

Draft Environmental Assessment

for

Construct New 802-ft Runway Extension

at the Eastern Slope Regional Airport

Town of Fryeburg, Maine

Draft Date

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Prepared for:
Town of Fryeburg
Eastern Slope Airport Authority
Eastern Slope Regional Airport
210 Lyman Dr, Fryeburg, ME 04037

Prepared by:
McFarland-Johnson, Inc.
53 Regional Drive
Concord, New Hampshire 03301



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List of Acronyms

<i>Acronyms</i>	<i>Names</i>
<i>ADG</i>	Aircraft Design Group
<i>ARFF</i>	Aircraft Rescue and Firefighting Facility
<i>BMPs</i>	Best Management Practices
<i>CAGR</i>	Compound Annual Growth Rate
<i>CDC</i>	Center for Disease Control and Prevention
<i>CEQ</i>	Council on Environmental Quality
<i>CFR</i>	Code of Federal Regulations
<i>CH₄</i>	Methane
<i>CO</i>	Carbon Monoxide
<i>CO₂</i>	Carbon Dioxide
<i>CO₂e</i>	Carbon Dioxide Equivalent
<i>DNL</i>	Day/Night Average Sound Level
<i>EA</i>	Environmental Assessment
<i>EIS</i>	Environmental Impact Statement
<i>EJ</i>	Environmental Justice
<i>EPA</i>	U.S. Environmental Protection Agency
<i>FAA</i>	Federal Aviation Administration
<i>FEMA</i>	Federal Emergency Management Agency
<i>FIRM</i>	Flood Insurance Rate Maps
<i>FONSI</i>	Finding of No Significant Impact
<i>GHG</i>	Greenhouse Gas
<i>GIS</i>	Geographic Information System
<i>GPS</i>	Global Positioning System
<i>IPaC</i>	Information for Planning and Conservation
<i>MDEP</i>	Maine Department of Environmental Protection
<i>MDIFW</i>	Maine Department of Inland Fisheries and Wildlife
<i>MIRL</i>	Medium Intensity Runway Lighting
<i>MMTCO₂e</i>	Million Metric Tons of carbon dioxide equivalents
<i>MNAP</i>	Maine Natural Areas Program
<i>N₂O</i>	Nitrous Oxide
<i>NAAQS</i>	National Ambient Air Quality Standards
<i>NEPA</i>	National Environmental Policy Act
<i>NHPA</i>	National Historic Preservation Act
<i>NLR</i>	Noise Level Reduction

Environmental Assessment

<i>NMFS</i>	National Marine Fisheries Service
<i>NO₂</i>	Nitrogen Dioxide
<i>NOAA</i>	National Oceanic and Atmospheric Administration
<i>NPDES</i>	National Pollutant Discharge Elimination System
<i>O₃</i>	Ozone
<i>PAPI</i>	Precision Approach Path Indicators
<i>PFAS</i>	Per- And Polyfluoroalkyl Substances
<i>PFOA</i>	Perfluorooctanoic Acid
<i>PFOS</i>	Perfluorooctane Sulfonate
<i>PPSOB</i>	Pitch Pine-Scrub Oak Barren
<i>PM</i>	Particulate Matter
<i>RCRA</i>	Resource Conservation Recovery Act
<i>REILs</i>	Runway End Identifier Lights
<i>SF</i>	Square Feet or Square Footage
<i>SHPO</i>	State Historic Preservation Office
<i>SO₂</i>	Sulfur Dioxide
<i>SPCC</i>	Spill Prevention Control and Countermeasure
<i>SWPPP</i>	Stormwater Pollution Prevention Plan
<i>US</i>	United States
<i>USACE</i>	United States Army Corps of Engineers
<i>USDOT</i>	United States Department of Transportation
<i>USFWS</i>	United States Fish and Wildlife Service
<i>USGS</i>	United States Geological Survey
<i>VASI</i>	Visual Approach Slope Indicator
<i>VOC</i>	Volatile Organic Compound
<i>WOTUS</i>	Waters of the United States

1. PROPOSED ACTION

1.1. INTRODUCTION

The Environmental Assessment (EA) addresses the foreseeable environmental, social, and economic consequences associated with the proposed extension of Runway 14/32 at Eastern Slope Regional Airport (IZG or “the Airport”). The EA has been prepared in accordance with guidelines from the Federal Aviation Administration (FAA) set forth in FAA Orders 1050.1F, *Environmental Impacts: Policies and Procedures*, and 5050.4B, *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*, 40 Code of Federal Regulations (CFR) Parts 1500-1508, and the FAA’s *1050.1 Environmental Desk Reference Version 3*, dated October 2023, and is in conformance with the National Environmental Policy Act (NEPA) of 1969 and the Council on Environmental Quality (CEQ) regulations. Upon reviewing this EA, the FAA determines if any of the environmental or socioeconomic impacts identified herein are significant under NEPA and require preparation of an Environmental Impact Statement (EIS) or are not significant, in which case FAA will issue a “Finding of No Significant Impact” (FONSI).

IZG is a public airport, constructed in 1961, that plays a vital role in the local transportation system for the White Mountains region of Maine and New Hampshire. IZG is classified as a public, local, general aviation service facility in the FAA National Plan of Integrated Airport Systems (NPIAS). IZG is owned by the Town of Fryeburg, occupies approximately 513 acres (AC), and is operated by the Eastern Slope Airport Authority (ESAA or “the Authority”). The IZG physical address is 210 Lyman Drive, Fryeburg, Maine 04037, situated within the foothills of the White Mountains. Existing facilities at IZG include one (1) active runway (4,200 feet long and 75 feet wide), designated Runway 14/32; a taxiway system (Taxiways A-D); one (1) aprons (Terminal Ramp); terminal building; ten (10) T-hangars, three (3) 6-unit hangars, one (1) 4-unit hangars, a 13-unit hangar, and a recently constructed 10,000 square foot conventional hangar; fuel farm and shed; and vehicle parking capable of holding approximately 15 vehicles.

Figure 1-1 is a Location Map showing the IZG property over a U.S. Geological Survey (USGS) Topographic Map. **Figure 1-2** includes an Aerial Image with the location of IZG.

Figure 1-1: Location Map

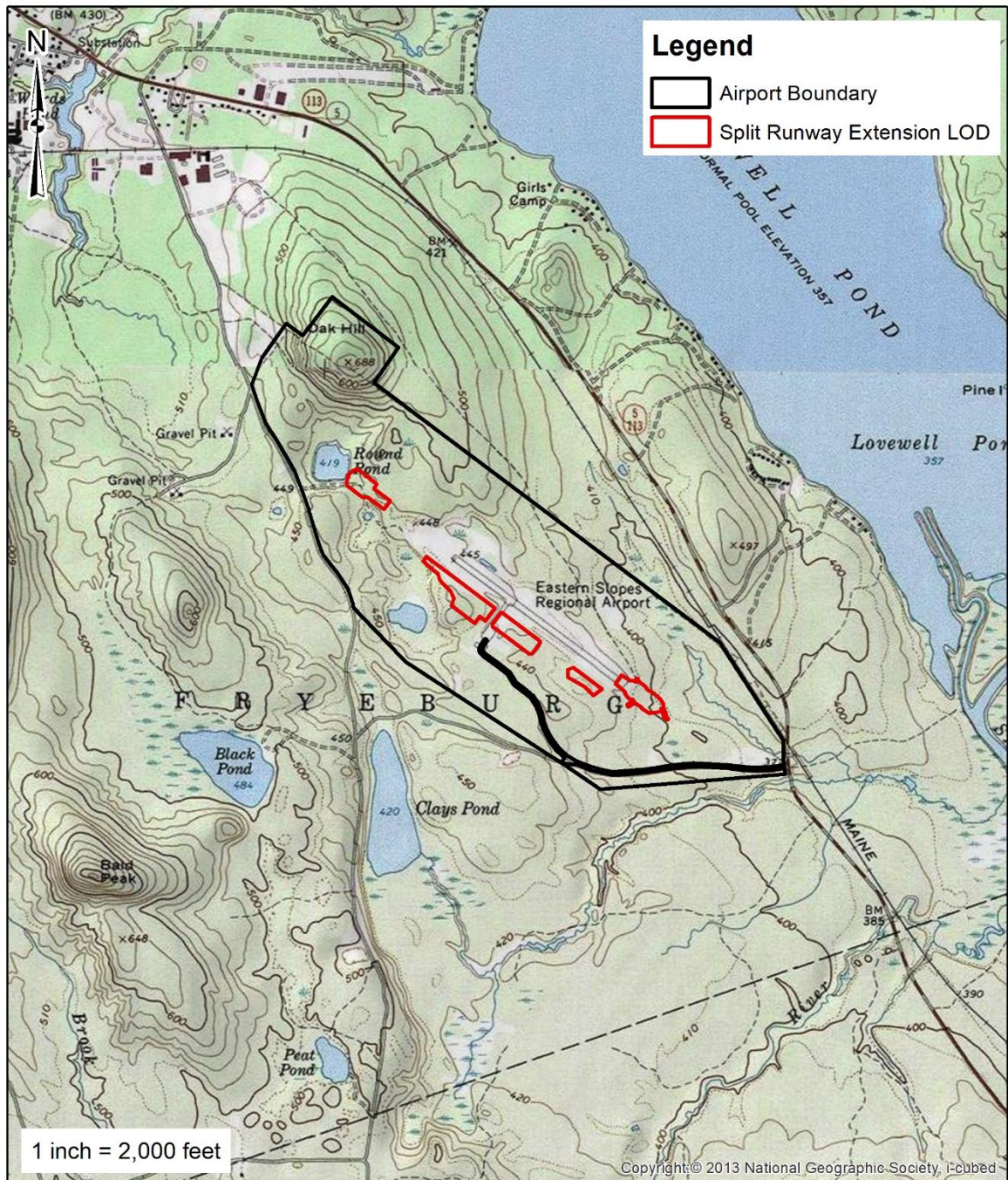
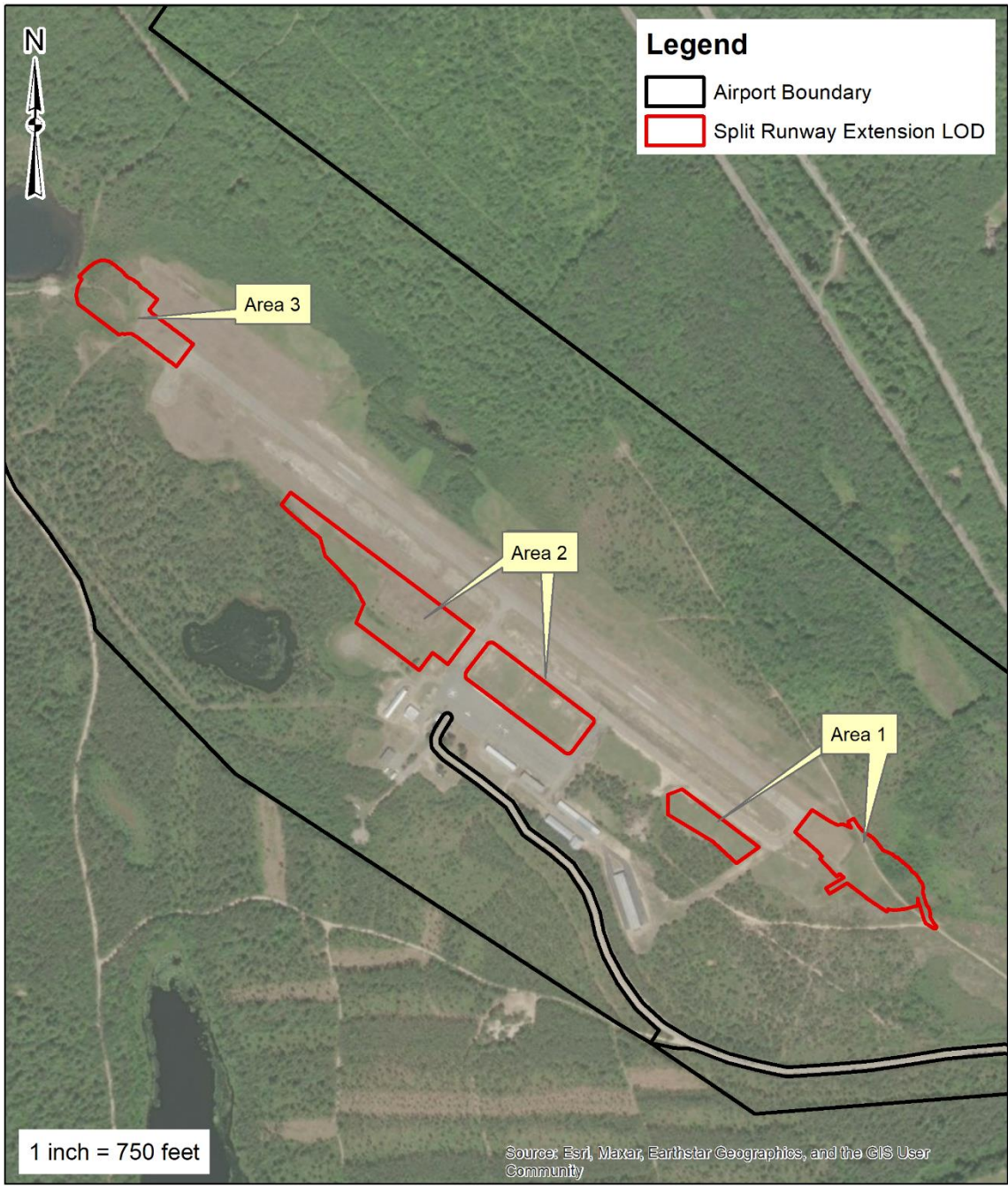


Figure 1-2: Aerial Map



1.2. DESCRIPTION OF PROPOSED ACTION

IZG proposes the extension of Runway 14/32 by 802 feet, which will be referred to as the “Proposed Action”. IZG currently has one runway, Runway 14-32, that is approximately 4,200 feet long by 75 feet wide that is currently designed for B-II Small Aircraft. IZG is proposing the extension of Runway 14-32 that will be split between both runway ends. The Runway 14 end will be extended 390 feet and the Runway 32 end will be extended 412 feet. See **Figure 1-3** for the Proposed Action. The following is a list of details of this Proposed Action:

- Extend of Runway 14-32 by approximately 802.
- Provide compliant geometry for Runway 14-32 for Airport Design Group (ADG) A/B-I for Small Aircraft, including the Runway Safety Area (RSA), Runway Object Free Area (ROFA), and the Runway Object Free Zone (ROFZ).
- Construct incidental grading, stormwater drainage design, and runway marking for the proposed extension.
- Provide slope stabilization for the grading within the RSA.
- Relocate existing Runway 14 navigational aids located at the runway threshold.
- Install runway edge lighting, guidance signs, and other ancillary electrical features.

1.3. ROLES AND RESPONSIBILITIES FOR THE PROPOSED AIRPORT IMPROVEMENTS

This EA evaluates development at the Airport related to the Airport Layout Plan changes that could potentially impact environmental, human and cultural resources. FAA's role, as the Lead Agency, is to review and issue a findings statement, and if appropriate, to approve the Proposed Action in accordance with 49 U.S.C. §47107(a)(16) and Section 163 of the FAA Reauthorization of 2018 (P.L. 115-254).

1.3.1. REGULATORY BASIS

NEPA is a federal statute that requires federal agencies to consider and evaluate the potential environmental impacts of a proposed action and factor them into the decision-making process. The CEQ Regulations set the standards for implementing NEPA compliance and directing federal agencies to develop their own procedures. FAA Order 1050.1F, *Environmental Impacts: Policies and Procedures*, provides the FAA's agency-wide policies and procedures for ensuring compliance with NEPA and the CEQ Regulations. This EA meets the requirements of the NEPA; CEQ regulations; FAA Order 1050.1F; and FAA Order 5050.4B, *NEPA Implementing Instructions for Airport Actions*. As required by NEPA and the implementing regulations from CEQ and FAA, the alternative of taking no action is evaluated, providing a baseline for comparison of potential impacts from the action alternative (i.e., the Proposed Action).

1.4. AGENCY COORDINATION AND PUBLIC INVOLVEMENT

The CEQ gives Federal agencies instructions on NEPA's public involvement process at 40 CFR 1506.6. In addition, FAA Order 5050.4B requires notice and opportunity for public involvement under the NEPA process. To meet the requirements, IZG is making this EA publicly available pursuant to NEPA by issuing a notice of availability (NOA) for the Draft EA. The electronic copy of the Draft EA was available for public review at the IZG website <https://easternslopeairport.com/>, and hardcopies are available at both the Airport located at 210 Lyman Drive, Fryeburg, ME 04037 and the Town of Fryeburg Town Hall located at 16

Lovewell Pond Rd, Fryeburg, ME 04037. Throughout the NEPA review process, IZG and the FAA sought input in writing from the public and federal, tribal, state and local agencies. The NEPA process for the Draft EA includes a 30-day public comment period, starting from publication of the NOA in a local newspaper, giving time to the public, interested agencies, organizations and Native American tribes to provide input and comments on all aspects of the Draft EA. All substantive written comments received during the 30-day public comment period will be considered in preparing the Final EA.

During the preparation of the EA, IZG coordinated with federal and state regulatory agencies. Correspondence from regulatory agencies is included in **Appendix B**.

Figure 1-3: Proposed Action



2. PURPOSE AND NEED

2.1. PURPOSE

The project purpose is to accommodate the operational requirements of the existing aircraft utilizing the Eastern Slope Regional Airport (IZG) to improve access to the region’s resort and recreationally-based economy by increasing the level of service to the greatest extent practicable while balancing environmental impacts.

2.2. NEED

Aircraft that currently operate at IZG are frequently constrained by runway length in both dry and wet conditions. While each aircraft model has specific performance criteria, it is standard to review certain aircraft as a group or family of aircraft with similar characteristics, referred to as "design families". There are two distinct design families for IZG: small aircraft and large aircraft. Runway length needs for both exceed the existing runway length.

Small Aircraft Design Family Runway Length Need

The small aircraft design family consists of 12,500 pounds or less maximum takeoff weight with approach speeds of 50 knots or more with less than ten passengers, as defined in FAA Advisory Circular (AC) 150/5325-4B, *Runway Length Requirements for Airport Design*. This design family has a range of engine types including piston, turboprop, and jet; types of operations including personal or charter operations (Part 135¹); and a variety of aircraft models. As of October 2023, the FAA has released its Small Aircraft Runway Length Analysis Tool (SARLAT), which reviews the most common small aircraft flown in the United States for their performance. As shown in **Table 2-1**, only 75% of small piston aircraft models can land at IZG’s existing 4,200-foot runway without incurring weight penalties² in wet and dry conditions. **Table 2-1** demonstrates the improvement of aircraft accessibility as the runway length increases per aircraft engine type in wet and dry conditions without incurring weight penalties.

¹ Code of Federal Regulations (CFR) Part 135 governs on-demand/charter operations and the Federal requirements these operations need to meet, which impact runway length.

² Weight penalty: An aircraft operates under a weight penalty when it cannot take a full passenger and/or fuel load.

Table 2-1: Level of Service Defined as Percentage of Small Aircraft Able to Operate at IZG without Weight Penalty

Aircraft Engine Type	Runway Length		
	4,200' (Existing Condition)	5,000'	5,500'
Piston	75%	93%	100%
Turboprop	78%	89%	89%
Turboprop (Part 135) ¹	56%	89%	89%
Jet	20%	100%	100%
Jet (Part 135) ¹	20%	40%	80%

Source: FAA SARLAT, Oct. 2023.

Large Aircraft Design Family Runway Length Need

Large aircraft with maximum takeoff weights of 12,501 to 60,000 pounds are generally operating at the airport with significant weight penalties in both dry and wet conditions. A representation of the large aircraft design family consists of the following:

- Cessna jets,
- Beech Super King Air 350,
- Bombardier Challenger,
- Dornier 328,
- Embraer Legacy 450,
- Embraer Phenom 300,
- Dassault Falcon/Mystere 50, and
- Pilatus PC-24 aircraft.

Over the four years from 2018 to 2022, this large aircraft design family grew its operations at IZG by a 14.1 percent compound annual growth rate (CAGR). In accordance with the guidance from FAA AC 150/5325-4B, this design family needs an estimated 5,100 feet dry and 5,500 feet wet runway length with a 60 percent load factor to operate without a penalty.

Accommodating Air Travel Access

The Eastern Slope Regional Airport is located on the border of Maine and New Hampshire in the rural Town of Fryeburg. The nearest Interstate Highway is I-95 located approximately 45 miles east and I-93 is approximately 60 miles to the west. Since the geographic area is underserved by the interstate highway system, improving aircraft accessibility is a critical transportation community need.

3. ALTERNATIVES ANALYSIS

This chapter details the alternatives considered and the evaluation process to select the preferred alternative that appropriately addresses the needed facility improvements. FAA Order 1050.1F, Chapter 6, Section 6-2.1(d) states that there “is no requirement for a specific number of alternatives or a specific range of alternatives to be included in an EA”. Each alternative considered in this EA, including No Action, was evaluated with the required degree of analysis and in accordance with the evaluation criteria described in **Section 3.1**.

3.1. EVALUATION CRITERIA

1. Fulfills Purpose and Need
2. Habitat Impacts
3. Cost
4. Level of Service

3.2. ALTERNATIVE 1 – NO BUILD

Alternative 1 is a No Build option, where IZG would continue operating with the level of service they currently have. This alternative was not considered the preferred alternative because it does not meet the Purpose and Need and does not increase the Level of Service at IZG. See **Figure 3-1** in **Appendix A** for the No Build Alternative and existing conditions and habitats at IZG. **Table 3-1** provides a breakdown of this analysis in relation to each of the evaluation criteria:

Table 3-1: Evaluation Criteria for Alternative 1

Criteria	Analysis
Fulfills Purpose and Need	The No Build Alternative does not improve level of service and therefore does not meet the Purpose and Need.
Habitat Impacts	The No Build Alternative does not include any construction, so there is no habitat impact as a result of this alternative.
Cost	There is no construction cost for this alternative. However, IZG may suffer loss of income which supports the sustainability of the infrastructure and maintenance of the vegetation as a result of not meeting airport operational needs. There is also a qualitative economic cost to the regional rural community for excluding access, but this was not quantified.
Level of Service	The No Build Alternative does not change the level of service of the existing conditions.

3.3. ALTERNATIVES CONSIDERED AND DISMISSED

The ideal alternative that would meet the Purpose and Need of this evaluation would be a 1,300-foot runway extension. This would result in 5,500 feet of useable runway and would improve the level of service by meeting 100% of operational needs for small piston and jet aircraft, and a high percentage for turboprop and charter jet aircraft. This alternative would also meet the operational needs for large aircraft with 60% usable load during wet conditions. Unfortunately, the construction costs alone are not practicable and this alternative was dismissed before quantifying environmental impacts.

Scenarios of shorter runway extensions below 802 feet were evaluated. Although these scenarios resulted in lower costs, they still created habitat impacts and construction costs without meeting the Level of Service criterion. Logically, the No-Build alternative represents the variety of shorter runway extension scenarios that don't meet the Purpose and Need, because it too does not meet the level of service and does so without construction costs or habitat impacts. Therefore, these scenarios were dismissed before being progressed into full alternatives with graphics and quantified impacts/costs.

The 802-foot extension construction on the Runway 14 end was an additional alternative that was considered. In a preliminary review, it was identified that approximately 750 feet from the Runway 14 end is Round Pond and that the pond serves as the main drainage outlet for a large subcatchment area. Construction of the full extension on this side would require filling the pond from a depth of approximately 40 feet. If the extension is constructed in full on the Runway 14 side, there would be high construction costs as well as potential hydrological and ecological impacts if the pond is filled, so this alternative was dismissed without quantifying impacts/costs.

3.4. ALTERNATIVE 2 – RUNWAY 32 EXTENSION

The second alternative that was analyzed includes an extension of the Runway 32 approach end by 802 feet, which brings the total runway length to 5,002 feet. See **Figure 3-2** in **Appendix A** for Alternative 2 Runway 32 802 foot Extension.

Fill material is required to address the change in topography from the existing runway elevation in order to meet FAA design requirements for runways and safety areas. This borrow material will be sourced on site to reduce the amount of trucking required and borrow sites are identified in the figure.

The project also consists of installation of airfield electrical cabling and lights, gravel, asphalt, pavement markings, stormwater treatment devices, topsoil, seeding, tree and brush removal, and temporary erosion control measures.

By proposing the extension solely on RW32 end, there are impacts to the existing wetland of special significance and to the inland waterfowl and wading bird habitat (IWWH). According to Maine Department of Environmental Protection regulation Chapter 310, *Wetlands and Waterbodies Protection*, Section 5. A(1), *Avoidance*, the impacts are allowable as long as the expansion of a facility cannot practicably be located elsewhere because of the relation to the existing facility, that was constructed prior to September 1, 1996. The airport was developed in the 1960s and the runway cannot practicably be relocated both due to unrealistic costs, but also restrictions with airspace due to the surrounding mountainous landscape. Chapter 310, Section 5.A further explains the following:

The activity will be considered to result in an unreasonable impact if the activity will cause a loss in wetland area, functions, or values, and there is a practicable alternative to the activity that would be less damaging to the environment. The applicant shall provide an analysis of alternatives in order to demonstrate that a practicable alternative does not exist.

Although identified as the preferred alternative in the 2008 Airport Master Plan due to impacts associated with Pitch Pine – Scrub Oak Barren (PPSOB) on the RW14 end, field investigations have identified similar habitat exists on the RW32 end as well and a practicable method to mitigate the PPSOB impacts. In order for this alternative to be feasible, no other alternative may exist that reduces impact to this wetland resource. This leads to the development of Alternative 3.

This would result in 5,002 feet of useable runway and would improve the level of service by meeting 93% of operational needs for small piston and 100% jet aircraft, and a high percentage for turboprop and charter jet aircraft.

A summary of impacts is provided in the **Table 3-4**.

Table 3-2 provides a breakdown of this alternative in relation to the evaluation criteria:

Table 3-2: Evaluation Criteria for Alternative 2

Criteria	Analysis
Fulfills Purpose and Need	The Runway 32 Extension Alternative provides additional runway length that increases the level of service of existing aircraft operations at IZG, and substantially advances the airport in meeting the Purpose and Need.
Habitat Impacts	The Runway 32 Extension Alternative impact a wetland of special significance and not feasible if another practicable alternative exists.
Cost	The total cost is estimated as \$4.82M.
Level of Service	The Runway 32 Extension Alternative provides additional runway length that substantially improves the Level of Service of the airport.

3.5. ALTERNATIVE 3 – RUNWAY 14 390' EXTENSION AND RUNWAY 32 412' EXTENSION

The third and final alternative that was analyzed includes an extension of the Runway 14 approach end by 390 feet and the Runway 32 approach end by 412 feet, which brings the total runway length to 5,002 feet. See **Figure 3-3** in **Appendix A** for Alternative 3 Runway Extension.

The intent of this alternative was to shift as much required infrastructure from Runway 32 end to the Runway 14 end without impacting Round Pond. The 100ft buffer to the Outwash Pondshore was impacted as this buffer is not as significant as the IWWH wetland of special significance located on the RW32 end and is already impacted by an existing utility corridor between this project and Round Pond. The remaining infrastructure needed is the resulting Runway 32 extension.

Fill material is required to address the change in topography from the existing runway elevation in order to meet FAA design requirements for runways and safety areas on each runway end. This borrow material will be sourced on site from the same borrow locations as Alternative 1 and results in less hauling than Alternative 1.

The project results in a greater amount of airfield electrical cabling and lights due to two sets of runway threshold lighting being shifted. The relocation of two thresholds also results in the need for additional pavement markings to paint new runway designations, centerlines, and shift the aiming points. The runway 14 end extension disrupts an existing services road which results in more gravel installation to re-route the access. There will be more stormwater devices, but they are likely going to result in smaller sizes. The topsoiling, seeding and temporary erosion control will also increase as more tree/brush are being converted to grassland. There is additional tree clearing compared to Alternative 2, both for obstructions and within the LOD. Refer to **Section 5.2.2.1** Federally Listed Species for more tree clearing information. Asphalt quantities are similar to Alternative 1.

This would result in 5,002 feet of useable runway and would improve the level of service by meeting 93% of operational needs for small piston and 100% jet aircraft, and a high percentage for turboprop and charter jet aircraft.

A summary of impacts are provided in the **Table 3-4**.

Table 3-3 provides a breakdown of this alternative in relation to each evaluation criteria:

Table 3-3: Evaluation Criteria for Alternative 3

Criteria	Analysis
Fulfills Purpose and Need	The Runway 14 and 32 Extension Alternative provides additional runway length that increases the level of service of existing aircraft operations at IZG, and substantially advances the airport in meeting the Purpose and Need.
Habitat Impacts	Impacts to PPSOB can be mitigated. Provides a viable alternative which results in less impacts to wetland of special significance.
Cost	The total costs is estimated as \$4,277,000.
Level of Service	The Runway 14 and 32 Extension Alternative provides additional runway length that substantially improves meeting the operational needs of the airport.

Table 3-4: Alternative Habitat Impact Summary

Habitat	Associated ETSC Species	Alternative 1 No Build	Alternative 2 Runway 32 802' Extension (Acres- AC)	Alternative 3 Runway 14 390' Extension and Runway 32 412' Extension
Wetland of Special Significance	N/A	No Impact	0.96 AC	0.32 AC
Inland Wading Bird and Waterfowl Buffer	N/A	No Impact	5.11 AC	1.80 AC
Pitch Pine Scrub Oak Barren (PPSOB)	Pine barrens zanclognatha, Twilight moth, Edwards' hairstreak, Sleepy duskywing, Eastern buckmoth	No Impact	1.19 AC	1.58 AC
Grassland	Grasshopper Sparrow	No Impact	Increase of 3.44 AC of habitat	Increase of 2.17 AC of habitat
		No Impact	10.84 AC of temporary impact	10.79 AC of temporary impact
Outwash Plain Pondshore (OPP)	New England Bluet	No Impact	No Impact	No Impact
OPP Buffer (100ft)	New England Bluet	No Impact	No Impact	0.22 AC
OPP Buffer (100-250ft)	New England Bluet	No Impact	No Impact	0.99 AC
Forested	Little brown bat, northern long-eared bat, eastern small-footed bat, big brown bat, red bat, hoary bat, silver-haired bat, tri-colored bat	No Impact	3.17 AC	3.40 AC

3.6. ALTERNATIVES REVIEWED

Both Alternative 2, the full 802-foot extension on the Runway 32 end, and Alternate 3, partial extensions on Runway 14 and Runway 32, meet the Purpose and Need through an 802' extension that increases the level of service. However, the difference between the alternatives is their habitat impacts within the limit of disturbance (LOD), specifically the impacts to a Wetland of Special Significance located off the northeast end of the Runway 32 approach. Habitat Impact was a selection criterion that aided in determining the Least Environmentally Damaging Practicable Alternative (LEDPA) between these two alternatives that provide equal additional runway length. Maine Natural Resources Protection Act (Maine NRPA) Chapter 310 states that "The activity will be considered to result in an unreasonable impact if the activity will cause a loss in wetland area, functions, or values, and there is a practicable alternative to the activity that would be less damaging to the environment." To reduce wetland impact for each alternative and determine the LEDPA between the two, a few scenarios of fill slopes were evaluated.

