APPENDIX C

ENDANGERED SPECIES GUIDANCE

(Town of Pelham answers are in green)

The U.S. Fish and Wildlife Service ESA Eligibility Process

Applicants must determine if they meet the ESA eligibility criteria by following the steps of this Appendix before submitting a notice of intent (NOI) for coverage by the Permit. **The Town of Pelham, New Hampshire, was determined as eligible to certify under USFWS Criterion C for the Permit.**

The USFWS ESA eligibility requirements of this permit relating to the Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Roseate Tern, Red Knot, Northern long-eared bat, Jesup's milk-vetch, and Small whorled Pogonia, may be satisfied by documenting that one of the following criteria has been met:

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:

During 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.

1. Steps for Determining if USFWS ESA Eligibility Criteria Can be Met

To determine eligibility, you must assess the potential effects of your known stormwater discharges and discharge related activities on listed species or critical habitat, prior to completing and submitting a Notice of Intent (NOI). You must follow the steps outlined below and document the results of your eligibility determination.

Step 1 – Determine if you can meet USFWS Criterion A

USFWS Criterion A: You can certify eligibility, according to USFWS Criterion A, for coverage by this permit if, upon completing the Information, Planning, and Conservation (IPaC) online system process, you printed and saved the preliminary determination which indicated that federally listed species or designated critical habitats are not present in the action area.

Federally listed species are shown to be present in the Town of Pelham through the IPaC screening tool. The Town is NOT eligible for USFWS Criterion A, go to Step 2.

If you have met USFWS Criterion A skip to Step # 4.

If you have not met USFWS Criterion A, go to Step # 2.

Step 2 – Determine if You Can Meet Eligibility USFWS Criteria B

USFWS Criterion B: You can certify eligibility according to USFWS Criteria B for coverage by this permit if you answer "**Yes**" to all the following questions:

1) Does your action area contain one or more of the following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Roseate Tern, Jesup's milk-vetch? **No.**

AND

2) Did your assessment of the discharge and discharge related activities indicate that the discharge or discharge related activities "may affect" or are "not likely to adversely affect" listed species or critical habitat? **No.**

AND

3) Did you contact the USFWS and did the formal or informal consultation result in either a "no jeopardy" opinion by the USFWS (for formal consultation) or concurrence by the USFWS that your activities would be "not likely to adversely affect" listed species or critical habitat (for informal consultation)? **No.**

AND

4) Do you agree to implement all measures upon which the consultation was conditioned? **N/A**

AND

5) Do you agree that if, during the permit term, you plan to install a structural BMP not identified in the NOI that you will re-initiate informal or formal consultation with USFWS as necessary? **Yes.**

Use the guidance below Step 3 to understand effects determination and to answer these questions.

The Town of Pelham does not answer "Yes" to all the questions. The Town is NOT eligible for USFWS Criterion B, go to Step 3.

If you answered "Yes" to all the questions above, you have met eligibility USFWS Criteria B. Skip to Step 4.

If you answered "No" to any of the questions above, go to Step 3.

Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C

USFWS Criterion C: You can certify eligibility according to USFWS Criterion C for coverage by this permit if you answer "Yes" to both of the following questions:

1) Does your action area contain the Small whorled Pogonia or the Northern long eared bat and does not contain one any following species: Dwarf wedgemussel, Northeastern bulrush, Piping Plover, Roseate Tern, or Jesup's milk-vetch? **Yes. The Town is shown to contain the Northern Long-eared Bat, but none of the other noted species in this question.**

OR

2) Did the assessment of your discharge and discharge related activities indicate that there would be "no affect" on listed species or critical habitat and EPA provided concurrence with your determination? **Yes. Based on review of the data on the USFWS, New England Field Office web site (New Hampshire Wildlife Action Plan), the "Core Range" of the listed species is not shown within or nearby the Town of Pelham, and additionally it is noted that "Northern long-eared bat is not specifically managed in New Hampshire" (*New Hampshire Wildlife Action Plan, Appendix A Mammals*). Therefore, it has been determined that the Town's discharge and discharge related activities would have "no affect" on listed species or critical habitat.**

3) Do you agree that if, during the permit term, you plan to install a structural BMP not identified in the NOI that you will conduct an endangered species screening for the proposed site and contact the USFWS if you determine that the new activity "may affect" or is "not likely to adversely affect" listed species or critical habitat under the jurisdiction of the USFWS. **Yes.**

Use the guidance below to understand effects determination and to answer these questions.

If you answered "Yes" to both the questions above, you have met eligibility USFWS Criterion C. Go to Step 4.

Step 4 - Document Results of the Eligibility Determination

Once the USFWS ESA eligibility requirements have been met, you shall include documentation of USFWS ESA eligibility in the Storm Water Management Program required by the permit. Documentation for the various eligibility criteria are as follows:

•USFWS Criterion A: A copy of the IPaC generated preliminary determination letter indicating that no listed species or critical habitat is present within your action area. You shall also include a statement on how you determined that no listed species or critical habitat are in proximity to your stormwater system or discharges.

•USFWS Criterion B: A dated copy of the USFWS letter of concurrence on a finding of "no jeopardy" (for formal consultation) or "not likely to adversely affect" (for informal consultation) regarding the ESA section 7 consultation.

•USFWS Criterion C: A dated copy of the EPA concurrence with the operator's determination that the stormwater discharges and discharge-related activities will have "no affect" on listed species or critical habitat.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To:
Consultation Code: 05E1NE00-2021-SLI-3667
Event Code: 05E1NE00-2021-E-10980
Project Name: Pelham NH MS4 Year 3

June 02, 2021

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2021-SLI-3667
Event Code: 05E1NE00-2021-E-10980
Project Name: Pelham NH MS4 Year 3
Project Type: ** OTHER **
Project Description: The Town of Pelham, NH needs endangered species act certification for the federally mandated Municipal Separate Storm Sewer System permit issued by the EPA.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.741070699999995,-71.3104481182958,14z

Counties: Massachusetts and New Hampshire

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. 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.

