple historic properties, including The First Period Buildings of Eastern Massachusetts, The Burlington Common, The Winn Street Area, The Burlington Town Common, The Maj. Gen. John Walker House, Simonds Park, The Center School, Burlington Old Burial Ground, The Raoul J. Lippe House, The Lt. Reuben Kimball House, The Humphrey Prescott House, Chestnut Hill Cemetery, The George Skelton House, The Ruel House, The Daniel McIntire Barn House, The Skelton House, Saint Malachy Roman Catholic Church, The West School, The Curtis White House, The Nathan Simonds House, The Windhover Sculpture, The Stele XLVI Sculpture, The M. Coram House, The Henry Nichols Barn, The Charles Tobin Boston House, The Reed Ham Works Barn, The Isaiah Reed and Thomas I. House and Farm, The Union School, the Marion Tavern – Half-Way House, The Burlington High School, The Sally Bell Philbrick House, The Hugh Stewart House, The Jonathan Reed - Isaiah Reed House, The Nehemiah Hunt - Isaiah Reed House, The Elijah Marion House, the Samuel Shedd House, The William Manning House, The George H. Bennett House, The Francis Wyman House, The Bradford Skelton House, The Horace Skelton House, The Susan Reed Skelton House, The Hearthstone Road Stone Walls, The Keans Road Stone Walls, The Meeting House of the Second Parish in Woburn, The Jotham Johnson House, The Chester MacDonald House, The Charles Raymond - Andrew Hammond House, The Blodgett J. Converse House, The John Radford House, The Dea. Jonathan Simonds House, The David Skelton House, The David Skelton – O. Staples House, The George Gleason – George H. Bennett Block, The Lt. Nathaniel Cutler House, The Daniel E. Dixon – Walter P. Vigneau House, The Alfred Malatesta House, The J. Lundragin – J. Looby Double House, The Samuel F. Winn – Looby House, The Helene Kent House, The 1987 Control Sculpture, The Augustus Prouty – Simon Johnson House, The Route 128 Bridge over Middlesex Turnpike, The Route 128 Bridge over Route 3A, The Route 128 Bridge over Winn Street, The Route 3 Bridge over Route 128, The Roscoe E. Pearsons House, The George Gleason – George H. Bennett Block, The Neil Ellsworth House, The Nathan Skilton House, The James Simonds – Ishmael Munroe House, The Thomas Locke House, The Elijah Marion Barn, The Benjamin Simonds House, The Rev. Dr. Nathaniel L. Frothingham House, The Catalyst I Sculpture, The Benjamin Carter House, The Dole Parker House, The John B. Taylor House, The J. S. Remick House, The Old Western Highway Stonewalls and Roadbed, The George Winn House, The John Hinston House, The David Tannery Cummings Building, The Locust Hill Farm, Saint Margaret's Roman Catholic Church, Saint Margaret's Roman Catholic Church Rectory, The Walker Barn, The Jonas Lawrence House, The Marshall Simonds Middle School, The William Dobbins House, Memorial Grade School, The Dea. Otis Cutler House, The Samuel Edward Walker House, The William Lawrence – Dea. Edward Foster House, The William Lawrence Barn, The John Wynn – Timothy Winn House, and The Nathaniel Kendall House.

These historic places are located at a minimum of 500 feet away from the Burlington Department of Public Works Facility. It has been determined to be very unlikely that any actions taking place at this

facility will cause any disturbances that would impact any of these historic properties.

Prior to construction of any structural BMPs, the Town will consult with the State Historic Preservation Officer by submitting a completed Project Notification Form to confirm that the proposed project will not impact any federal historic properties.

8. CERTIFICATIONS

This section includes certifications for the facility's:

- Non-Stormwater Discharges
- Stormwater Pollution Prevention Plan

Non-Stormwater Discharges

All stormwater outfalls to surface waters at this facility have been evaluated and found to be free of non-stormwater discharges.

Stormwater Pollution Prevention Plan

This Stormwater Pollution Prevention Plan has been prepared in accordance with good engineering practices. Qualified personnel properly gathered and evaluated information submitted for this Plan. The information in this Plan, to the best of my knowledge, is accurate and complete.

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 of 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 fine and imprisonment for knowing violations.