Grading requirements to allow for mechanized equipment to maintain vegetation are generally a 4:1 slope or less. When this scenario was advanced, it was determined the side slope grading created a large area of disturbance in habitats, specifically over one acre of wetland habitat, in both alternatives. Since there may be other means to construct and maintain vegetated slopes, this scenario was dismissed before being evaluated further. Following this scenario, a 3:1 slope was evaluated to represent a vegetated slope that does not typically require structural stabilization. As with the 4:1 slope scenario, this scenario still included impacts to the wetland habitat that were not financially feasible.

To further reduce wetland impact, a 2:1 slope was evaluated as a scenario. The 2:1 slope requires structural stabilization through stone rip-rap, geotextile fabric, and an implementation of a bench along the taller fill locations greater than 20 feet in height, as required by Maine Department of Environmental Protection (MDEP) Erosion and Sediment Controls Best Management Practices. Although an improvement in reducing wetland impacts, the stone rip-rap with geotextile fabric proved to be cost prohibitive to implement everywhere. This analysis further excluded the consideration of steeper, engineered slopes of 1.5:1; 1:1, and retaining walls as these costs far exceeded feasibility. This analysis led to the further development of Alternative 2 and Alternative 3 with a combination of 2:1 and 3:1 slopes to avoid and minimize habitat impacts and to determine the LEDPA. In each alternative, the 2:1 slope was utilized specifically in the location where the Wetland of Special Significance was impacted, and a 3:1 slope utilized in other locations.

With this combination grading, Alternate 2, Runway 32 Extension, impacts approximately 0.96 acres of the Wetland of Special Significance, and Alternative 3, Runway 14 and Runway 32 Extension, impacts approximately 0.32 acres of Wetland of Special Significance. Because Alternative 2 has a greater impact, it was dismissed at the preferred alternative and Alternative 3 was determined to be the LEDPA.

The results of the alternative comparison identify Alternative 3 – Runway 14 and Runway 32 Extension as the preferred alternative. This alternative meets the Purpose and Need by improving the percentage of small aircrafts' operational requirements that are being accommodated, and also by reducing the weight penalty of large aircraft in both dry and wet conditions. These improvements increase the level of service while avoiding and minimizing habitat impact in a way that results in a practicable alternative.

4. AFFECTED ENVIRONMENT

This section describes the environmental conditions of the project site. The characterization of the site is based on the information gathered from technical studies, on-site investigations, a review of available and published scientific information, agency correspondence, and discussions with Airport personnel and public officials. Field investigations were conducted in September 2023. Information presented herein serves as a basis for the assessment of environmental, social, and economic consequences (refer to **Chapter 5**) associated with the Proposed Action.

4.1. GENERAL SITE DESCRIPTION

The study area is within Airport property as shown in **Figure 1-2** and totals approximately 46.2 acres. The Project study area consists of three separate areas as described below:

1. Runway 32 end for runway extension (25.60 acres)
2. Southwestern area parallel to Runway 14/32 for possible fill materials (17.07 acres)
3. Runway 14 end for runway extension (3.52 acres)

Area 1 of the project site exhibits a downward sloping topography towards the southeast. Area 2 of the project site features a terrace with a slight slope to the northeast down to the runway. Area 3 consists of relatively flat terrain immediately off Runway 14 end which then slopes steeply towards the northwest towards Round Pond.

4.2. AIR QUALITY

Under the Clean Air Act, the U.S. Environmental Protection Agency (EPA) designates areas with respect to the level of six criteria air pollutants within a specific area in the state. These criteria air pollutants are carbon monoxide (CO), nitrogen dioxide (NO₂), ozone (O₃), particulate matter (PM), sulfur dioxide (SO₂), and lead (Pb). Particulate matter is divided into two (2) particle size categories: coarse particles with a diameter less than 10 micrometers (PM₁₀) and fine particles with a diameter of less than 2.5 micrometers (PM_{2.5}). An area with measured pollutant concentrations that are below the National Ambient Air Quality Standards (NAAQS) is designated as “attainment”, and an area with pollutant concentrations that exceed the NAAQS is designated as “nonattainment”. After air pollutant concentrations in a nonattainment area are reduced to levels below the NAAQS, the EPA re-designates the area to be “maintenance”— a designation that is maintained for a period of 20 years. Finally, an area is designated as unclassifiable when there is a lack of sufficient data to determine the status of a pollutant. The Airport is located in Oxford County, which is designated as an attainment area for NAAQS.

4.3. BIOLOGICAL RESOURCES

Biological resources refer to the various types of flora (i.e., plants) and fauna (e.g., fish, birds, reptiles, amphibians, mammals, etc.), including state and federally listed threatened and endangered species, in a particular area. The habitats supporting the various flora and fauna, including rivers, lakes, wetlands, wooded areas, forests, and other ecological communities are also biological resources. The study area for biological resources within the project site is shown on **Figure 1-2**.

4.3.1. Ecological Communities and Wildlife

In September 2023, McFarland Johnson conducted a wetland delineation and habitat assessment on site which identified areas of possible pitch pine and scrub oak barren habitats within the study area, however, these areas were not defined as Pitch Pine Scrub Oak Barren (PPSOB) by the Maine Natural Areas Program (MNAP) in their review of the Proposed Action dated November 9th, 2023. A field review of the runway extension with MNAP and the Maine Department of Inland Fisheries and Wildlife (MDIFW) staff was performed December 13, 2023, to determine the presence of suitable grassland habitat for grasshopper sparrows and conformity of PPSOB to the MNAP natural community characteristics. Based on discussions with MDIFW staff, the majority of the grassland areas have characteristics that are suitable for grasshopper sparrows, primarily native grasses that form clusters intermixed with areas of exposed soils. A shapefile of suitable PPSOB habitat within and in the immediate vicinity of the study area was provided by MNAP staff on February 5, 2024, which are shown in **Table 4-1**. A copy of the Habitat Assessment can be found in **Appendix C**. Refer to Error! Reference source not found. for distribution of vegetation assemblages within the project site. **Table 4-1** includes a breakdown of the vegetation assemblage distribution within the study areas and project site.

Table 4-1: Vegetation Assemblage Distribution in Project Site

Main Habitats	Acreages - Approximate			Total (Approx.)	Percentage of Project Site
	Area 1	Area 2	Area 3		
Airport Managed Grassland (regularly mowed)	5.17	13.30	0	18.47	39.99
Pitch Pine Scrub Oak Barren (PPSOB)	0.00	0.72	1.58	2.30	4.98
Outwash Plain Pondshore (OPP) Buffer (100')	0.00	0.00	0.22	0.22	0.48
OPP Buffer (100-250')	0.00	0.00	0.99	0.99	2.14
Wetlands	5.25	0.00	0	5.25	11.36
Other	15.18	3.05	0.73	18.96	41.05
Total	25.60	17.07	3.52	46.19	100

Grasslands: Much of the Proposed Action would occur within managed grassland habitat consisting of maintained airport grounds regularly mowed by mechanical means. This type of habitat comprises the largest habitat type in the project sites. These managed grass areas are predominantly well-drained sandy soils comprised of both warm and cold season grasses with intermixed forbs. Grassland areas provide

potential habitat for the state endangered grasshopper sparrow (*Ammodramus savannarum*), however, areas mowed more than twice per year during the breeding season (May 1 to August 1) are not considered suitable grasshopper sparrow habitat for the purposes of impacts and mitigation as discussed in **Section 5.2**.

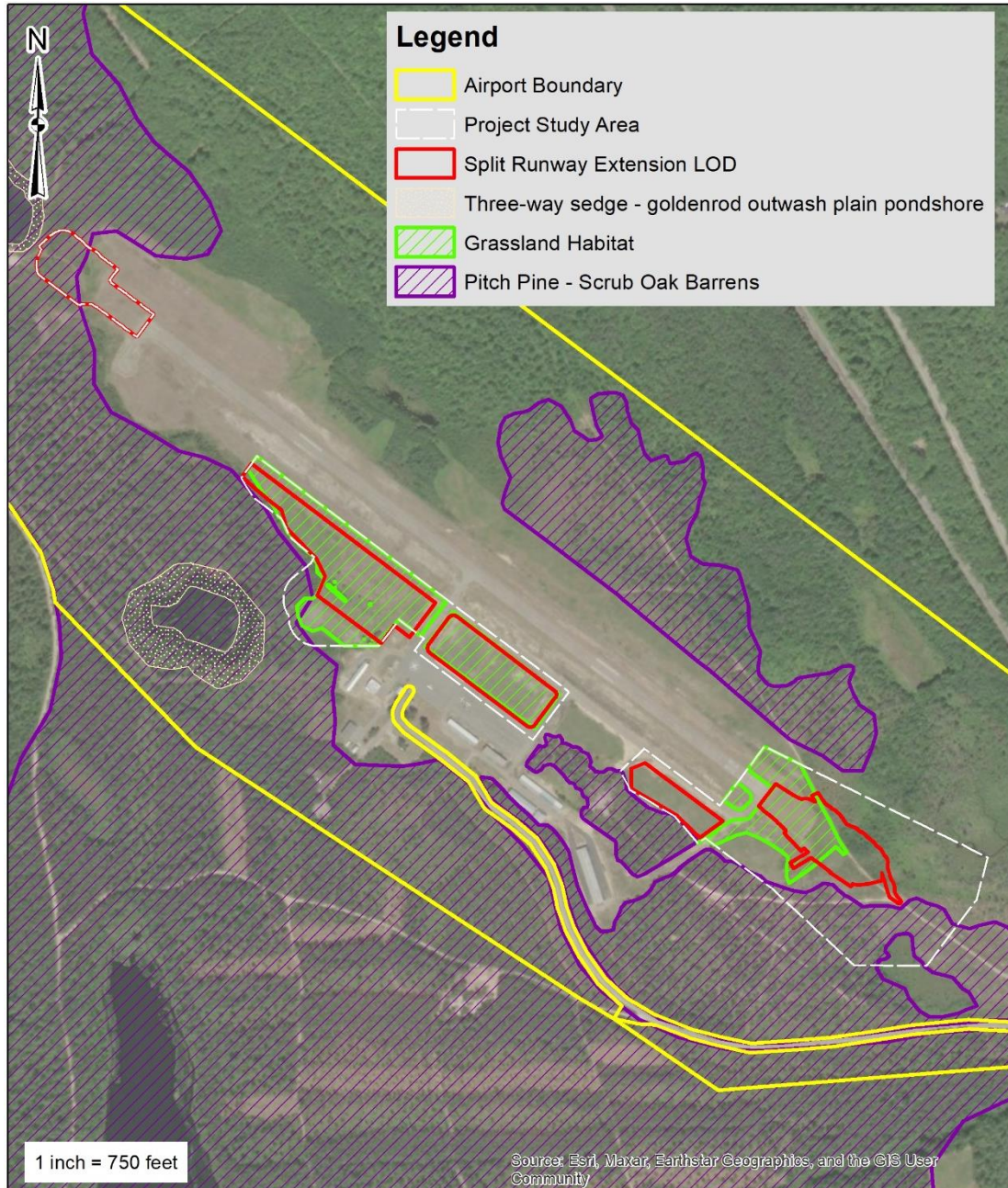
Pitch Pine Scrub Oak Barren: PPSOB habitat is an imperiled community type within the state of Maine and is regulated by MNAP. The canopy of this habitat type is dominated by pitch pine (*Pinus rigida*) and gray birch (*Betula populifolia*) and to a lesser extent white pine (*Pinus strobus*). The midstory consists primarily of scrub oak (*Quercus ilicifolia*) and gray birch and pitch pine saplings. Prominent species in the understory include lowbush blueberry (*Vaccinium angustifolium*), bracken fern (*Pteridium aquilinum*), sweet fern (*Comptonia peregrina*), eastern spicy wintergreen (*Gaultheria procumbens*), woodland sedge (*Carex spp.*), and reindeer lichen (*Cladonia spp.*). This community type has varying heights throughout the project study area, ranging from approximately 8-foot to 30-foot canopy height.

Outwash Plain Pondshore Buffer: Round Pond is a small kettle pond northwest of the Runway 14 end, with a Three-way Sedge - Goldenrod Outwash Plain Pondshore surrounding the pond, a critically imperiled natural community in the state of Maine. This community consists of concentric zones of different herbs around a central pond. A band of shrubs (highbush blueberry, maleberry, buttonbush, leatherleaf) is typical at the upland/pondshore edge. Moving pondward, the next zone is dominated by narrow-leaved goldenrod and three-way sedge, with patches of flat-sedge and brown-fruited rush. In a narrow band at the top of this zone, golden pert and meadow beauty are characteristic and may form dense patches. The next zone, exposed less frequently and for a shorter time, is dominated by pipewort and spikerushes. To protect this habitat type, a 250-foot buffer is recommended by MNAP.

Wetlands: Wetlands consist of scrub-shrub wetland habitat not previously filled or within the developed footprint of IZG. Wetlands A and B mainly consist of a palustrine forested broad-leaved deciduous, seasonally flooded/saturated, wetland (PSS1E). These wetlands are bogs dominated by shrubs such as leatherleaf (*Chamaedaphne calyculata*), mountain holly (*Ilex mucronata*), and rhodora (*Rhododendron canadense*). Trees within the bogs are sparse and include black spruce (*Picea mariana*) and tamarack (*Larix laricina*). See **Appendix D** (Wetland Technical Memo) for details.

PPSOB areas also provide habitat for the eastern buckmoth (*Hemileuca maia maia*), a species of special concern in the state, as scrub oak is the species' host plant. Additionally, grassland habitats on the airport provide potential habitat for the state-listed grasshopper sparrow (*Ammodramus savannarum*). Lastly, all forested areas with trees larger than three (3) inches diameter at breast height (DBH) provide potential summer habitat for the federally endangered northern long-eared bat. A discussion of these species and their habitats are provided in more detail below.

Figure 4-1: Habitat Assemblage Distribution



4.3.2. Federally Threatened and Endangered Species

The potential occurrence of federally listed threatened and endangered species within the study area was evaluated using the USFWS Information for Planning and Conservation (IPaC) online system. The IPaC official species list indicates the northern long-eared bat (*Myotis septentrionalis*, federally endangered) and candidate species monarch butterfly (*Danaus plexippus*) have the potential to occur within the project area. The USFWS will review the monarch's status each year until resources are available to begin developing a proposal to list the monarch as threatened or endangered under the ESA. The candidate status of the monarch does not provide protection under the ESA, and no further coordination with the USFWS is required at this time. See **Appendix B** (Agency Correspondence) for the USFWS Official Species List.

Northern long-eared bats (NLEB) are small to medium size bats that can be found across the northern United States and some provinces in Canada. In the winter, this species hibernates in caves, mines, and talus slopes, called hibernacula. In the late spring through most of fall, this species is typically found in forested areas, where they feed on a variety of insects and roosting singly or in colonies underneath bark or in cavities and crevices of living and dead trees (snags), referred to as summer roosting habitat. Roost trees are live trees and/or snags that are greater than or equal to three (3) inches diameter at breast height (dbh) and have exfoliating bark, cracks, crevices, and/or cavities. Suitable summer habitat can also include forest edges and interspersed non-forested areas such as small clearings and emergent wetlands. Occasionally, this species may also roost in buildings such as barns, sheds, and attics. Suitable summer roosting is present within the action area off the Runway 32 end, where there are trees within both upland and wetland areas. NLEB have not been documented on Airport property, however, per information received from the Maine Ecological Field Office on 11/27/2023, there were two documented detections within three (3) miles of the airport along rivers in 2022.

4.3.3. Essential Fish Habitat

Under the Magnuson-Stevens Fishery Conservation and Management Act, federal agencies are required to consult with the National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) on federal actions that may affect Essential Fish Habitat (EFH). An Essential Fish Habitat is defined as "those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity". According to the NOAA EFH Mapper, accessed on October 3, 2023, the study area is not located within a mapped area of Essential Fish Habitat or within Habitat Areas of Particular Concern (HAPC).

4.3.4. Migratory Birds

The IPaC query produced a list of 11 migratory bird³ species that may occur on, or in the vicinity of, the study area. The birds listed by IPaC are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern list or warrant special attention. It is not a comprehensive list of all migratory bird species that could potentially be found on site. These migratory bird species include:

³ Pursuant to the Migratory Bird Species Act (MBTA) of 1918 (16 U.S.C. §§703-712) it is unlawful and illegal to take, possess, import, export, transport, sell, purchase, barter, or offer for sale, purchase, or barter, any migratory bird, or the parts, nests, or eggs of such a bird except under the terms of a valid federal permit. The Bald and Golden Eagle Protection Act (16 U.S.C. §668-668c) prohibits anyone, without a permit issued by the Secretary of the Interior, from "taking" bald or golden eagles, including their parts, nests, or eggs.

- Bald Eagle (*Haliaeetus leucocephalus*)
- Black-billed Cuckoo (*Coccyzus erythrophthalmus*)
- Bobolink (*Dolichonyx oryzivorus*)
- Canada Warbler (*Cardellina canadensis*)
- Cape May Warbler (*Setophaga tigrine*)
- Chimney Swift (*Chaetura pelagica*)
- Eastern Whip-poor-will (*Antrostomus vociferus*)
- Lesser Yellowlegs (*Tringa flavipes*)
- Olive-sided Flycatcher (*Contopus cooperi*)
- Prairie Warbler (*Dendroica discolor*)
- Wood Thrush (*Hylocichla mustelina*)

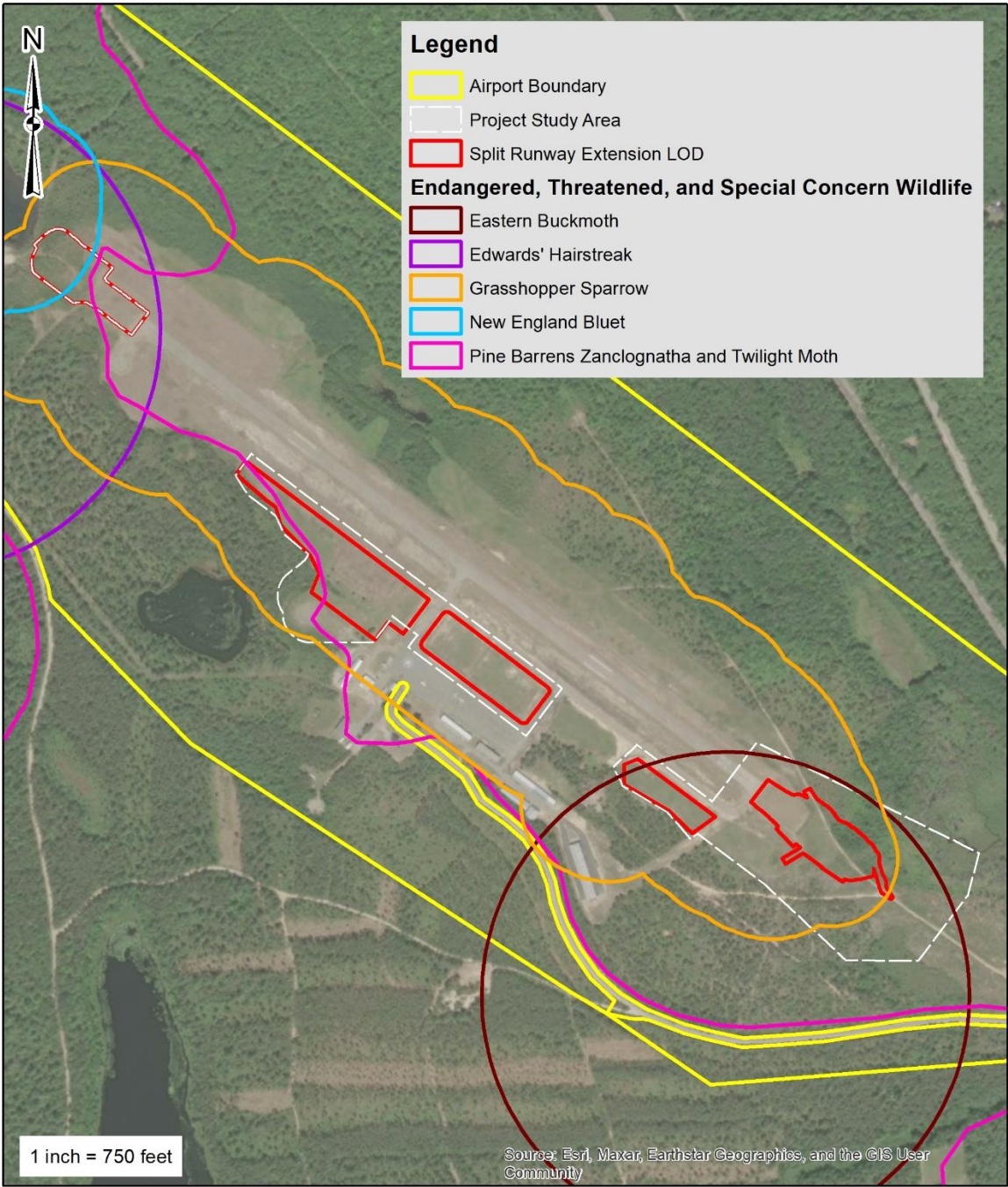
4.3.5. State Designated Threatened, Endangered or Special Status Species

The study area was reviewed for potential occurrence of State-listed endangered, threatened, and species of special concern (ETSC) by the MNAP and MDIFW. An initial project review letter was provided by MDIFW on November 21, 2023. After reviewing the updated preferred alternative, MDIFW provided an additional letter on February 16, 2024. According to the MDIFW response letters and available GIS data, eight bat species, five lepidoptera species (butterflies and moths), one damselfly species, and one bird species, have been historically documented near the proposed project (**Table 4-2**). Mapped habitats of state-listed species are shown in **Figure 4-2**.

Table 4-2: State-Listed ETSC Species

Common Name	Scientific Name	State Status	Habitat
Little brown bat	<i>Myotis lucifugus</i>	Endangered	Forested
Northern long-eared bat	<i>Myotis septentrionalis</i>	Endangered	Forested
Eastern small-footed bat	<i>Myotis leibii</i>	Threatened	Forested and rocky outcrops
Big brown bat	<i>Eptesicus fuscus</i>	Special Concern	Forested
Red bat	<i>Lasiurus borealis</i>	Special Concern	Forested
Hoary bat	<i>Lasiurus cinereus</i>	Special Concern	Forested
Silver-haired bat	<i>Lasionycteris noctivagas</i>	Special Concern	Forested
Tri-colored bat	<i>Perimyotis subflavus</i>	Special Concern	Forested
Grasshopper sparrow	<i>Ammodramus savannarum</i>	Endangered	Grassland
Pine barrens zanclognatha	<i>Zanclognatha martha</i>	Threatened	PPSOB
Twilight moth	<i>Lycia rachelae</i>	Threatened	PPSOB
Edwards' hairstreak	<i>Satyrium edwardsii</i>	Endangered	PPSOB
Sleepy duskywing	<i>Erynnis brizo</i>	Threatened	PPSOB
Eastern buckmoth	<i>Hemileuca maia maia</i>	Special Concern	PPSOB
New England Bluet	<i>Enallagma laterale</i>	Special Concern	Outwash Plain Pondshore

Figure 4-2: State Mapped Threatened and Endangered Species Locations



4.4. CLIMATE

The Intergovernmental Panel on Climate Change (2021) has concluded that it is unequivocal that human influence has warmed the atmosphere, ocean, and land and that human activities have caused concentrations of greenhouse gases (GHG) to increase since the mid-18th century. Climate change is a global phenomenon that can have local impacts. Scientific measurements show that Earth's climate is warming, with concurrent impacts including warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Increasing concentrations of GHG emissions in the atmosphere affect global climate. GHG emissions result from anthropogenic sources, including the combustion of fossil fuels. GHGs include carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), ozone (O₃), and fluorinated gases. CO₂ is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years. Aircraft jet engines, like other vehicle engines, produce CO₂, water (H₂O) vapor, N₂O, CO, oxides of sulfur, unburned or partially combusted hydrocarbons or VOCs, particulates, and other trace compounds.

Although no federal standards have been set for GHG emissions, it is well established that GHG emissions can affect climate. Based on President Biden's recent Executive Order⁴, the project impacts on GHG emissions and climate change should be documented in the Environmental Assessment. Furthermore, per FAA Order 1050.1F, the discussion of potential climate impacts should be documented in a separate section of the NEPA document, distinct from air quality⁵. Where the proposed action or alternative(s) would result in an increase in GHG emissions, the emissions should be assessed either qualitatively or quantitatively. The guidance recommends consideration of: (1) the potential effects of a proposed action or its alternatives on climate change as indicated by its GHG emissions; and (2) the implications of climate change for the environmental effects of a proposed action or alternatives.

On November 28, 2021, the Maine Legislature passed into law the State Greenhouse Gas Emissions Regulation, which requires a reduction from 1990 levels of gross emissions of GHGs from all sources in the State and all sectors of the State economy of 45 percent by the year 2030 and 80 percent by the year 2050. The statewide level of greenhouse gas emissions in 1990 was 32.02 million metric tons of carbon dioxide equivalent (MMTCO₂e). There are currently no enforceable measures for sectors to limit GHG emissions, nor are there state standards for GHG emissions by sector. **Section 5.3** elaborates on the Environmental Consequences of climate.

4.4.1. Local Greenhouse Gas Emissions Inventory

According to the most recently published greenhouse gas emissions⁶, the transportation sector accounts for 49 percent of Maine's CO₂ emissions from the combustion of fossil fuels, however, the total emissions from the transportation sector were eight (8) percent lower in 2019 than they were in 1990. According to the USEPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990–2021*, transportation accounted

⁴ Executive Order on Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis." January 20, 2021.

⁵ https://www.faa.gov/sites/faa.gov/files/about/office_org/headquarters_offices/apl/3-climate.pdf

⁶ <https://www.maine.gov/dep/commissioners-office/kpi/details.html?id=606898>

for the largest portion (29%) of total U.S. GHG emissions in 2021, with 8 percent of that attributed to aircraft⁷. Transportation GHG emissions associated with Aircraft dropped 17.7% between 1990 and 2021.

4.5. COASTAL RESOURCES

The Maine Coastal Program, administered by the Maine Department of Marine Resources, established standards and boundaries in accordance with the federal Coastal Zone Management Act of 1972. Lands within the coastal boundary fall under the purview of the Maine Coastal Program, which allows the state to review certain federal actions that affect coastal uses or resources. The Airport is located within the Town of Fryeburg, which is not within the Maine coastal zone and therefore not subject to the Maine Coastal Program.

4.6. HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL AND CULTURAL RESOURCES

Section 106 of the National Historic Preservation Act (54 U.S.C. § 306108 et seq.) requires federal agencies to consider the effects of their Proposed Actions (or undertakings) on properties that are listed in or determined eligible for listing in the National Register of Historic Places. Historic properties may include buildings, structures, sites, objects, and districts. An effect is considered to be adverse “when an undertaking (Proposed Action) may alter, directly or indirectly, any of the characteristics of the historic resource that qualify the property for inclusion in the National Register of Historic Places in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling or association” (36 CFR Section 800.5). Effects may be direct or indirect.

4.6.1. Area of Potential Effect

In accordance with Section 106 of the National Historic Preservation Act, an Area of Potential Effect was established for the Project, which was submitted to the Maine Historic Preservation Commission (MHPC) on October 17, 2023. The MHPC provided a response on November 1, 2023 (See **Appendix E**, SHPO Project Review Package). The Area of Potential Effect (APE) is the area within which a project may cause alterations in the character or use of historic properties. Areas 1 and 2 of the study area shown in **Figure 1-2** was provided to the MHPC as the APE for the proposed action. Effects may include physical destruction, damage, or alteration of a property; change in the character of the property’s use or of physical features within its setting that contribute to its historic significance; and introduction of visual, atmospheric, or audible elements that diminish the integrity of the property’s significant historic features (36 CFR 800.5(a)(2)). The preferred alternative was developed after initial consultation was initiated with MHPC. A previous archaeological survey in 1995 was conducted in the vicinity of Runway 14 end (Area 3), that determined there were no historic or archaeological resources in the area. A summary of the updated preferred alternative, a figure, and the 1995 archaeological survey was provided to MHPC on January 15, 2024.

4.6.2. Historic Architectural Resources

According to the response received from MHPC dated November 1, 2023, there are no architectural or historic archaeological properties within the APE, however, there is potential for prehistoric archaeological

⁷ <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>

Environmental Assessment

resources and an archaeological survey is required. After reviewing the 1995 archaeological survey and updated preferred alternative, MHPC issued a response on January 31, 2024, indicating that there are no historic properties (architectural or archaeological) within Area 3.

4.6.3. Archaeological Resources

A review of archaeological resources within and near the Area of Potential Effect was performed pursuant to all pertinent cultural resource laws, regulations, and guidelines, including Section 106 of the National Historic Preservation Act of 1966, as amended.

A Phase I archaeological survey was performed in November 2023 by Northeast Archaeology Research Center (NARC) within the APE for the runway extension at the Runway 32 end and the proposed borrow pits. The survey consisted of an initial visual inspection of the project area and subsurface test via hand excavation of 118 test pits along 23 linear sampling transects. The test pits measured 0.5 meters by 0.5 meters to depths of 25 to 106 centimeters. No artifacts of any kind were recovered from the test pits, therefore, NARC considered it unlikely that significant historical or archaeological sites are present. The Maine Historic Preservation Commission issued a Finding of No Effect letter on January 3, 2024.

A Phase I archaeological survey was performed in the vicinity of Runway end 14 (including Area 3 of the current project) in 1995 by Dufresne-Henry, Inc. for a previously proposed but unconstructed 500-foot runway extension. The survey consisted of 200 shovel test pits, in which no archaeological artifacts were recovered. On June 5, 1995, MHPC issued a letter stating that no historic, architectural, or archaeological resources were present in the project area. After reviewing the 1995 archaeological survey and updated preferred alternative, MHPC issued a response on January 31, 2024, indicating that there are no historic properties (architectural or archaeological) within Area 3.

4.7. SECTION 4(F) AND SECTION 6(F) RESOURCES

Section 4(f) of the U.S. Department of Transportation Act of 1966 (49 U.S.C. §303) protects significant publicly owned parks, recreational areas, wildlife and waterfowl refuges, and public and private historic sites. Section 4(f) prohibits the use of land from a publicly owned park, recreational area, wildlife or waterfowl refuge, or public or private historic site for a federal transportation use unless it is determined that there is no feasible and prudent alternative to using the land, and that the project incorporates all possible planning to minimize harm to Section 4(f) resources; or that the use, including any measures to minimize harm, would have a minimal or insignificant adverse impact on the property. A use occurs when the property is permanently incorporated into the transportation project through a taking of land; when it is temporarily occupied; or when its significant features are substantially impaired such that its value as a 4(f) resource will be meaningfully diminished or lost. The latter is termed a constructive use.

Section 6(f) also regulates parkland and recreational resources. The Land and Water Conservation Fund Act of 1965 was enacted to preserve, develop, and assure accessibility to outdoor recreational resources. If a property was acquired or improved with Land and Water Conservation Fund Act money, the property cannot be converted to a use other than public outdoor recreation without the approval of the Secretary of the Interior. A Section 6(f) conversion may also occur as a result of a temporary use equal to or greater than six months in duration.