Mammals

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

Flowering Plants

NAME	STATUS
Small Whorled Pogonia *Isotria medeoloides* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1890	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

Northern Long-eared Bat

Myotis septentrionalis

Federal Listing	N/A
State Listing	SC
Global Rank	G2
State Rank	
Regional Status	Very High

Photo by USFWS

Justification (Reason for Concern in NH)

Like other bats, northern long-eared bat life history is different from the typical life history of other small mammals. Individuals are relatively long lived and have a low reproductive rate, generally giving birth to a single young each year (Whitaker and Hamilton 1998). Since the northern long-eared bat is found in relatively rare, at-risk habitats during winter (caves/mines), they are at risk of population decline if such habitats are lost or degraded. Their slow reproductive rate would, in turn, lead to a slow population recovery time. This has proven to be the case since the onset of White-Nose Syndrome (WNS). Northern long-eared bats have been decimated by White-Nose Syndrome, a fungal disease that affects bats during hibernation. The fungus, *Psuedogymnoascus destructans*, grows into the wings, muzzles and ears of the bats, disrupting metabolic functions and causing bats to arouse from hibernation more frequently and stay awake longer than uninfected bats. This causes them to use up stored energy (fat) at a much higher rate. Bats cannot replenish their fat stores in winter as their food source is unavailable. They perish from starvation, some first flying out the hibernacula in mid-winter in a desperate search. Since bats are in hibernation they do not mount an immune response to this disease. First discovered in 2006-2007 by cavers near Albany, New York, the disease quickly spread, with NH seeing its first cases during the winter of 2009. By 2015, WNS had found in 24 states and 4 Canadian provinces. Winter surveys in 2010 showed a 54% decline in northern long-eared bats and by 2011 declines had reached 99%. Surveys over the winters of 2014 and 2015 echoed this with one individual found in one of the 8 regularly surveyed hibernacula (down from the 2008 high of 721).

Distribution

Winter distribution of the northern long-eared bat prior to White-Nose Syndrome included each of New Hampshire's seven mine hibernacula. In addition, a newly discovered hibernacula in a WWII bunker was discovered in 2010 also housed northern long-eared bats. The concentration of northern long-eared bats among the hibernacula ranged from fewer than 1% (Mascot Lead Mine) to 47% (Bristol Mine) of the total bat population. Northern long-eared bats n New Hampshire tended to be less common (fewer than 1% of hibernating bats) in the large hibernacula such as Mascot Lead Mine, intermediate (less than 20%) at medium-sized mines such as Paddock Copper Mine and Mt. Kearsarge Lead Mine, and relatively abundant in small hibernacula such as Bristol Mine, Beebe River Mine, and the Red Mine (table 1). This pattern is consistent with hibernaculum surveys in Vermont (Trombulak 2001).

Summer records are known from Carroll, Coos, Cheshire, Grafton, Hillsborough and Rockingham counties. Of 141 summer captures of northern long-eared bats in New Hampshire prior to WNS, 74.2% are from the White Mountain National Forest (Sasse 1995, Krusic 1996, Chenger 2005), 24.3%

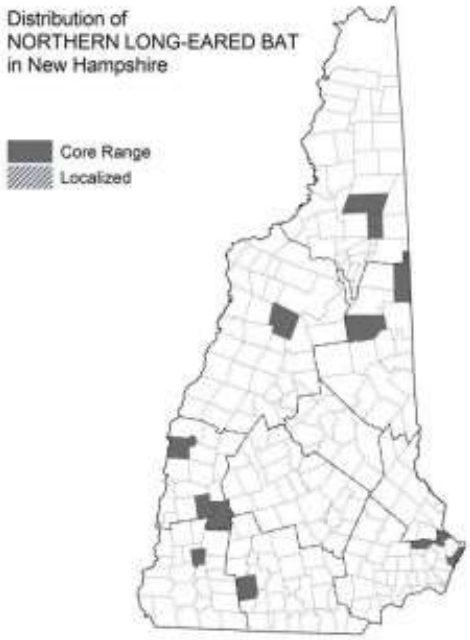
are from northern Cheshire County (Chenger 2002, J.P. Veilleux, unpublished data) and 3.5% are from Merrimack and Hillsborough County (LaGory et al. 2002, Reynolds, unpublished data). Any apparent geographical clustering may be an artifact of sampling effort. Data from Rockingham County comes from one site and includes just a few individuals (D. Yates pers. com.).

Habitat

During winter, the northern long-eared bats requires cave or mine habitat that provides adequate characteristics for successful hibernation. Such characteristics include proper microclimate (i.e. temperature stability) and a low level of human disturbance. During hibernation, the northern long-eared bat often retreats into small holes, cracks, and crevices in the walls and ceiling (John Whitaker, Indiana State University, personal communication, Durham 2000), though they will also cling to the wall and ceiling surface. It is unknown whether the northern myotis prefers caves and mines with large numbers of small crevices for hibernation. Northern long-eared bats are often found deep within mine shafts (Durham 2000). Northern long-eared bats are known to use caves and mines year- round and often maintain some activity throughout the winter months (Whitaker & Rissler 1992).
In the White Mountain National Forest (WMNF), sixty-six percent of northern long-eared bats roosted in snags (dead trees) and the remainder roosted in live trees (Sasse 1995), They will use a variety of deciduous species, and choice may be influenced by availability. Large, tall trees with intact bark and moderate levels of decay are commonly chosen, especially if they have hollows (Sasse 1995). Most roost trees used by northern long-eared bats in West Virginia were located in 70-90 year-old intact forests that had not been logged in 10 to 15 years (Owen et al. 2003). However, some females have been observed roosting in actively managed industrial forests in West Virginia (Menzel et al. 2002).