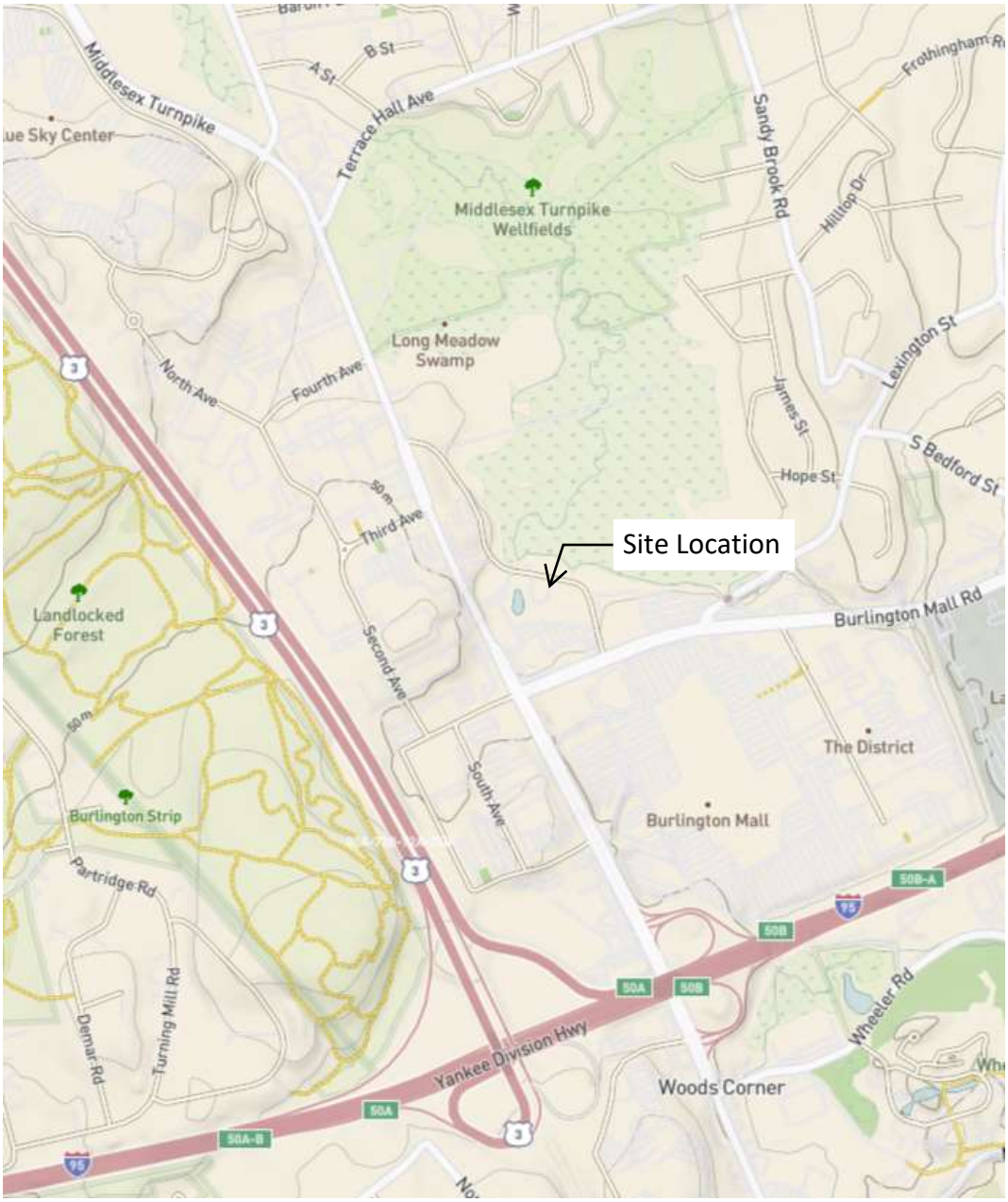
_____
Name:

_____
Title:

_____
Date

Appendix A

Burlington DPW Facility Locus Map



(USGS, 2022)