The study area for Section 4(f) and Section 6(f) resources encompasses an area within one-half (0.5) mile of the project sites at the Airport. This area takes into consideration both potential physical and constructive uses.

The Gregory Sanborn Wildlife Management Area, owned by the State of Maine, is adjacent to the Airport and to the southeast across Route 113, which has recreational trails open to the public, which qualifies as a Section 4(f) property (refer to **Figure 4-3.**) To the east of the Airport, there is a former railroad that is now a recreational rail trail, which runs southeast to northwest. According to the Maine Department of Agriculture, Conservation & Forestry's Land and Water Conservation Fund map, accessed on November 1, 2023, there are no Section 6(f) properties within the above-mentioned study area.

4.8. FARMLANDS

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey (WSS) accessed on October 17, 2023 (**Appendix F**), a majority of the proposed action area is mapped as Adams loamy sand, which is classified as Farmland of Statewide Importance. The Farmland Protection Policy Act of 1994 regulates federal actions with the potential to convert farmland to non-agricultural uses. For the purposes of the Farmland Protection Policy Act, farmland refers to soils classified as prime farmland, unique farmland, and land of statewide or local importance. The Farmland Protection Policy Act assures that to the extent possible, federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. However, the Farmland Protection Policy Act does not apply to land already committed to urban development or water.

The Airport property has already been previously committed to current airport utilization and development; therefore, the area of impacts would not be subject to the Farmland Protection Policy Act, so no farmlands are proposed to be impacted by the project. **Figure 4-4** depicts the soils within the project site.

Figure 4-3: Section 4(f) / 6(f) Resources

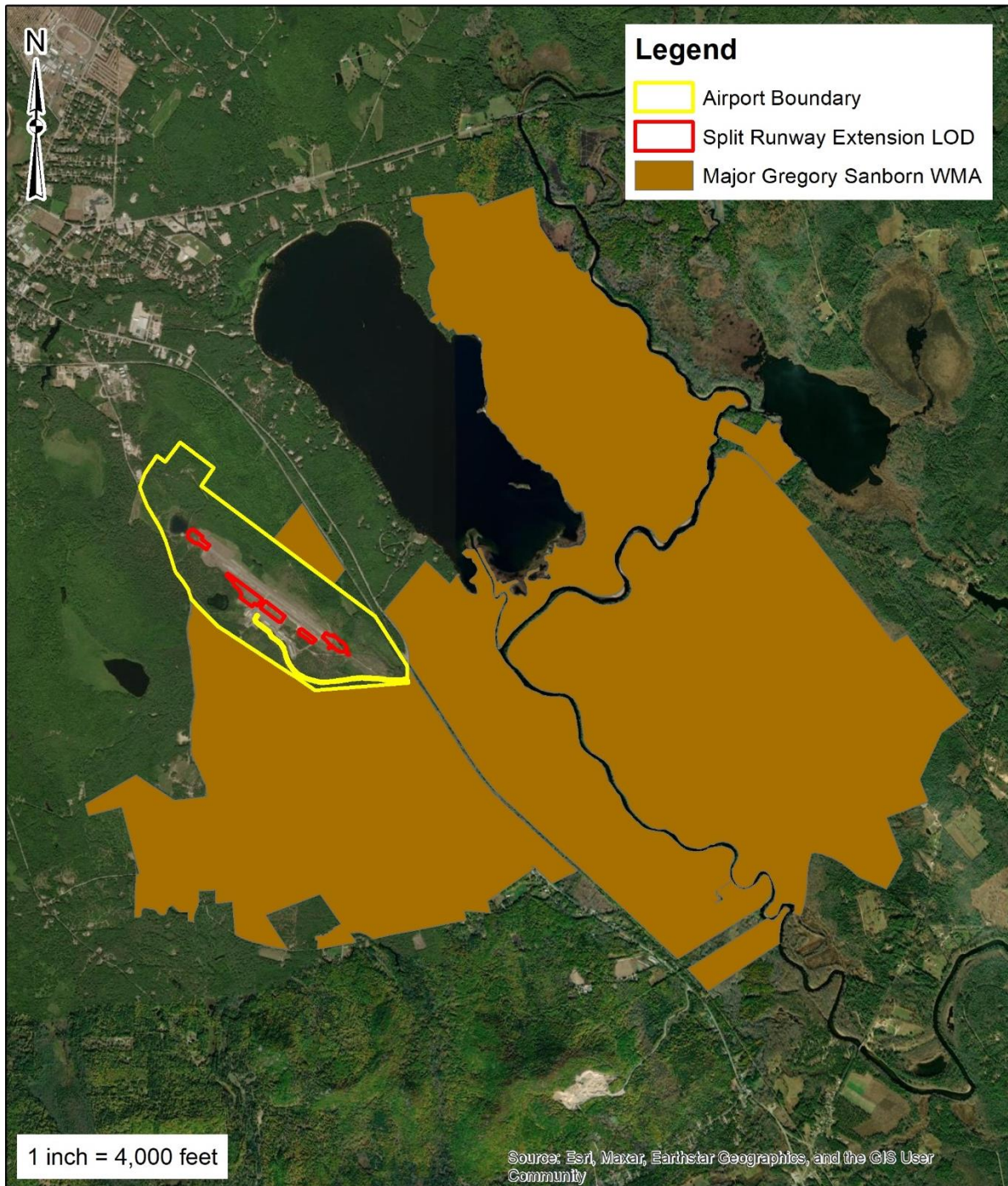
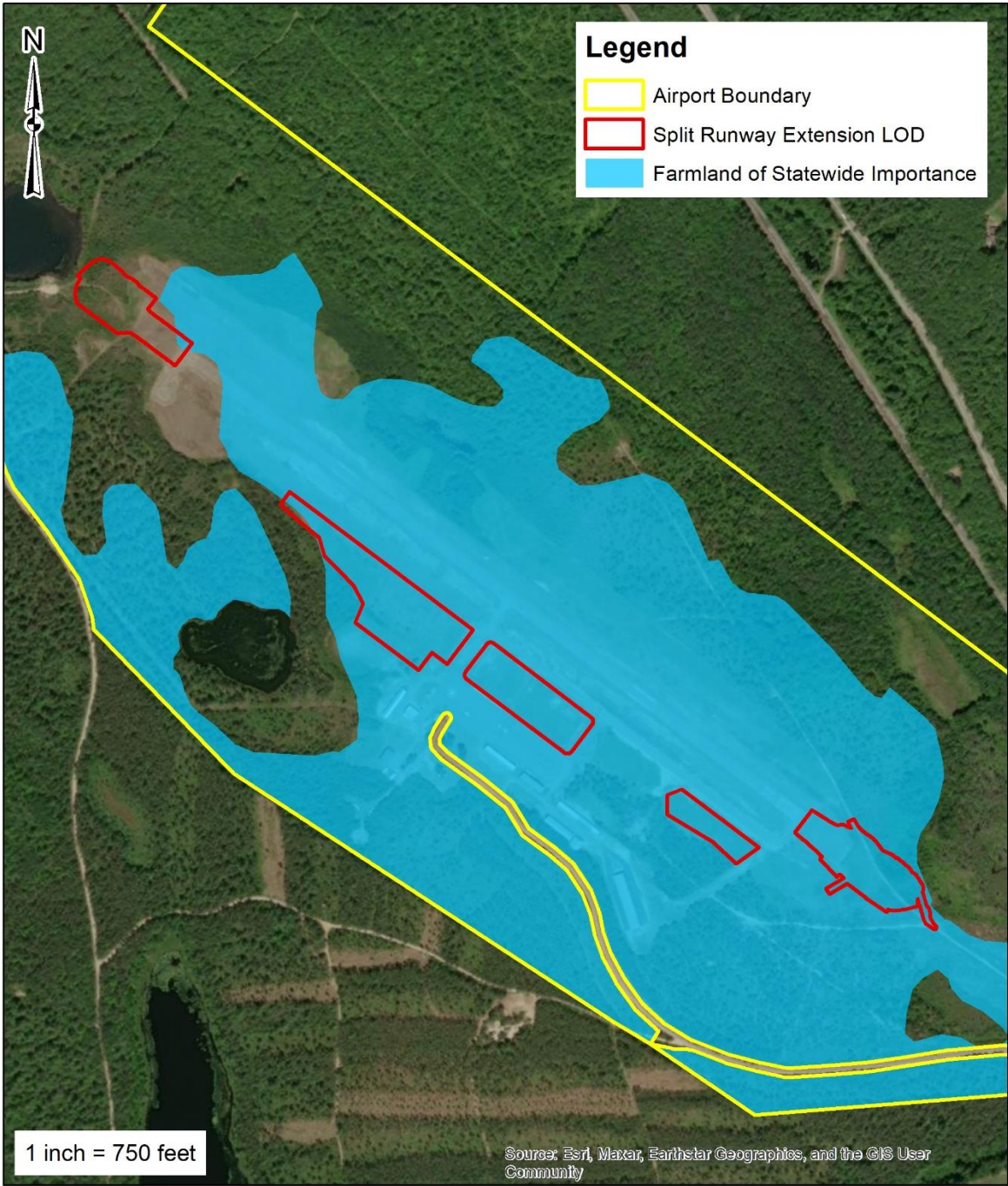


Figure 4-4: Soils Farmland Classification Map



4.9. HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

Based on EPA, MDEP and other databases, there are no records of active or open contamination, abandoned, inactive, or uncontrolled hazardous waste sites reported within the project site, nor land use restrictions. The following databases or information were reviewed (as available) for the project site within the IZG property boundary:

- NETROnline Environmental Data Report (**Appendix G**)
- EPA National Priority List
- MDEP Remediation site list mapper
- MDEP PFAS Investigation mapper

According to the information provided by the resources above, the nearest remediation site is the Fryeburg Municipal Landfill (site ID REM00133), located approximately 0.9 miles southwest of the Airport. The landfill closed in 1993 and is in the MDEP landfill closure program, undertaking post-closure obligations. There is a closed Resource Conservation Recovery Act (RCRA) site, Just Cabinets (site ID REM02789), located approximately 0.6 miles northwest of the Airport. Contamination at the site has been fully remediated and no further action is required.

There are three active underground storage tanks (USTs) at the Airport, a 10,000-gallon aviation gas (avgas) UST installed in 1989, a 10,000-gallon jet fuel UST installed in 2011, and a 1,000-gallon petroleum-contaminated wastewater UST installed in 2022. There are no records of spills at the Airport. There are no deicing activities performed at or by the Airport.

There are no regulatory records of ongoing remediation projects at IZG according to available information. However, the potential for the presence of PFAS (Per- and polyfluoroalkyl substances) cannot be eliminated from consideration. Perfluorooctanoic acid (PFOA) and perfluorooctane sulfonate (PFOS), collectively called PFAS, are two (2) man-made chemicals that were commonly used in household and industrial products, and historically in firefighting foams. Biosolids, also referred to as sludge, are potential sources of PFAS as wastewater from industrial, commercial, and household facilities that may be contaminated enter wastewater treatment plants. Biosolids in the form of cow manure have been applied on Airport property circa 1995-1997, however, no sampling of soil or groundwater has been conducted to confirm or exclude the presence of PFAS. Aircraft Rescue and Fire Fighting (ARFF) facilities on Airports are required by FAA to annually test their systems, which include the use of fire suppressing foams that have historically contained PFAS. The Airport does not have an ARFF facility and therefore has not historically discharged any fire suppressing foams during required FAA testing. It is not expected that there is any PFAS contamination on Airport property associated with fire suppressing foams.

Solid waste is collected at the Airport in an onsite dumpster and hauled offsite by an independent contractor. The nearest transfer station is the Fryeburg Transfer Station (1771 Main St, Fryeburg, ME 04037) for diversion of solid waste and then disposed at a permitted volume reduction plant, resource recovery facility and/or landfill.

4.10. LAND USE AND ZONING

The Airport is located in the Town of Fryeburg, in Oxford County, Maine, and is currently utilized as a general aviation facility. The area surrounding IZG is generally undeveloped land, with a large portion of the area

to the south and southeast owned by the State of Maine. Land to the west of the Airport is used for timber harvest, and land to the north and northeast is largely undeveloped, with some rural residences. To the east of the Airport, there is a former railroad that is now a recreational rail trail, which runs southeast to northwest. The nearest area of residential development is approximately 0.5 miles to the east.

The Airport is currently zoned for industrial use by the Town of Fryeburg. A detailed Zoning Map for the area surrounding the Airport is provided in **Figure 4-5**.

The Town of Fryeburg Land Use Ordinance, Section 12, describes the purpose of the Industrial District as existing to allow light industrial development in areas with access to major arterial highways. Permissible uses, outlined in Section 5 of the Land Use Ordinance, include municipal airport related development.

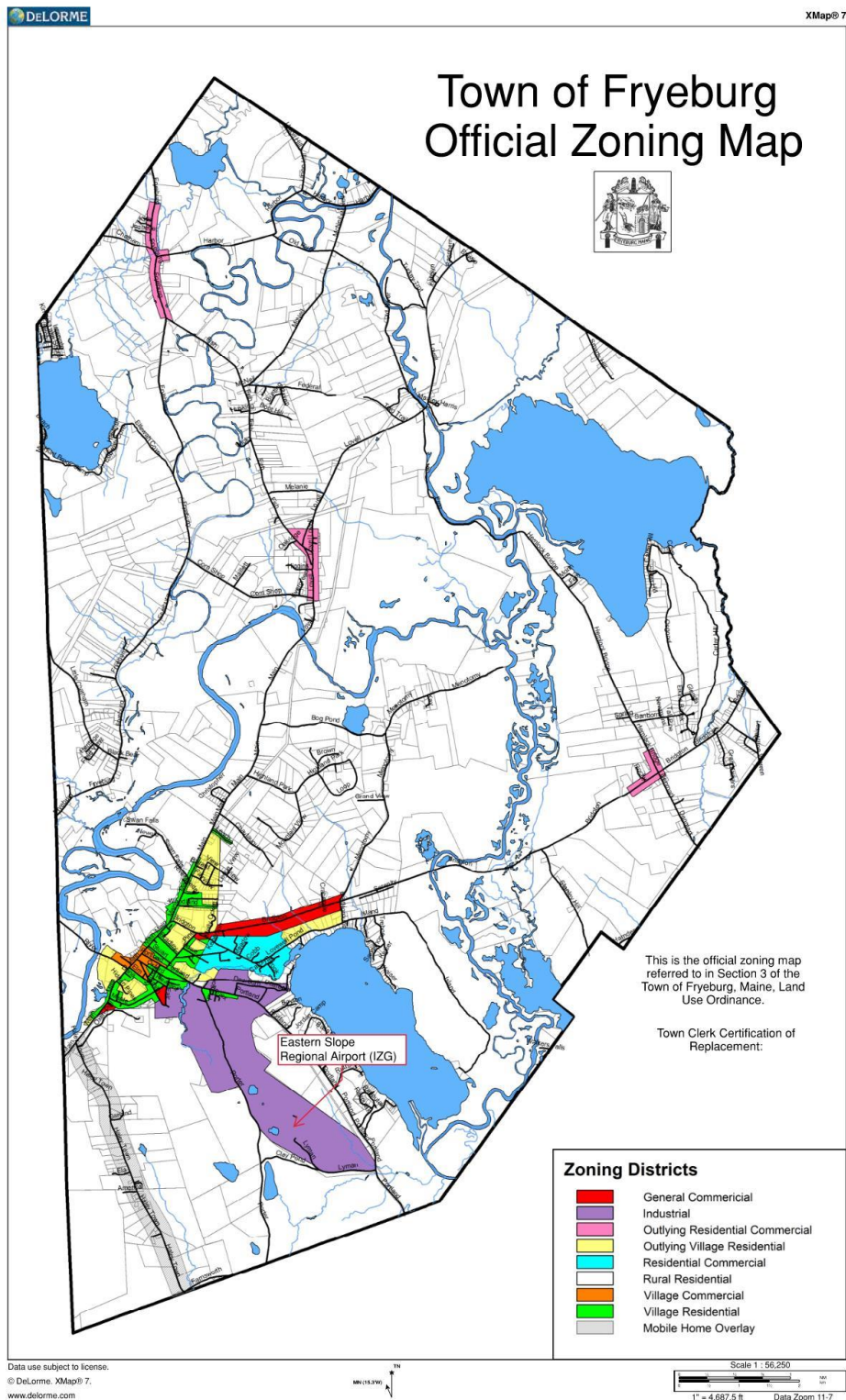
The following are the principal zoning districts present in the vicinity of the Airport:

- Industrial
- Rural Residential

4.10.1. Residential Areas, Schools, Places of Worship, Outdoor Areas

Nearby residential areas are primarily located to the north in the “Village” districts and to the east of the Airport on Lovewell Pond. The majority of schools and places of worship are also located in the Village districts to the north, approximately two (2) miles from the Airport. There is a recreational rail trail adjacent to the southeast end of the airport that travels roughly parallel to Route 113 northwest towards Route 302. There is the Gregory Sanborn Wildlife Management Area, owned by the State of Maine, adjacent to the Airport and to the southeast across Route 113, which has recreational trails open to the public.

Figure 4-5: Zoning



4.11. NOISE AND COMPATIBLE LAND USE

The compatibility of existing and planned land uses in the vicinity of an airport is usually associated with the extent of the airport's noise impact. Airport development actions to accommodate fleet mix changes, the number of aircraft operations, or air traffic changes are examples of activities that can alter aviation-related noise impacts and affect land uses subjected to those impacts.

For aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of yearly Day-Night Average Sound Level (DNL) which is FAA's primary noise metric.

Title 14 CFR Part 150 (Appendix A, Table 1) provides federal compatible land use guidelines for several categories of land use as a function of DNL⁸ values; those guidelines are reproduced as **Table 4-3**. Title 14 CFR Part 150 land use compatibility guidelines shown do not constitute a federal determination that a specific land use is acceptable or unacceptable under federal, state, or local laws. The responsibility for determining acceptable land uses rests with the local authorities through their zoning laws and ordinances.

⁸ DNL is a 24-hour time-weighted-average noise metric expressed in dBA which accounts for the noise levels of all individual aircraft events, the number of times those events occur, and the time of day which they occur. DNL has two time periods: daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.). In order to represent the added intrusiveness of sounds occurring during nighttime hours, DNL penalizes or weights events occurring during the nighttime periods by 10 dBA.

Table 4-3: Title 14 CFR Part 150 – FAA Land Use Compatibility Guidelines as a Function of Yearly DNL

Land use	Yearly day-night average sound level (L_{dn}) in decibels					
	Below 65	65–70	70–75	75–80	80–85	Over 85
RESIDENTIAL						
Residential, other than mobile homes and transient lodgings ...	Y	N(1)	N(1)	N	N	N
Mobile home parks	Y	N	N	N	N	N
Transient lodgings	Y	N(1)	N(1)	N(1)	N	N
PUBLIC USE						
Schools	Y	N(1)	N(1)	N	N	N
Hospitals and nursing homes	Y	25	30	N	N	N
Churches, auditoriums, and concert halls	Y	25	30	N	N	N
Governmental services	Y	Y	25	30	N	N
Transportation	Y	Y	Y(2)	Y(3)	Y(4)	Y(4)
Parking	Y	Y	Y(2)	Y(3)	Y(4)	N
COMMERCIAL USE						
Offices, business and professional	Y	Y	25	30	N	N
Wholesale and retail—building materials, hardware and farm equipment	Y	Y	Y(2)	Y(3)	Y(4)	N
Retail trade—general	Y	Y	25	30	N	N
Utilities	Y	Y	Y(2)	Y(3)	Y(4)	N
Communication	Y	Y	25	30	N	N
MANUFACTURING AND PRODUCTION						
Manufacturing, general	Y	Y	Y(2)	Y(3)	Y(4)	N
Photographic and optical	Y	Y	25	30	N	N
Agriculture (except livestock) and forestry	Y	Y(6)	Y(7)	Y(8)	Y(8)	Y(8)
Livestock farming and breeding	Y	Y(6)	Y(7)	N	N	N
Mining and fishing, resource production and extraction	Y	Y	Y	Y	Y	Y
RECREATIONAL						
Outdoor sports arenas and spectator sports	Y	Y(5)	Y(5)	N	N	N
Outdoor music shells, amphitheaters	Y	N	N	N	N	N
Nature exhibits and zoos	Y	Y	N	N	N	N
Amusements, parks, resorts and camps	Y	Y	Y	N	N	N
Golf courses, riding stables and water recreation	Y	Y	25	30	N	N

Numbers in parentheses refer to notes.

Key to Table 4-6

SLUCM: Standard Land Use Coding Manual.

Y(Yes): Land use and related structures compatible without restrictions.

N(No): Land use and related structures are not compatible and should be prohibited.

NLR = Noise Level Reduction (outdoor to indoor) to be achieved through incorporation of noise attenuation into the design and construction of the structure.

25, 30, or 35: Land use and related structures generally compatible; measures to achieve NLR of 25, 30, or 35 dBA must be incorporated into design and construction of structure.

The Airport is generally located in a rural area where the nearest schools, places of worship, and recreational areas are approximately two miles north of the Airport. The nearest residences are approximately 1,600 feet to the east of the Airport boundary. Furthermore, there are no existing non-compatible land uses under the approach within approximately 1 mile from the proposed runway end according to the Town of Fryeburg Accessors Mapping.

4.12. SOCIOECONOMICS, ENVIRONMENTAL JUSTICE, AND CHILDREN'S HEALTH AND SAFETY RISKS

The Airport is located in the Town of Fryeburg, Oxford County, Maine. According to the US Census Bureau's American Community Survey (ACS) 2021 5-year estimate, the Town of Fryeburg has a population of 3,384. Population density in the Town of Fryeburg is approximately 51 persons per square mile, which is more densely settled than Oxford County and the State of Maine (28 and 44 persons per square mile, respectively). **Table 4-4** provides an overview of the population statistics at the town, county, and state levels.

Table 4-4: Population Statistics

Geography	Total Population	Population Density (People per square mile)	Percent Minority Population	Population Under 5	Population Age 65 & Older
Town of Fryeburg	3,384	51.4	1.9	147	679
Oxford County	57,807	27.8	1.5	2,544	12,615
State of Maine	1,357,046	44.0	3.7	63,932	280,821

Source: U.S. Census Bureau 2021 American Community Survey 5-Year Estimate table DP05.

As shown in **Table 4-4**, the percent of minority population is higher than that of the county, but lower than the state's percentage. Population age 65 and older is roughly the same across all levels. **Table 4-5** shows that the percent below poverty level is lower for the town than it is at the county and state level. Median household income is lower for Fryeburg than that of the county and state.

4.12.1.1. Employment

According to the American Community Survey 2021 5-year estimates, the largest employment sector for the Town of Fryeburg is management and business at 32.7% of the employed population, followed by the service industry at 21.6%, sales and office occupations at 20.1%, production and transportation industry jobs at 13.6%, and natural resources, construction, and maintenance at 12 percent. Similarly at the county level, management and business is the largest employment sector at 30.7% followed by the service industry at 20.1%. **Table 4-5** displays the total socioeconomic conditions for the town, county, and state levels.

Table 4-5: Socioeconomic Conditions

Geography	Employment Rate	Percent Unemployed	Percent Below Poverty Level	Median Household Income
Town of Fryeburg	56.9	5.4%	9.7	57,440
Oxford County	53.6	5.7%	16.6	62,802
State of Maine	59.5	3.3%	11.0	63,182

Source: U.S. Census Bureau 2021 American Community Survey 5-Year Estimate table DP03.

4.12.2. Environmental Justice

Executive Order No. 12898, issued February 11, 1994, requires that each federal agency incorporate Environmental Justice (EJ) into its mission. This is to be accomplished “by identifying and addressing disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” Executive Order 14096, *Revitalizing Our Nation’s Commitment to Environmental Justice for All*, was signed on April 21, 2023, to continue to address and advance environmental justice. This recently enacted Executive Order complements Executive Order 12898, which remains in place, along with existing NEPA implementing procedures.

The EPA defines EJ as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.⁹ Note that EJ focuses upon a different categorization of population than addressed by Title VI of the Civil Rights Act, which requires that no person, on the ground of race, color, or national origin, is excluded from participation in, denied the benefits of, or subject to discrimination under any program or activity receiving federal financial assistance. However, for some individuals and neighborhoods, these areas of federal interest overlap. Therefore, EJ principles are incorporated into the processes and products of federally funded regional transportation planning. As guidance, the USDOT¹⁰ outlines the following three principles to guide EJ evaluations:

- Avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority and low-income populations.
- Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent the denial of the reduction in, or the significant delay in, the receipt of benefits by minority and low-income populations.

Pursuant to CEQ guidance, minority populations exist where: “(a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis”¹¹. From FAA Order 1050.1F and per DOT Order 5610.2(c), low-income population is determined by considering the percentage of individuals in the study area whose median household income is at or below the Department of Health and Human Services poverty guidelines.¹² According to the Department of Health and Human Services, the best approximation for the number of people below the Department of Health and Human Services poverty guidelines in a particular area would be the number of persons below the Census Bureau poverty thresholds in that area.¹³ Information regarding low-income and minority populations in Fryeburg and Oxford County was obtained from the U.S. Census Bureau, and are shown above in **Table 4-4** and **Table 4-5**.

⁹ <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice>

¹⁰ <https://www.transportation.gov/transportation-policy/environmental-justice/environmental-justice-strategy>

¹¹ Council on Environmental Quality, Environmental Justice: Guidance Under the National Environmental Policy Act. 1997.

¹² <http://aspe.hhs.gov/poverty/index.cfm>

¹³ <https://aspe.hhs.gov/frequently-asked-questions-related-poverty-guidelines-and-poverty#many>

The EPA and the Centers for Disease Control and Prevention (CDC) provide screening and mapping tools for planning level analysis that identify Environmental Justice indicators via EPA's EJScreen¹⁴ and CDC's Environmental Justice Index (EJI)¹⁵. These tools utilize data to identify places that may have higher environmental burdens and vulnerable populations.

The EJScreen reports provide Environmental Justice and supplemental indexes that are a combination of environmental and socioeconomic information. The EJScreen tool shows results of Environmental Justice Index percentiles for Oxford County. The Airport is not located within a low income area or a minority community, additionally, the percentiles for all 13 EJ indexes and 13 supplemental indexes were below the 80th percentile threshold that is generally recommended by the EPA as an initial filter when evaluating for potential EJ areas.

The CDC EJI tool provides rankings by Census Tract for environmental, social, and health factors, including an overall environmental burden ranking. The EJI tool shows a low to moderate burden rank in the study area and adjacent towns. The EJI tool also provides category summaries (referenced as domains) that represent aspects of the social vulnerability and environmental burden. The standard reports produced by the EPA EJScreen for Fryeburg and Oxford County along with the CDC map and category (domain) summaries are provided in **Appendix H**.

The U.S. government also produces a Climate and Economic Justice Screening Tool¹⁶. The tool identifies census tracts that are "overburdened and underserved" and considered disadvantaged. Communities may be identified as disadvantaged based on considerations such as potential climate change impact, energy costs, prevalence of health risks, housing factors, legacy pollution, or other factors. Accessed November 2, 2023, the Screening Tool indicated the Town of Fryeburg census tract is not considered disadvantaged as it "does not meet any burden thresholds or at least one associated socioeconomic threshold".

4.12.3. Children's Health and Safety

Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, directs federal agencies to identify environmental health and safety risks that could disproportionately affect children. These risks result from products or substances that a child may ingest or be exposed to, such as food, drinking or recreational waters, air, soil, or products they might be exposed to.

As shown above in **Table 4-4**, the total population of Oxford County is 57,807, including 8,562 children up to age 14. Within the Town of Fryeburg, there are approximately 518 children up to the age of 14, of which 147 are under age five (5). The surrounding area of IZG is largely undeveloped tracts of land, with residential areas to the east and north over one mile away. See **Figure 4-5** for Land Use.

As noted in **Section 4.9** on Hazardous Materials, Solid Waste, and Pollution Prevention, there are no known or documented contaminated or potentially contaminated sites on airport property. The nearest hazardous materials site is approximately one mile to the southwest of the Airport.

¹⁴ <https://www.epa.gov/ejscreen>

¹⁵ <https://www.atsdr.cdc.gov/placeandhealth/eji/index.html>

¹⁶ <https://screeningtool.geoplatform.gov/en/#3/33.47/-97.5>

4.13. TRAFFIC

The Airport is located on Lyman Drive, off State Route 113, also called Portland Street in this section of Fryeburg. Route 113 is an arterial roadway which spans approximately 30 miles from Standish Maine into Fryeburg. The route was extended north of Fryeburg to Gilead, Maine, traversing through Evans Notch with portions of the road located in New Hampshire. The portion of Route 113 that travels through Evans Notch is seasonally closed in the winter. Another regional access route to the Airport is US Route 302, which is an east-west spur of Route 2, and runs approximately 171 miles from Montpelier, Vermont to Portland, Maine. Route 113 intersects Route 302 in Fryeburg approximately 2 miles north of the Airport. The nearest highway access to I-95 is located in Gray, Maine, approximately 43 miles east of the Airport.

According to the Maine DOT 2019 annual traffic volume counts¹⁷, Route 113 at the intersection of Lyman Drive has an average annual daily traffic count of 4,470 trips. Route 113 is currently a two-lane, 55-mph posted road that has the capacity to service 1,800 vehicles per hour, much higher than the current volume the road actually services. Lyman drive is currently a two-lane 25 mph road that has an hourly capacity of 1,000 vehicles, however experiences significantly less volume on a daily basis.

Porter Road and Clay Pond Road are two other locally owned gravel access routes adjacent to the airport that are gated for seasonal access.

4.14. NATURAL RESOURCES AND ENERGY SUPPLY

IZG currently uses electricity, fossil fuels, and other sources of energy for lighting, heating, and air conditioning; airfield lighting (locational, directional, and safety); powering computers, printers, modems, radios, and other technology; aircraft; and ground vehicles and equipment. Water at the Airport is currently provided from an on-site well, and waste-water is treated by a subsurface wastewater disposal system. Electricity for the Airport is provided by Central Maine Power Company (CMP).

4.15. VISUAL EFFECTS

Fryeburg is situated in the foothills of the White Mountains, which are located northwest of the Airport and are visible in the distance. The Airport itself is generally located on gently sloping topography, with the runway sloping from the higher northwest down to the southeast. The southern half of the airport generally slopes downward towards the southeast, where two large wetlands are situated. The northwestern portion of the airport slopes downward towards the west to Round and Davis Ponds. The northernmost portion of the airport contains a steep hill approximately 200 feet above the elevation of the surrounding area.

The visual landscape, for viewer groups on the ground, is dominated by airport land uses, including the paved surfaces like the runway, taxiway, and aprons, wide swaths of turf, the terminal building, and hangars. Each of these Airport buildings are of greater height and mass than any of the other surrounding structures. The remaining visual setting on Airport is predominantly forested, with two kettle ponds in the northwestern portion of the airport and two bog wetlands to the southeast.

¹⁷ <https://www.maine.gov/mdot/traffic/docs/yt/2020/2019%20Traffic%20Volume%20Counts%20Annual%20Report.pdf>

The majority of land immediately surrounding the airport is undeveloped forested uplands and palustrine shrub/sapling wetlands.