NH Wildlife Action Plan Habitats

- Hemlock Hardwood Pine Forest
- Caves and Mines
- Appalachian Oak Pine Forest
- Lowland Spruce-Fir Forest
- Northern Hardwood-Conifer Forest
- Pine Barrens



Distribution Map

Current Species and Habitat Condition in New Hampshire

Northern long-eared bats were known from seven mine and one artificial hibernacula in New Hampshire, but the decline in the population due to WNS has reduced it to only one seen in the past two winters. However, northern long-eared bats roost in cracks and crevices and may not be detected. Summer data collected at the Great Bay National Wildlife Refuge 2013-2015 has recorded the presence of several individuals (D. Yates pers com).

Population Management Status

Northern long-eared bat are not specifically managed in New Hampshire. The bat gate at Mascot Lead Mine and sealing of the Rockingham County hibernacula are conservation tools for hibernating bats collectively. Lack of data on the summer distribution of northern long-eared bats hinders effective management.

Regulatory Protection (for explanations, see Appendix I)

- NHFG Permit for collection or possession
- Federal Endangered Species Act - under consideration
- NH NHB Database - current
- NH NHB Database - historic
- NHFG Rule FIS 804.02. Possession.
- WMNF sensitive species

Quality of Habitat

The New Hampshire Natural Heritage Survey (NHNHS) has ranked all known northern long-eared bat hibernacula according to habitat quality and prospects for long-term conservation. Carter's Mine (Grafton County), Paddock Copper Mine (Grafton County), and Bristol Mine (Grafton County) each received an 'A', indicating excellent quality and prospects for long-term conservation. Dodge Mine (Grafton County) was ranked 'B', indicating good quality and prospect for long-term conservation. Both Mt. Kearsarge Lead Mine and Mascot Lead Mine were ranked as 'B/C', indicating fair to good quality and prospects for long-term conservation. Beebe River Mine was ranked as 'C', indicating fair quality and/or prospects for long-term conservation. However, NHNHB ranking does not appear to reliably assess the value of northern long-eared bat mine habitats, because the two hibernacula in serious decline received a 'B/C' (Mascot Lead Mine) and an 'A' (Paddock Copper Mine).

Habitat Protection Status

Most bat hibernacula in NH are not protected. Three are on state land but only two are gated. One hibernacula on private land has a conservation easement with a special management unit defined around the mine entrance but is not gated. The other hibernacula are located on private land.

Habitat Management Status

The only ongoing habitat management practices in New Hampshire are the bat gate at Mascot Lead Mine and the sealing of the Rockingham County hibernacula.

Threats to this Species or Habitat in NH

Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a "medium" or "high" score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.

Disturbance from humans exploring bat hibernacula (Threat Rank: High)

Active cavers and casual cave explorers disturb bats when they enter occupied caves and mines. Noise, light, changes in temperature and airflow, and physical contact can all disturb bats (Thomas 1995). In winter during hibernation, these disturbances can cause bats to arouse from hibernation and thus use up precious stored energy. Bats susceptible to White-Nose Syndrome are especially vulnerable to disturbance, as the disease already causes increased numbers of arousals and depletion of stored fat.

Northern long-eared bats occur at hibernacula that may experience high levels of human disturbance. Ungated mines saw the largest decline in hibernating northern long-eared bats 1986-2004, whereas bat populations within the gated hibernaculum remained stable during this same period.

Mortality and species impacts (loss of fitness) due to White-Nose Syndrome (Threat Rank: High)

Northern long-eared bats have been decimated by White-Nose Syndrome (WNS), a fungal disease that affects bats during hibernation. The fungus, *Pseudogymnoascus destructans*, grows into the wings, muzzles and ears of the bats (Lorch et al. 2011), disrupting metabolic functions (Meteyer et al. 2009, Cryan et al. 2013, Verant et al. 2014) and causing bats to arouse from hibernation more frequently and stay awake longer than uninfected bats (Lorch et al. 2011, Reeder et al. 2012). This causes them to use up stored energy (fat) at a much higher rate (Reeder et al. 2012). Bats cannot replenish their fat stores in winter as their food source is unavailable. They perish from starvation, some first flying out the hibernacula in mid-winter in a desperate search for food. Since bats are in hibernation they do not mount an immune response to this disease.

WNS was first found in NH in 2009. Winter surveys in 2010 showed a 54% decline and by 2011 declines had reached 99% for Northern long-eared bats. Surveys over the winters of 2014 and 2015 echoed this with only one individual found in only one of the 8 regularly surveyed hibernacula (down from the 2009 high of 519). This drop in population has also occurred in other affected states (Turner et al. 2011).

Habitat degradation and conversion due to changes in mine configuration from landowner & natural causes, including reopening or closing mines (Threat Rank: Medium)

Changes in the mine entrances can block access or change the temperature and humidity within the mine. Bats have specific ranges of temperatures and humidity they require for hibernating. Reopening of mines for active use can disturb or kill hibernating bats, or make the mine unsuitable for hibernating.

Habitat conversion due to negative perceptions of bats by homeowners that results in loss of roosting habitat in buildings (Threat Rank: Medium)

Northern long-eared bats sometimes use human structures for roosting, usually in the attic or walls. Humans often do not like having bats roosting in their buildings, particularly in houses and businesses and so remove them, mostly through exclusion. Exclusions done when pups are in residence can lead

to the death of the pups. Bats entering the parts of buildings that humans use may be killed due to fears about the bats.

List of Lower Ranking Threats:

Species impacts from agricultural pesticide use causing prey declines

Habitat degradation from succession that causes loss of drinking and foraging habitats

Habitat degradation from timber harvest that removes summer roosting and foraging areas

Habitat degradation from roads and powerline development

Mortality and conversion of migratory habitat due to wind turbine development

Habitat conversion and degradation due to removal of summer roosting and foraging areas

Actions to benefit this Species or Habitat in NH

Participate in efforts regarding White-Nose Syndrome

Primary Threat Addressed: Mortality and species impacts (loss of fitness) due to White-Nose Syndrome

Specific Threat (IUCN Threat Levels): Invasive & other problematic species, genes & diseases / Invasive non-native/alien species/diseases / Named species

Objective:
Assist in the research, management and planning efforts to control the spread of, find a treatment for, and recover bat species affected by White-Nose Syndrome

General Strategy:
Participate in regional, national and international research, management and planning efforts to control the spread of, find a treatment for, and recover bat species affected by White-Nose Syndrome. Continue to participate in national research projects such as acoustic transects and emergence counts. Continue to participate in research efforts as requested. Participate in regional and national workshops, plans and projects for conservation, recovery and communications about White-Nose Syndrome.