APPENDIX A

TOWN OF BURLINGTON, MASSACHUSETTS

DPW FACILITY

LOCUS MAP

Appendix B

Inventory of Vehicles and Equipment

Administration Vehicles in Burlington MA

Town ID #:	H4
W&S (iData Collect)	1864
Year/Make/Model:	Ford F450
Type	Small Vehicle
Dimensions	19 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H5
W&S (iData Collect)	1867
Year/Make/Model:	Ford F450
Type	Small Vehicle
Dimensions	19 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H13
W&S (iData Collect)	1870
Year/Make/Model:	International
Type	Large Vehicle 23'
Dimensions	24 x 9
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H35
W&S (iData Collect)	1873
Year/Make/Model:	International
Type	Large Vehicle 23'
Dimensions	28 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H18
W&S (iData Collect)	1876
Year/Make/Model:	International
Type	Large Equipment
Dimensions	24 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H8
W&S (iData Collect)	1879
Year/Make/Model:	John Deere Grader
Type	Large Equipment
Dimensions	34 x 9.5
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H10
W&S (iData Collect)	1882
Year/Make/Model:	International 4900
Type	Large Vehicle 23'
Dimensions	24 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H22
W&S (iData Collect)	1885
Year/Make/Model:	Trackless
Type	Small Equipment
Dimensions	16 x 12
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H24
W&S (iData Collect)	1888
Year/Make/Model:	Trackless
Type	Small Equipment
Dimensions	16 x 12
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H21
W&S (iData Collect)	1891
Year/Make/Model:	Trackless
Type	Small Equipment
Dimensions	18 x 4
Division	Highway

Plow ☐
Sander ☐

Town ID #:	??
W&S (iData Collect)	1894
Year/Make/Model:	Ford F550
Type	
Dimensions	23 x 9
Division	Recreation

Plow ☐
Sander ☐

Town ID #:	
W&S (iData Collect)	1897
Year/Make/Model:	Generator
Type	Towable
Dimensions	20 x 7
Division	Water & Sewer

Plow ☐
Sander ☐

Town ID #:	H7
W&S (iData Collect)	1900
Year/Make/Model:	Ford F350
Type	Small Vehicle
Dimensions	22.5 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H39
W&S (iData Collect)	1903
Year/Make/Model:	Volvo Loader
Type	Large Equipment
Dimensions	23 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H30
W&S (iData Collect)	1906
Year/Make/Model:	Elgin Street Sweeper
Type	
Dimensions	16 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H57
W&S (iData Collect)	1909
Year/Make/Model:	Bobcat Loader
Type	Small Equipment
Dimensions	11 x 5
Division	Highway

Plow ☐
Sander ☐

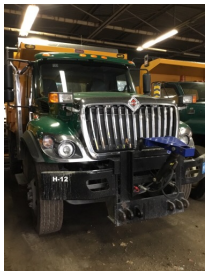
Town ID #:	H37
W&S (iData Collect)	1912
Year/Make/Model:	Volvo Loader
Type	Large Equipment
Dimensions	23 x 8
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H17
W&S (iData Collect)	1915
Year/Make/Model:	Chevy 8500
Type	Large Vehicle 23'
Dimensions	24 x 8
Division	Highway

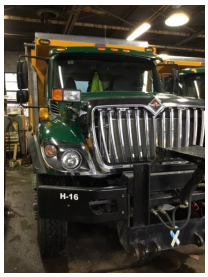
Plow ☐
Sander ☐

Town ID #:	H12
W&S (iData Collect)	1918
Year/Make/Model:	International
Type	Large Vehicle 23'
Dimensions	24 x 8
Division	Highway



Plow ☐
Sander ☐

Town ID #:	H16
W&S (iData Collect)	1921
Year/Make/Model:	International
Type	Large Vehicle 23'
Dimensions	24 x 8
Division	Highway



Plow ☐
Sander ☐

Town ID #:	H11
W&S (iData Collect)	1924
Year/Make/Model:	Elgin Street Sweeper
Type	
Dimensions	17 x 8.5
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H60-R3
W&S (iData Collect)	1927
Year/Make/Model:	Roller
Type	Small Equipment
Dimensions	6.5 x 3
Division	Highway

Plow ☐
Sander ☐

Town ID #:	S12
W&S (iData Collect)	1930
Year/Make/Model:	Ford Ranger
Type	Small Vehicle
Dimensions	18 x 7
Division	Sewer

Plow ☐
Sander ☐

Town ID #:	
W&S (iData Collect)	1933
Year/Make/Model:	9’ plows (4)
Type	Attachments
Dimensions	
Division	Highway

Plow ☐
Sander ☐

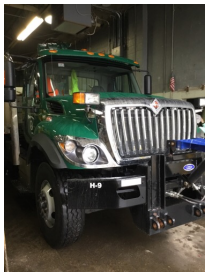
Town ID #:	
W&S (iData Collect)	1936
Year/Make/Model:	
Type	Attachments
Dimensions	
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H6
W&S (iData Collect)	1939
Year/Make/Model:	Ford F450
Type	Small Vehicle
Dimensions	18 x 9
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H9
W&S (iData Collect)	1942
Year/Make/Model:	International
Type	Large Vehicle 23'
Dimensions	24 x 8
Division	Highway