Lighting on the Airport is employed for aircraft safety reasons, to provide critical information to pilots on take-offs and landings. The following airfield lighting is employed:

- An airport beacon operates from sunset to sunrise;
- Runway 14/32 has 82 Medium Intensity Runway Lighting (MIRL), which are radio controlled and run on a timer for approximately 15 minutes once activated;
- Runway 14/32 has Runway End Identifier Lights (REILs); and
- Runway 32 has two box Visual Approach Slope Indicator (VASI) lighting on one side.

There is also lighting associated with the terminal area and hangars.

4.16. WATER RESOURCES

4.16.1. Wetlands

According to the USFWS National Wetland Inventory, there are two palustrine forested wetlands mapped within the Proposed Action area; see **Figure 4-6**.

A wetland delineation was performed in September 2023 in Areas 1 and 2 of the project study area to determine the presence of wetlands based on guidance found in the 1987 United States Army Corps of Engineers *Wetlands Delineation Manual* (1987 USACE Manual) and 2012 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (2012 Regional Supplement). Two palustrine scrub-shrub wetlands (Wetlands A and B) and a perennial stream were delineated in the southeastern portion of the study area (**Figure 4-7**). The Wetland Delineation Report is reproduced in **Appendix D**. The wetland characteristics are summarized in **Table 4-6**.

At the time of the wetland delineation in September 2023, Area 3 was not being considered as a potential project study area. Wetland information and Round Pond shown in **Figure 3-1** of **Appendix A** was provided by Maine Natural Areas Program. In Area 3, there are wetlands immediately surrounding Round Pond. These are not impacted by the Proposed Action.

Table 4-6: Summary of Wetland Areas Delineated in the Immediate Vicinity of Project Site

Wetland ID	Project Site Location	Wetland Classification	Wetland Characterization / Principal Functions and Values	Acreage within Study Area	ME DEP Regulated	USACE Regulated
A	Southeast to Runway 32	PSS1E	Floodflow alteration, sediment/toxicant retention, nutrient removal, wildlife habitat, uniqueness/heritage	0.59	Yes	Yes
B	Southeast to Runway 32	PFO1E/ PSS1Eb	Floodflow alteration, sediment/toxicant retention, nutrient removal, wildlife habitat, uniqueness/heritage	4.66	Yes	Yes
Total Wetland Area*				5.25	5.25	5.25

PSS1E – Palustrine scrub-shrub, broad leaved deciduous, seasonally flooded/saturated wetland.

PSS1Eb - Palustrine scrub-shrub, broad leaved deciduous, seasonally flooded/saturated wetland, beaver activity

4.16.2. Surface Waters

A perennial, unconsolidated bottom stream was delineated within Wetland B. The stream flows southeast through the edge of the study area. Surface waters in the vicinity of the project site are shown in **Figure 4-7**. According to the MDEP Classification of Maine Waters mapper, this unnamed stream is designated as a “Class A” waterway. As defined in Maine Title 38, Waters and Navigation, Chapter 3, Section 464, Class A waters are those suitable for drinking water after disinfection, fishing, agriculture, recreation in and on the water, industrial process and cooling water supply, hydroelectric power generation, navigation, and fish and aquatic life habitat. There are no public surface water supplies or reservoirs in the vicinity of IZG.

IZG is characterized by sandy soils with high infiltration rates. As such, there are no discharges to surface waters on the airport. Therefore, the Airport is not subject to the National Pollutant Discharge Elimination System (NPDES) programs for stormwater runoff from industrial sites, and no Stormwater Pollution Prevention Plan (SWPPP) is necessary for operational activities.

4.16.3. Groundwater

The Airport is located within an area mapped as a significant sand and gravel aquifer, with a yield of 10 to 50 gallons per minute. According to the 2021 Annual Aquifer Monitoring Report¹⁸, the northwestern portion of the Airport, including Round Pond, overlaps the Wards Brook Aquifer which is the drinking water supply for the Town of Fryeburg.

¹⁸ https://www.fryeburgmaine.org/sites/g/files/vyhlf4446/f/uploads/2021_evergreen_spring_annual_report.pdf

4.16.4. Floodplains and Sea Level Rise

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) under the National Flood Insurance Act of 1968, as well as overseeing the federal floodplain management programs and flood hazard mapping. Federal flood hazard areas are identified on community specific Flood Insurance Rate Maps (FIRM). Additionally, Executive Order 11988 requires federal agencies to avoid to the extent possible the long- and short-term adverse impacts to floodplains. According to the FIRM, the majority of the study area is located within Panel 3303C040D in areas of minimal flood hazard, and a small portion at the southeastern-most corner is located in Panel 23017C1456D where a sliver of the study area includes a 0.2 percent annual chance of flood hazard along the perennial stream, however, this area is located beyond the limits of disturbance. The flood zone boundaries in the vicinity of IZG are depicted in **Figure 4-8**.

4.16.4.1. Sea Level Rise

The Town of Fryeburg is not located within the Maine Coastal Zone, therefore, sea level rise considerations are not applicable to the Proposed Action.

4.16.5. National and State Forests, Wilderness Areas, and Wild and Scenic Rivers

According to the U.S. National Wild and Scenic Rivers System¹⁹, no designated rivers are present in the immediate vicinity of IZG.

¹⁹ <https://www.rivers.gov/documents/nwsrs-map.pdf>

Figure 4-6: USFWS National Wetland inventory Map

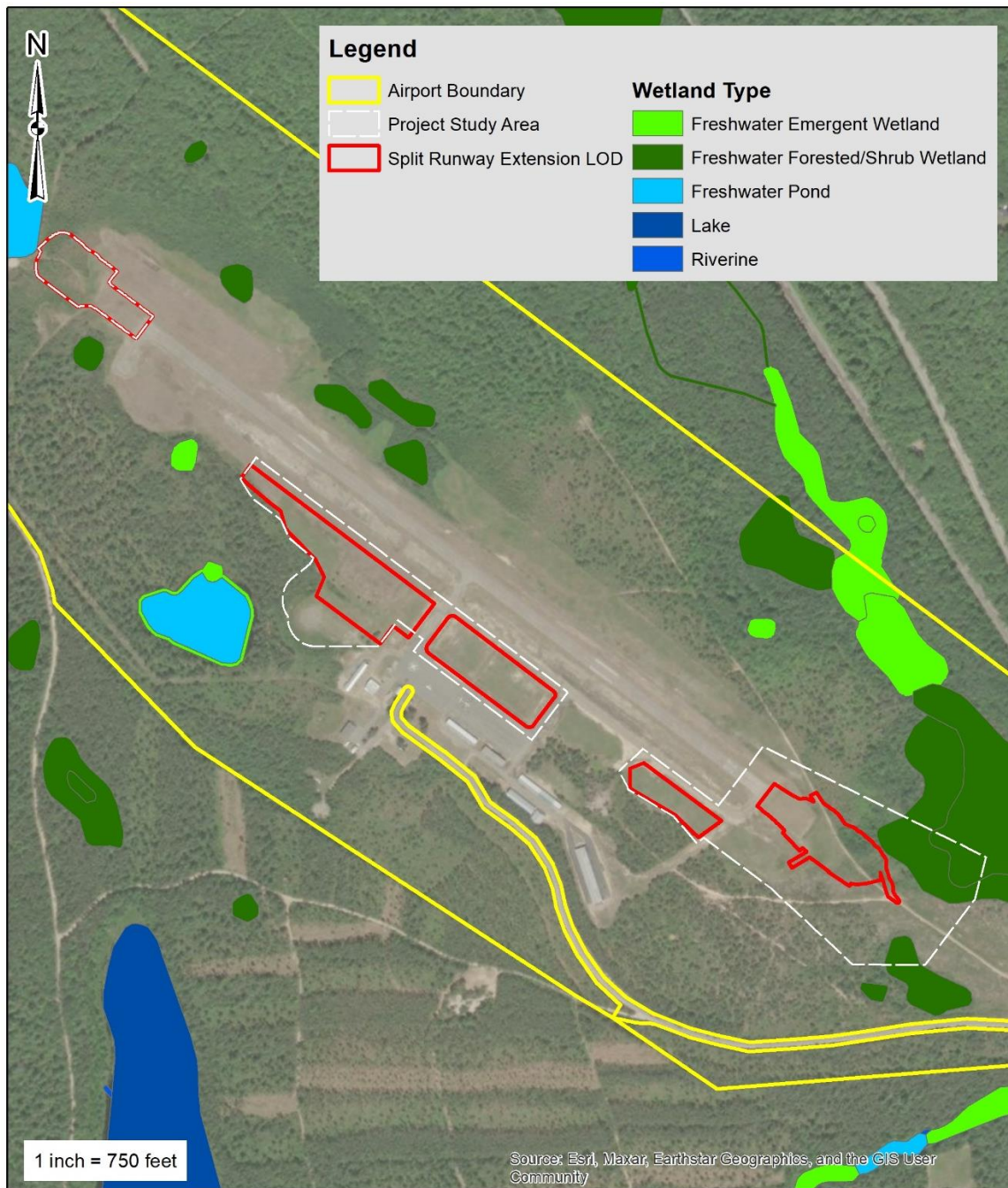


Figure 4-7: Delineated Wetlands and Surface Waters

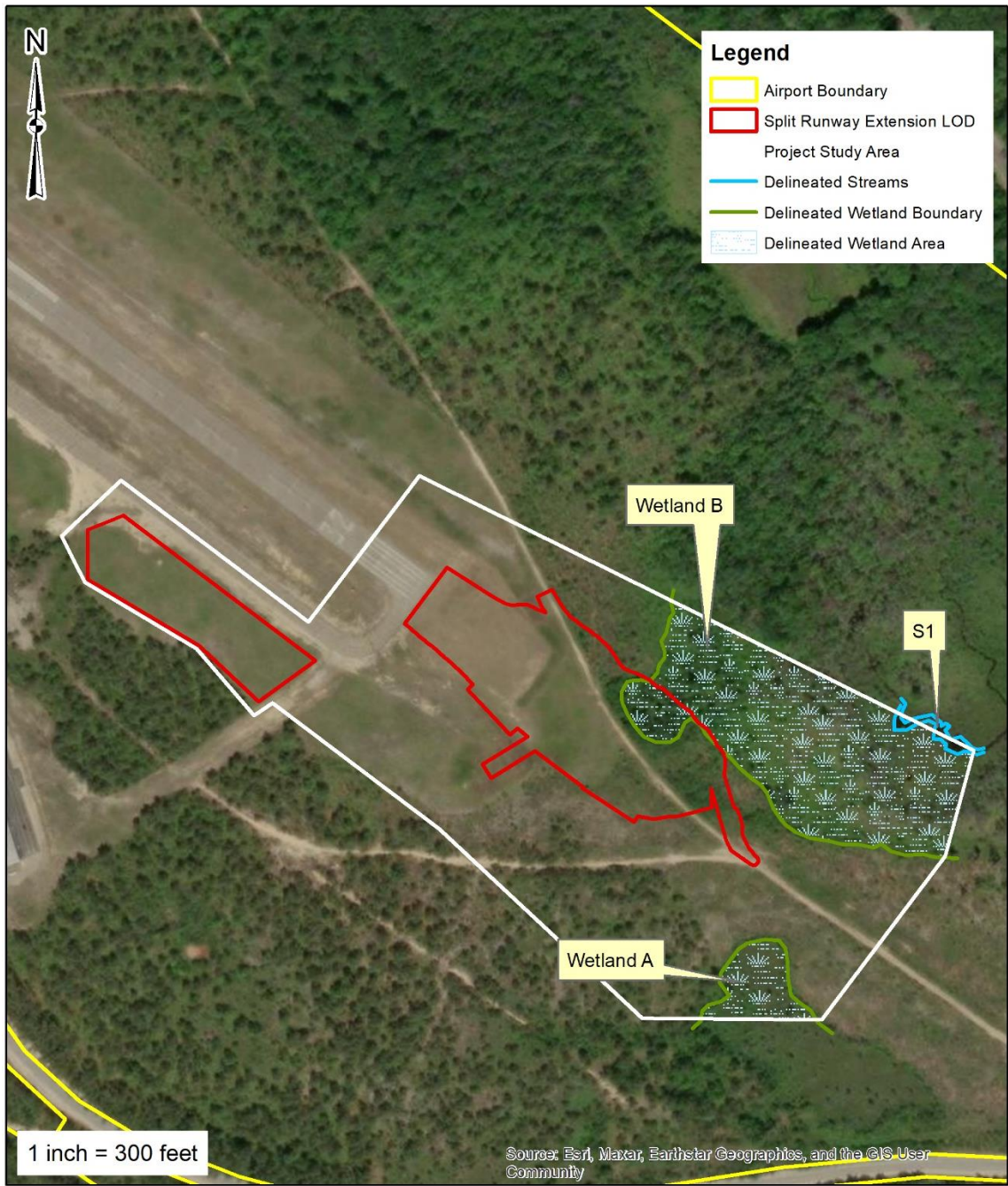
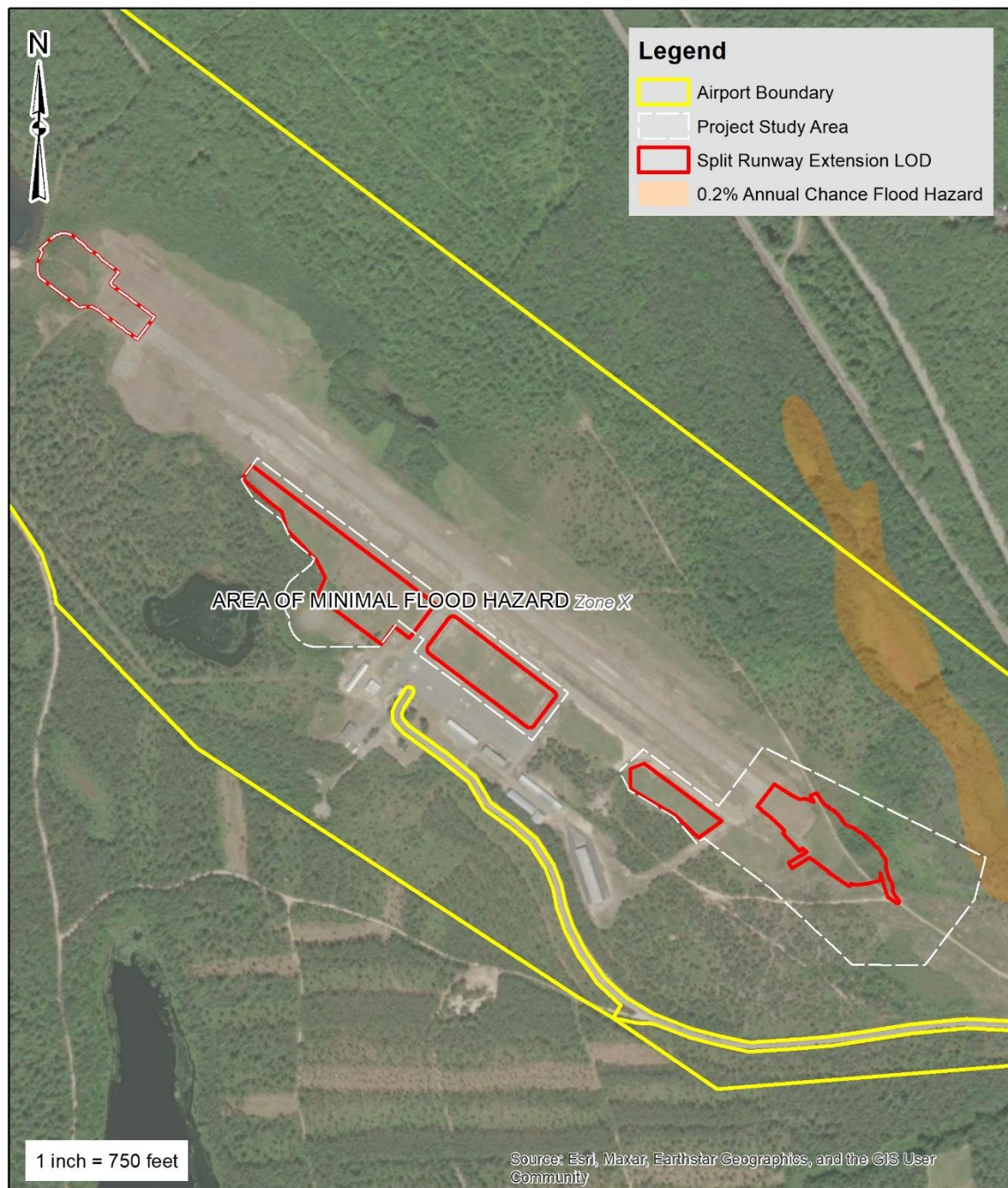


Figure 4-8: FEMA Flood Insurance Rate Map



5. ENVIRONMENTAL CONSEQUENCES

This chapter describes the foreseeable environmental, social, and economic consequences of the Proposed Action. Information pertaining to the environmental consequences was obtained through an alternatives analysis, evaluation of conceptual plans, on-site investigations, review of published information, agency correspondence, and discussions with the Airport personnel and public officials. The schematic and conceptual design, including various alternatives developed, are the result of a cohesive and integrated planning effort which minimizes impacts in the post-development condition.

The Proposed Action includes the extension of Runway 14/32 by 802 feet split between the two runway ends. The No Build / No Action alternative does not meet nor address the needs of the Airport. The No Action alternative assumes that the Proposed Action is not implemented. The Proposed Action is compared to the No Action (Alternative 1) throughout this chapter as per FAA Order 1050.1F, Section 6-2.1.f. **Section 5.15.4** presents, in a comparative and collective form, the level of environmental consequences per resources category for each alternative taking into consideration existing and future conditions, as applicable.

Using the data collected as part of the environmental planning process and comparing the Proposed Action analysis results to the No Action alternative, limited environmental impacts were revealed (below the Significance Impact Thresholds²⁰ established in FAA Order 1050.1F), due to the nature and location of the Project. Necessary measures and BMPs would be established to further minimize and mitigate foreseeable environmental impacts the Proposed Action may have. The potential impacts from the Proposed Action are discussed in the following sections and quantified to the maximum extent possible. In areas where quantitative measures cannot be provided, qualitative assessments are provided. The following resources are not present within the project site; therefore, these resources are not evaluated further:

- Essential Fish Habitat / Habitat Areas of Particular Concern (including submerged aquatic vegetation or federally managed fish species)
- Coastal Resources
- Farmlands
- Wilderness Areas and Scenic Rivers

The Project takes into consideration the importance of minimizing the construction footprint impacts and compliance with environmental regulations and policies.

²⁰ The FAA uses thresholds that serve as specific indicators of significant impact for some environmental impact categories. FAA proposed actions that would result in impacts at or above these thresholds require the preparation of an EIS, unless impacts can be reduced below threshold levels. Quantitative significance thresholds do not exist for all impact categories; however, consistent with the CEQ Regulations, the FAA has identified factors that should be considered in evaluating the context and intensity of potential environmental impacts. If these factors exist, there is not necessarily a significant impact. Some impact categories may have both a significance threshold and significance factors to consider.

5.1. AIR QUALITY

5.1.1. Proposed Action

The Clean Air Act requires federal agencies such as the FAA to ensure that any actions not occurring in an area in attainment with Clean Air Act standards “conform” to the appropriate State Implementation Plan. The Clean Air Act General Conformity Rule requires that a project or action adheres to the State Implementation Plan’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of such standards. The General Conformity Rule is only considered when a federal action is proposed to occur in a nonattainment or maintenance area. As stated in **Section 4.2**, the Airport is located in Oxford County, which the EPA has designated as attainment for the six criteria NAAQS pollutants, therefore, General Conformity does not apply to the Proposed Action.

Extending the length of the current runway at Eastern Slope Regional Airport is not anticipated to result in more than minor, incremental increases in aircraft operations. The FAA Aerospace Forecast for 10 years at the Airport shows a 0.77% compound annual growth rate (CAGR) over 10 years, and the Proposed Action is not expected to significantly affect the growth rate. Likewise, the Proposed Action is expected to result in negligible, if any, increases in automobile traffic on area roads. For these reasons, the increases in air emissions, including greenhouse gas emissions, from the Proposed Action are expected to be negligible.

The runway extension is expected to be constructed over one or two construction seasons. Construction activities associated with the proposed project would result in a temporary increase in air pollutants, including greenhouse gas emissions. The primary source of potential greenhouse gas emissions from these activities would be from the engines of the construction equipment. Greenhouse gas emissions from the operation of construction machinery are short-term and not generally considered substantial.

Changes in greenhouse gas emissions from changes in vegetation cover were estimated by estimating the amount of carbon sequestration and biomass removal associated with the proposed project. The runway extension would remove vegetation on approximately 3.40 acres of land which is treed. Based on average U.S. forest conditions, the USEPA has estimated that 0.9 short tons of carbon dioxide (CO₂) are sequestered by one acre of forest annually. As such, the annual carbon sequestration lost due to the land alteration is estimated to be 3 short tons per year. Additionally, carbon is stored in the existing forest biomass and may be released when the biomass is removed and converted to other uses, such as energy production. Forest biomass has been found to store approximately 25 short tons of carbon per acre. The 3.40 acres of tree removal therefore could result in the one-time removal or release of approximately 85 short tons of carbon.

5.1.2. Significance Thresholds

As provided in FAA Order 1050.1F, an action would cause a significant air quality impact if pollutant concentrations would exceed one or more of the NAAQS established by the EPA under the Clean Air Act, for any of the time periods analyzed, or would increase the frequency or severity of any such existing violations. Since air and vehicular traffic will increase only minimally and the area is currently in attainment, the Proposed Action is not expected to cause or contribute to exceedances of the NAAQS. Additionally, contributions to greenhouse gas emissions are likely to be either short-term (due to construction activity) or minimal in quantity.

5.1.3. Best Management Practices and Minimization Measures – Air Quality

As necessary and applicable, the following best management practices and reasonably available control measures would be implemented:

- Construction sequencing or phasing
- Minimization of exposed soils at any given time during construction activities
- Water spray for dust suppression and preventing fugitive dust from becoming airborne from construction vehicles
- Using tarp covers on construction trucks transporting construction materials and construction debris to and from the site
- Re-vegetating exposed soils following completion of construction activities in designated areas

5.1.4. No Action

The No-Action alternative assumes that the Proposed Action is not implemented, therefore, no changes to air quality would be expected to occur.

5.2. BIOLOGICAL RESOURCES

5.2.1. Proposed Action

A variety of habitat types occur within the Project footprint, as shown in **Table 5-1**. The area within the proposed runway extension limits of disturbance totals approximately 20 acres and consists primarily of mowed grasslands and upland pine forests. Impacts to state rare natural communities and habitats for state-listed rare species is shown in [Error! Reference source not found.](#). Impacts to biological resources would not be significant.

Table 5-1: Vegetation Assemblage Distribution and Estimated Footprint Impacts

Main Habitats	Conversion to Grassland (Acres)	Conversion to Pavement or Landscaped (Acres)	Net Change to Habitat (Acres)
Grassland	N/A	0.47	2.17
Pitch Pine Scrub Oak Barren	1.31	0.27	-1.58
Outwash Plain Pondshore Buffer (100')	0.18	0.04	-0.22
OPP Buffer (100-250')	0.94	0.05	-0.99
Wetlands	0.27	0.05	-0.32
Other non-regulatory uplands	2.56	1.36	-3.92

5.2.2. Federally and State Listed Threatened and Endangered Species

5.2.2.1. Federally Listed Species

Based on the USFWS IPaC results, there are no critical habitats within the project site (see **Appendix B** for Agency Correspondence). However, forested habitats are present in the vicinity of the Airport which may serve as northern long-eared bat habitat. On November 30, 2022, the USFWS published a final rule to reclassify the northern long-eared bat as endangered under the Endangered Species Act (Federal Register, November 30, 2022). The rule became effective March 31, 2023. There is approximately 3.4 acres of tree removal associated with the runway extension of the Proposed Action area, and approximately 26 single tree removals within both runway approaches (see Figure 5-2 in **Appendix J**). The exact amount of single-tree cutting for the obstruction removal would require field verification to confirm if obstruction is still in place prior to any tree removal taking place. According to the range-wide determination key for the northern long-eared bat within the IPaC system completed on November 2, 2023, the Proposed Action is located within an area of known sensitivity for northern long-eared bat (NLEB), which resulted in a May Affect determination.

Per information received from the Maine Ecological Field Office on 11/27/2023 and 02/16/2024, there were two documented detections within three (3) miles of the airport along rivers in 2022, and the project does intersect a known sensitive area for NLEB. The Proposed Action will remove trees within a 3.4-acre area, which consists predominantly of pitch pines, which will not be allowed to regrow. All tree removal will occur during the inactive season of NLEB, which in the Proposed Action area is November 1 to April 14. The surrounding area is relatively well forested, with much of the habitat consisting of Pitch Pine Scrub Oak Barrens and is owned by the State of Maine as part of the Major Gregory Sanborn Wildlife Management Area. Therefore, there are significant roosting habitat alternatives in the vicinity. The Proposed Action area is not within five (5) miles from a known hibernaculum. Given these factors, the FAA determined that the project May Affect, but is Not Likely to Adversely Affect (NLAA) northern long-eared bats.

Pursuant to the interim consultation framework under the new rule, the lead agency, the FAA, submitted a Biological Assessment Form for Project Level Consultation to the USFWS with a determination of Not Likely to Adversely Affect (NLAA) NLEB. A concurrence letter of the NLAA determination was provided by the Maine Field Office of the USFWS on December 1, 2023.

5.2.2.2. State-Listed Species

As mentioned previously in Chapter 4, three species of bats that are protected under the Maine Endangered Species Act (MESA) may potentially occur within the Proposed Action area, including the little brown bat, the northern long-eared bat, and the eastern small-footed bat. The northern long-eared bat is also federally listed under the U.S. Endangered Species Act as discussed above. According to the project review performed by MDIFW, dated November 21, 2023, impacts to state-listed bats are not anticipated as a result of the Proposed Action.

Approximately half of the areas to be impacted by the Proposed Action consist of grasslands maintained by the Airport through regular mowing. This grassland provides habitat for the grasshopper sparrow. The Proposed Action will result in 0.47 acres of permanent impacts to existing grassland habitat through conversion to impervious surface. According to the MDIFW's additional response, recommended mitigation for permanent impacts to grasshopper sparrow habitat consists of an 8:1 ratio of habitat creation, enhancement, or compensation. The Proposed Action will result in a net increase of 1.43 acres

grassland area. Mowing within the RSA occurs frequently as needed to maintain FAA regulations and safety and was not included in the grassland net increase computations.

The Proposed Action will also result in temporary impacts to grasshopper sparrow habitat within areas proposed as borrow pits for fill materials, the exact area of disturbance and suitability as grasshopper sparrow habitat will be finalized during the permitting phase. The areas will be regraded and revegetated following construction with warm season grass seed. According to the MDIFW's additional response, recommended mitigation for temporary impacts to grasshopper sparrow habitat consists of a 4:1 ratio of habitat creation, enhancement, or compensation. Given MDIFW's concern about the efficacy of revegetation, they also recommend a five-year monitoring effort with conditional mitigation requirements for temporary impact areas. If upon assessment by MDIFW the habitat has not been returned to existing functions and values, an additional 4:1 ratio is recommended, for a total of 8:1 acres of compensation.

The Proposed Action will result in a net decrease of 1.58 acres of PPSOB, which is a state-imperiled community type and provides habitat for several state endangered, threatened, and species of special concern lepidoptera, identified in Chapter 4. According to discussions with MNAP and MDIFW, impacts to this community type will require mitigation. The proposed mitigation consists of on-site habitat preservation of PPSOB at the recommended 8:1 mitigation ratio. See **Figure 5-3** in **Appendix J** for the proposed mitigation actions for PPSOB.

Round Pond is a small kettle pond northwest of the Runway 14 end, with a Three-way Sedge - Goldenrod Outwash Plain Pondshore surrounding the pond, a critically imperiled natural community in the state of Maine, and as such, MNAP has recommended a 250ft buffer. Other recommended avoidance and minimization measures include hang cutting methods only within the 100ft buffer, maintaining a portion of the 250ft buffer around Round Pond, and avoiding future vegetation disturbance within the 100-250ft buffer of Round Pond. The Outwash Plain Pondshore also provides habitat for the New England bluet, a state species of special concern, and MDIFW has recommended a 250ft buffer to protect water quality and the aquatic vegetation that supports this species. The Proposed Action will not result in impacts to the Outwash Plain Pondshore, However, it will result in approximately 0.22 acres of impacts to the 100ft buffer, and 0.99 acres from the 100ft buffer to the 250ft buffer. MDIFW recommends a 4:1 ratio of habitat mitigation for impacts within the 250ft buffer. The proposed PPSOB mitigation consists of on-site habitat preservation in the area surrounding Davis Pond, which also has an Outwash Plain Pondshore habitat. As a result, the entirety of the Davis Pond outwash plain pondshore habitat and its associated buffer will be preserved and therefore serve as mitigation for all impacts to the Round Pond Outwash Plain Pondshore.

The proposed project will be constructed in two phases. The first phase of construction consists of site preparation (e.g., clearing, grubbing, grading, erosion control, etc.), which will begin in fall of 2024. To avoid impacts to NLEB and grasshopper sparrows, site preparation will begin after November 1, during the inactive season for both species.

The remainder of the work (earthwork, paving, revegetation, etc.) will take place in the second phase of construction, which will begin in the late spring of 2025 after snowmelt, and will have a duration of approximately 60 days. As all vegetation and topsoil within the Proposed Action area will be removed during Phase 1, there will be no suitable nesting habitat for grasshopper sparrows, therefore direct impacts to this species are not anticipated during the second phase of construction, although there will be a temporary reduction in the amount of nesting habitat available.

5.2.3. Best Management Practices and Minimization Measures – Biological Resources

To ensure impacts remain below significance thresholds, the effects on biological resources would be further minimized and reduced through the implementation of best management practices and available control measures, such as:

- Land clearing and grubbing would be performed in such a manner as to minimize damage outside the project footprint.
- Maintain construction activities within authorized project boundaries, construction staging areas and clearing limits.
- Coordinate with MDEP during the design and permitting phase, to determine appropriate mitigation measures.
- All tree removal activities will be conducted during the inactive season for NLEB in Maine, which is November 1 to April 14.

5.2.4. No Action

Under the No Action alternative, IZG would continue operating within the same footprint. Similar to the Proposed Action, impacts to biological resources would not be significant.

5.3. CLIMATE

Climate change is a global phenomenon that can have local impacts.²¹ Scientific measurements show that Earth's climate is warming, with concurrent impacts including warmer air temperatures, increased sea level rise, increased storm activity, and an increased intensity in precipitation events. Increasing concentrations of greenhouse gas (GHG) emissions in the atmosphere affect global climate.^{22,23} GHG emissions result from anthropogenic sources, including the combustion of fossil fuels. GHGs include CO₂, methane (CH₄), N₂O, O₃, and fluorinated gases.²⁴ CO₂ is the most important anthropogenic GHG because it is a long-lived gas that remains in the atmosphere for up to 100 years.

²¹ As explained by the EPA, "greenhouse gases, once emitted, become well mixed in the atmosphere, meaning U.S. emissions can affect not only the U.S. population and environment but other regions of the world as well; likewise, emissions in other countries can affect the United States." U.S. Environmental Protection Agency, Climate Change Division, Office of Atmospheric Programs, *Technical Support Document for Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act 2-3*, 2009, <https://www.epa.gov/ghgemissions/technical-support-document-endangerment-and-cause-or-contribute-findings-greenhouse> (accessed September 28, 2018).