Political Location:
National, Northeast, Statewide

Watershed Location:
Statewide

Monitor bat populations

Objective:
Continue to monitor hibernating and summer bat populations.

General Strategy:
Monitor hibernacula at least every three years for the presence and abundance of bats. Resurvey summer mist netting sites that have been historically monitored such as Surry Mountains Dam and New Boston Air Force Station.

Political Location:
Statewide

Watershed Location:
Statewide

Promote organic practices and integrated pest management (IPM)

Primary Threat Addressed: Species impacts from agricultural pesticide use causing prey declines

Specific Threat (IUCN Threat Levels): Pollution / Agricultural & forestry effluents / Herbicides & pesticides

Objective:
Provide technical assistance to organizations that provide education, technical assistance and funding to farmers and homeowners on organic growing practices and IPM.

General Strategy:
Work with the Northeast Organic Farmers Association, UNH Cooperative Extension, NRCS, nursery stock growers, garden centers, garden clubs, landscapers and others to educate farmers, homeowners and commercial landscapers on using IPM and organic practices

Political Location:
Statewide

Watershed Location:
Statewide

Protect summer colonies in buildings

Primary Threat Addressed: Habitat conversion due to negative perceptions of bats by homeowners that results in loss of roosting habitat in buildings

Specific Threat (IUCN Threat Levels): Human intrusions & disturbance

Objective:
Protect summer colonies in buildings without compromising public health

General Strategy:
Protect summer colonies by prohibiting exclusion of bats from buildings during the time they have non-volant young (May 15-August 15). Exceptions should be available in the case of a documented rabid bat in the building or other public health issue. Develop materials for wildlife control operators and homeowners about bats in houses and their reproductive cycle to build support for the rule change and compliance afterwards.

Political Location:
Statewide

Watershed Location:
Statewide

Prevent disturbances to hibernating bats

Primary Threat Addressed: Disturbance from humans exploring bat hibernacula

Specific Threat (IUCN Threat Levels): Human intrusions & disturbance

Objective:

Prevent recreational use of known bat hibernacula during the hibernation period

General Strategy:

Through education, bat-friendly gates and other means prevent people from entering hibernacula during the hibernation period.

Political Location:
Coos County, Grafton County, Merrimack County, Rockingham County

Watershed Location:
Androscoggin-Saco Watershed, Upper CT Watershed, Middle CT Watershed, Merrimack Watershed, Coastal Watershed

Protect occupied roosting trees

Primary Threat Addressed: Habitat degradation from timber harvest that removes summer roosting and foraging areas

Specific Threat (IUCN Threat Levels): Biological resource use

Objective:

Prevent occupied roosting trees from being cut down.

General Strategy:

Develop voluntary BMPs for forestry that help landowners and foresters identify and protect known and potential roosting trees during harvesting operations. Provide these guidelines to organization building trails or otherwise potentially cutting trees. BMPs could include time of year restrictions for cutting, tree size limitation and other techniques. Coordinate with other states for consistency.

Political Location:
Northeast, Statewide

Watershed Location:
Statewide

Develop standard processes to reduce the effect of wind energy production on bats

Primary Threat Addressed: Mortality and conversion of migratory habitat due to wind turbine development

Specific Threat (IUCN Threat Levels): Energy production & mining

Objective:

Develop and implement rules on siting and operation of wind turbines to reduce mortality of bats during construction and operation

General Strategy:

Develop and implement siting rules that protect migration routes and occupied habitat from wind turbine development. Develop required operational mitigation measures such as curtailment to reduce bat mortality post-construction. Develop these in conjunction with nearby states to provide consistency to energy developers across the northeast.

Political Location:
Northeast, Statewide

Watershed Location:
Statewide

Protect hibernacula from structural damage

Primary Threat Addressed: Habitat degradation and conversion due to changes in mine configuration from landowner & natural causes, including reopening or closing mines

Specific Threat (IUCN Threat Levels): Energy production & mining

Objective:
Protect hibernacula from structural damage such as changes to mine opening or configuration.

General Strategy:
Work with owners of hibernacula to encourage them to voluntarily refrain from changing the opening or the configuration of the interior of mines, unless it is to erect a bat-friendly gate over the opening. Encourage the installations of bat-friendly gates.

Political Location:
County, Rockingham County Coos County, Grafton County,

Watershed Location: Merrimack Androscoggin-Saco Watershed, Upper CT Watershed, Middle CT Watershed, Pemi-Winni Watershed, Merrimack Watershed, Coastal Watershed

References, Data Sources and Authors

Data Sources
Information on northern long-eared bats comes from NHFG unpublished data, hibernation survey reports from Dr. Jacques Veilleux and Dr. Scott Reynolds, and published scientific literature.

Data Quality
Cave and mine hibernacula data is fairly comprehensive. Data is missing from what may have been the largest hibernacula, still not specifically located but known to be on the slopes of Mount Washington due to the presence of hundreds of sick bats flying in February of 2010. Summer population data is lacking. Data on most threats is well documented in the scientific literature

2015 Authors:
Emily Preston, NHFG

2005 Authors:
Jacques Veilleux, Franklin Pierce University; D. Scott Reynolds, St. Paul's School

Literature

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Pelham NH MS4 Year 3

Biological Assessment

Prepared using IPaC

Generated by Dena Hoffman (dhoffman@pelhamweb.com)

June 2, 2021

The purpose of this Biological Assessment (BA) is to assess the effects of the proposed project and determine whether the project may affect any Federally threatened, endangered, proposed or candidate species. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)).