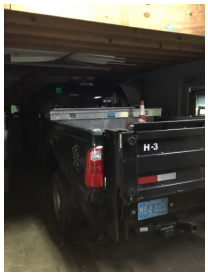


Plow ☐
Sander ☐

Town ID #:	H2
W&S (iData Collect)	1945
Year/Make/Model:	Ford Ranger
Type	Small Vehicle
Dimensions	17 x 6
Division	Highway

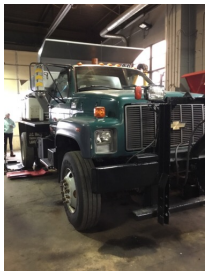
Plow ☐
Sander ☐

Town ID #:	H3
W&S (iData Collect)	1948
Year/Make/Model:	Ford F350
Type	Small Vehicle
Dimensions	19 x 9.5
Division	Highway



Plow ☐
Sander ☐

Town ID #:	H15
W&S (iData Collect)	1951
Year/Make/Model:	Chevy 8500
Type	Large Vehicle 23'
Dimensions	25 x 6.5
Division	Highway



Plow ☐
Sander ☐

Town ID #:	
W&S (iData Collect)	1954
Year/Make/Model:	
Type	Attachments
Dimensions	
Division	Highway

Plow ☐
Sander ☐

Town ID #:	??
W&S (iData Collect)	1957
Year/Make/Model:	Trailer
Type	Towable
Dimensions	
Division	

Plow ☐
Sander ☐

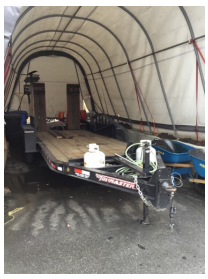
Town ID #:	H60-P1
W&S (iData Collect)	1960
Year/Make/Model:	Bomag Hot Top Paver
Type	
Dimensions	11 x 12
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H61?
W&S (iData Collect)	1963
Year/Make/Model:	Compressor
Type	Towable
Dimensions	14 x 7
Division	Highway

Plow ☐
Sander ☐

Town ID #:	H76
W&S (iData Collect)	1966
Year/Make/Model:	Towmaster Trailer
Type	
Dimensions	23 x 8
Division	Highway



Plow ☐
Sander ☐

Town ID #:	H72
W&S (iData Collect)	1969
Year/Make/Model:	Hudson trailer
Type	
Dimensions	8 .5 x 29
Division	Highway

Plow ☐
Sander ☐

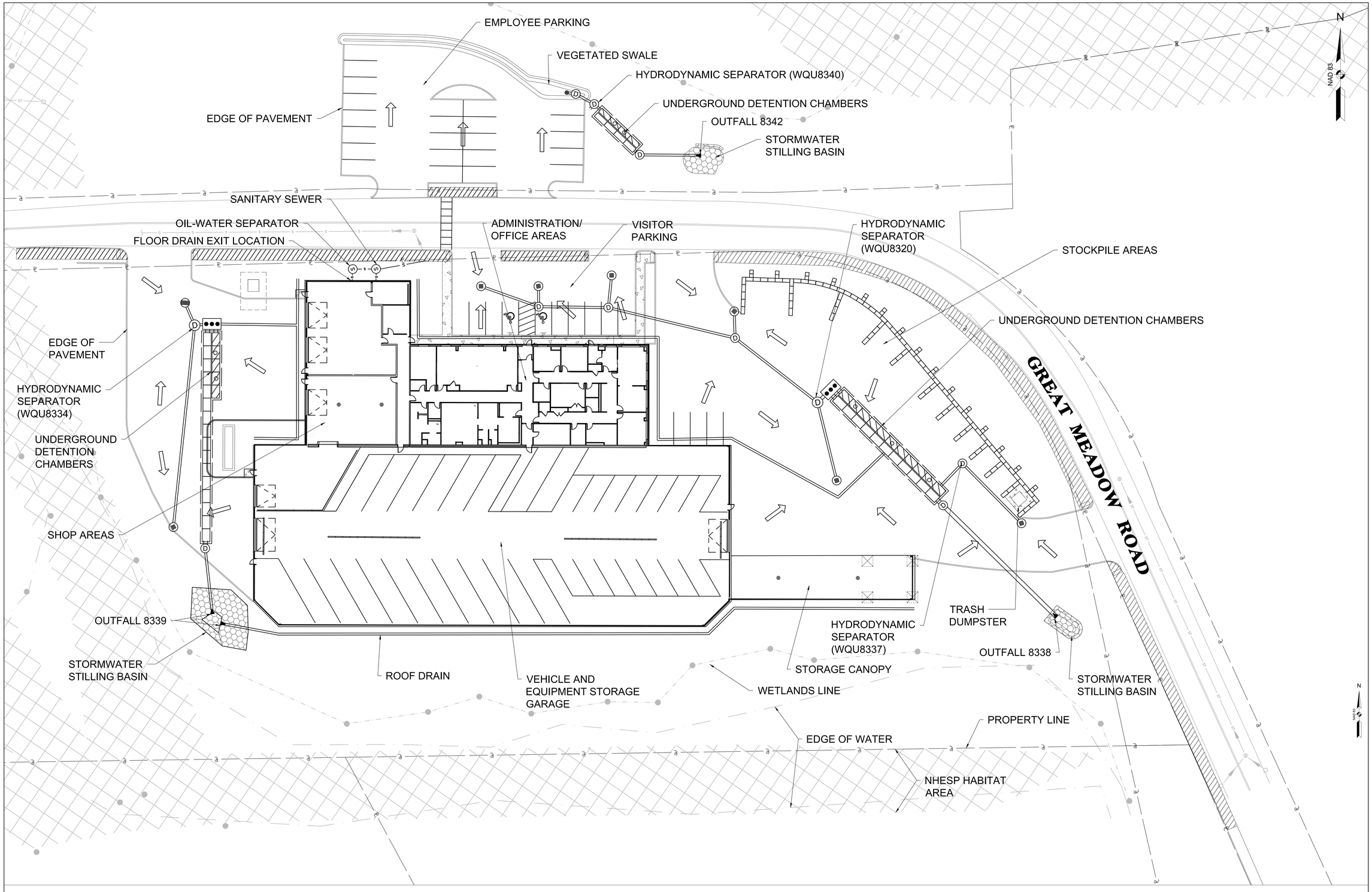
Town ID #:	H71
W&S (iData Collect)	1972
Year/Make/Model:	Trailer
Type	
Dimensions	24 x 8.5
Division	Highway

