



Environmental Strategy & Engineering

June 21, 2019

GeoInsight Project 9205-000

Jeff Gowan, Planning Director
Town of Pelham, New Hampshire
6 Village Green
Pelham, NH 03076

Re: 2017 NH Small MS4 General Permit
Section 1.9 Special Eligibility Determinations
Documentation Regarding Endangered Species
Documentation Regarding Historic Properties

Mr. Gowan:

As required for the Town of Pelham's (the Town) authorization under the US Environmental Protection Agency (EPA) 2017 NH Small Municipal Separate Stormwater System (MS4) General Permit, and on behalf of the Town, GeoInsight, Inc. (GeoInsight) performed the required screening and prepared attached documentation for Section 1.9, Special Eligibility Determinations Regarding Endangered Species and Historic Properties to provide determination of the presence of endangered or threatened species, as well as cultural or historic resources within the limits of the Town's MS4 regulated area.

Section 1.9.1 Documentation Regarding Endangered Species

Per Appendix C of the MS4 and using the US Fish & Wildlife Service (USFWS) IPaC screening tool¹ there is one (1) listed (threatened) species (Northern Long-eared Bat) and no critical habitat identified within the Town.

Based upon our review of available data, the US Fish & Wildlife Service, New England Field Office guidance^{2,3} and EPA-NH MS4 instructions⁴, GeoInsight has determined that the implementation of the Town's MS4 stormwater discharges and discharge-related activities will have will have "no affect" on the listed species or critical habitat. As such, the Town is eligible to certify ESA eligibility under USFWS **Criterion C** for the MS4.

¹ <https://ecos.fws.gov/ipac/>

² https://www.fws.gov/newengland/EndangeredSpec-Consultation_Project_Review.htm

³ <https://www3.epa.gov/region1/npdes/stormwater/nh/epa-2017-ms4-permit-letter-nh.pdf>

⁴ https://www4.des.state.nh.us/nh-ms4/wp-content/uploads/2017/06/Suzanne-Warner-EPA-NOI-Presentation_NH2017.pdf

NEW HAMPSHIRE

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The Town's stormwater program is a continuation of the 2003 MS4 General Permit and does not currently propose land or vegetation disturbance activities. Planned stormwater management under the 2017 MS4 includes: planning; public education; and identification, sampling, and prioritization of outfalls within the Town's regulated areas; and pollution prevention at Town facilities.

The listed species are sensitive to land and vegetation disturbance activities; therefore, should the Town decide to implement projects in the future under the 2017 MS4 that would involve such activity, the Town will seek further site-specific consultation with appropriate agencies as required.

Documentation for the ESA determination is provided in Attachment 1 of this letter.

Section 1.9.2 Documentation Regarding Historic Properties

On behalf of the Town of Pelham, GeoInsight has documented the Historic Property Screening Process as defined in Appendix D of the MS4. As a municipality previously covered by the 2003 MS4, and based upon our review of available data, GeoInsight has determined that the continued implementation of the Town's current MS4 stormwater discharges and discharge-related activities will not have the potential to affect historic properties. As such, the Town is eligible to certify eligibility under **Criterion A** for the MS4.

The EPA identifies proposed construction or installation activities of stormwater related measures that include subsurface disturbance and impacts of less than 1 acre of land as potentially having an effect on historic properties. Currently, the Town is not proposing to construct or install structural stormwater measures under the MS4. Should the Town decide to implement projects in the future under the 2017 MS4 that would involve such activity, the Town will seek further site-specific consultation with appropriate agencies as required.

Documentation for the Historic Property Screening Process is provided in Attachment 2 of this letter.

Sincerely,
GeoInsight, Inc.

Project Engineer

Senior Engineer/Principal



ATTACHMENT 1

Section 1.9.1 Documentation Regarding Endangered Species



Decision Steps from:
APPENDIX C
ENDANGERED SPECIES GUIDANCE
(Town of Pelham results shown in Blue)

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

Before submitting a notice of intent (NOI) for coverage by this Permit, applicants must determine whether they meet the ESA eligibility criteria by following the steps in Section B of this Appendix. Applicants that cannot meet the eligibility criteria in Section B must apply for an individual 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: In the course of formal or informal consultation with the Fish and Wildlife Service, under section 7 of the ESA, the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the stormwater discharges and discharge related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation).