In this document, any data provided by U.S. Fish and Wildlife Service is based on data as of June 2, 2021.

June 28, 2021
Town of Pelham, New Hampshire

Prepared using IPaC version 5.59.1

Pelham NH MS4 Year 3 Biological Assessment

Table Of Contents

1 Description Of The Action

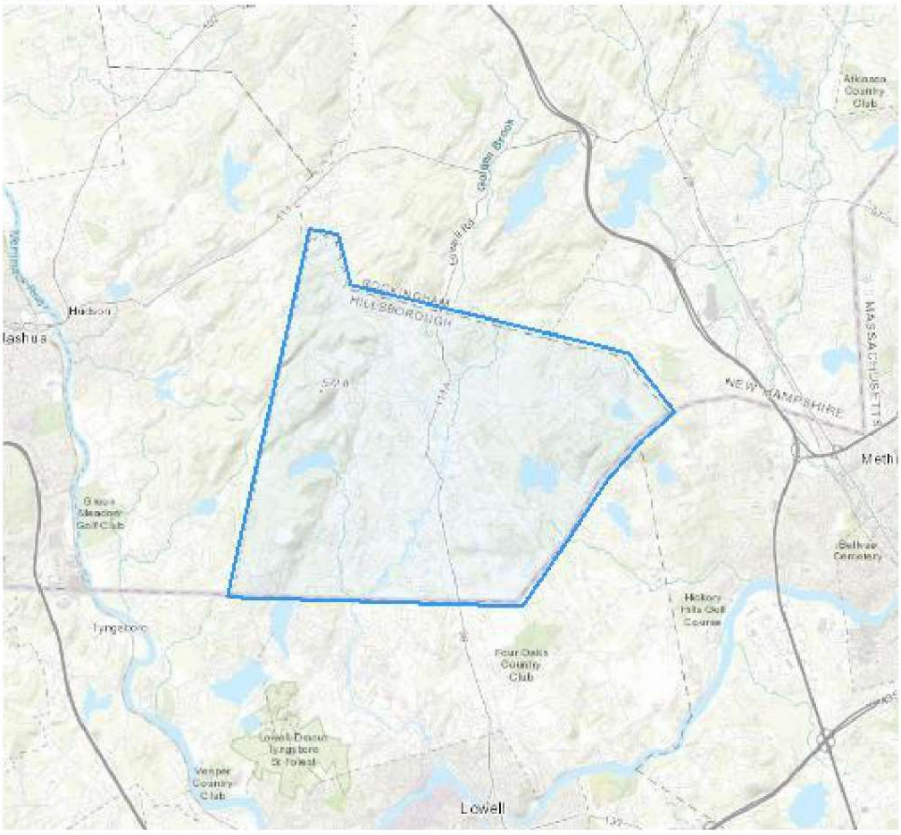
1.1 Project Name
Pelham NH MS4 Year 3

1.2 Executive Summary
The EPA's Municipal Separate Storm Sewer System permit for the Town of Pelham, NH, requires documentation to prove that stormwater structures will not impact any endangered or federally listed species. This project illustrates that there will be no effect on either of the two species in Pelham.

Effect determination summary

1.3 Project Description

1.3.1 Location



LOCATION
Massachusetts and New Hampshire

1.3.2 Description of project habitat

The entire town of Pelham, NH.

1.3.3 Project proponent information

Provide information regarding who is proposing to conduct the project, and their contact information. Please provide details on whether there is a Federal nexus.