Plow ☐

Sander ☐

Appendix C

DPW Facility Site Plan



LEGEND

- SEWER MANHOLE
- DRAIN MANHOLE
- CATCH BASIN
- STORM DRAIN PIPE AND OUTFALL
- FLOOR DRAINS
- CONCRETE PAD
- STORMWATER RUNOFF DIRECTION

0 20 50 100

SCALE: 1" = 20'

Project:
New Public Works and Parks & Recreation Facilities, VOL.2

TOWN OF BURLINGTON, MA

1-3 GREAT MEADOW RD
BURLINGTON, MA 01803

Weston & Sampson Engineers, Inc.
55 Walkers Brook Drive Suite 100
Reading, MA 01867
(978) 532-1900 (800) SAMPSON
www.westonandsampson.com

Consultants:

Seal:

Revisions:

Rev	Date	Description

Issued For: CONFORMED

SCALE: AS NOTED

Date:

Drawn By:

Reviewed By:

Approved By:

W&S Project No:

Drawing Title:
Site 2

BURLINGTON, MA
SWPPP SITE
PLAN
DPW FACILITY

Sheet Number:

Appendix D

SWPPP Material Inventory

Appendix D
Burlington, MA DPW Facility - SWPPP Material Inventory

The following table includes an inventory of materials and activities that are exposed to stormwater at the DPW Facility. These areas are also identified on the Site Map included in Appendix C.

Material	Activity/ Use	Quantity stored (tank size if applicable: above or below ground)	Pollutant	Likelihood of contact with storm water? (Low, medium or high)	Comments
Gravel, Fill, Sand	Material Stockpile	N/A	Sediment, Total Suspended Solids	Medium	Materials are expected to be stored in the confined stockpile areas in the western portion of the site. Any sediment or pollutants from the stockpile area in stormwater runoff will be carried into the drainage system.
Vehicles/ Equipment	Vehicle & Equipment Storage	N/A	Oil, Grease & Petroleum Products	Medium	Some vehicles and equipment are stored outdoors. Any fluid leaks from these vehicles may cause stormwater pollution.
Solid Waste	Solid Waste Management	N/A	Nutrients, pathogens, metals, sediments	Medium	Solid waste is confined in a dumpster adjacent to the stockpile areas. Runoff from the dumpster can carry pollutants into the drainage system and the nearby Vine Brook.

Appendix E

List of Significant Spills and Leaks

Appendix E
Burlington, MA DPW Facility
List of Significant Spills (> 5 gallons) and Chronic Leaks

The DPW Facility has not had any significant (> 5 gallons) spills of oils, toxic or hazardous materials since construction completion. Any spills that occur in the future should be documented in this table.