USFWS Criterion C: Using the best scientific and commercial data available, the effect of the stormwater discharge and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the applicant and affirmed by EPA, that the stormwater discharges and discharge related activities will have "no affect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

1. The Steps to Determine if the 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. See Attachment 1 to Appendix C for instructions on how to use IPaC.

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 of 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
- 5) Do you agree that if, during the course of 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 of the questions. The Town is NOT eligible for USFWS Criterion B, go to Step 3.

If you answered “Yes” to all of 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 question:

- 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? OR
YES. The Town is shown to contain the Northern Long-eared Bat, but none of the other noted species in this question.
- 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 are not specifically managed in New Hampshire.”⁵. 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 course of 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 question above, you have met eligibility USFWS Criterion C. Go to Step 4.

⁵ New Hampshire Wildlife Action Plan, Appendix A Mammals, page 87



The Town of Pelham has answered yes to the above questions and is eligible to certify under USFWS Criterion C.

If you answered "No" to either of the questions above, you are not eligible for coverage by this permit. You must submit an application for an individual permit for your stormwater discharges. (See 40 CFR 122.21).

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:

May 13, 2019

Consultation Code: 05E1NE00-2019-SLI-1698

Event Code: 05E1NE00-2019-E-04124

Project Name: Pelham NH 2017 MS4 Permit

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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: 05E1NE00-2019-SLI-1698

Event Code: 05E1NE00-2019-E-04124

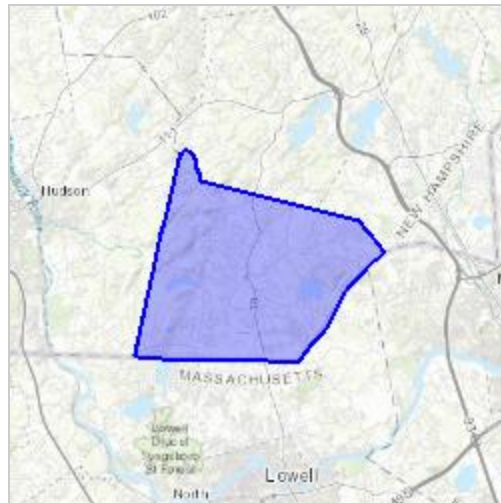
Project Name: Pelham NH 2017 MS4 Permit

Project Type: ** OTHER **

Project Description: This project is to provide ESA screening for the Town of Pelham NH for the NH MS4 permit effective July 1, 2018. The project area includes the entire Town of Pelham NH within the town boundaries as imported into IPaC as a shapefile extracted from the NH GRANIT political boundaries data set.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.74110485474489N71.31125331701482W>



Counties: Essex, MA | Middlesex, MA | Hillsborough, NH | Rockingham, NH

Endangered Species Act Species

There is a total of 1 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 Fisheries¹, 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.

-
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 <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

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

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN NEW HAMPSHIRE**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Belknap	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Meredith, Alton and Laconia
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Carroll	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Albany, Brookfield, Eaton, Effingham, Madison, Ossipee, Wakefield and Wolfeboro
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Coos	Canada Lynx	Threatened	Regenerating softwood forest, usually with a high density of snowshoe hare.	All Towns
	Dwarf wedgemussel	Endangered	Connecticut River main channel and Johns River	Northumberland, Lancaster and Dalton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Cheshire	Dwarf wedgemussel	Endangered	S. Branch Ashuelot River and Ashuelot River	Swanzey, Keene and Surry
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Grafton	Dwarf wedgemussel	Endangered	Connecticut River main channel	Haverhill, Piermont, Orford and Lyme
	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Holderness
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hillsborough	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Manchester, Weare
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Merrimack	Karner Blue Butterfly	Endangered	Pine Barrens with wild blue lupine	Concord and Pembroke
	Small whorled Pogonia	Threatened	Forests	Bow, Danbury, Epsom, Loudon, Warner and Allenstown
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

**FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES
IN NEW HAMPSHIRE**

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Rockingham	Piping Plover	Threatened	Coastal Beaches	Hampton and Seabrook
	Roseate Tern	Endangered	Atlantic Ocean and nesting at the Isle of Shoals	
	Red knot ¹	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal towns
	Small whorled Pogonia	Threatened	Forests	Deerfield, Northwood, Nottingham, and Epping
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Strafford	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Middleton, New Durham, Milton, Farmington, Strafford, Barrington, and Madbury
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Sullivan	Northeastern bulrush	Endangered	Wetlands	Acworth, Charlestown, Langdon
	Dwarf wedgemussel	Endangered	Connecticut River main channel	Plainfield, Cornish, Claremont and Charlestown
	Jesup's milk-vetch	Endangered	Banks of the Connecticut River	Plainfield and Claremont
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

¹Migratory only, scattered along the coast in small numbers

-Eastern cougar, gray wolf and Puritan tiger beetle are considered extirpated in New Hampshire.