²² Intergovernmental Panel on Climate Change, *Fifth Assessment Report*, 2014, <https://www.ipcc.ch/report/ar5/syr/9> (accessed September 28, 2018).

²³ U.S. Global Change Research Program, *Global Climate Change Impacts in the United States*, 2009, <http://www.globalchange.gov/what-we-do/assessment/previous-assessments/global-climate-change-impacts-in-the-us-2009> (accessed September 28, 2018).

²⁴ U.S. Environmental Protection Agency, Overview of Greenhouse Gases, <http://www3.epa.gov/climatechange/ghgemissions/gases.html> (accessed February 10, 2022).

5.3.1. Climate Change Adaptation

The Airport is not located within a coastal zone or a regulatory floodway that would be susceptible to rising water levels as a result of climate change, therefore, the Airport is in a relatively low risk location for resources that may be affected by climate change.

5.3.2. Proposed Action

Sources of Greenhouse Gas Emissions for the Proposed Action are mainly emissions from construction operations, including construction equipment moving around on-site, on-road construction equipment, passenger/truck delivery vehicles, and fugitive dust emissions, related to site preparation, as well as operational emissions from aircraft and ground support equipment. Construction of the proposed project will result in a temporary increase of GHG emissions through the use of construction equipment and vehicles. Construction is anticipated to last approximately 120 days and will not result in a significant source of additional GHG emissions.

As addressed in Chapter 2, the purpose of the proposed project is to improve the operations of existing aircraft utilizing the airport, primarily jets, that are not able to operate at full capacity during inclement weather and must make sacrifices such as reduced fuel load or passengers they are able to transport. Extending the length of the current runway at Eastern Slope Regional Airport is not anticipated to result in more than minor, incremental increases in aircraft operations. The FAA Aerospace Forecast at the Airport shows a 0.77% compound annual growth rate (CAGR) over 10 years, and the Proposed Action is not expected to significantly affect the growth rate. Likewise, the Proposed Action is expected to result in negligible, if any, increases in automobile traffic on area roads. For these reasons, the increases in air emissions, including greenhouse gas emissions, from the Proposed Action are expected to be negligible.

As discussed in **Section 5.1** (Air Quality), GHG emissions from construction activities are expected to be short-term and relatively minor, and the proposed tree removal will result in a loss of carbon sequestration and a potential one-time release of carbon from biomass removal.

5.3.3. Significant Impact Threshold

There are no defined significance thresholds for aviation GHG emissions, nor has FAA identified any factors to consider in making a significance determination for GHG emissions. As discussed in **Section 5.1** (Air Quality), construction and operational emissions under the Proposed Action would not result in a significant impact.

5.3.4. No Action

The No-Action alternative assumes that the Proposed Action is not implemented, and greenhouse gases from construction and tree removal would not occur.

5.4. HISTORICAL, ARCHITECTURAL, ARCHAEOLOGICAL, AND CULTURAL RESOURCES

5.4.1. Proposed Action

As described in **Section 4.6**, there are no historic or archaeological resources within the Area of Potential Effect and therefore no historical, architectural, archaeological or cultural resources will be affected by the

Proposed Action. The MHPC issued a finding on January 3, 2024, indicating that no historic properties in Areas 1 and 2 would be affected by the Proposed Action, and a finding on January 31, 2024 that no such resources would be affected by the Proposed Action in Area 3. See **Appendix B** for Agency Correspondence and **Appendix E** for SHPO Project Review Package.

5.4.2. No Action

The No Action assumes that the existing Airport footprint would remain unchanged, therefore, no impacts to historic architectural, archaeological, or cultural resources would occur.

5.5. SECTION 4(F) AND SECTION 6(F) RESOURCES

5.5.1. Proposed Action

According to Section 4(f) of the U.S. Department of Transportation Act, a use occurs when the property is permanently incorporated into the transportation project through a taking of land; when it is temporarily occupied²⁵; or when its features are substantially impaired such that its value as a 4(f) resource will be meaningfully diminished or lost (termed a constructive use). A constructive use may result from noise, vibration, aesthetic changes, restricted access, or ecological intrusion.²⁶ See **Section 5.8** for more information pertaining to noise impacts.

According to FAA Order 1050.1F, a significant action involves more than a minimal physical use of a Section 4(f) resource or constitutes a “constructive use” based on an FAA determination that the aviation project would substantially impair the Section 4(f) resource.

The Proposed Action is located entirely on airport property and is not anticipated to result in a significant increase in aircraft operations, and therefore is not expected to result in a use under Section 4(f) of the U.S. Department of Transportation Act. The runway extension will result in an expansion of the runway approach, within which trees that are obstructions and potential obstructions would need to be removed. Approximately 3.4 acres of trees will have to be removed within the expanded runway approach in addition to single tree cutting for obstruction removal of approximately 26 trees. All of the single tree cuts and tree clearing are located within Airport Property, as shown in **Appendix I – Exhibit A** and in Figure 5-2 of **Appendix J**. Given the removal is all on airport property easement for the purpose of maintaining a safe runway approach, the obstruction removal is not considered a Section 4(f) use.

There are no Section 6(f) resources within the project area.

²⁵ A temporary occupancy may not be considered a use when certain conditions are met: the duration of occupancy is less than the time needed for construction of the project and there is no change in ownership of land; the scope of work is minor; there are no anticipated permanent adverse physical impacts; the land being used is fully restored; and there is documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding these conditions.

²⁶ According to CFR Part 774.15, a constructive use occurs when the projected noise level increase attributable to the project substantially interferes with the use and enjoyment of a noise sensitive property; the proximity of the project substantially impairs aesthetic features or attributes of a protected property; the project results in a restriction in access which substantially diminishes the utility of the property; the vibration impact from the construction or operation of the project substantially impairs the use of a Section 4(f) property; the ecological intrusion of the project substantially diminishes the value of wildlife habitat in a wildlife or waterfowl refuge, substantially interferes with access to a refuge when access is necessary for established wildlife migration, or substantially reduces wildlife use of a wildlife or waterfowl refuge.

5.5.2. No Action

The No Action assumes that the existing Airport footprint would remain unchanged, and no use of Section 4(f) or 6(f) resources would occur.

5.6. HAZARDOUS MATERIALS, SOLID WASTE, AND POLLUTION PREVENTION

The FAA 1050.1F Desk Reference states that the EA should describe anticipated waste to be generated as a result of the Proposed Action; waste handling and disposal requirements; identify if waste disposal would impact the capacity of the disposal facility; and determine whether the Proposed Action would interfere with ongoing remediation of contaminated sites within the project site or in the immediate vicinity.

5.6.1. Proposed Action

According to available information discussed in **Section 4.9** (Chapter 4), there are no records of active or open contamination, abandoned, inactive, or uncontrolled hazardous waste sites reported within the project site, nor land use restrictions. Therefore, the Proposed Action does not interfere with known contamination sites or remediation. If unexpected hazardous wastes are encountered during construction, the findings and remediation of those unexpected conditions would be conducted in accordance with applicable regulations.

Implementation of the Proposed Action would comply with applicable federal, State, and local regulations regarding hazardous materials, hazardous waste management, solid waste, and pollution prevention.

Construction-related activities under the Proposed Action have the potential to generate non-hazardous and hazardous construction waste. The Proposed Action includes earthwork and vegetation clearing, paving, relocation of runway lighting, etc. Excavated soils would be reutilized on-site to the maximum extent possible and in accordance with site-specific design specifications. Excess clean soil may also be reutilized at other areas within IZG, if practical. Vegetative debris would be generated from the land clearing and site preparation. Vegetation debris will be encouraged to be chipped and spread as mulch onsite. Any solid waste generated by the project is expected to be minimal and would be hauled by a licensed contractor to a permitted volume reduction plant, resource recovery facility and/or landfill.

5.6.2. Pollution Prevention, Best Management Practices and Minimization Measures – Hazardous Materials / Solid Waste

To further avoid and minimize the risk of unanticipated incidental impacts, the following pollution prevention and control measures would be implemented:

- Dispose of debris and solid waste generated by the project according to applicable federal, state, and local regulations.
- Re-use excess soils on-site to the maximum extent possible.
- Stage and operate construction equipment in designated areas.
- Implement spill and leak prevention and response procedures for construction equipment.
- Maintain spill kits to rapidly respond to and limit impacts from accidental releases of vehicle fluids.

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- Report releases of regulated quantities and perform cleanup according to applicable regulatory requirements.
- Manage solid wastes in designated areas and establish routine pickup for disposal according to applicable regulations.

5.6.3. Significant Impact Threshold

Taking into consideration the scope of work, potential effects would not be significant. The Proposed Action does not exceed the Significant Impact Threshold as per the FAA Order 1050.1F, and does not have the potential to:

- Violate applicable federal, state, tribal, or local laws or regulations regarding hazardous materials and/or solid waste management;
- Involve a contaminated site (including, but not limited to, a site listed on the NPL);
- Produce an appreciably different quantity or type of hazardous waste;
- Generate an appreciably different quantity or type of solid waste or use a different method of collection or disposal and/or would exceed local capacity; or
- Adversely affect human health and the environment.

5.6.4. No Action

The No Action assumes that the existing Airport footprint would remain unchanged, with no change in effects or involvement with solid waste and hazardous materials.

5.7. LAND USE AND ZONING

5.7.1. Proposed Action

The construction footprint of the Proposed Action is within the boundaries of IZG and compatible with current land uses; refer to Chapter 4, **Figure 4-7** for Land Use Map. The implementation of the Proposed Action does not require amendment of current Land Use or Zoning Maps, would not impact or promote changes with regard to land use designations, nor prevent use of adjacent off-airport properties.

5.7.2. Significant Impact Threshold – Land Use

There are no specific independent factors to consider for Land Use. The determination that significant impacts exist in the Land Use impact category is normally dependent on the significance of other impacts. In consideration of the scope of work, its location, and lack of property acquisition, significant impacts on land use are not anticipated.

5.7.3. No Action – Land Use

The No Action assumes that the existing Airport footprint would remain unchanged, so it would not impact land use.

5.8. NOISE AND COMPATIBLE LAND USE

Runway extensions have been identified as an airport action that could cause noise impacts to certain noise-sensitive land uses such as residences, schools, churches, and hospitals. FAA does not require noise analysis for projects involving Design Group I airplanes (wingspan less than 49 feet) in Approach Category A (landing speed less than 91 knots) operating at airports whose forecast operations in the period covered by the National Environmental Policy Act (NEPA) document do not exceed 90,000 annual propeller operations (247 average daily operations) or 700 annual jet operations (2 average daily operations). The Eastern Slope Regional Airport has been evaluated by FAA to conduct approximately 7,850 total operations in 2022 and not forecasted to exceed 9,400 over the next 10 years according to the FAA 5010 data with approximately 100-200 operations represented by jet-powered aircraft. The noise contour is not anticipated to extend 1,600 feet beyond the future runway extension and would still remain within the property line of the airport. Therefore, noise impacts associated with the Proposed Action are expected to be insignificant.

5.9. SOCIOECONOMIC, ENVIRONMENTAL JUSTICE, AND CHILDREN’S HEALTH AND SAFETY RISKS

5.9.1. Proposed Action - Socioeconomics

IZG plays a vital role in the regional transportation system for the region, as the Airport is located over an hour away from a major federal highway. The runway extension will be a more reliable transportation alternative, which will benefit the socioeconomic region through improving public access at the Airport. Additionally, during the construction phase, temporary jobs would be created.

According to the job creation formula provided by the U.S. White House under the American Recovery and Reinvestment Act (ARRA)²⁷, the following is used to estimate potential jobs that may be created as result of the construction (i.e., development phase) of Proposed Action:

- \$92,000 of government spending creates one (1) job year
 - 64 percent of the job-years represent direct and indirect effects
 - 36 percent of the job years are induced effect

Applying the ARRA formula to the estimated construction cost of around \$4.27 million, the Proposed Action has the potential to create the following jobs (cumulative) for the development phase:

- Up to 46 jobs
 - Approximate Direct and Indirect: 29
 - Approximate Induced effect: 17

5.9.2. Proposed Action – Community Tax Base

No significant changes are expected between pre-development and post-development conditions. The Project does not require property acquisition and is not anticipated to negatively affect property owners or businesses; therefore, it is not expected to produce a decrease in the community tax base.

²⁷ <https://obamawhitehouse.archives.gov/administration/eop/cea/Estimate-of-Job-Creation>

5.9.3. Proposed Action – Children’s Health and Safety Risks

No significant changes are expected between pre-development and post-development conditions regarding children’s health and safety risks. As discussed in **Section 5.1** (Air Quality), the analysis found that potential impacts on air quality resulting from the Project would not be significant. Emissions are not expected to exceed regulatory limits established in the NAAQS.

5.9.4. Significant Impact Threshold

The FAA has not established significance thresholds for socioeconomics; however, FAA Order 1050.1F provides factors to consider for socioeconomics. Based on those factors listed below, potential socioeconomic effects would not be significant. The Proposed Action does not involve or would not have the potential to:

- Induce offsite developments through establishing projects in an undeveloped area;
- Disrupt or divide the physical arrangement of an established community;
- Result in disproportionate impacts on children’s health and safety;
- Cause housing relocation;
- Cause relocation of community businesses that would cause severe economic hardship for the community;
- Cause permanent disruption of local vehicular traffic patterns and/or substantial reduction in the level of service of roads serving the Airport and its surrounding community; or
- Produce a substantial change in the community tax base.

FAA Order 1050.1F does not provide significance thresholds related to Environmental Justice. However, FAA Order 1050.1F provides factors that should be considered when making a significance determination, as described below:

- If an underlying impact to the natural and physical environment that has the potential to lead to a disproportionately high and adverse impact to an Environmental Justice population is itself deemed significant, this may suggest that the Environmental Justice impact is also significant.
- An underlying impact that is not significant may lead to a significant Environmental Justice impact if the action disproportionately impacts an Environmental Justice population and the underlying impact affects the Environmental Justice population in a unique way. Consultation with FAA and other environmental resource agencies may be required to determine if such impacts rise to a level of significance.

Based on the evaluation provided above, it can be concluded that the Proposed Action would not result in significant impacts to Environmental Justice communities, socioeconomics, or children’s health and safety.

5.9.5. No Action

The No Action alternative assumes that the Proposed Action is not implemented. The No Action has the potential to result in negative socioeconomic impacts by limiting transportation options.

5.10. TRAFFIC

5.10.1. Proposed Action

Existing traffic would be temporarily affected by the Proposed Action during construction. These impacts are considered short-term and not significant compared to background traffic levels. Roadway and traffic operations during construction would be expected to be almost identical to existing operations.

Data on IZG's airport operations from 2018 to 2023 was collected from traffic flow management system counts (TFMSC) to determine the current daily aircraft operations as well as forecast the future operations of the airport, including operations related to the proposed runway extension. Using the growth of operations over the last five years and forecasting this over the next ten years, it is estimated that airport annual operations may increase from 7,850 annual flights to 8,478 annual flights, or an increase from 21.5 average flights per day to 23.3 average flights per day.

This information can be used in conjunction with the Institute of Transportation Engineers (ITE) Trip Generation Manual to determine the increase in daily vehicle trips in ten years resulting from airport operations. According to the ITE Trip Generation Manual, Section 022 General Aviation Airport, the Trip Generation per Flight average rate is 1.98. Using this rate, the current daily trip generation based on 7,850 annual flights is 42.7 daily trips, and the daily trip generation in ten years based on 8,478 annual flights would be 46.1 trips. This is an increase of 3.4 trips per day on Lyman Drive.

Because the proposed runway extension takes place on airport property and does not directly impact the airport access road or the adjacent state road, traffic re-routing, changes to street configurations, or any other changes to traffic patterns are not required.

5.10.2. Significant Impact Threshold – Traffic

The FAA has not established significance thresholds for traffic; however, traffic impacts of the Proposed Action were determined by comparing the No Action analysis to the Proposed Action analysis. As described above, the Proposed Action, in combination with forecasted operations based on the last five years, would not significantly impact traffic operations at the study area intersections.

5.10.3. No Action – Traffic

The No Action alternative assumes that the Proposed Action is not implemented. The No Action Alternative represents normal traffic growth that naturally occurs over time plus estimated trips generated by future operations of the Airport without the runway extension.

5.11. NATURAL RESOURCES AND ENERGY SUPPLY

5.11.1. Proposed Action

The Proposed Action would use a relatively small amount of readily available natural resources for its construction. If additional sources of power or electricity are needed during construction, it would be provided by the existing IZG infrastructure and through temporary use of portable power generators. The runway extension would result in the addition of eight (8) runway lights, that are radio activated and run for a short period of time, after which they turn off. Therefore, increases in energy use associated with the Proposed Action are expected to be insignificant.

5.11.2. Significant Impact Threshold – Natural Resources and Energy Supply

The FAA has not established a significance threshold for natural resources and energy supply. NEPA encourages federal agencies to consider whether the action would have the potential to cause demand to exceed available or future supplies of these resources, which as stated above, is not expected for the Proposed Action.

5.11.3. No Action

The No Action assumes that the existing Airport footprint would remain unchanged without addressing the needs of the IZG, and there would be no changes to existing natural resources and energy consumption.

5.12. VISUAL EFFECTS

5.12.1. Proposed Action

The proposed runway extension would include typical airfield lighting, primarily consisting of extending the existing Medium Intensity Runway Lights (MIRL) by four (4) on each side of the runway, for a total of eight (8) additional MIRLS. The lights are ground mounted and would be consistent in appearance with the existing airfield lights and signs. The MIRLS are radio activated and operate on a timer, and therefore, are only illuminated on an as needed basis. The existing runway end identifier light (REIL) at the Runway 32 end would be removed and relocated to the new runway end. The runway extension is consistent with the existing visual conditions and is not a significant change compared to existing. The change in light emissions associated with the runway extension is expected to be insignificant, and would not affect any abutting properties.

5.12.2. Significant Impact Threshold – Light Emission and Visual Effects

There are no federal special purpose laws or requirements specific to light emissions and visual effects and FAA has not established significance thresholds for Light Emissions and Visual Resources. According to FAA Order 1050.1F, factors to consider for Light Emissions are:

- The degree to which the action would have the potential to:
 - Create annoyance or interfere with the normal activities from light emissions; or
 - Affect the visual character of the area due to light emissions, including the importance, uniqueness and aesthetic value of the affected visual resources.

Considering the criteria above, the additional runway lighting does not represent a significant change for nearby properties. The Proposed Action is located on airport property and is airport-compatible development. There are no notable visual resources that would be obscured by the Proposed Action.

5.12.3. No Action – Light Emissions / Visual Effects

Under the No Action alternative, the proposed action would not progress and no changes to the airfield lighting or visual effects would occur.

5.13. WATER RESOURCES

5.13.1. Proposed Action

5.13.1.1. Wetlands and Surface Waters

The Proposed Action will result in approximately 0.32 acres of permanent impacts to freshwater wetlands for slope stabilization of the runway extension. The Proposed Action would result in an increase in impervious surfaces by approximately 1.84 acres. Generally, the potentially impacted wetlands are considered relatively high-value and are designated Inland Waterfowl and Wading Bird Habitat (IWWH) by the MDIFW, which makes this a freshwater Wetland of Special Significance at the state level. During the engineering design phase, exact wetland impacts would be refined, and mitigation actions would continue to be developed to satisfy applicable regulations from USACE and MDEP. Additionally, prior to construction, IZG would submit permit applications to the USACE and MDEP for federal and state approval. Wetland areas to be impacted are shown in **Figure 5-1**.

Figure 5-1: Proposed Action



Avoidance, Minimization, and Mitigation Measures

Extending the runway cannot be accomplished without incurring wetland impacts. The proposed wetland impacts have been minimized by splitting the runway extension between both ends of the runway, which minimizes impacts to the wetland near the Runway 32 end,; and by designing the maximum slopes possible within site constraints. Specifically, slopes of 3 percent are proposed within the runway safety area, the maximum recommended by FAA in their design guidance (FAA Order AC 150/5500-13B). Outside of the runway safety area, the proposed slopes are 2:1, the maximum to achieve slope stability and reasonable ease of maintenance while minimizing ground disturbance and wetland impacts. Additionally, impacts would be minimized through the use of best management practices including appropriate erosion and sedimentation control measures tailored to specific site conditions.

Mitigation is proposed to compensate for wetland impacts and negotiations are ongoing with both the USACE and the MDEP. Compensatory mitigation will be finalized during the permitting stage. **See Figure 5-3 in Appendix J** for the proposed mitigation actions. The Proposed Action will require a permit under the USACE Maine General Permit 10. As of May 25, 2023, unavoidable impacts to freshwater wetlands over 5,000 square feet will require a pre-construction notification and compensatory mitigation. Compensatory mitigation would be implemented for all wetland impacts to achieve the overall policy goal of “no net loss” according to their ecological functions and values. Currently, preferred mitigation consists of an in-lieu fee that would be paid to the MDEP in the amount of \$150,276.40 for impacts to the wetland of special significance as IWWH and the associated upland buffer. However, funding for the Proposed Action is finite, and in the event that continued inflation results in higher construction costs, it is possible that there will not be sufficient funds to pay the entirety of the in-lieu fee. As discussed in three meetings with state and federal agencies occurring on November 29th, 2023, December 5, 2023, and February 5, 2024, off-site mitigation is not financially feasible for the Airport, therefore, in the event that the entire in-lieu fee cannot be met, a combined on-site preservation with a reduced in-lieu fee will be considered as an alternative mitigation method for the Proposed Action. There are high-quality wetlands on airport property that could be preserved, so on-site preservation can appropriately mitigate impacts to ensure “no net loss” of regulated wetlands.

The acreage of preservation would be determined based on the acreage and type of wetlands impacted by the project.²⁸ The USACE ratio for mitigation of wetland impacts to forested and scrub-shrub wetlands is 20 acres of preservation for every 1 acre of impact, and the MDEP mitigation ratio for preservation for freshwater wetlands of significance is 8:1. Further coordination with MDEP and USACE would continue, and decisions would be finalized in the subsequent design and permitting phase. This approach is consistent with the current New England District Compensatory Mitigation Guidance, 33 CFR 332 (Compensatory Mitigation for Losses of Aquatic Resources, and Chapter 310 of the Maine Natural Resource Protection Act).

Significant Impact Threshold

Taking into consideration the scope of work, its location, minimization of impacts within wetlands (see **Appendix D** for Wetland Function and Value Assessment) and compensatory mitigation which is currently being negotiated with MDEP and USACE and will be finalized at the permitting phase, potential effects

²⁸https://www.nae.usace.army.mil/portals/74/docs/regulatory/Mitigation/2016_New_England_Compensatory_Mitigation_Guidance.pdf

would not be significant. See **Appendix B** for agency coordination. The Proposed Action does not exceed the Significant Impact Threshold as per the FAA Order 1050.1F, and does not have the potential to:

- Adversely affect a wetland's function to protect the quality or quantity of municipal water supplies, including surface waters and sole source and other aquifers;
- Substantially alter the hydrology needed to sustain the affected wetland system's values and functions or those of a wetland to which it is connected;
- Substantially reduce the affected wetland's ability to retain floodwaters or storm runoff, thereby threatening public health, safety, or welfare (the term welfare includes cultural, recreational, and scientific resources or property important to the public);
- Adversely affect the maintenance of natural systems supporting wildlife and fish habitat or economically important timber, food, or fiber resources of the affected or surrounding wetlands;
- Promote development of secondary activities or services that would cause the circumstances listed above to occur;
- Exceed water quality standards established by federal, state, local, and tribal regulatory agencies; or
- Contaminate public drinking water supply such that public health may be adversely affected.

5.13.1.2. Groundwater

The Project would be designed to meet water quality standards; therefore, groundwater impacts are not anticipated or proposed. IZG is characterized by sandy soils with high infiltration rates. As such, there are no discharges to surface waters on the airport. Therefore, the Airport is not subject to the National Pollutant Discharge Elimination System (NPDES) programs for stormwater runoff from industrial sites, and no Stormwater Pollution Prevention Plan is necessary for operational activities.

Best Management Practices and Minimization Measures

Although impervious surfaces would be increased as part of the Proposed Action, additional stormwater treatment would be constructed. In order to meet the MDEP Chapter 500 Stormwater Management requirements, there are several locations proposed for potential stormwater treatment. In Section 3, Figure 3-3, Alternative 3 – Runway 14 390' Extension and Runway 32 412' Extension, five stormwater treatment locations are depicted. The five proposed locations will capture the required amount of stormwater runoff without exceeding size and volume limitations required by the MDEP. The intended stormwater treatment type in these locations is a grassed underdrained soil filter as described in the 2016 *Maine Stormwater Management Design Manual, Technical Design Manual Volume III*, Chapter 7.1 – *Grassed Underdrained Soil Filters*. Best management practices would be implemented during the construction and operational phases. A Contractor is required to have good housekeeping practices, including a plan for spill prevention in accordance with the 2016 *Maine Erosion and Sediment Control Best Management Practices Manual for Designers and Engineers* including updating the Airport's Spill Prevention Control and Countermeasure (SPCC) Plan to avoid and minimize unforeseen impacts to groundwater. Refer to **Section 5.6** for spill prevention and best management practices.

Significant Impact Threshold – Groundwater

Taking into consideration the scope of work, potential effects would not be significant. The Proposed Action does not exceed the Significant Impact Threshold as per the FAA Order 1050.1F, and does not have the potential to:

- Adversely affect natural and beneficial groundwater values to a degree that substantially diminishes or destroys such values;
- Adversely affect groundwater quantities such that the beneficial uses and values of such groundwater are appreciably diminished or can no longer be maintained, and such impairment cannot be avoided or satisfactorily mitigated; or
- Present difficulties based on water quality impacts when obtaining a permit or authorization.

5.13.1.3. Floodplains and Sea Level Rise

As described in **Section 4.15.4**, only a small portion of the study area is located in Zone X, an area of 0.2% annual chance of flood hazard. Refer to Chapter 4, **Figure 4-8** for FEMA Floodplain Map. However, the Proposed Action does not propose impacting this flood hazard area. All impacts are located outside designated flood hazard areas.

Significant Impact Threshold

According to FAA Order 1050.1F, a floodplain impact is significant if it would cause notable adverse impacts on natural and beneficial floodplain values. Natural and beneficial floodplain values are defined in Paragraph 4.k of USDOT Order 5650.2, *Floodplain Management and Protection*. They include natural moderation of floods, water quality maintenance, groundwater recharge, fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, and forestry.

The Proposed Action will not result in direct impacts to floodplains, and runoff from the increase of impervious surface will be treated with additional stormwater treatment areas, therefore, it can be concluded that no adverse impacts on natural and beneficial floodplain values are anticipated.

5.13.2. No Action

The No Action alternative assumes that existing conditions would remain unchanged within the project site and there would be no impacts to wetlands or additional impervious surfaces added to the Airport. Therefore, impacts from the No Action alternative on water resources are not considered to be significant.

5.14. CUMULATIVE IMPACTS

Based on the technical analysis and information discussed in previous sections, it is not anticipated that implementation of the Proposed Action will contribute significantly to cumulative impacts. In determining the significance of the impacts associated with the Proposed Action, the overall foreseeable impacts of all project components (connected actions²⁹) were cumulatively evaluated in this EA as applicable.

CEQ regulations, 40 CFR § 1508.1³⁰ Implementing Regulations (August 2023), define cumulative effects as the effects on the environment that result from the incremental effects of the action when added to the effects of other past, present, and reasonably foreseeable actions regardless of what agency (federal or non-federal) or person undertakes such other actions. CEQ regulations also state that cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.

The cumulative impact analysis considers the past, present or foreseeable actions in the near future that are closely related either in time or location to the project being considered. In general, the geographic area of concern for this analysis is the Airport property. For some resources (e.g., cultural and historic, Section 4(f) / 6(f)) or certain other environmental impact categories (i.e., noise, air quality, traffic, Environmental Justice and socioeconomics) the cumulative impact analysis extends beyond Airport property. However, as per EPA guidance for cumulative impacts under NEPA, the geographic boundaries should not be extended to the point that the analysis becomes unwieldy and useless for decision-making and should focus on the natural units or environmental impact category that constitute the resources of concern. The evaluation of cumulative impacts considered reasonably foreseeable future projects proposed in combination with past and present actions at the Airport. These actions have been implemented, are under current planning, or are anticipated in the near future to maintain the Airport in compliance with federal design standards, improve safety of Airport operations, and improve the facility's infrastructure. The time period for cumulative effects analysis is the cycle during which a project is expected to affect a resource, ecosystem, or human community, if that is the case. The analysis also considers unrelated projects in the surrounding environs.

Previously completed IZG projects did not result in significant impacts and are summarized in **Table 5-2**.

²⁹ FAA Order 1050.1F: Connected actions are closely related actions that: (a) automatically trigger other actions; (b) cannot or will not proceed unless other actions are taken previously or simultaneously; or (c) are interdependent parts of a larger action and depend on the larger action for their justification (see 40 CFR § 1508.25(a)(1), CEQ Regulations). Connected actions and other proposed actions or parts of proposed actions that are related to each other closely enough to be, in effect, a single course of action must be evaluated in the same EA or EIS (see 40 CFR §§ 1502.4(a) and 1508.25(a)(1), CEQ Regulations). A proposed action cannot be segmented by breaking it down into small component parts to attempt to reduce impacts (see 40 CFR § 1508.27(b)(7), CEQ Regulations).

³⁰ [eCFR: 40 CFR 1508.1 -- Definitions.](#)

Table 5-2: Previous Projects at IZG

Previous Projects	Project Summary
2019 Obstruction Removal	An obstruction removal of the Runway 14 end approach occurred in early spring of 2019, which cut trees within approximately 4 acres in the area surrounding Round Pond, which was located within PPSOB habitat. The obstruction removal was permitted after-the-fact for impacts to PPSOB and rare lepidoptera species. A Habitat Management Plan (HMP) to manage PPSOB in the area of obstruction removal is pending approval with MDEP to satisfy conditions of the after-the-fact permit.
100-foot X 100-foot Transient Hangar	A 100-foot by 100-foot transient hangar was constructed in 2022 in an area that had consisted of mowed grass. The hangar was permitted in a joint effort with the obstruction removal and received a permit, with no compensatory mitigation required.

Source: Airport records

These projects are independent (single and complete) of the Proposed Action.

5.14.1. On-Airport Future Projects

Future projects planned within the next five (5) years are summarized in **Table 5-3**. These future projects are independent, not related to or triggered by the Proposed Action. Most of these projects listed in this table are separate courses of actions that would be required to undergo their own independent environmental review under NEPA and may be subject to separate state and/or federal environmental regulations. It is expected that these projects would be designed to minimize environmental impacts to avoid exceeding Significant Thresholds for the applicable environmental impact categories defined in FAA Order 1050.1F.