Requesting Agency
Town of Pelham, NH

FULL NAME
Dena Hoffman

STREET ADDRESS
6 Village Green

CITY	STATE	ZIP
Pelham	NH	03076

PHONE NUMBER	E-MAIL ADDRESS
(603) 635-7811	dhoffman@pelhamweb.com

Lead agency
Lead agency is the same as requesting agency

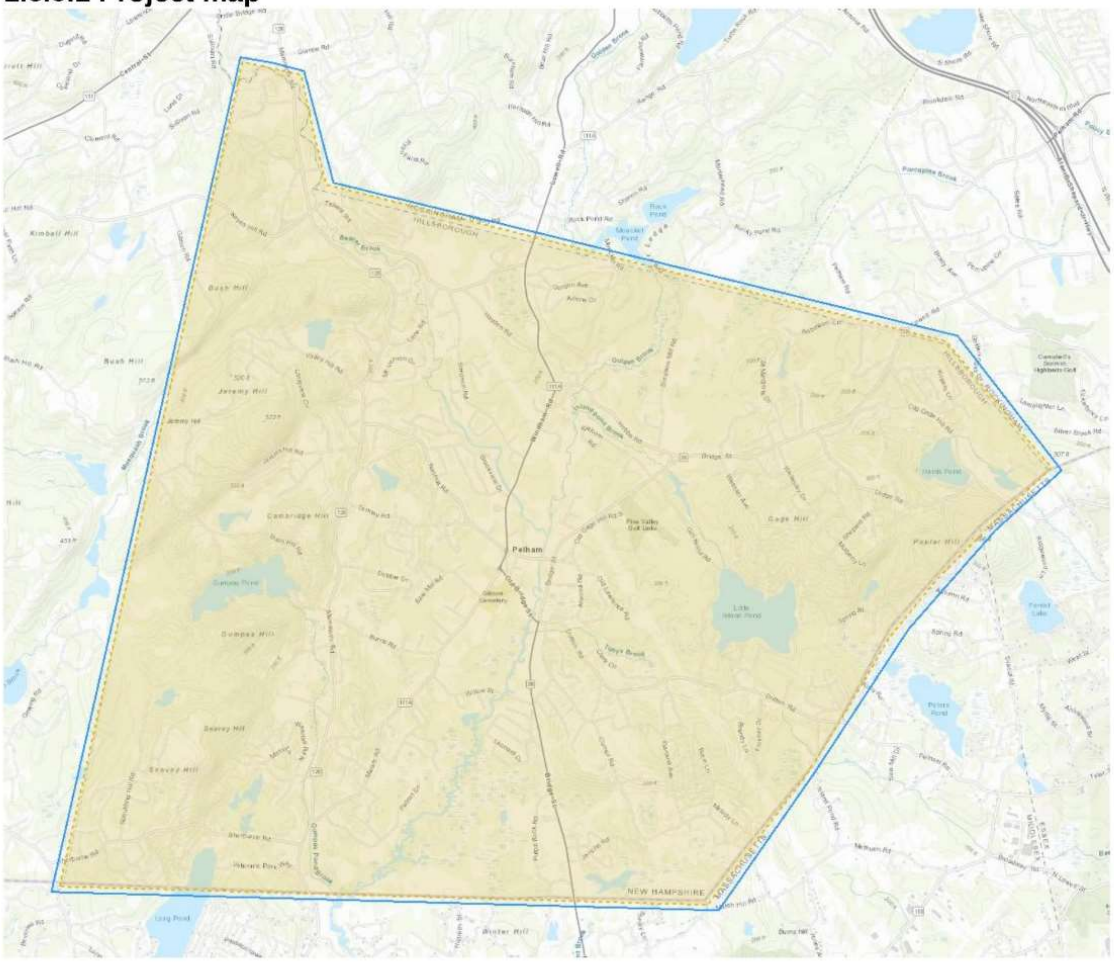
1.3.4 Project purpose

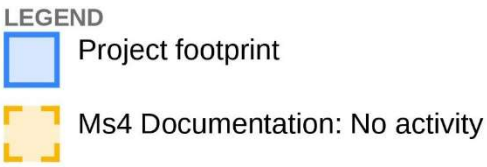
There is no project occurring, the Town of Pelham needs this data for MS4 documentation.

1.3.5 Project type and deconstruction

This project is a ms4 documentation project.

1.3.5.1 Project map




LEGEND
Project footprint
Ms4 Documentation: No activity

1.3.5.2 no activity

Activity start date
June 01, 2021

Activity end date
June 29, 2022

Stressors
This activity is not expected to have any impact on the environment.

Description
This is for the MS4.

1.3.6 Anticipated environmental stressors

Describe the anticipated effects of your proposed project on the aspects of the land, air and water that will occur due to the activities above. These should be based on the activity deconstructions done in the previous section and will be used to inform the action area.

1.3.6.1 Animal Features

Individuals from the Animalia kingdom, such as raptors, mollusks, and fish. This feature also includes byproducts and remains of animals (e.g., carrion, feathers, scat, etc.), and animal-related structures (e.g., dens, nests, hibernacula, etc.).

1.3.6.2 Plant Features

Individuals from the Plantae kingdom, such as trees, shrubs, herbs, grasses, ferns, and mosses. This feature also includes products of plants (e.g., nectar, flowers, seeds, etc.).

1.3.6.3 Aquatic Features

Bodies of water on the landscape, such as streams, rivers, ponds, wetlands, etc., and their physical characteristics (e.g., depth, current, etc.). This feature includes the groundwater and its characteristics. Water quality attributes (e.g., turbidity, pH, temperature, DO, nutrients, etc.) should be placed in the Environmental Quality Features.

1.3.6.4 Environmental Quality Features

Abiotic attributes of the landscape (e.g., temperature, moisture, slope, aspect, etc.).