-Endangered gray wolves are not known to be present in New Hampshire, but dispersing individuals from source populations in Canada may occur statewide.-There is no federally-designated Critical Habitat in New Hampshire

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 in 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, Cheng 2005), 24.3%

Appendix A: Mammals

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 bat 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).

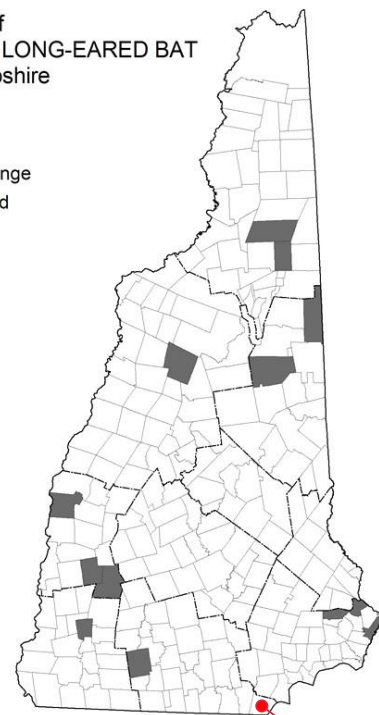
In the White Mountain National Forest (WMNF), sixty-six percent of northern long-eared bats roosted in snags (dead trees) and the remainder roosted in live trees (Sasse 1995). They will use a variety of deciduous species, and choice may be influenced by availability. Large, tall trees with intact bark 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 of
NORTHERN LONG-EARED BAT
in New Hampshire

Core Range
Localized



Distribution Map

Appendix A: Mammals

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

Appendix A: Mammals

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.

Appendix A: Mammals

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:

Appendix A: Mammals

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

Appendix A: Mammals

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

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Emily Preston, NHFG

2005 Authors:

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

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New England Field Office

Conserving the Nature of New England

Monday,
May 13, 2019

Endangered Species Reviews/Consultations

ENDANGERED SPECIES

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Let's Go Outside

Staff Directory

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HOME



Endangered Species Consultation

Project Review for Projects with Federal Involvement (authorizing, funding or carrying out the project)

The following information is designed to assist applicants or project sponsors in determining whether a federally-listed, proposed and/or candidate species may occur within the proposed project area and whether it is appropriate to contact our office for additional coordination or consultation. We encourage you to print out all materials used in the analyses of effects on listed, proposed or candidate species for your records or submission to the appropriate federal agency or our office.

Step 1. - Determine whether any listed, proposed, or candidate species (T/E species) are likely to occur within the proposed project **action area** based on location of the proposed project:

A. Choose your state list below and review for Towns in which federally-listed species occur:

[Connecticut](#) - 12 species (29 KB)
[Massachusetts](#) - 14 species (41 KB)
[New Hampshire](#) - 13 species (31 KB)
[Rhode Island](#) - 8 species (22 KB)
[Vermont](#) - 10 species (25 KB)

B. You should contact your state Natural Heritage Program or Endangered Species Program (see list below) for additional information on federally and state-listed species:

[Rhode Island](#) Natural Heritage Program
[Connecticut](#) Endangered Species Program
Massachusetts [Natural Heritage and Endangered Species Program](#)
Vermont [Non-Game and Natural Heritage](#)
New Hampshire [Fish and Game's Non-game and Endangered Wildlife Program](#)
New Hampshire Natural Heritage Bureau's [Home Page](#)

Please note that these agencies provide information on known occurrences; this information does not replace field surveys, especially for plants, as most project sites have not been previously surveyed specifically for listed species.

C. If the project falls within a Town where the endangered dwarf wedgemussel is known to occur, check the appropriate map to determine whether your project is in the vicinity of its known range.