Table 5-3: Future Projects at IZG

Projects	Project Summary
Solar Farm	The solar farm includes a land release in preparation of a BNRG Solar Farm Project. The parcel is a 19.8-acre area of land at the Eastern Slope Regional Airport which would be utilized for a 4.99-megawatt (MW) solar facility. The project would consist of solar panels, concrete equipment pads, transformers, a gravel access road, and associated infrastructure. The facility will be interconnected to Central Maine Power Company's local distribution system. The site that is proposed for the solar array has wooded undisturbed areas along with several existing gravel/dirt roads. A NEPA Categorical Exclusion was recently completed for the proposed land release associated with the solar farm.

Projects	Project Summary
Taxiway ABC Reconstruction	The width of the taxiways will be reduced from their current nominal width of 40 feet to a nominal width of 25 feet based on the eligible design aircraft that utilize the airport. To mitigate the risk of runway incursions (inadvertent runway access), the portion of Taxiway B between Taxiway A and Runway 14-32 will be shifted to the east apparently 200 feet. A Categorical Exclusion is currently being prepared for the proposed taxiway reconstruction.

Source: IZG

No other significant improvements are currently expected to occur within the next five (5) years, but any additional improvements (single and complete actions) would undergo either an EA to assist in determining whether potential impacts are significant, or a Categorical Exclusion determination where there is no potential for significant impacts, as appropriate.

5.14.2. Off-Airport Projects

Based on readily available information from the Town Fryeburg, there are no major development or capital improvement programs in the airport vicinity. There is a plan to remove 31 miles of unused railroad track from Fryeburg to Standish, replacing it with a ten-foot-wide multi-use recreational trail, to fully extend the existing Mountain Division Rail Trail to Portland, Maine³¹. As of December 2023, the Town of Fryeburg was accepting bids for construction of an 18-foot by 24-foot outdoor learning center open pavilion at the Town Forest³². These projects are not airport related nor proposed in conjunction with the Proposed Action. These projects do not coincide with the Proposed Action. It is assumed that some degree of environmental impact would be generated by these projects. However, the status or likelihood of these projects being approved, constructed and completed is unknown. These projects were or would be subject to their own independent environmental reviews and separate permitting processes.

5.14.3. Summary of Cumulative Impacts Assessment

Most of the environmental impacts of the past, present, and reasonably foreseeable future actions, including the Proposed Action, are minor in nature and would not contribute to significant cumulative effects. Impacts to rare species habitat were incurred in the 2019 obstruction removal project and are expected for the runway extension project, but the impacts would be adequately mitigated by implementing a Habitat Management Plan and preserving valuable wildlife habitat. Wetland impacts from the Proposed Action will also be mitigated by preserving habitat. Due to the minor nature of environmental impacts of these actions, best management practices to be implemented, and applicable mitigation measures to offset the impacts, cumulative impacts are not expected to be significant.

³¹ <https://www.mainepublic.org/environment-and-outdoors/2023-08-16/proposed-rail-trail-would-connect-fryeburg-to-greater-portland>

³² <https://www.fryeburgmaine.org/home/news/outdoor-learning-center-bid>

6. LIST OF PREPARERS

This EA was prepared by McFarland-Johnson, Inc., with support from Northeast Archaeology Research Center (NARC), and integrating information provided by IZG (ESAA). The EA was prepared in collaboration with the FAA. The following personnel participated in preparation of the document:

Table 6-1: List of Preparers – Technical Team

FAA
Cheryl Quaine - Regional Environmental Protection Specialist, M.S. Environmental Science (2005): Christopher Newport University; B.S. Zoology (1999): University of Rhode Island. Project Involvement: Document Review and Preparation
McFarland-Johnson, Inc.
Matt O'Brien, PE – Senior Project Manager, B.S. Civil Engineering (2007): Roger Williams University. Project Involvement: Project Manager, document preparation, and technical writer.
Jordan Tate – Assistant Environmental Analyst, B.S. Environmental Science (2015): University of New England. Project Involvement: Document preparation and environmental technical writer.
Jed Merrow, CWS – Environmental Manager, M.S. Natural Resource Science (1990): University of Rhode Island. Project Involvement: Document review and quality control.
Sydney Seney, PE - Senior Engineer, B.S. in Civil Engineering (2018): University of Maine. Project Involvement: Alternatives analysis and preparation and engineering technical writer.
Ferd Schoedinger, EI – Junior Engineer, B.S. in Civil Engineering (2020): University of Dayton. Project Involvement: Alternatives analysis and drafting.
Northeast Archaeology Research Center
Robert N. Bartone., Director and Principal Investigator II, M.A. in Archaeology (1998), State university of New York. Project Involvement: Report Preparation and Manager.
Gemma-Jayne Hudgell, Ph.D., Assistant Director and Principal Director II, Ph.D. in Archaeology (2006), University of Liverpool, England. Project Involvement: Report Preparation and Coordinator
Hutch M. McPheters, Assistant Director/Director of Information Technology II, B.A. in Anthropology and Sociology (1998), University of Maine Farmington. Project involvement: Report Preparation
Rosemary A. Cyr., Laboratory Director, M.A. in Maine Studies (2001), University of Maine. Project Involvement: Lab Testing Director
David Wesley Beattie, Project Director II, M.A. in Anthropology (2021), University College in Cork City Ireland. Project Involvement: Report Preparation

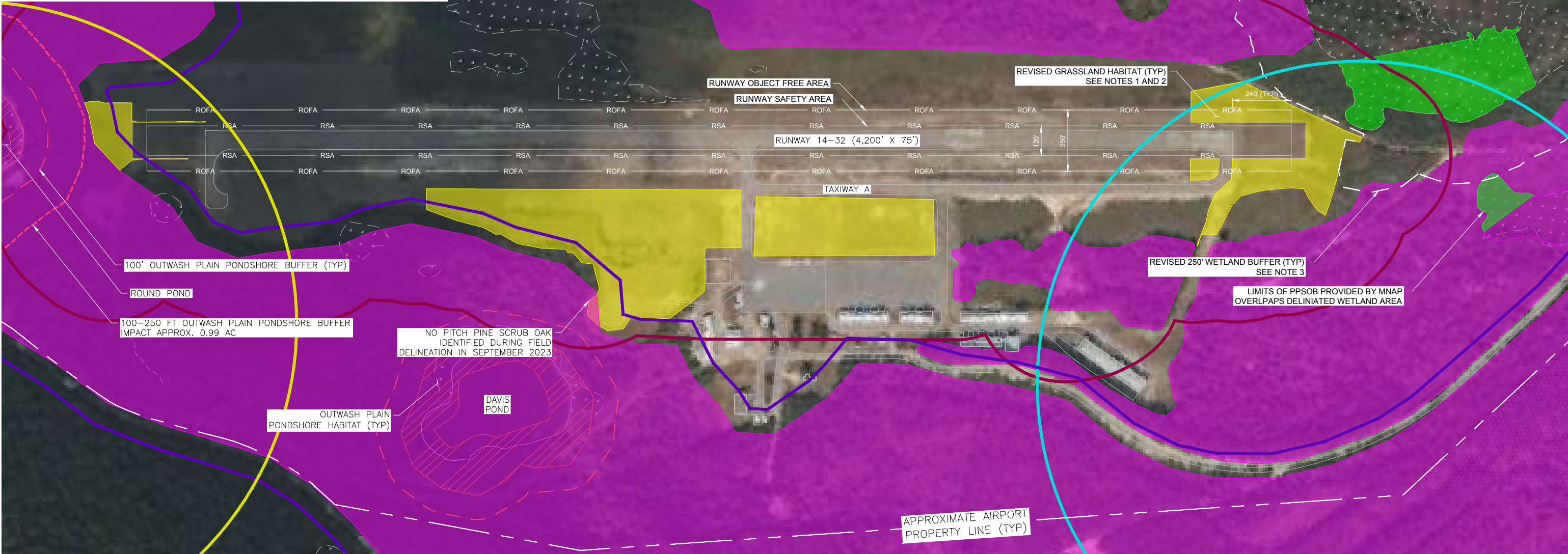
Table 6-1: List of Preparers – Technical Team

Megan Bryson, Project Director I, B.S. in Archaeology/Anthropology (2019), Millersville University. Project involvement: Report Preparation
Connor Kleinschmidt, Field Director II, B.S. in Archaeology/Anthropology (2022), University of Wisconsin. Project involvement: Report preparation
Lydia Jacob, Laboratory Assistant, B.S. in Anthropology (2017), University of Texas at Austin. Project involvement: Lab Testing and reporting
Victoria Alexios, Archaeological Technician II, B.A. in Anthropology (2020), University of Central Florida. Project involvement: Report preparation and field technician
Nathan Anton, Archaeological Technician II, Associate Degree in Animal Science/Farm Management (2012), Ridgewater College. Project Involvement: Field technician
Michael Bliem, Archaeological Technician III, Penn Manor High School Graduate (1994). Project Involvement: Field technician
Courtney Cote, Archaeological Technician II, B.A. in Anthropology (2021), University of Colorado at Boulder. Project Involvement: Report preparation
Jacob Eckert, Archaeological Technician II, B.A. in Anthropology (2021), Purdue University. Project Involvement: Report preparation
Amy Hodge, Archaeological Technician III, B.A. in Anthropology (2023), University of Maine at Farmington. Project involvement: Report preparation

Appendix A

Alternatives Analysis Figure

HABITAT	IMPACT
WETLAND OF SPECIAL SIGNIFICANCE	NO IMPACT
INLAND WADING BIRD AND WATERFOWL BUFFER	NO IMPACT
PITCH PINE SCRUB OAK BARREN (PPSOB)	NO IMPACT
GRASSLAND	NO IMPACT
GRASSHOPPER SPARROW	NO IMPACT
OUTWASH PLAIN PONDSHORE	NO IMPACT
OUTWASH PLAIN PONDSHORE BUFFER (100 FT)	NO IMPACT
OUTWASH PLAIN PONDSHORE BUFFER (100-250 FT)	NO IMPACT
EASRTERN BUCKMOTH	NO IMPACT
EDWARD'S HAIRSTREAK	NO IMPACT
TWILIGHT MOTH	NO IMPACT
TREELINE	NO IMPACT

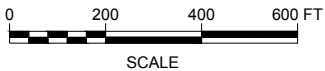


LEGEND

	GRASSLAND HABITAT
	PITCH PINE SCRUB OAK BARREN HABITAT
	DELINEATED WETLAND HABITAT
	NWI WETLAND HABITAT
	OUTWASH PLAIN PONDSHORE HABITAT
	EASTERN BUCKMOTH
	EDWARD'S HAIRSTREAK
	GRASSHOPPER SPARROW
	TWILIGHT MOTH
	AIRPORT PROPERTY LINE (WHITE)

NOTES:

1. THE GRASSLAND HABITAT WAS DETERMINED BASED ON EXISTING RUNWAY AIRPORT DESIGN CODE B-II.
2. THE EXISTING RUNWAY SAFETY AREA (RSA) FOR RUNWAY 14-32 IS MOWED MORE THAN TWICE A YEAR AND DOES NOT QUALIFY AS GRASSLAND HABITAT.
3. THE 250' WETLAND BOUNDARY BUFFER WAS REVISED TO REFLECT THE EXISTING LIMITS OF UNDEVELOPED BUFFER.
4. THE PITCH PINE SCRUB OAK, WETLAND HABITAT OUTSIDE OF THE STUDY AREA, AND OUTWASH PLAIN PONDSHORE HABITAT DATA WAS PROVIDED BY THE MAINE NATURAL AREAS PROGRAM AND NATIONAL WETLANDS INVENTORY.
5. THE EASTERN BUCKMOTH, EDWARD'S HAIRSTREAK, GRASSHOPPER SPARROW, AND TWILIGHT MOTH HABITATS DATA WAS PROVIDED PREVIOUSLY BY THE MAINE INLAND FISHERIES AND WILDLIFE.



ENVIRONMENTAL ASSESSMENT

REV	DATE	DESCRIPTION	BY
53 REGIONAL DRIVE CONCORD, NEW HAMPSHIRE 03301			

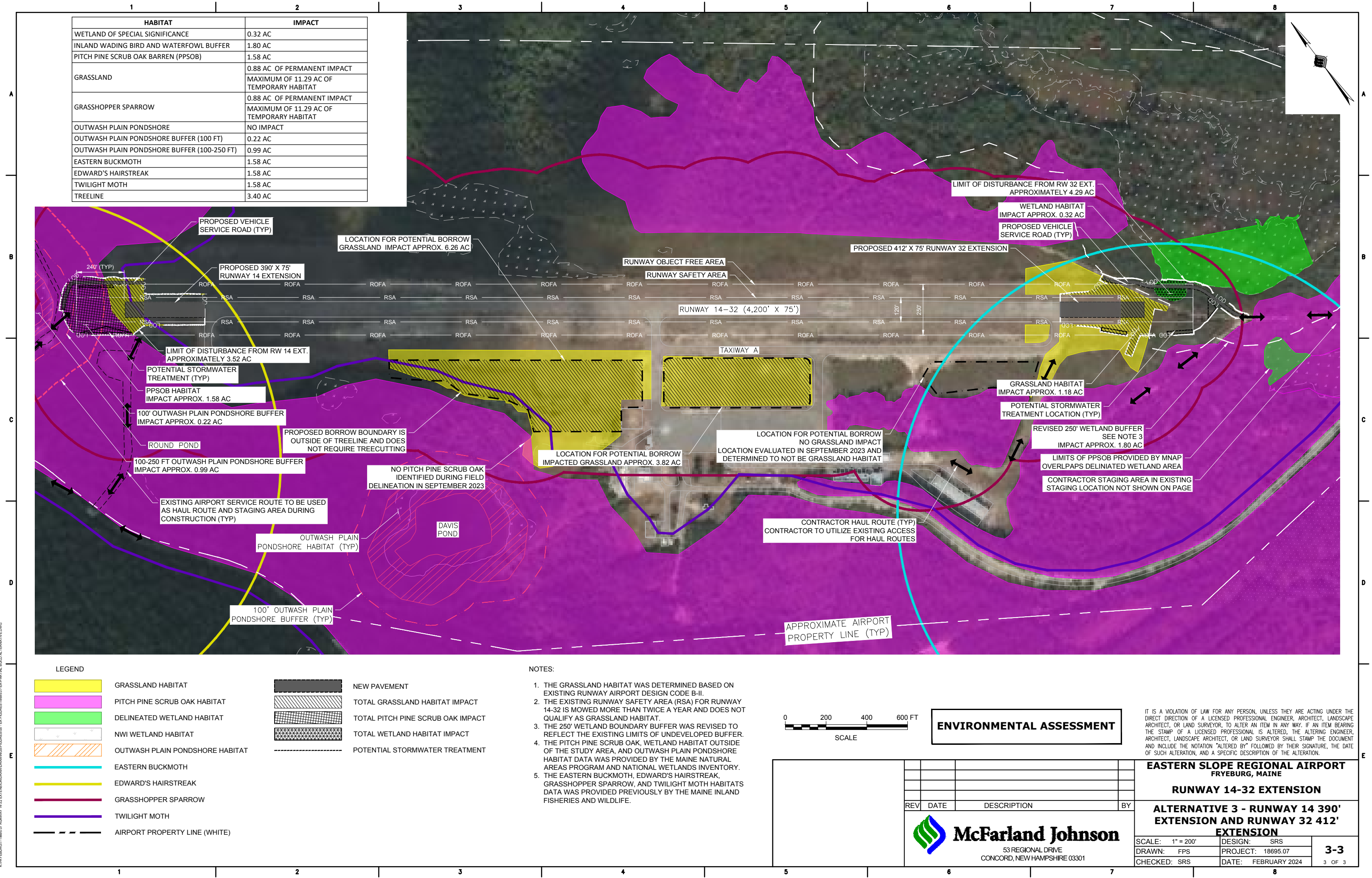
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

EASTERN SLOPE REGIONAL AIRPORT
FRYEBURG, MAINE

RUNWAY 14-32 EXTENSION

ALTERNATIVE 1 - NO BUILD

SCALE: 1" = 200'	DESIGN: SRS
DRAWN: FPS	PROJECT: 18695.07
CHECKED: SRS	DATE: FEBRUARY 2024



Appendix B
Agency Coordination



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041



November 21, 2023

Jordan Tate
McFarland Johnson
5 Depot Street
Freeport, ME 04032

RE: Preliminary Environmental Review – Eastern Slope Regional Airport Runway Extension and Related Site Work, Fryeburg (ERid 6198, ERVerID 8791)

Dear Jordan,

Per your request received on October 18, 2023, we have reviewed current Maine Department of Inland Fisheries and Wildlife (MDIFW) information sources for known locations of Endangered, Threatened, and Special Concern (Rare) species; designated Essential and Significant Wildlife Habitats; inland fisheries and aquatic habitats, and other Protected Natural Resource concerns within the vicinity of the *Eastern Slope Regional Airport Runway Extension and Related Site Work, Fryeburg* project. MDIFW data sources include many important resources. However, there is no comprehensive statewide inventory, and the completeness of records depends on previous survey efforts, particularly related to Endangered, Threatened, and Special Concern (Rare) species and habitats and Significant Vernal Pools.

Our Department has not mapped any Essential Habitats that would be directly affected by your project. Essential Habitats are areas formally designated as essential to the conservation of a State Endangered or Threatened species and are protected pursuant to the Maine Endangered Species Act (MESA, 12 M.R.S, §12804.2). Currently, Essential Habitats are only designated for three State Endangered coastal breeding bird species.

Endangered, Threatened, and Special Concern (Rare) Species

The Maine Endangered Species Act prohibits activities that may cause “Take” (kill or cause death), “harassment” (create injury or significantly disrupt normal behavior patterns), and other adverse actions to State Endangered and Threatened species. We recommend working closely with MDIFW staff to design a project that minimizes the risk for potential Take and Harassment of MESA-protected species.

Bat Species – Of the eight species of bats that occur in Maine, four species are afforded protection under Maine’s Endangered Species Act (MESA, 12 M.R.S §12801 et. seq.): little brown bat (State Endangered), northern long-eared bat (State Endangered), eastern small-footed bat (State Threatened), and tri-colored bat (State Threatened). The four remaining bat species are designated as Species of Special Concern: big brown bat, red bat, hoary bat, and silver-haired bat. While a comprehensive statewide inventory for bats has not been completed, based on historical evidence, it is likely that several of these species occur within the project area during spring/fall migration, the summer breeding season, and/or for overwintering. However, our Agency does not anticipate significant impacts to any of the bat species as a result of this project.

Grasshopper Sparrow – The grasshopper sparrow is a State Endangered species. Grasshopper sparrows are an area-sensitive species requiring open grassland or barrens habitat with patches of bare ground for nesting and will use both native and cultivated vegetation for nest sites. We recommend that development be avoided in or adjacent to grasshopper sparrow habitat and as much undisturbed buffer provided as possible from any documented occurrences and habitat of this species. If impacts to grasshopper sparrow habitat are permitted, no clearing or construction shall occur between May 1 to August 1, and mowing should be limited to a frequency of no greater than twice per year within the same period. Based on the location of the project in relation to documented occurrences of this species, we recommend working with MDIFW staff for further guidance.

Pine Barrens Zanclognatha – The pine barrens zanclognatha moth, a State Threatened species, is documented in the project vicinity. This species is known only from pitch pine-scrub oak barrens, a rare and declining forest habitat found on just seven sites in York and southern Oxford Counties. As these habitats are documented on the project site, within the geographic range of these species, MDIFW may recommend that specialized surveys be conducted. Guidelines for buffers and site protection measures for this species are highly habitat specific and should be developed in consultation with MDIFW staff. For site-specific data, and for recommendations for habitat and species protection, contact Beth Swartz, MDIFW Reptile, Amphibian, and Invertebrate Biologist (beth.swartz@maine.gov, 207-941-4475) and MDIFW's Environmental Review Program.

Twilight Moth - Twilight moth, a State Threatened species, is documented in the project vicinity. This species is known only from pitch pine-scrub oak barrens, a rare and declining forest habitat found on just seven sites in York and southern Oxford Counties. As these habitats are documented on the project site, within the geographic range of these species, MDIFW may recommend that specialized surveys be conducted. Guidelines for buffers and site protection measures for this species are highly habitat specific and should be developed in consultation with MDIFW staff. For site-specific data, and for recommendations for habitat and species protection, contact Beth Swartz, MDIFW Reptile, Amphibian, and Invertebrate Biologist (beth.swartz@maine.gov, 207-941-4475) and MDIFW's Environmental Review Program.

Eastern Buckmoth – The eastern buckmoth is a Species of Special Concern (Rare) in Maine that is restricted to specialized barren habitats in York and southern Oxford Counties. They inhabit dry oak shrublands in oak-pine woodlands, and semi-open barrens. These sites typically have dry, poor soil and low plant diversity. Maine sites are usually in pitch pine-scrub-oak barrens, a rare and declining forest type that often provides habitat for a unique assemblage of rare insects and other biota. The eastern buckmoth is only found where its host plant, scrub oak, grows in abundance. As these habitats are documented on the project site, within the geographic range of these species, MDIFW may recommend that specialized surveys and/or habitat assessments for this and other lepidopteran species be conducted, as described in MDIFW's August 12, 2022 Environmental Review.

Significant Wildlife Habitat

Inland Waterfowl Wading Bird Habitat (IWWH) – This project intersects with IWWH #200541, a Significant Wildlife Habitat under Maine's Natural Resources Protection Act. These habitats provide important breeding, feeding, migration, and staging habitat for waterfowl and wading bird species. High and moderate value IWWHs include both the wetland complex and a 250-foot upland zone. MDIFW recommends that these resources be avoided entirely, including no clearing within the 250-foot upland zone extending from the wetland edge. In the event that activities are permitted within the associated

upland habitat, MDIFW recommends that no clearing or construction occur from April 1 through July 15, the peak waterfowl and wading bird breeding, nesting, and brood rearing season.

Significant Vernal Pools – Significant Vernal Pools (SVPs) are Significant Wildlife Habitats under Maine’s Natural Resources Protection Act. Vernal pools are shallow depressions that usually contain water for only part of the year and typically dry out by mid to late summer. Despite their relatively short hydroperiod, vernal pools serve as unique breeding habitat for certain species of wildlife, including specialized amphibians and invertebrates. The regulatory “significance” of vernal pools and their associated buffers (Critical Terrestrial Habitats or CTHs) is dependent upon several factors, including the use by state Rare, Threatened, or Endangered Species or the presence and productivity of certain pool-breeding amphibians. MDIFW’s resource maps may not currently document SVPs on the project parcel. However, it should be noted, there is no comprehensive statewide inventory for all SVPs. SVPs are not included on MDIFW resource maps until project areas have been surveyed using approved methods and the survey results confirmed. Thus, their absence from resource maps is not necessarily indicative of an absence on the ground.

MDIFW recommends that surveys for vernal pools be conducted by qualified wetland scientists prior to final project design to determine whether there are SVPs present in the project area. These surveys should extend out to 250 feet beyond the anticipated project footprint to determine potential impacts to the CTHs of off-site SVPs, assuming such pools are located on land owned or controlled by the applicant. A Maine State Vernal Pool Assessment Form should be completed for each pool and submitted to MDIFW for pool status determination as soon as possible and well before the project application is submitted to state regulatory agencies. The optimal time for assessing the presence of amphibian indicator species coincides with a relatively brief spring breeding period that varies slightly with geography, elevation, and weather. Because of the limited survey period, vernal pools should be considered as “Potentially Significant” until such time that a seasonally valid survey is conducted, and the true pool status is determined. Alternatively, a developer may choose to not conduct formal surveys for indicator species, consider all natural origin pools as SVPs, and design the project accordingly to avoid (recommended), minimize, and mitigate for any impacts to these resources. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Aquatic Resources

Fisheries, Aquatic, and Riparian Habitat - MDIFW generally recommends maintaining 100-foot undisturbed vegetated buffers from the upland edge of all intermittent and perennial streams and any contiguous wetlands. Maintaining and enhancing buffers along these resources is critical to the protection of water temperatures, water quality, natural inputs of coarse woody debris, and various forms of aquatic life necessary to support fish and other aquatic and wetland species. Riparian buffers also provide critical habitat and important travel corridors for a variety of wildlife species. Project related alterations within the recommended riparian buffer are considered as impacts to be avoided or minimized to the extent practicable and, if determined reasonable, appropriately mitigated. MDIFW recommends impact mitigation based on the extent of alterations to natural vegetation and the presence of State listed species. Stream crossings should be avoided, but if a stream crossing is necessary, or an existing crossing needs to be modified, it should be designed to provide for full aquatic passage. Small streams, including intermittent streams, can provide crucial rearing habitat, cold water for thermal refugia, and abundant food for juvenile salmonids on a seasonal basis. Undersized crossings may inhibit these functions and become a frequent maintenance problem that causes reoccurring damage to the resource. Generally, MDIFW recommends that all new, modified, and replacement stream crossings be sized to span at least

1.2 times the bankfull width of the stream. In addition, we generally recommend that stream crossings be open bottomed (i.e., natural bottom), although embedded structures which are backfilled with representative streambed material have been shown to be effective in providing habitat connectivity for fish and other aquatic organisms. Construction Best Management Practices should be closely followed to avoid erosion, sedimentation, alteration of stream flow, and other impacts as eroding soils can travel significant distances as well as transport other pollutants resulting in direct impacts to fish, other aquatic life, and their habitats. In addition, we recommend that any necessary instream work occur only between July 15 and October 1.

Freshwater Wetlands - Freshwater wetlands are valuable natural resources that serve important functions to help preserve, protect, and enhance adjacent aquatic and terrestrial habitats, as well as provide important habitats themselves for a high diversity of fish and wildlife species. Pursuant to the Natural Resource Protection Act's Wetlands and Waterbodies Protection Rules (06-096 CMR Ch. 310), certain wetlands are designated as Wetlands of Special Significance in part or entirety, and afforded additional protections based on their characteristics. Wetland impacts should be avoided or minimized to the maximum extent practicable, and remaining reasonable impacts appropriately mitigated. MDIFW recommends that freshwater wetlands be definitively located and delineated on site by qualified wetland scientists to enable an informed assessment of resources and appropriate agency recommendations.

This consultation review has been conducted specifically for known MDIFW jurisdictional features and should not be interpreted as a comprehensive review for the presence of other regulated features that may occur in this area. Prior to the start of any future site disturbance, we recommend additional consultation with the municipality and other state resource and regulatory agencies including the Maine Natural Areas Program and Maine Department of Environmental Protection in order to avoid unintended protected resource disturbance. For information on federally listed species, contact the U.S. Fish and Wildlife Service's Maine Field Office (207-469-7300, mainefieldoffice@fws.gov).

If you have any questions or concerns with any of these recommendations, please feel free to contact me at robert.d.stratton@maine.gov or (207) 287-5659.

Sincerely,

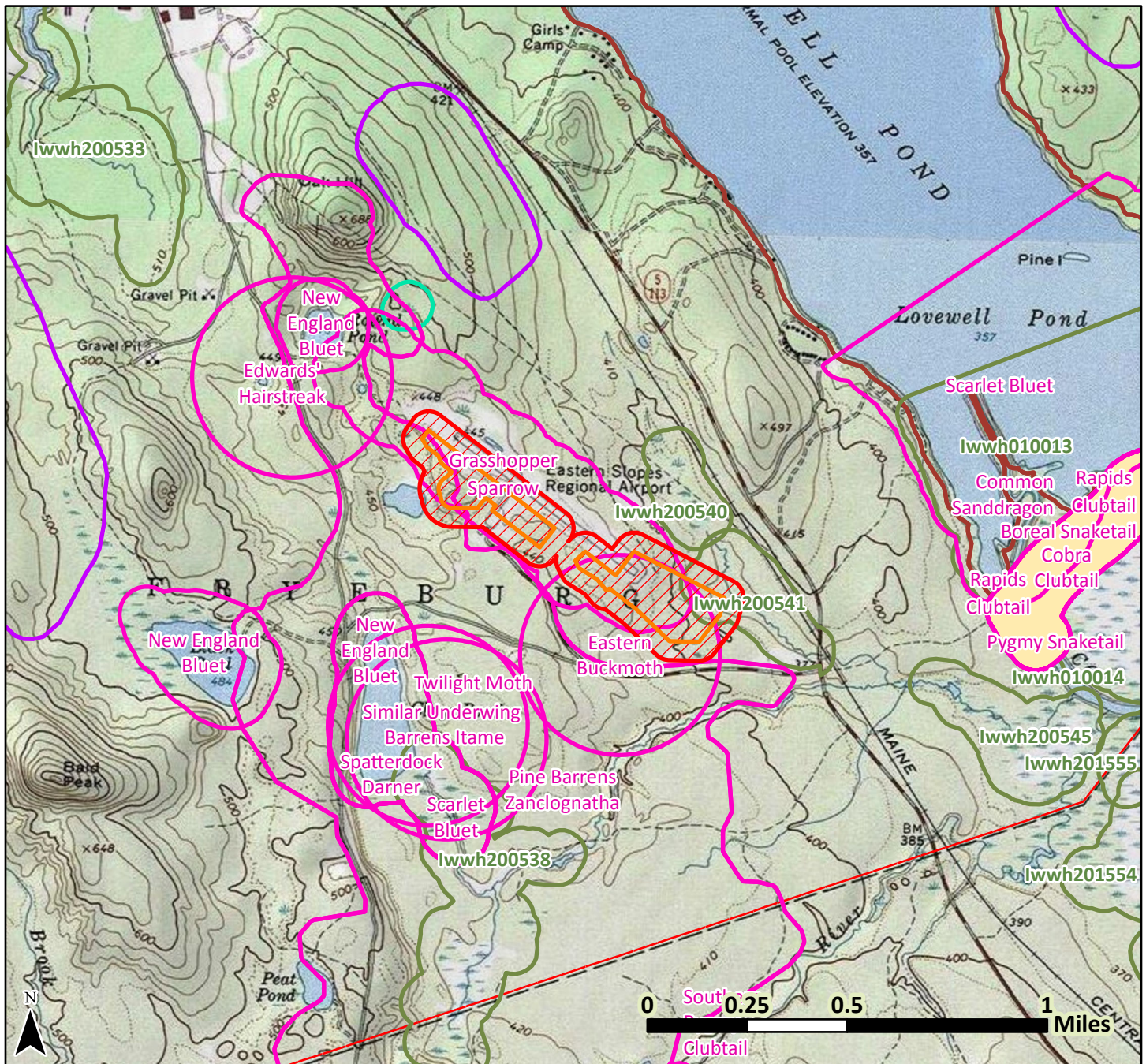
A handwritten signature in black ink that reads "Bob Stratton" with a small "IFW" monogram at the bottom right.

Robert D. Stratton
Environmental Program Manager
Maine Department of Inland Fisheries and Wildlife

encl: ESRA Site Map
MDIFW Environmental Review Resource Map
MDIFW Environmental Review, August 12, 2022

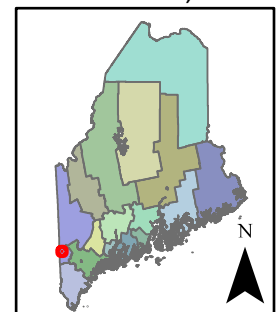


Maine Department of Inland Fisheries and Wildlife
Environmental Review of Fish and Wildlife Observations and Priority Habitats
Eastern Slope Regional Airport runway expansion, Fryeburg



- | | |
|-------------------|---------------------------------|
| County Boundary | Aquatic Species (2.5 mi review) |
| Township Boundary | Deer Wintering Area |
| Project Footprint | E, T, & SC Species |
| Search Area | Inland Waterfowl/Wading Bird |
| | Significant Vernal Pool |
| | Special Concern Fish |

Date: 10/31/2023
Projection:
UTM Zone 19N, NAD83



Legend only lists resources visible in the map; see response letter for all resources that were evaluated.