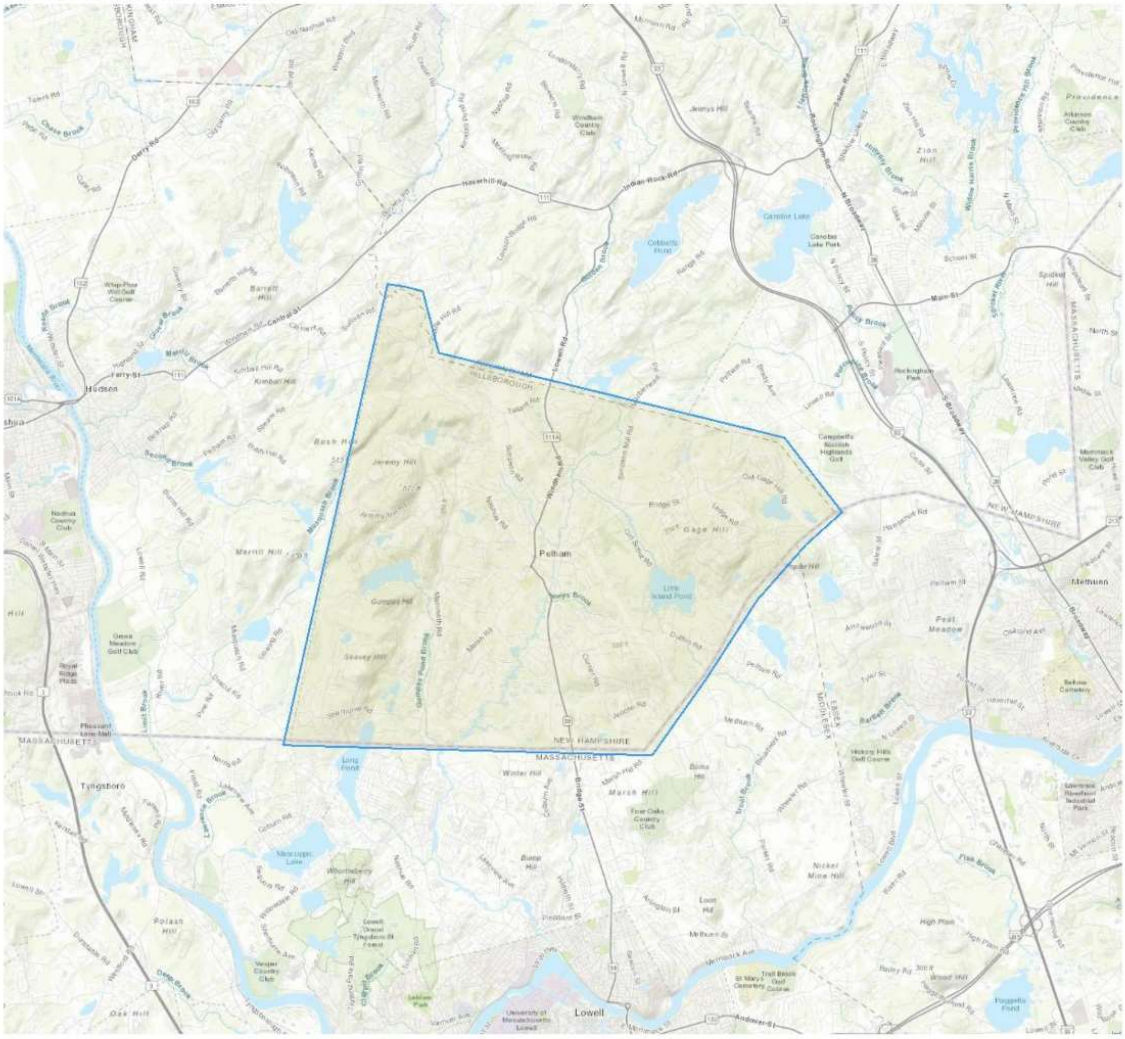
1.3.6.5 Soil and Sediment

The topmost layer of earth on the landscape and its components (e.g., rock, sand, gravel, silt, etc.). This feature includes the physical characteristics of soil, such as depth, compaction, etc. Soil quality attributes (e.g, temperature, pH, etc.) should be placed in the Environmental Quality Features.

1.3.6.6 Miscellaneous

Miscellaneous should only be used if the created feature does not fit into one of the other categories or if the creator is not sure in which category it should be placed.

1.4 Action Area



1.5 Conservation Measures

Describe any proposed measures being implemented as part of the project that are designed to reduce the impacts to the environment and their resulting effects to listed species. To avoid extra verbiage, don't list measures that have no relevance to the species being analyzed.

No conservation measures have been selected for this project.

1.6 Prior Consultation History

The Town of Pelham received ESA documentation last year for the 2nd year of the Small MS4 Permit.

1.7 Other Agency Partners And Interested Parties

None.

1.8 Other Reports And Helpful Information

I've attached the previous ESA documentation. The historic information at the end can be ignored.

Relevant documentation

- SWMP APPENDIX C-YR2

2 Species Effects Analysis

This section describes, species by species, the effects of the proposed action on listed, proposed, and candidate species, and the habitat on which they depend. In this document, effects are broken down as direct interactions (something happening directly to the species) or indirect interactions (something happening to the environment on which a species depends that could then result in effects to the species).

These interactions encompass effects that occur both during project construction and those which could be ongoing after the project is finished. All effects, however, should be considered, including effects from direct and indirect interactions and cumulative effects.

2.1 Northern Long-Eared Bat

2.1.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.1.1.1 Legal status

The Northern Long-eared Bat is federally listed as 'Threatened' and additional information regarding its legal status can be found on the ECOS species profile.

2.1.1.2 Recovery plans

Available recovery plans for the Northern Long-eared Bat can be found on the ECOS species profile.

2.1.1.3 Life history information

The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species range includes 37 states. White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. Although the disease has not yet spread throughout the northern long-eared bats entire range (white-nose syndrome is currently found in at least 25 of 37 states where the northern long-eared bat occurs), it continues to spread. Experts expect that where it spreads, it will have the same impact as seen in the Northeast.

Identified resource needs

Hibernacula

Humidity: high, noise: low, with minimal distrubance, temperature: 0-9 degrees celsius, time of year: august through april, type: caves, mines, sewers and spillways

Insects

Type: lepidoptera (moths and butterflies), coleoptera (beetles), trichoptera (caddisflies), diptera (flies), spiders and lepidopterous larvae

Open water

Type: streams, rivers, ponds, wetlands, lakes and road ruts

Travel corridors

Location: between forest patches, type: riparian corridors, wooded paths, hedgerows and fence rows

Trees

Size: > or equal to 3 inch dbh, spatial arrangement: within 1000 feet of forest, structure: cracks, crevices, cavities, exfoliating bark, time of year: april through august, type: dead, nearly dead, living tree with dead parts and living with appropriate structure

2.1.1.4 Conservation needs

Northern Long-eared Bats need stable and safe habitats to survive. There are no critical habitats in Pelham.

2.1.2 Environmental baseline

*The environmental baseline describes the species' health **within the action area only** at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.*

2.1.2.1 Species presence and use
There is no critical habitat in Pelham, NH.

2.1.2.2 Species conservation needs within the action area
The Town does not have to do anything.

2.1.2.3 Habitat condition (general)
There is no habitat.

2.1.2.4 Influences
Northern Long-eared Bats are greatly impacted by White Nose Syndrome.

2.1.2.5 Additional baseline information
N/A

2.1.3 Effects of the action
This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.1.3.1 Indirect interactions
Provide a brief overview of what the applicable science has discovered regarding the species and its response to the stressors that each project activity may cause. This should include an explanation of the pathways and mechanisms that have potential to translate environmental change (impact) into response and effects to individuals.

2.1.3.2 Direct interactions
No direct interactions leading to effects on species are expected to occur from the proposed project.

2.1.4 Cumulative effects
There are none.

2.1.5 Discussion and conclusion

Determination: NE

2.2 Small Whorled Pogonia

2.2.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.2.1.1 Legal status

The Small Whorled Pogonia is federally listed as 'Threatened' and additional information regarding its legal status can be found on the ECOS species profile.

2.2.1.2 Recovery plans

Available recovery plans for the Small Whorled Pogonia can be found on the ECOS species profile.