Massachusetts - [Connecticut River Watershed](#) (912 KB)
New Hampshire/Vermont - [Connecticut River Watershed](#)
[Upper Connecticut River](#) (872 KB)
[Middle Connecticut River](#) (1.07 MB)
[Lower Connecticut River](#) (1.56 MB)
New Hampshire - [Ashuelot River Watershed](#) (886 KB)
Connecticut - [Connecticut River Watershed](#) (2.04 MB)

D. If the project falls within a Town where the endangered northern red-bellied cooter is known to occur, or if the project occurs in Plymouth County, Massachusetts, check the map to determine whether your project is in the vicinity of its known range or critical habitat. [NRBC_MAP](#) (59 KB)

E. If a proposed project occurs in a Town with no known listed, proposed or candidate species present, no further coordination with the Service is needed. You may download a ["no species present" letter](#) (158 KB) stating "no species are known to occur in the project area".

F. If the proposed project occurs in a Town with known occurrences of T/E species, proceed to Step 2.

Step 2. - Determine whether any listed or proposed New England Species are likely to occur within the proposed project area by comparing the habitat present within the proposed project action area with habitat that is suitable for the species.

- Review the information we have provided on the species list information from the appropriate state agency, and any other sources of information available to you to determine types of habitat the species use. A description of suitable habitat for New England's federally-listed species may be found in [New England Species'](#) profiles and fact sheets.
- Determine whether your proposed project action area has any potential for listed species habitat (e.g., are suitable roost trees present? - Indiana bats; are wetlands present? - bog turtles or Northeastern bulrush; will project affect a waterway? - dwarf wedgemussel). After this initial coarse review, determine whether any more detailed surveys may be appropriate (e.g., survey for dwarf wedgemussels).
- If your state Natural Heritage Program or Endangered Species Program does not identify any listed species for the proposed project AND there is **no potential habitat for any listed species within the action area, no further coordination**

with the Service is required. You may download a **"no species present" letter** (158 KB) stating "no species are known to occur in the project area".

- D. If you have identified that potential listed species habitat is present although the species has not been documented from that specific location, further coordination with our office is recommended. Please send the results of your assessment including any habitat surveys to:

Supervisor
U.S. Fish and Wildlife Service
70 Commercial St., Suite 300
Concord, NH 03301

Include in your letter:

A detailed description of the proposed project, including approximate proposed project construction schedule and project activities (e.g., land clearing, utilities, stormwater management). Site plans are often helpful in our evaluation process.

- A description of the natural characteristics of the property and surrounding area (e.g., forested areas, freshwater wetlands, open waters, and soils). Photographs are often helpful in assessing the habitat. Additionally, please include a description of surrounding land use (residential, agricultural, or commercial).
- The location of the above referenced property and extent of any project related activities or discharges clearly indicated on a copy of a USGS 7.5 Minute Topographic Quadrangle (Quad) with the name of the Quad(s) and latitude/longitude clearly labeled.
- A description of conservation measures to avoid or minimize impacts to listed species.

Why does this matter?- In a case where no habitat is present, a quick and easy determination can be made that further coordination is not necessary. In a case where habitat is present, but you believe that the project activities will not impact listed species, it is important to coordinate with us to ensure that all project activities and all potential effects (direct and indirect) have been considered.

(Please allow 30 days following our receipt of your request for processing.)

Step 3. - Based on the results of the habitat survey and a description of the proposed project (including information as to whether any potential habitat may be directly or indirectly affected), the involved Federal agency may determine:

- The proposed project will result in no effect to any T/E species and no further coordination or consultation with the Service is required;
- Additional information (e.g., surveys) is required to determine whether any T/E species are likely to occur within the proposed project area; or
- The proposed project "may affect" a T/E species and consultation with the Service is required.

Files in PDF format will require Acrobat Reader to access the content. If you do not have a copy, please select the link [or click the image] to take you to the Adobe website where you can download a free copy. [Get Adobe Acrobat Reader](#)

Last updated: March 3, 2014



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 31, 2019

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:

<http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm> (accessed January 2019)

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 David Simmons of this office at 603-227-6425 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office



ATTACHMENT 2

Section 1.9.2 Documentation Regarding Historic Properties



Decision Steps from:
APPENDIX D
Procedures Relating to Historic Properties Preservation
(Town of Pelham results shown in Blue)

Historic Property Screening Process

You should follow the following screening process in order 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 Place Listed		
1896	Pelham Public Library	5 Main Street
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 Street, over Beaver Brook
1842	Congregational Church	3 Main Street
1886	Butler Monument	3 Main Street
	Atwood Cemetery	Atwood Road
	Bedard's Quarry	Ledge Road
	Cranberry Bog	Old Bridge Street
	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