Date	Spill	Leak	Source	Description			Response Procedures	Measures Taken to Prevent Recurrence
	(check one)			Type of Material	Quantity	Reason		

Completed by:
Title:
Date:

Appendix F

Training Materials

Town of Burlington Department of Public Works

DPW Facility

Stormwater Pollution Prevention Plan (SWPPP) Training Sign-In

Date _____

Name (Please Print)	Department

Appendix G

Quarterly Monitoring Logs

Appendix G
Burlington, MA DPW Facility Stormwater Pollution Prevention Plan
Quarterly SWPPP Inspection Report

General Information			
Date:		Start/End Time:	
Inspector's Name(s):			
Weather Conditions (Check if applicable):	☐ Clear ☐ Cloudy ☐ Rain	☐ Sleet ☐ Fog ☐ Snow	Temperature:
Description of discharges occurring at the time of inspection:			

Areas Exposed to Stormwater			
Inspect the following areas and activities that are exposed to stormwater for evidence of/potential for stormwater pollution:			
	Area/Activity	Evidence of stormwater pollution?	Notes/Necessary Corrective Action
1	Stockpile Area	☐ Yes ☐ No	
2	Vehicle and Equipment Storage Area	☐ Yes ☐ No	
3	Dumpster	☐ Yes ☐ No	

Stormwater Outfalls and Control Measures				
Inspect each stormwater outfall and each stormwater control measure (BMP) at the facility.				
Outfall / Structure ID	Condition of Structure	Observed Discharge?	Evidence of stormwater pollution observed in discharge?	What evidence of stormwater pollution was observed? Examples include color, odor, cloudiness, excessive sediment, etc.
Outfall8339 (southwest)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
WQU8334 (west)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	

Stormwater Outfalls and Control Measures				
Inspect each stormwater outfall and each stormwater control measure (BMP) at the facility.				
Outfall / Structure ID	Condition of Structure	Observed Discharge?	Evidence of stormwater pollution observed in discharge?	What evidence of stormwater pollution was observed? Examples include color, odor, cloudiness, excessive sediment, etc.
Outfall8338 (southeast)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
WQU8320 (east)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
WQU8337 (east)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
Outfall8342 (northeast)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
Swale (northern portion of site)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
WQU8340 (north)	☐ Good ☐ Fair ☐ Poor ☐ Needs Repair	☐ Yes ☐ No	☐ Yes ☐ No	
Describe any corrective action required at any outfall or stormwater control measure at the facility:				
Are any changes to the SWPPP required as a result of this inspection? If so, please describe below:				

Inspector Name and Title (Print):

Signature of Inspector:

Date:

Appendix H

Endangered Species Correspondence

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.

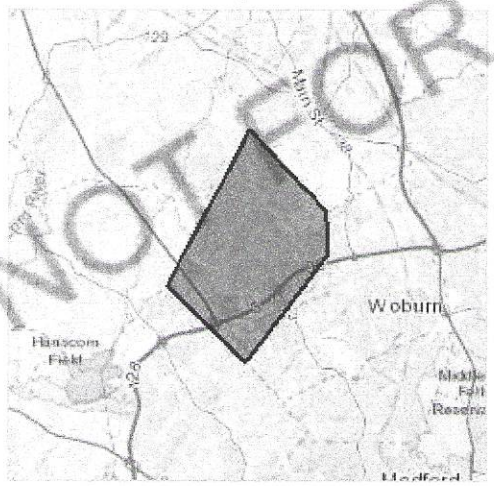
Project information

NAME

Burlington NOI 2018

LOCATION

Middlesex County, Massachusetts



DESCRIPTION

MS4 NOI only.

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. 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 Fisheries[2]).

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

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

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

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

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

Additional information can be found using the following links:

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

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

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

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

Evening Grosbeak Coccothraustes vespertinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Nelson's Sparrow Ammodramus nelsoni — Breeds May 15 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prothonotary Warbler Protonotaria citrea — Breeds Apr 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-headed Woodpecker Melanerpes erythrocephalus — Breeds May 10 to Sep 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon Gavia stellata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Semipalmated Sandpiper Calidris pusilla — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Snowy Owl Bubo scandiacus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

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

Probability of Presence Summary

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

Probability of Presence (▪)

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

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

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

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

Breeding Season (▪)

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

Survey Effort (|)

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.