STATE OF MAINE
DEPARTMENT OF
INLAND FISHERIES & WILDLIFE
353 WATER STREET
41 STATE HOUSE STATION
AUGUSTA ME 04333-0041



February 16, 2024

Jordan Tate
McFarland Johnson
5 Depot Street
Freeport, ME 04032

RE: Information Request – Fryeburg, Eastern Slopes Regional Airport Project (ERID 6198)

Dear Jordan:

We have reviewed the most recent rendition of the *Eastern Slope Regional Airport Taxiway Reconstruction Project* in Fryeburg. This letter reflects our preliminary comments based on our recent communications, including our virtual meeting on February 5, 2024; please refer to our letter dated November 21, 2023, for a list of MDIFW resources, potential concerns, and recommendations. MDIFW data includes many important resources. However, there is no comprehensive statewide inventory, and the completeness of records depends on previous survey efforts, particularly related to Endangered, Threatened, and Special Concern (Rare) species and habitats and Significant Vernal Pools.

Endangered, Threatened, and Special Concern (Rare) Species

The Maine Endangered Species Act prohibits activities that may cause “Take” (kill or cause death), “harassment” (create injury or significantly disrupt normal behavior patterns), and other adverse actions to State Endangered and Threatened species. Please continue to work closely with MDIFW staff to design a project that minimizes the risk for potential Take and Harassment of MESA-protected species.

Grasshopper Sparrow – As currently proposed, the project will impact State Endangered Grasshopper Sparrows through loss of habitat from the runway extension (approximately 1.23 acres) and potential fill borrow pits (approximately 10.79 acres). The fill borrow pits are anticipated to result in a potential permanent impact to the grassland habitat due to loss of native sandplain grasses and microtopography that will be flattened upon restoration, as well as a temporary impact due to the displacement of birds during the time in which the habitat is not suitable. We recommend that the temporary impacts be compensated at a 4:1 ratio (4 acres of habitat mitigation [creation, enhancement, or compensation] for every 1 acre of habitat loss or displacement). Given the uncertainty of restoration efficacy, we recommend monitoring the site for habitat recovery for five years with conditional mitigation requirements. To this end, we recommend the applicant develop a restoration and monitoring plan for approval by MDIFW and the Maine Natural Areas Program (MNAP). Please see attached for additional information on Grasshopper Sparrow habitat preferences and management. If upon assessment by MDIFW and MNAP the habitat has not been returned to existing functions and values, we recommend additional mitigation at a 4:1 ratio (4 acres of habitat mitigation [creation, enhancement, or compensation] for every 1 acre of habitat loss or displacement). In other words, if permanent impacts are determined to occur, we recommend a total mitigation ratio of 8:1, consistent with other efforts to mitigate habitat impacts for Endangered or Threatened Species. Mitigation for Endangered and Threatened Species habitat impacts would be in the form of in-lieu fee mitigation into MDIFW’s Endangered and Nongame Wildlife Fund.

As an alternative to in-lieu fee mitigation into MDIFW's Endangered and Nongame Wildlife Fund, we recommend the creation and maintenance of additional grassland habitat onsite, to be managed by the Applicant as suitable grassland habitat, per guidelines developed by MDIFW, for the benefit of this species in perpetuity and protected by deed restrictions or similar legal measures. The information provided references 3.44 acres of grassland habitat creation through the conversion of PPSOB habitat. It is unclear how much of this conversion is within the Runway Safety Area (RSA); please note that based on our understanding of the mowing practices in the RSA, habitat in these areas would not be maintained as suitable Grasshopper Sparrow habitat and should not be considered habitat creation. The forested area not defined as pitch pine-scrub oak (PPSO) barrens to the north of the runway *may* also serve as suitable habitat for conversion, although additional field surveys may be needed to determine potential presence or absence of other State-listed species that may utilize this area.

Lastly, the table in the Preferred Alternative Mitigation Figure references avoidance through seasonal constraints as mitigation; to be clear, MDIFW views seasonal clearing as an avoidance or minimization effort, not as mitigation. To minimize impacts to Grasshopper Sparrow, we recommend no clearing or construction between May 1 to August 1, and that mowing be limited to a frequency of no greater than twice per year outside of this period. Please note that this is a compromise from our typical timing recommendations of May 1 to August 15. We recommend these mowing practices be used site-wide on all managed airport grasslands, excluding the RSAs.

Rare Damselfly – Round Pond is a globally rare Outwash Plain Pondshore Natural Community and is known to host a population of a state and globally rare damselfly, the New England Bluet (State Special Concern). This species is at-risk because of limited populations statewide and sensitivity to riparian habitat degradation. To conserve habitat values for this rare insect and other aquatic fish and wildlife values, we recommend that no further disturbance of vegetation occur within 250 feet of the Round Pond shoreline, and that previously cleared areas within the buffer be permitted to grow back to a scrub-shrub and/or forested condition through natural succession. Per the information provided, impacts are proposed within 100 feet of Round Pond from the runway extension and proposed vehicle service road. Please note that the table in the Preferred Alternative Mitigation Figure lists implementation of stormwater and erosion control best management practices as mitigation; while we do recommend these practices, they are standard minimization practices and MDIFW does not view them as mitigation.

If impacts to the Round Pond buffers and New England Bluet are permitted, we recommend that direct and indirect impacts be compensated at a 4:1 ratio (4 acres of habitat mitigation [creation, enhancement, or compensation] for every 1 acre of habitat loss or displacement) within 250 feet of Round Pond. We recommend onsite mitigation, to be managed as suitable PPSO barren habitat for the benefit of these species in perpetuity and protected by deed restrictions or similar legal measures, consistent with other efforts to provide habitat impact mitigation for Special Concern Species. Please see attached for a map of our recommended mitigation habitat area. Lastly, we recommend the avoidance, minimization, and compensation measures listed under Section 4. Wildlife and Fisheries of L-8645-18-K-A (Approval, Partial After-the-Fact), filed by the Department of Environmental Protection on March 23, 2020, be closely followed.

Rare Lepidoptera (Butterflies and Moths) – The Edward's Hairstreak butterfly (State Endangered), Pine Barrens Zanclognatha moth (State Threatened), Twilight Moth (State Threatened), Sleepy Duskywing butterfly (State Threatened), and Eastern Buckmoth (State Special Concern) have been documented within the project area. These species are specialized on PPSO barrens, a rare and declining forest habitat found on just seven sites in York and southern Oxford Counties. Project-related alterations within habitat

and recommended buffers are considered impacts to be avoided or minimized to the extent practicable and, if determined reasonable, appropriately mitigated.

As currently proposed, the project will impact these species through the removal of 2.40 acres of PPSO barren habitat. As part of the permitting process, we recommend that direct and indirect impacts to these species be compensated at an 8:1 ratio (8 acres of habitat mitigation [creation, enhancement, or compensation] for every 1 acre of habitat loss or displacement), to be managed as suitable PPSO barren habitat for the benefit of these species in perpetuity and protected by deed restrictions or similar legal measures, consistent with other efforts to provide habitat impact mitigation for Endangered or Threatened Species. We recommend this mitigation be in addition to any proposed by the Maine Natural Areas Program for impacts to the rare natural PPSO barren community. Though our typical recommendation is for mitigation at an 8:1 ratio for each Threatened and Endangered Species separately, we are willing to compromise by mitigating the Lepidopteran species as a related habitat guild. Please see attached for a map of our recommended mitigation habitat area. Additionally, we recommend further coordination with our program for proper management of this habitat and to correct past permit and Habitat Management Plan violations.

Significant Wildlife Habitat

Significant Vernal Pools – We are still unclear from the information provided whether the entire site has been surveyed for vernal pools. If not, we recommend surveys for vernal pools be conducted within the project boundary by qualified wetland scientists prior to final project design to determine whether there are SVPs present in the area. These surveys should extend up to 250 feet beyond the anticipated project footprint because of potential performance standard requirements for off-site SVPs, assuming such pools are located on land owned or controlled by the applicant. Once surveys are completed, survey forms should be submitted to our Agency for review well before the submission of any necessary permits. Our Department will need to review and verify any vernal pool data prior to final determination of significance.

Inland Waterfowl Wading Bird Habitat (IWWH) – This project is in close proximity to an Inland Waterfowl and Wading Bird Habitat (IWWH), a Significant Wildlife Habitat protected under Maine's Natural Resources Protection Act. These habitats provide important breeding, feeding, migration, and staging habitat for waterfowl and wading birds and many other species. High and moderate value IWWHs include both the wetland complex and a 250-foot upland zone. MDIFW recommends that these resources be avoided entirely, including no clearing within the 250-foot upland zone extending from the wetland edge.

Other Resources

Freshwater Wetlands – Freshwater wetlands are valuable natural resources that serve important functions to help preserve, protect, and enhance adjacent aquatic and terrestrial habitats, as well as provide important habitats themselves for a high diversity of fish and wildlife species. Pursuant to the Natural Resource Protection Act's Wetlands and Waterbodies Protection Rules (06-096 CMR Ch. 310), certain wetlands are designated as Wetlands of Special Significance in part or entirety, and afforded additional protections based on their characteristics. Wetland impacts should be avoided or minimized to the maximum extent practicable, and remaining reasonable impacts appropriately mitigated. MDIFW recommends that freshwater wetlands be definitively located and delineated on site by qualified wetland scientists to enable an informed assessment of resources and appropriate agency recommendations.

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Please feel free to contact my office if you have any questions regarding this information, or if I can be of any further assistance.

Best regards,

A handwritten signature in blue ink, appearing to read "Ciara Wentworth".

Ciara Wentworth
Resource Biologist

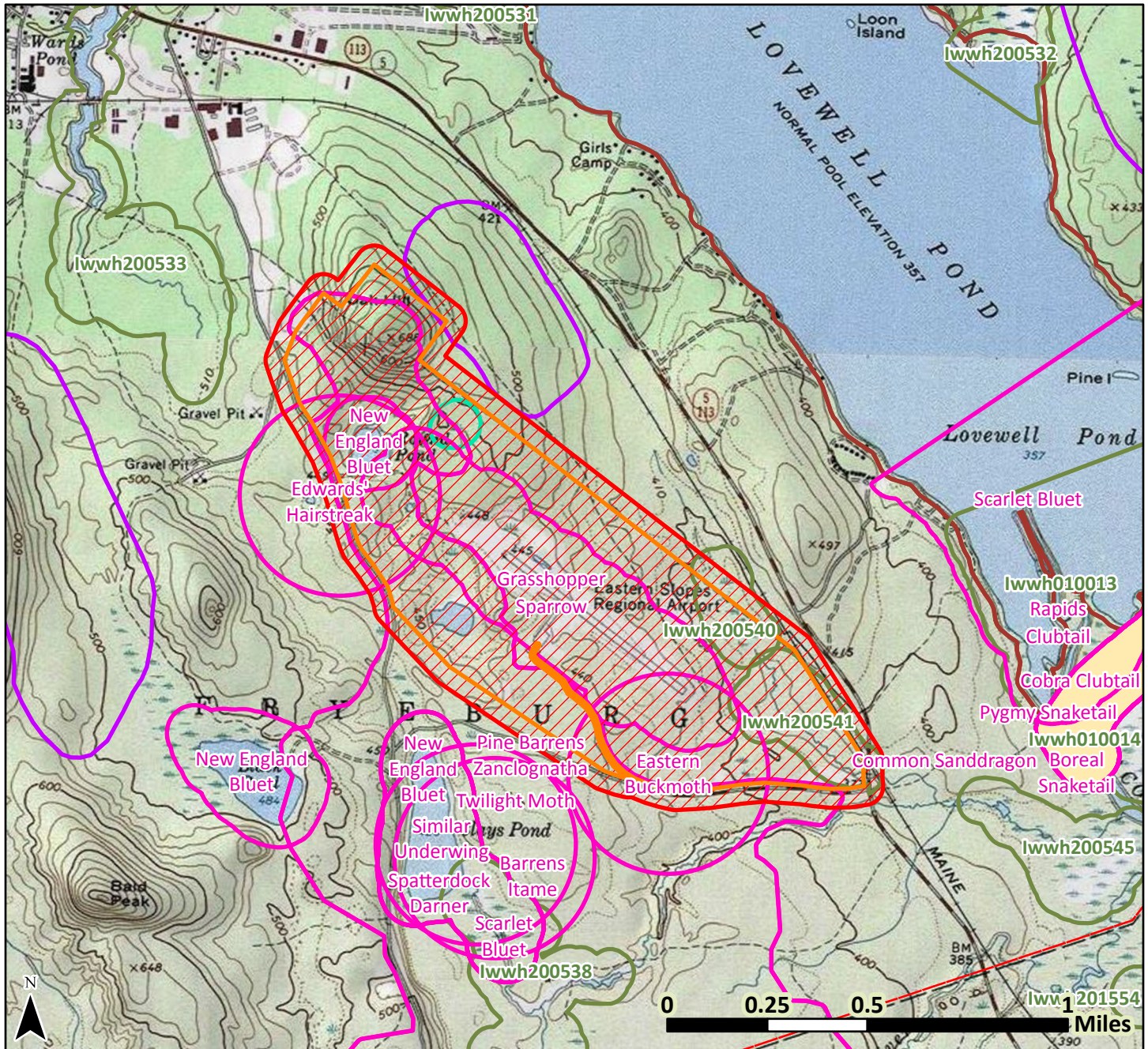
cc: Scott Lindsay, Phillip deMaynadier, Adrienne Leppold, Amy McLaughlin, John Perry (MDIFW)
Kristen Puryear, Lisa St. Hilaire (MNAP)
Marybeth Richardson, Alex Groblewski (MDEP)
Jami Macneil (USACE)
Cheryl Quaine (FAA)
Matthew O'Brien, Sydney Seney (McFarland Johnson)



Maine Department of Inland Fisheries and Wildlife
Project Area Review of Fish and Wildlife Observations and Priority Habitats

Fryeburg, Eastern Slopes Regional Airport

Project ID 1734_9041

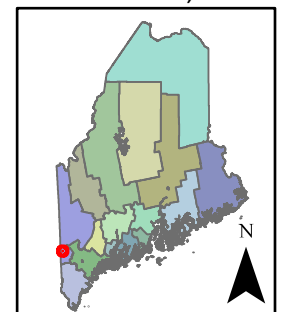


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|-------------------|---------------------------------|
| County Boundary | Aquatic Species (2.5 mi review) |
| Township Boundary | Deer Wintering Area |
| Project Footprint | E, T, & SC Species |
| Search Area | Inland Waterfowl/Wading Bird |
| | Significant Vernal Pool |
| | Special Concern Fish |

Date: 2/5/2024

Projection:

UTM Zone 19N, NAD83



Legend only lists resources visible in the map; see response letter for all resources that were evaluated.

Swanson (1998) concluded that mowing could maintain or increase Savannah Sparrow abundance, if carried out at the appropriate time of year. The researcher suggests avoiding mowing activity between 1 May and 1 August. Other authorities in the Northeast suggest 15 August as the earliest summer date to mow (Jones and Vickery 1997). However, mowing woody species during the dormant season may have less of an effect than disturbance during the growing season. Restoration activities for Savannah Sparrows should focus on establishing a mixture of short- and medium- height grasses with ratios of forb to grass cover of about 25:75 (Herkert et al. 1993).

Grasshopper Sparrow (*Ammodramus savannarum*)

In the Northeast, this sparrow breeds from central New England south, and was once considered abundant at lower elevations (Jones and Vickery 1997, Salzman and Smith 1998) and in high mountain grassy balds of the Appalachian mountains in the south (Ehrlich 1988e). Grasshopper Sparrow abundance has declined as agricultural grasslands have been abandoned or converted to row-crops or urban developments (Jones and Vickery 1997, Salzman and Smith 1998). BBS data from 1966 to 1996 show an annual decline of 3.7% for the Northeast (Sauer et al. 1997). In New York, the decline for this period was 10.2%. The species is now listed in all New England states (Jones and Vickery 1997), and is considered a rare breeder (Veit and Petersen 1993). Grasshopper Sparrows are listed as endangered or threatened in at least 5 states in the Northeast.

Breeding Habitat Characterization:

Grasshopper Sparrows have been observed breeding in the following habitats in the Northeast: lightly grazed pasture (Stewart and Robbins 1958), reclaimed surface mines (Whitmore 1981, Wray et al. 1982), old hayfields (Bollinger 1995), moderately grazed pastures (Smith 1997), coastal grassland barrens (Vickery et al. 1992, 1994), airfields mowed to 15-25 cm tall (Maryland Partners in Flight 1998), and cool season grasslands (Norment 1999).

Whitmore and Hall (1978) found Grasshopper Sparrows to be the most abundant grassland bird on reclaimed surface mines in West Virginia. Up to 17 pairs per 10 ha were reported. Dominant vegetation at the mines was fescue (*Festuca* sp.), birdsfoot trefoil (*Lotus corniculatus*), red top (*Agrostis gigantea*), timothy, and oats (*Avena* sp). Whitmore (1979a) reported average heights of vegetation in breeding territories between 22-36 cm. Sparrow breeding activity increased over time as vegetation height and grass cover decreased, and bare ground increased. Conversely, sparrow pairs decreased as grass cover increased, and bare ground declined. Wray et al. (1982) also found Grasshopper Sparrow abundance declined as grass density increased.

At the time of spring arrival, Grasshopper Sparrows require sparsely vegetated grasslands with at least 24% bare ground, 74% litter cover, and 27% grass cover (Whitmore 1979a). Territories during peak breeding periods had an average vegetation height of 65 cm and litter depth of 1.5 cm (Whitmore 1979b). Whitmore (1981) found similar values for Grasshopper Sparrow territories; mean bare ground was 29%, while mean grass cover was 25.7%. The researcher pointed out that Grasshopper Sparrows prefer to nest in bunch grasses, and forage in openings or gaps between bunches. Wray et al. (1982) state that increased litter and grass density inhibits Grasshopper Sparrow foraging efficiency.

Vickery et al. (1994) evaluated Grasshopper Sparrow breeding habitat on Maine grassland barrens. The researchers identified area, graminoid cover, and forb cover as significant, positive predictors of Grasshopper Sparrow relative abundance. Incidence/area functions for Grasshopper Sparrows on sandplain grasslands were steep, reaching 50% at about 100 ha. This incidence/area function suggests that minimum habitat areas in Maine, at the northeastern extreme of their range, are larger for Grasshopper Sparrows than in midwestern studies (Vickery et al. 1994).

Bollinger (1995), in sampling 90 hayfields in New York, found breeding Grasshopper Sparrows on the oldest hayfields (≥ 15 yrs.). He found abundance of Grasshopper Sparrows positively related to plant richness, field size, and vertical

patchiness, and negatively related to litter depth. According to Bollinger (1991), Grasshopper Sparrows "prefer the lowest and sparsest fields" with short, patchy, grass-dominated vegetation (Bollinger 1995).

Smith (1997) observed Grasshopper Sparrows breeding in pastures in central NY. The minimum pasture area containing Grasshopper Sparrows was 16.2 ha, with an average size of 49.1 ha. On average, Grasshopper Sparrows occupied the least productive of the pastures studied in terms of cattle production. Smith recorded the following vegetative characteristics: mean grass height/territory of 54.5 cm, mean percent goldenrod/territory of 9.4%, and mean percent goldenrod/pasture of 38.5%. Grasshopper Sparrows bred on fields that had been mowed 1 to 6 years earlier. Smith noted that Grasshopper Sparrows appeared to use fields that were smaller than those typically used by Henslow's Sparrow in the region. They also preferred shorter vegetation than Henslow's Sparrow (Smith 1997).

Norment (1999) observed limited numbers of Grasshopper Sparrows during five years of surveys in wildlife conservation areas in central and western New York. The researcher surveyed six grassland cover types, and observed the species breeding only in planted fields of cool season grasses. He reported that Grasshopper Sparrows were present in fields ranging in size from 4.6 to 17.4 ha.

Minimum Grasshopper Sparrow breeding habitat in the Northeast is characterized by large areas (20-30 ha) with abundance increasing with habitat size. Preferred habitats contain about equal amounts of grass cover and bare ground (about 25%), grasses of short to medium height (up to 50 cm), and shallow litter. Suitable habitats are found in old hayfields (Bollinger 1995), although the birds also breed in moderately grazed pastures (Smith 1997) and ungrazed, cool season grasslands (Norment 1999).

In Missouri, Samson (1980) estimated a minimum breeding site size for Grasshopper Sparrows of 1-10 ha. Herkert (1991) suggested 10-30 ha for Illinois. Grasshopper Sparrows nest in low, sparse, grass-dominated habitats, with shallow litter in

the Midwest (Cody 1968, Wiens 1969). Kahl et al. (1985) report optimum vegetation height of 20-30 cm and litter depth of 0.1-1.0 cm for the species in Missouri. In Illinois, Delisle and Savidge (1997) found Grasshopper Sparrows to be slightly more abundant in cool season Conservation Reserve Program (CRP) fields than those planted to native warm season grasses, although the differences were not significant.

Habitat Recommendations for the Northeast:

Grasshopper Sparrows are area sensitive in the Northeast. Habitat managers need to focus on sites >20 ha. Midwestern studies have suggested that developing habitats far from forest edges are important in reducing nest predation and Brown-headed Cowbird brood parasitism in Grasshopper Sparrows (Johnson and Temple 1990).

Grasshopper Sparrows select sites with moderate amounts of bare ground and small amounts of litter. Prescribed burning should be compatible with habitat management for this species. Prescribed fire temporarily removes standing dead material, reduces litter depth, and creates bare ground for short periods post-fire. Research in the Midwest generally has indicated that Grasshopper Sparrows respond positively to prescribed burns (Herkert 1994b, Johnson 1997). Sparrows may become less abundant immediately following burns, due to loss of cover, but increase in abundance 1-3 years after this disturbance (Johnson 1997). It is advisable to burn parts of sparrow habitat on a rotational basis, burning no more than 20-30% of an area annually (Herkert et al. 1993).

Although it may be easier to burn large sites, mowing also may be used to maintain Grasshopper Sparrow habitat. Mowing in the Northeast should be done outside of the breeding season, before May and after 5 August (Jones and Vickery 1997). In Missouri, Swengel (1996) found higher densities of Grasshopper Sparrows in prairies hayed in mid-summer than on spring-burned sites. Delisle and Savidge (1997) found that mowed sites maintained Grasshopper Sparrows in warm season grasslands in Nebraska. Many grasslands in the Northeast are highly productive (Bollinger 1995) with denser

vegetation than native midwestern prairies. Mowing these grasslands builds litter and may discourage Grasshopper Sparrows (Rudnicky et al. 1997). Haying may alleviate this problem.

Light to moderate grazing may also maintain Grasshopper Sparrow habitat. In productive grasslands, grazing may benefit Grasshopper Sparrows by creating sparser, patchier vegetation (Whitmore 1981). Smith (1997) found moderate grazing practices compatible with Grasshopper Sparrow habitat use in New York.

Grasslands established for Grasshopper Sparrow breeding areas should be planted with short, bunch grasses, at sparse to moderate densities (Jones and Vickery 1997). Grasshopper Sparrows may benefit from planting grasses and forbs at a ratio of about 30% forbs to 70% grasses (Herkert et al. 1993). Sod-forming grasses should be avoided (Jones and Vickery 1997). Upland sites are probably more attractive to Grasshopper Sparrows.

Henslow's Sparrow (*Ammodramus henslowii*)

Henslow's Sparrow is identified as a migratory nongame bird of management concern in the Northeast by the U.S. Fish and Wildlife Service (Smith 1992). Henslow's Sparrows historically bred throughout central New England, New York, and the more southern states of the region (Smith 1968, Boone and Dowell 1996). The species is found in both coastal (often considered *Ammodramus henslowii susurrans*) and inland (often considered *Ammodramus henslowii henslowii*) areas (Veit and Petersen 1993, Boone and Dowell 1996, Smith 1998a, Scott 1999). Breeding activity is sparse and localized in the Northeast (Veit and Petersen 1993, Smith 1992). The species historically expanded its range as forests in the Northeast were cleared for agriculture (Boone and Dowell 1996, Smith 1998a). It is possible that the sparrows are more abundant today than in the early 1900s (Smith 1998a).

Thomas R. Zenger



**ECOLOGY OF GRASSLAND BREEDING BIRDS IN THE
NORTHEASTERN UNITED STATES - A LITERATURE REVIEW
WITH RECOMMENDATIONS FOR MANAGEMENT**

Laura R. Mitchell, Charles R. Smith, Richard A. Malecki
U.S. Geological Survey, Biological Resources Division
New York Cooperative Fish and Wildlife Research Unit
Department of Natural Resources, Cornell University
Ithaca, NY 14853-3001

September 2000



United States Department of the Interior

US FISH AND WILDLIFE SERVICE



Maine Fish and Wildlife Service Complex
Ecological Services
Maine Field Office
306 Hatchery Road
East Orland, Maine 04431
Telephone: 207/469-7300 Fax: 207/902-1588

December 1, 2023

Cheryl Quaine
Environmental Protection Specialist
New England Regional Office
Airports Division
Federal Aviation Administration
1200 District Avenue
Burlington, Massachusetts 01803-5299

REF: Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine
USFWS Project Code: 2023-0003961

This letter responds to the Federal Aviation Administration's (FAA) request to the U.S. Fish and Wildlife Service (Service) for consultation pursuant to section 7 of the Endangered Species Act regarding a proposed runway extension project. The FAA provided project information on November 27, 2023. The proposed action has the potential to affect the endangered northern long-eared bat (*Myotis septentrionalis* [NLEB]).

The proposed project consists of a runway extension at the Eastern Slope Regional Airport in Fryeburg, Maine. The existing runway has a northwest-southeast orientation, with a length of 4,200 feet and width of 75 feet. The proposed extension would add 800 feet to the runway at the southeastern end, for a total length of 5,000 feet. Potential fill materials to supply the extension will be removed from borrow pits located to the southern side of the runway. Stormwater best management practices and a spill prevention, control, and countermeasures plan will be utilized to minimize impacts to water quality. There will be approximately 3.17 acres of tree removal for the runway extension and within the expanded runway approach. All tree removal will occur within the inactive season for NLEB (April 15 to October 31).

The action area includes all areas within the limits of disturbance for the runway expansion including the pavement and side slopes, the expanded runway approach, two areas identified on airport property for borrow pits, associated stormwater treatment areas, and the extent of potential impacts from construction related noise and activities.

Although NLEB have not been detected on the airport grounds themselves or within the action area, they have been detected within 3 miles during summer acoustic surveys. Trees and habitat within the action area appear suitable as summer roosting and foraging habitat and NLEB likely occur in the action area during the NLEB summer active season.

Construction activities associated with the project may have effects on NLEB, but any effects will be temporary and limited to short-term visual and noise disturbances, potential displacement from regular foraging patterns, and loss of potential summer roosting habitat from non-active season tree removal. Larger, more intact blocks of suitable active season habitat occur to the east-southeast, offering significant alternative roosting and foraging habitat in the vicinity of the action area, coincidentally where the nearest summer acoustic survey detections were made. Though construction equipment will be operating on the airport grounds intermittently throughout construction during the NLEB active season, construction related noise and activity isn't expected to be above typical levels associated with airport operations. The proposed project also includes the installation of approximately eight medium intensity runway lights. These lights will be radio activated and operate on a timer, minimizing their use and limiting impacts to NLEB to the extent possible. Trees being actively utilized as summer roosting sites by NLEB will not be directly impacted since all tree removal will occur during the inactive season.

Therefore, construction effects are expected to be insignificant. Based on our knowledge, expertise, and the action agency's materials, we concur with the action agency's conclusion that the proposed action may affect, but is not likely to adversely affect NLEB. Therefore, no further consultation pursuant to section 7 of the ESA is required. Should project plans change, or if additional information on the distribution of listed or proposed species come available, this determination may need to be reconsidered and reinitiation may be necessary.

Thank you for your cooperation in completing this section 7 consultation. Please contact Patrick Dockens by telephone at 207/460-2566 or by email at *Patrick.Dockens@fws.gov* if you have any questions.

Sincerely,

Dr. Amanda S. Cross
Project Leader
Maine Field Office
Maine-New Hampshire
Fish and Wildlife Service Complex

cc: Jed S. Merrow, McFarland Johnson
Jordan Tate, McFarland Johnson
Patrick Dockens, U.S. Fish and Wildlife Service—East Orland, Maine

Jordan Tate

From: Jordan Tate
Sent: Friday, February 16, 2024 10:29 AM
To: Dockens, Patrick E; Quaine, Cheryl J (FAA)
Cc: Pauley, Nicole M; Jed S. Merrow
Subject: RE: [EXTERNAL] RE: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

Awesome, thanks for looking at that so quickly. The updated project is below, and I'll include this correspondence in our EA appendix with the concurrence letter.

The proposed project consists of a runway extension at Eastern Slope Regional Airport (ESAA or "the Airport") in Fryeburg, Maine. The existing Runway 14/32 has a northwest-southeast orientation, with a length of 4,200 feet and width of 75 feet. The proposed project would extend the Runway 14 approach end by 390 feet and the Runway 32 approach end by 412 feet, for a total runway length to 5,002 feet. The study area includes a portion of the airport parallel to the southern side of the runway for potential fill materials to supply the extension.

The runway extension would remove vegetation on approximately 3.40 acres of land which is treed, and single tree removal of approximately 30 individual trees within the runway approaches. The tree removal within the approach is located within an aviation easement on state owned property. All tree removal will occur within the inactive season for NLEB.

Jordan Tate

From: Dockens, Patrick E <patrick_dockens@fws.gov>
Sent: Friday, February 16, 2024 10:21 AM
To: Jordan Tate <jtate@mjinc.com>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>
Cc: Pauley, Nicole M <nicole_pauley@fws.gov>; Jed S. Merrow <jmerrow@mjinc.com>
Subject: Re: [EXTERNAL] RE: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

Great, that is good to hear. There are no other NLEB detections that intersect your project that weren't considered in your original BA or the concurrence letter.

Therefore, I don't think you need to update the form or wait for a new concurrence as I don't think the effects of the project are changing enough to warrant it.

Can you just send me the updated project description for my files?

Patrick

Patrick E.T. Dockens (he/him)

Wildlife Biologist || Transportation Liaison

US Fish & Wildlife Service || Ecological Services - Maine Field Office || Maine - New Hampshire Fish & Wildlife Service Complex

PO Box A || 306 Hatchery Road || East Orland, Maine 04431

Cell Phone (calls & texts): (207) 460-2566

Email: patrick_dockens@fws.gov

From: Jordan Tate <jtate@mjinc.com>

Sent: Friday, February 16, 2024 10:16

To: Dockens, Patrick E <patrick_dockens@fws.gov>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>

Cc: Pauley, Nicole M <nicole_pauley@fws.gov>; Jed S. Merrow <jmerrow@mjinc.com>

Subject: RE: [EXTERNAL] RE: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

Yes, tree removal would still occur during the inactive season.