2.2.1.3 Life history information

No description available

Identified resource needs

Mycorrhizae

Location: plant and seeds requires substrate that contains mychorrhizal fungus. this symbiosis allows the fungus to provides nutrients and water to the pogonia.

Nutrients

Location: soil

Slope

Range: 0-30 degree slope

Soil

Ph level: 4.0-5.0

Soil moisture/saturation

Sunlight

Amount: canopy gaps that allow low dapples of sunlight in. semi-permanent break in the canopy. light availability could be a limiting factor for the species.

Understory

Range: relatively open

2.2.1.4 Conservation needs
Small Whorled Pogonia need untouched habitat.

2.2.2 Environmental baseline
*The environmental baseline describes the species' health **within the action area only** at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.*

2.2.2.1 Species presence and use
There is no critical habitat for this species in Pelham, NH.

2.2.2.2 Species conservation needs within the action area
This species needs conservation land that is not interacted with by the public.

2.2.2.3 Habitat condition (general)
There is no habitat in Pelham.

2.2.2.4 Influences
There are no influences.

2.2.2.5 Additional baseline information
N/A

2.2.3 Effects of the action
This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.2.3.1 Indirect interactions
Provide a brief overview of what the applicable science has discovered regarding the species and its response to the stressors that each project activity may cause. This should include an explanation of the pathways and mechanisms that have potential to translate environmental change (impact) into response and effects to individuals.

2.2.3.2 Direct interactions

No direct interactions leading to effects on species are expected to occur from the proposed project.

2.2.4 Cumulative effects

There are none.

2.2.5 Discussion and conclusion

Determination: NE

3 Critical Habitat Effects Analysis

No critical habitats intersect with the project action area.

4 Summary Discussion, Conclusion, And Effect Determinations

4.1 Effect Determination Summary

SPECIES (COMMON NAME)	SCIENTIFIC NAME	LISTING STATUS	PRESENT IN ACTION AREA	EFFECT DETERMINATION
Northern Long-eared Bat	Myotis septentrionalis	Threatened	Yes	NE
Small Whorled Pogonia	Isotria medeoloides	Threatened	Yes	NE

4.2 Summary Discussion

There will be no effects to species in Pelham. There will be no effects to critical habitat in Pelham because there are none.

4.3 Conclusion

In conclusion, this documentation will help the Town of Pelham with their MS4 ESA documentation and illustrates that stormwater structures will have no impact on the endangered species that may be in Pelham, NH.

United States Department of the Interior

FISH AND WILDLIFE SERVICE

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

January 4, 2021

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

https://www.fws.gov/newengland/endangeredspecies/index.html (accessed January 2021)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact us at 603-223-2541 or www.fws.gov/newengland if we can be of further assistance.

Sincerely,

DAVID SIMMONS
Digitally signed by DAVID SIMMONS
Date: 2021.01.25 16:36:49 -05'00'

David Simmons
Acting Field Supervisor
New England Field Office

Decision Steps from APPENDIX D

Procedures Relating to Historic Properties Preservation

(Town of Pelham results shown in green)

Historic Property Screening Process

You should follow the following screening process to certify your compliance with historic property eligibility requirements under this permit. The following four steps describe how applicants can meet the permit eligibility criteria for protection of historic properties under this permit:

Step One: Are you a municipality that is reapplying for certification under the 2003 Small MS4?

If you are a municipality previously covered by the 2003 Small MS4, you should have already addressed NHPA issues. To gain coverage under the 2003 Small MS4 you were required to certify that you were either not affecting historic properties or had obtained written agreement from the relevant SHPO or THPO regarding methods of mitigating potential impacts. As long as you are not constructing or installing any new stormwater control measures then you have met eligibility Criterion A of the Small MS4. After you submit your NOI, there is a minimum 30-day public notice period during which the SHPO, THPO, or other tribal representative may review your NOI. The SHPO, THPO, or other tribal representative may request that EPA hold authorization based on concerns about potential adverse impacts to historic properties.

If you are an existing municipality and will construct or install stormwater control measures that require subsurface disturbance of less than 1 acre, then you should proceed to Step Two. (Note: Construction activities disturbing 1 acre, or more are not eligible for coverage under this permit.)

If you are a municipality not covered by the previous permit, then you should proceed to Step Two.

The Town of Pelham is a municipality previously covered by the 2003 Small MS4. Additionally, the Town is not currently proposing to construct or install structural stormwater measures under the MS4 that would cause subsurface disturbance or impacts less than 1-acre of land.

The Town of Pelham is eligible to certify under Criterion A.

In the future, if the Town should decide to implement stormwater projects under the MS4, the Town will seek further site-specific consultation with appropriate agencies as required.

TABLE C.1 Town of Pelham Historic Resources		
Date	**Name**	**Location ***
National or State Register of Historic Places Listed		
1896	Pelham Public Library and Memorial Building	5 Main St
Town Noted Significant Historic Resources (Not Listed) **		
1719	Pulpit Rock Site	Route 38
1741	Pelham-Hudson stone town marker	Nashua Road
1837	Abbott Bridge	Old Bridge St, over Beaver Brook
1842	Congregational Church	3 Main St
1886	Butler Monument	3 Main St
	Atwood Cemetery	Atwood Road
	Bedard's Quarry	Ledge Road
	Cranberry Bog	Old Bridge St
	First Block House Site	Marsh Road
	Gibson Cemetery	Marsh Road
	Gumpas Cemetery	Mammoth Road
	Hilman's Corner – Hilman Factory	Sherburne Road
	Mitchell Bound	Colburn Avenue
	North Pelham Cemetery	Keyes Hill Road
	Old Cotton Mill	Tallant Road
	Old Stone Cottage	Route 38
	Sexton's House	Gage Hill Road
	Stickney House	Tenney Road
	Webster Farm	Webster Avenue
	Wyman House	Marsh Road

*Locations approximated from Map VII-1; Historic Resources, 2007 Master Plan

**2007 Town of Pelham Master Plan