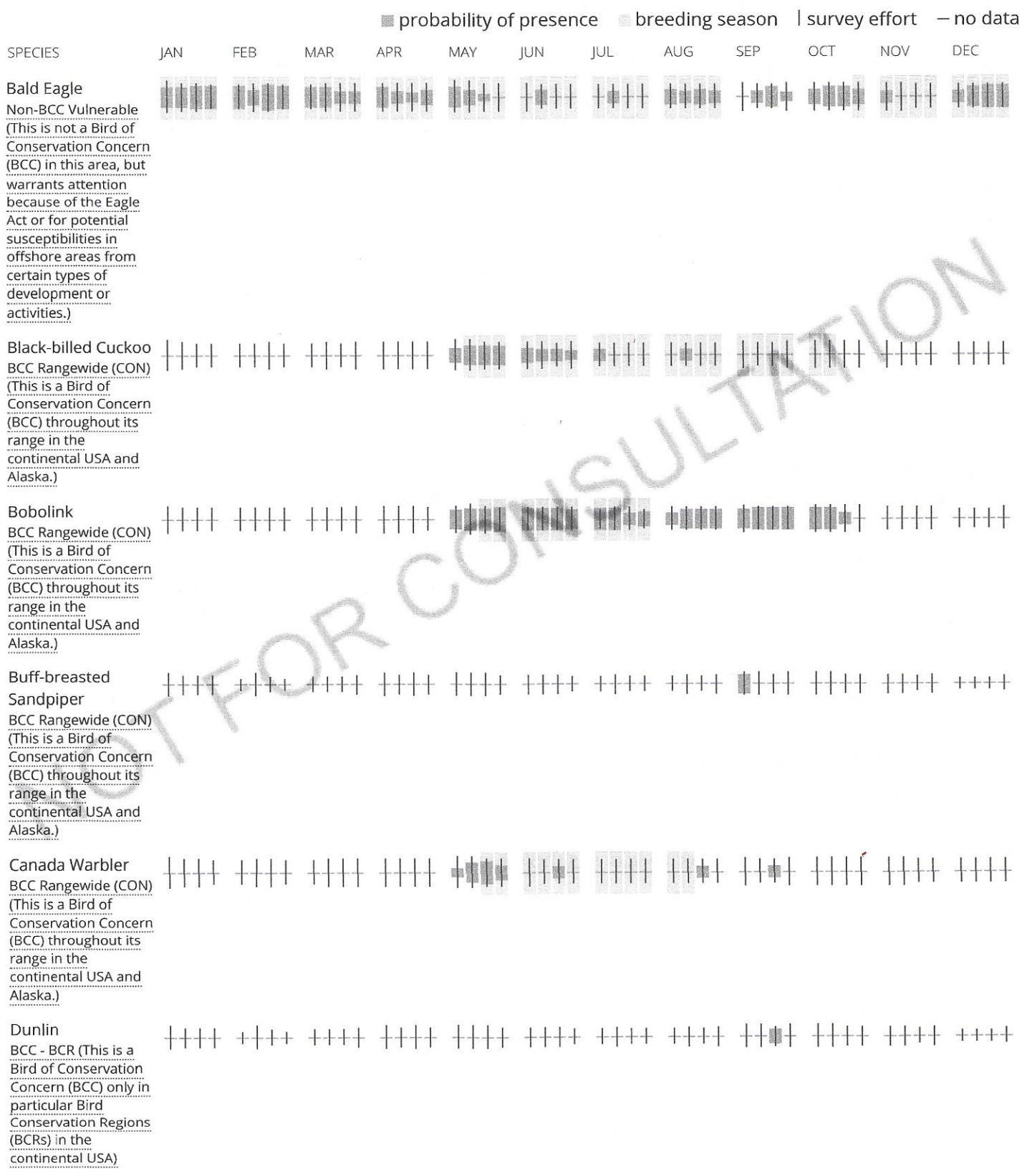
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

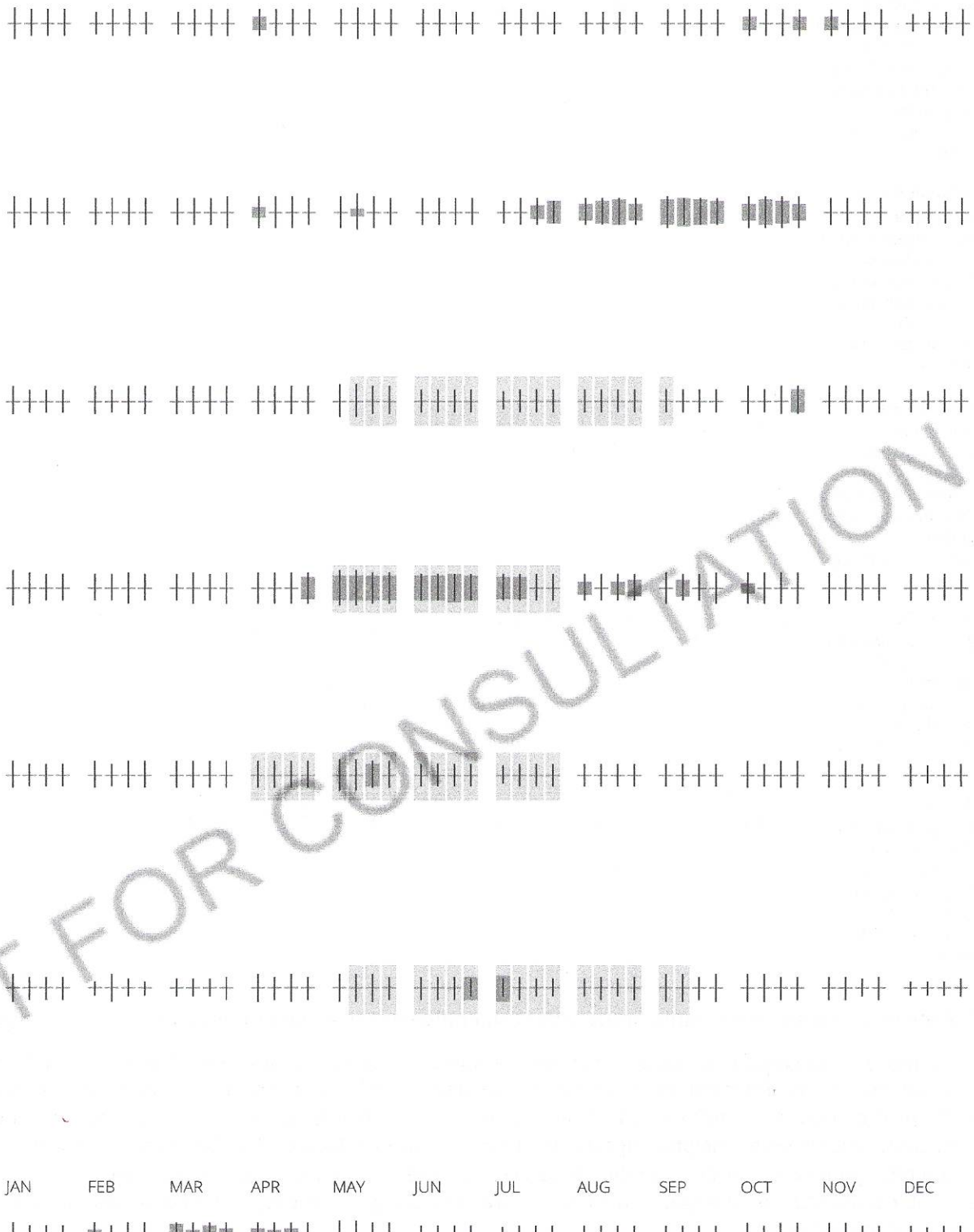
No Data (–)

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.

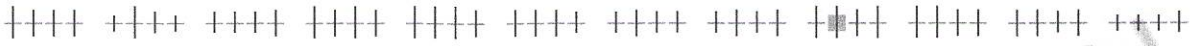




Rusty Blackbird
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

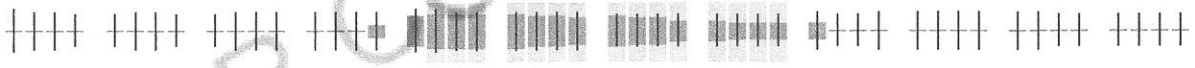
Semipalmated Sandpiper
BCC Rangewide (CON)
(This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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



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

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



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

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

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

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

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects,

and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

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

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

- PEM1E
- PEM1/UBFh
- PEM1Fh
- PEM1Ex
- PEM1Ed
- PEM1Cd
- PEM1/UBF
- PEM1F

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1E
- PFO1Ed
- PSS1E
- PFO1/4E
- PFO1B
- PSS1/EM1E
- PFO1C
- PFO1/4B
- PSS1Ed
- PSS1F
- PSS1Fh
- PFO1Bd
- PSS1/FO1E
- PSS1B
- PFO1A
- PSS1C
- PFO1Ex

FRESHWATER POND

- PUBHh
- PUBHx
- PUBH

LAKE

- L1UBHh

RIVERINE

- R2UBHx

R2UBH
R4SBC
R4SBCx
R5UBH
R4SBA
R4SBAx

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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