JORDAN TATE
ASSISTANT ENVIRONMENTAL ANALYST

207-869-5419

JTATE@MJINC.COM

WWW.MJINC.COM

From: Dockens, Patrick E <patrick_dockens@fws.gov>

Sent: Friday, February 16, 2024 10:15 AM

To: Jordan Tate <jtate@mjinc.com>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>

Cc: Pauley, Nicole M <nicole_pauley@fws.gov>; Jed S. Merrow <jmerrow@mjinc.com>

Subject: Re: [EXTERNAL] RE: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

Thanks for letting me know Jordan.

Are you still committing to completing tree removal during the inactive season?

Patrick

Patrick E.T. Dockens (he/him)

Wildlife Biologist || Transportation Liaison

Cell Phone (calls & texts): (207) 460-2566

Email: patrick_dockens@fws.gov

From: Jordan Tate <jtate@mjinc.com>

Sent: Friday, February 16, 2024 07:38

To: Dockens, Patrick E <patrick_dockens@fws.gov>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>

Cc: Pauley, Nicole M <nicole_pauley@fws.gov>; Jed S. Merrow <jmerrow@mjinc.com>

Subject: [EXTERNAL] RE: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Good morning Patrick,

Since this concurrence letter, the preferred alternative for this runway extension project at the Eastern Slope Regional Airport in Fryeburg, Maine has changed slightly. The runway extension is now split between both runway ends (previously it was just the Runway 32 end at the southeastern side of the Airport). Therefore, I'm emailing to see if there are any documented NLEB detections in the vicinity of the Runway 14 end. I've included a figure showing the additional project area.

I'll update the BA form with the new project description and any additional information you provide and hopefully be sending that over later today so that we can get an updated concurrence letter. Thank you,

Jordan



JORDAN TATE

ASSISTANT ENVIRONMENTAL ANALYST

207-869-5419

JTATE@MJINC.COM

WWW.MJINC.COM

From: Dockens, Patrick E <patrick_dockens@fws.gov>

Sent: Monday, December 4, 2023 8:30 AM

To: Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>

Cc: Pauley, Nicole M <nicole_pauley@fws.gov>; Jed S. Merrow <jmerrow@mjinc.com>; Jordan Tate <jtate@mjinc.com>

Subject: 2023-0003961 Runway extension, Eastern Slope Regional Airport, Fryeburg, Maine

Cheryl,

Please see the attached, signed concurrence letter for the runway extension project at the Eastern Slope Regional Airport in Fryeburg, Maine (2023-0003961).

Please let me know if you have any questions,

Patrick

Patrick E.T. Dockens (he/him)

Wildlife Biologist || Transportation Liaison

US Fish & Wildlife Service || Ecological Services - Maine Field Office || Maine - New Hampshire Fish & Wildlife Service Complex

PO Box A || 306 Hatchery Road || East Orland, Maine 04431

Cell Phone (calls & texts): (207) 460-2566

Email: patrick_dockens@fws.gov

Jordan Tate

From: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Sent: Wednesday, November 1, 2023 12:39 PM
To: Jordan Tate
Subject: RE: Section 6(f) and 4(f) properties
Attachments: 1576_23 Fryeburg airport.docx

Good Afternoon,

There are no concerns for architectural or historic archaeological properties within the area defined on the map. However, there is potential for prehistoric archaeological resources in the area. Please see attached.

If you have questions regarding prehistoric archaeology, please contact Dr. Arthur Spiess, Arthur.spiess@maine.gov.

Best,

Megan M. Rideout
Review & Compliance/CLG Coordinator
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, Maine 04333
207.287.2992

From: Jordan Tate <jtate@mjinc.com>
Sent: Monday, October 16, 2023 4:35 PM
To: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Subject: RE: Section 6(f) and 4(f) properties

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Great, thank you, Megan!



McFarland Johnson

Jordan Tate | Environmental Analyst

207-869-5419

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From: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Sent: Monday, October 16, 2023 2:02 PM
To: Jordan Tate <jtate@mjinc.com>
Subject: RE: Section 6(f) and 4(f) properties

Good Afternoon Jordan,

I will have this looked at historic properties as it relates to Section 4(f) but you will need to contact Maine Dept. of Agriculture, Conservation and Forestry for the Section 6(f) properties. I believe Doug Beck would be the correct contact for that information.

Best,

Megan M. Rideout
Review & Compliance/CLG Coordinator
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, Maine 04333
207.287.2992

From: Jordan Tate <jtate@mjinc.com>
Sent: Monday, October 16, 2023 1:40 PM
To: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Subject: Section 6(f) and 4(f) properties

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Hi Megan,

I'm emailing to see if there are any section 6(f) or 4(f) properties in the vicinity of the attached study area/APE. The proposed project consists of an approximately 800-foot runway extension at the Eastern Slope Regional Airport in Fryeburg Maine. I've included a location map and shapefile of the area. Cheryl Quaine at FAA will be coordinating with MHPC regarding Section 106 consultation.

Jordan



McFarland Johnson

Jordan Tate | Environmental Analyst

207-869-5419

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PENOBSCOT NATION
CULTURAL & HISTORIC PRESERVATION
12 WABANAKI WAY, INDIAN ISLAND, ME 04468

CHRIS SOCKALEXIS – TRIBAL HISTORIC PRESERVATION OFFICER

E-MAIL: chris.sockalexis@penobscotnation.org

NAME	Elisabeth Smeda
ADDRESS	US Department of Transportation Federal Aviation Administration 1200 District Avenue Burlington, MA 01803
OWNER'S NAME	Eastern Slope Regional Airport
TELEPHONE	781-238-7020
EMAIL	elisabeth.smeda@faa.gov
PROJECT NAME	Runway (14/32) Extension
PROJECT SITE	Fryeburg, ME
DATE OF REQUEST	October 19, 2023
DATE REVIEWED	January 8, 2024

Thank you for the opportunity to comment on the above referenced project. This project appears to have no impact on a structure or site of historic, architectural or archaeological significance to the Penobscot Nation as defined by the National Historic Preservation Act of 1966, as amended.

If there is an inadvertent discovery of Native American cultural materials during the course of the project, please contact my office at (207) 817-7471. Thank you for consulting with the Penobscot Nation Tribal Historic Preservation Office with this project.

A handwritten signature in black ink, appearing to read "Chris Sockalexis".

Chris Sockalexis, THPO
Penobscot Nation



MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

January 3, 2024

Ms. Jordan Tate
McFarland Johnson
5 Depot St
Suite 25
Freeport, ME 04032

Project: MHPC# 1576-23 Eastern Slope Regional Airport
800 Foot Runway Extension
Town: Fryeburg, ME

Dear Ms. Tate:

In response to your recent request, I have reviewed the information received from NEARC December 14, 2023 to continue consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Based on the information submitted, I have concluded that there will be no historic properties (architectural or archaeological) affected by this proposed undertaking, as defined by Section 106.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney
State Historic Preservation Officer



MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

January 31, 2024

Ms. Jordan Tate
McFarland Johnson
5 Depot St
Suite 25
Freeport, ME 04032

Project: MHPC# 1576-23 Eastern Slope Regional Airport
800 Foot Runway Extension
Town: Fryeburg, ME

Dear Ms. Tate:

In response to your recent request, I have reviewed the information received on January 16, 2024 to continue consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Based on the information submitted, I have concluded that there will be no historic properties (architectural or archaeological) affected by this proposed undertaking, as defined by Section 106.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney
State Historic Preservation Officer



STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

November 9, 2023

Jordan Tate
McFarland Johnson
5 Depot Street, Suite 25
Freeport, ME 04032

Via email: jtate@mjinc.com

Re: Rare and exemplary botanical features in proximity to: Runway Extension and Taxiway ABC Reconstruction, Eastern Slope Regional Airport, Fryeburg, Maine

Dear Jordan Tate:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received October 17, 2023 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Fryeburg, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

According to the information currently in our Biological and Conservation Data System files, a portion of the runway extension area on the southwest side of the existing runway is within the mapped Pitch Pine – Scrub Oak Barren at the site. Additionally, this is within about 125-feet of the Outwash Plain Pondshore and the State-Threatened Narrow-leaved Goldenrod at Davis Pond. MNAP recommends no additional tree or shrub clearing in this area. If any additional clearing is planned within the Pitch Pine – Scrub Oak Barren, please get back in touch with MNAP for guidance on avoidance and minimization or possible mitigation. Please refer to the table below, attached map, and attached factsheets for more information.

Feature	State Status	State Rank	Global Rank	Notes
Pitch Pine – Scrub Oak Barren	-	S2	G2	Fryeburg Barrens
Outwash Plain Pondshore <i>Three-way sedge – goldenrod outwash plain pondshore</i>	-	S1	G2G3	Davis Pond
Narrow-leaved Goldenrod <i>Euthamia caroliniana</i>	Threatened	S2	G5	Davis Pond

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

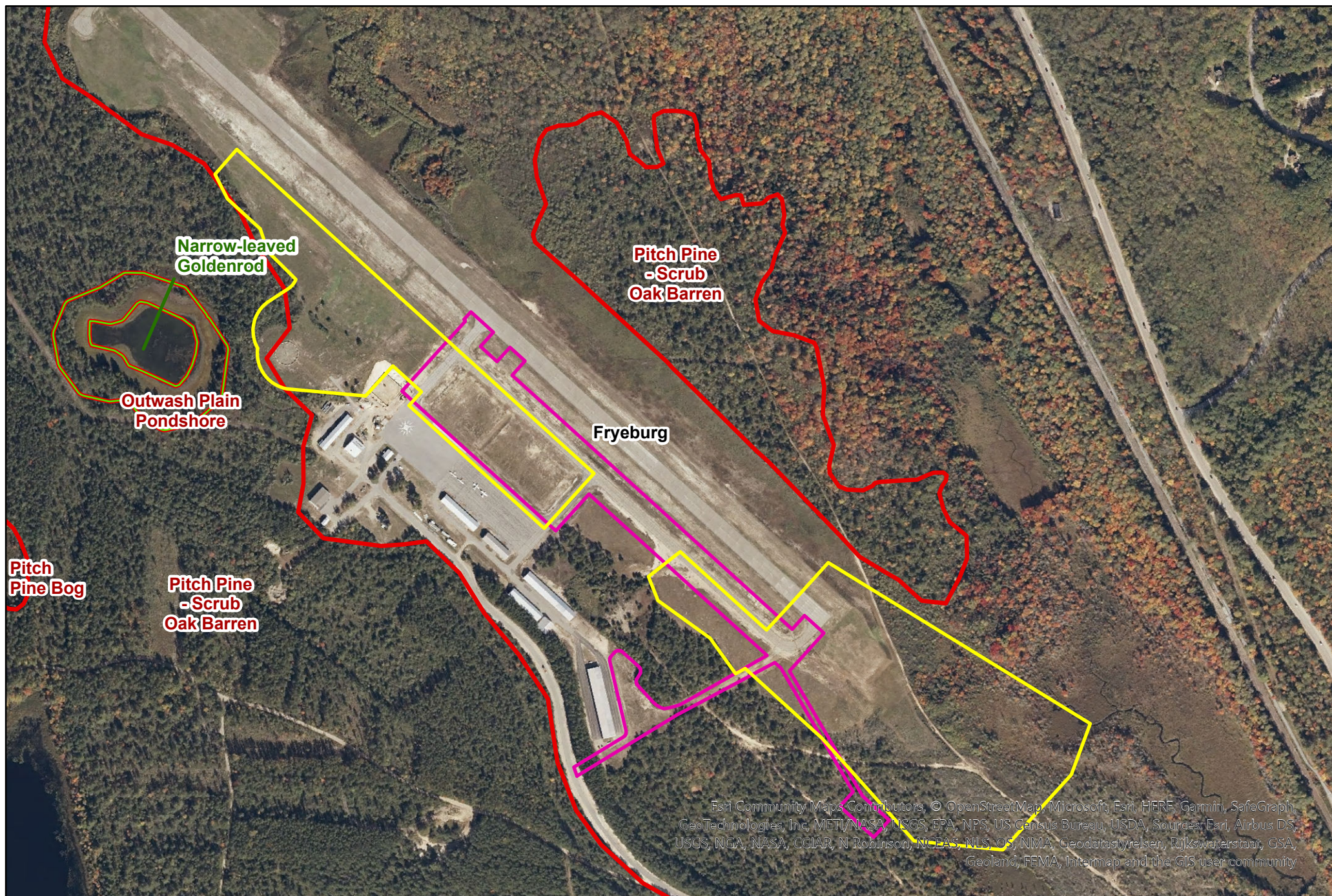
The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information. You will receive an invoice for \$225.00 for three hours of our services.

Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Sincerely,

Lisa St. Hilaire

Lisa St. Hilaire | Information Manager | Maine Natural Areas Program
207-287-8044 | lisa.st.hilaire@maine.gov



Runway Extension and Taxiway ABC Reconstruction, Eastern Slope Regional Airport, Fryeburg, Maine

- Proposed Project Area
- Taxiway Reconstruction Project Area
- Rare/Exemplary Natural Community
- Rare Plants

 Town

Maine Natural Areas Program, DACF - November 2023
NAIP 2021 Imagery

0 0.05 0.1 0.2 Miles



Pitch Pine - Scrub Oak Barren

State Rank S2

is common and locally dominant in the shrub layer.

Community Description

This woodland type ranges from very open to nearly closed canopy (25-75% closure) in which pitch pine is dominant (up to 50% cover). Red maple is frequent but rarely abundant in the canopy. In openings among the trees, a dense shrub/sapling layer of scrub oak is typical. Gray birch may be a prominent feature of the shrub layer, and shrubs are locally dense. A low layer of heath shrubs dominated by lowbush or velvet-leaf blueberry is usually present. Bracken fern and woodland sedge are characteristic herbs. Bryoids are virtually absent. Vegetation is typically very patchy, with some areas clearly pitch pine dominated and others areas extensive thickets of scrub oak. Nonforested openings with blueberry and lichens may occur within the barrens.

Soil and Site Characteristics

Sites occur on nutrient poor soils of glacial outwash plains or moraines south of 44 degrees latitude. Topography is flat to undulating. The xeric to dry-mesic, sandy soils are acidic (pH usually <5.0) and have little organic matter. Fire is an important factor in maintaining this community.



Northern Blazing Star

Diagnostics

These are pitch pine dominated partially forested areas which develop on sands or glacial outwash deposits, not on stabilized coastal dunes. Scrub oak

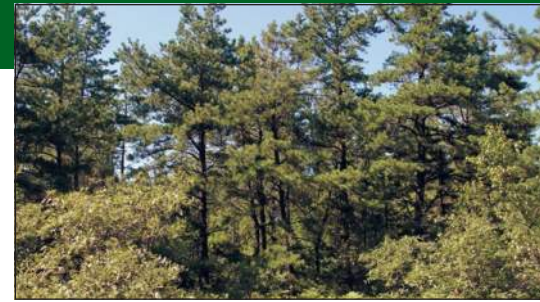
Similar Types

Pitch Pine Woodlands can be floristically similar but occur on bedrock, not on deep sandy soils. Pitch Pine Dune Woodlands occur on stabilized sand dunes along the coast. They also lack a well developed heath shrub layer. Pitch Pine - Heath Barrens share many species but lack the scrub oak layer (scrub oak may be present but only at low cover). Pitch Pine Bogs are wetlands, with at least a shallow peat substrate.

Conservation, Wildlife, and Management Considerations

This community type is dependent upon periodic fires to eliminate competing tree species and prevent succession to an Oak

Location Map



Pitch Pine - Scrub Oak Barren

- Pine Forest. Because of fire suppression in the last century, this community type has become very rare. Relatively large areas are required to maintain this dynamic community and its associated rare animal species. Most of the large sites in the state have been fragmented by permanent conversion to residential areas or to sand and gravel pits.

Birds such as the whip-poor-will, eastern towhee, pine warbler, and prairie warbler may prefer this open habitat. This community type includes a rich array of rare butterflies and moths that use pitch pine or scrub oak as their larval host plant, including the southern pine sphinx, pine pinion, oblique zale, the buckmoth, Edward's hairstreak, pine barrens zale, pine barrens itame, and sleepy dusky wing.

Distribution

Primarily southern Maine (Eastern Broadleaf Forest Province). Extends southward and southwestward from the state along the Atlantic coastal plain.

Landscape Pattern: Large Patch

Examples on Conservation Lands You Can Visit

- Brownfield Bog Wildlife Management Area - Oxford Co.
- Kennebunk Plains Preserve - York Co.
- Killick Pond Wildlife Management Area - York Co.
- Waterboro Barrens Preserve - York Co.

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Canopy

Gray birch
Pitch pine*
Red maple

Sapling/shrub

Gray birch
Pitch pine
Scrub oak*
Shadbush
Sweetfern
Wild-raisin

Dwarf Shrub

Lowbush blueberry*
Sheep laurel
Velvet-leaf blueberry

Herb

Bracken fern*
Canada mayflower
Mayflower
Sharp-pointed ricegrass
Wintergreen*
Woodland sedge

Bryoid

Large hair-cap moss

Associated Rare Plants

Butterfly weed
Fern-leaved false foxglove
Northern blazing star
Wild chess
Wild indigo
Wild lupine

Associated Rare Animals

Edward's hairstreak
Oblique zale
Pine barrens itame
Pine barrens zale
Pine barrens zanclognatha
Pine pinion
Pine-devil moth
Pink sallow
Similar underwing
Sleepy duskywing
Southern pine sphinx
The buckmoth
Twilight moth
Whip-poor-will

Outwash Plain Pondshore

State Rank S1

Community Description

This community consists of concentric zones of different herbs around a central pond. A band of shrubs (highbush blueberry, maleberry, buttonbush, leatherleaf) is typical at the upland/pondshore edge. Moving pondward, the next zone is dominated by narrow-leaved goldenrod and three-way sedge, with patches of flat-sedge and brown-fruited rush. In a narrow band at the top of this zone, golden pert and meadow beauty are characteristic and may form dense patches. The next zone, exposed less frequently and for a shorter time, is dominated by pipewort and spikerushes. There is no well developed bryoid layer.

Soil and Site Characteristics

This community forms a band around the perimeter of shallow, sandy bottomed ponds in glacial outwash plains. It occurs on shores that are inundated for the early part of the growing season and exposed later in the growing season, although actual exposure varies from year to year. The substrate is sandy, occasionally mucky, and usually saturated to the surface or nearly so.



Ribbon Snake

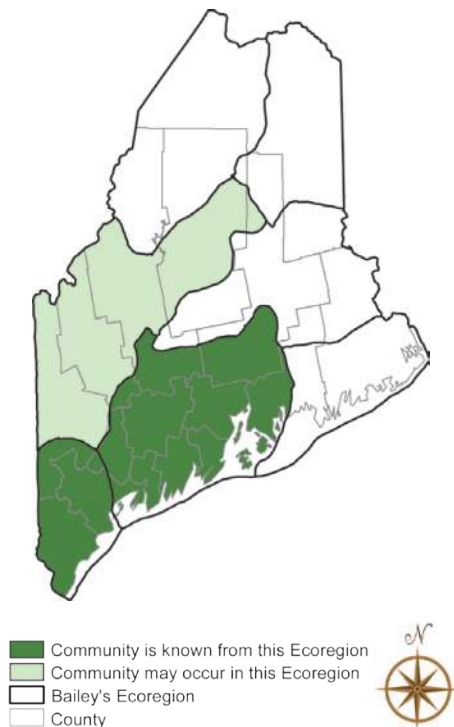
Diagnostics

Three-way sedge and usually narrow-leaved goldenrod are dominant in a sandy pondshore setting, with evidence of water level changes through the season. Golden pert and meadow beauty are indicator species.

Similar Types

Mixed Graminoid - Shrub Marshes can also occur on temporarily flooded mineral soils and can share some dominants such as three-way sedge, but they lack the concentric zonation of outwash plain pondshores and typically intermingle shrubs and herbs rather than segregating them into zones. The more variable and widespread Lakeshore Beaches lack three-way sedge, golden pert, and meadow beauty.

Location Map



Three-way Sedge

Conservation, Wildlife, and Management Considerations

This extremely rare natural community is under pressure from adjacent land uses and recreational impacts. The periphery of several sites has been developed or converted to other uses. At the few known sites on conservation lands, the major recreational impact is off-road vehicle use. At low water, ATV use has significantly altered the vegetation at some sites. Hydrologic integrity is also a concern, as water use increases from neighboring homes and businesses and aquifer drawdowns could impair these water dependent systems and lead to vegetational changes.

These outwash plain pondshores provide excellent foraging habitat for the ribbon snake. The pondshores also provide habitat for the big bluet, a rare damselfly. Other more wide-ranging rare insects are likely to be found in this community. This community may also provide feeding habitat for wading birds.

Characteristic Plants

These plants are frequently found in this community type. Those with an asterisk are often diagnostic of this community.

Herb

Bluejoint*
 Brown-fruited rush*
 Bur-reed*
 Canada rush
 Fly-away grass
 Golden pert*
 Narrow-leaved goldenrod*
 Pipewort*
 Robbin's spikerush*
 Three-way sedge
 Toothed flat-sedge*
 Yellow loosestrife

Associated Rare Plants

Dwarf bulrush
 Englemann's spikerush
 Fall fimbry
 Huron tansy
 Long-tubercled spike-rush
 Narrow-leaved goldenrod

Associated Rare Animals

Big bluet
 Ribbon snake

Distribution

Extreme southwestern Maine (Eastern Broadleaf Forest Province), extending southward along the coast to Massachusetts; disjunct in Nova Scotia and Ontario.

Landscape Pattern: Small Patch

Examples on Conservation Lands You Can Visit

- Killick Pond Wildlife Management Area - York Co.
- Waterboro Barrens Preserve - Oxford Co.



Credits



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Contact

Department of Agriculture,
Conservation and Forestry
22 State House Station
18 Elkins Lane
Augusta, ME 04333
More [Locations](#)

Phone: (207) 287-3200
Fax: (207) 287-2400
TTY Users Call Maine Relay
711
DACE@Maine.gov

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

Rank	Definition
S1 G1	Critically Imperiled – At very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
S2 G2	Imperiled – At high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
S3 G3	Vulnerable – At moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
S4 G4	Apparently Secure – At fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
S5 G5	Secure – At very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats.
SX GX	Presumed Extinct – Not located despite intensive searches and virtually no likelihood of rediscovery.
SH GH	Possibly Extinct – Known from only historical occurrences but still some hope of rediscovery.
S#S# G#G#	Range Rank – A numeric range rank (e.g., S2S3 or S1S3) is used to indicate any range of uncertainty about the status of the species or ecosystem.
SU GU	Unrankable – Currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
GNR SNR	Unranked – Global or subnational conservation status not yet assessed.
SNA GNA	Not Applicable – A conservation status rank is not applicable because the species or ecosystem is not a suitable target for conservation activities (e.g., non-native species or ecosystems).
Qualifier	Definition
S#? G#?	Inexact Numeric Rank – Denotes inexact numeric rank.
Q	Questionable taxonomy that may reduce conservation priority – Distinctiveness of this entity as a taxon or ecosystem type at the current level is questionable. The “Q” modifier is only used at a global level.
T#	Intraspecific Taxon (trinomial) – The status of intraspecific taxa (subspecies or varieties) are indicated by a "T-rank" following the species' global rank.

State Status: Endangered and Threatened are legal status designations authorized by statute. Please refer to MRSA Title 12, §544 and §544-B.

Status	Definition
E	Endangered – Any native plant species in danger of extinction throughout all or a significant portion of its range within the State or Federally listed as Endangered.
T	Threatened – Any native plant species likely to become endangered within the foreseeable future throughout all or a significant portion of its range in the State or Federally listed as Threatened.
SC	Special Concern – A native plant species that is rare in the State, but not rare enough to be considered Threatened or Endangered.
PE	Potentially Extirpated – A native plant species that has not been documented in the State in over 20 years, or loss of the last known occurrence.

Element Occurrence (EO) Ranks: Quality assessments that designate viability of a population or integrity of habitat. These ranks are based on size, condition, and landscape context. Range ranks (e.g., AB, BC) and uncertainty ranks (e.g., B?) are allowed. The Maine Natural Areas Program tracks all occurrences of rare plants and natural communities/ecosystems (S1-S3) as well as exemplary common natural community types (S4-S5 with EO ranks A/B).

Rank	Definition
A	Excellent – Excellent estimated viability/ecological integrity.
B	Good – Good estimated viability/ecological integrity.
C	Fair – Fair estimated viability/ecological integrity.
D	Poor – Poor estimated viability/ecological integrity.
E	Extant – Verified extant, but viability/ecological integrity not assessed.
H	Historical – Lack of field information within past 20 years verifying continued existence of the occurrence, but not enough to document extirpation.
X	Extirpated – Documented loss of population/destruction of habitat.
U	Unrankable – Occurrence unable to be ranked due to lack of sufficient information (e.g., possible mistaken identification).
NR	Not Ranked – An occurrence rank has not been assigned.

Visit the Maine Natural Areas Program website for more information
<http://www.maine.gov/dacf/mnap>





STATE OF MAINE
DEPARTMENT OF AGRICULTURE, CONSERVATION & FORESTRY
177 STATE HOUSE STATION
AUGUSTA, MAINE 04333

JANET T. MILLS
GOVERNOR

AMANDA E. BEAL
COMMISSIONER

February 20, 2024

Jordan Tate
McFarland Johnson
5 Depot Street, Suite 25
Freeport, ME 04032

Via email: jtate@mjin.com

Re: Rare and exemplary botanical features in proximity to: Runway 14/32 Extension Split Alternative, Eastern Slope Regional Airport, Fryeburg, Maine

Dear Jordan Tate:

I have searched the Maine Natural Areas Program's Biological and Conservation Data System files in response to your request received January 15, 2024 for information on the presence of rare or unique botanical features documented from the vicinity of the project in Fryeburg, Maine. Rare and unique botanical features include the habitat of rare, threatened, or endangered plant species and unique or exemplary natural communities. Our review involves examining maps, manual and computerized records, other sources of information such as scientific articles or published references, and the personal knowledge of staff or cooperating experts.

Our official response covers only botanical features. For authoritative information and official response for zoological features you must make a similar request to the Maine Department of Inland Fisheries and Wildlife, 284 State Street, Augusta, Maine 04333.

On December 13, 2023, Kristen Puryear, Emily Carty, and Lisa St. Hilaire (MNAP) made a site visit to the "32" (southeast) end of the current runway with DEP, IFW, and McFarland Johnson staff. While our site visit was focused on a proposed limit of development that has since been changed, the result of the survey was an updated delineation of the Pitch Pine – Scrub Oak Barren (PPSOB) natural community at the southeastern end of the runway. That December 13, 2023 PPSOB updated shape has been shared with McFarland Johnson and should be referenced for discussions related to this project.

Based on the updated PPSOB delineation, the proposed limit of disturbance will have direct impacts to the PPSOB natural community at the northwest end of the runway (Limit of Disturbance associated with the Runway 14 Extension). There are not likely to be any direct impacts from activities within the limit of disturbance to PPSOB at the southeast end of the runway. Additionally, the limit of disturbance at Runway 14 extends to within 30 feet of the edge of the Outwash Plain Pondshore natural community and the Fall Fimbrity and Narrow Leaved Goldenrod populations, all associated with Round

MOLLY DOCHERTY, DIRECTOR
MAINE NATURAL AREAS PROGRAM
90 BLOSSOM LANE, DEERING BUILDING



PHONE: (207) 287-8044
WWW.MAINE.GOV/DACF/MNAP

Pond. MNAP typically recommends a 250-foot vegetated and undisturbed buffer be maintained around sensitive natural communities such as the globally rare Outwash Plain Pondshore. Although the runway extension remains outside the 250-foot buffer to the Outwash Plain Pondshore natural community, hazard tree clearing, earthwork and grading, permanent conversion to mowed sod, rip rap, and the construction of a gravel or asphalt vehicle service road are proposed to within 30 feet of the Outwash Plain Pondshore natural community and rare plant populations.

It should be noted that the 2020 Site Law permit amendment L-8645-18-K-A (approval, partial after-the-fact) required avoidance measures within 100 feet of the Outwash Plain Pondshore, specifically: *“Restore PPSO/Pitch Pine stand within buffer to Round Pond, by **allowing revegetation within 100’ buffer** (to maximum height possible within safety requirements); and **No further vegetation removal within 100’ of Round Pond other than selective removal using hand cutting methods only.**”* (p. 5, attached). The limit of disturbance as currently proposed would violate this requirement.

MNAP recommends at a minimum upholding the avoidance measures described in the 2020 Site Law amendment L-8645-18-K-A, in order to 1) maintain the avoidance measures required for previous impacts from mechanical harvesting around Round Pond and 2) maintain at least a portion of the preferred 250-foot vegetated buffer to the Outwash Plain Pondshore natural community and associated rare plant populations. Furthermore, MNAP recommends avoiding further vegetation disturbance within the 100 to 250-foot buffer to the Outwash Plain Pondshore natural community at Round Pond. This is a unique community that depends on specific geophysical conditions that result in seasonal fluctuations of the water table. This natural community is therefore sensitive to adjacent land use and land cover changes as these effect water drainage and filtration. Notably also the proposed development is directly upslope from the pond and will include significant vegetation alteration as well as impervious surfaces that will alter and potentially contaminate natural runoff to the pond. MNAP therefore has concerns that the additional runway expansion, associated cleared areas, impervious surface, and additional vehicle service road within the buffer zone to Round Pond will cause a degradation of water quality or quantity due to contaminated runoff that is likely to adversely affect the Outwash Plain Pondshore and the many plant and animal species here, including Fall Fimbry (Endangered), Narrow-leaved Goldenrod (Special Concern), and New England Bluet (Special Concern).

If avoidance or minimization of impacts within the PPSOB and buffers associated with the Outwash Plain Pondshore and rare plant populations cannot be implemented, MNAP recommends compensation for the impacts to these rare and sensitive natural features. Specifically, this would include permanent conservation of these specific natural communities with third party holder or deed restrictions in place and based on consultation with MNAP and MDIFW. Based on the December 2023 PPSOB delineation, we have calculated the following impact areas and mitigation acreage amounts:

Feature	Acres impacted	Ratio compensation	Acres mitigation
Pitch Pine Scrub Oak Barren	1.581	8:1	12.65
100’ buffer to Outwash Plain Pondshore	0.219	8:1	1.75
250’ buffer to Outwash Plain Pondshore	0.985	4:1	3.94

McFarland Johnson provided MNAP with a preferred alternative mitigation map on February 2, 2024. Since then, the acreage calculations for direct and indirect impacts have changed. Note MNAP's compensation recommendations should be considered as in addition to any proposed by MDIFW for impacts to the rare Lepidoptera or Odonata species associated with Round Pond and the PPSOB. MNAP would be amendable to mitigation in the area between David and Round Pond, however we request the opportunity to discuss potential mitigation design following review of our response.

Please refer to the table below, attached map, and attached figures for more information about the sensitive botanical features at this site.

Feature	State Status*	State Rank*	Global Rank*	Site
Pitch Pine – Scrub Oak Barren	-	S2	G2	Fryeburg Barrens
Outwash Plain Pondshore <i>Three-way sedge – goldenrod outwash plain pondshore</i>	-	S1	G2G3	Davis Pond
Narrow-leaved Goldenrod <i>Euthamia caroliniana</i>	Threatened	S2	G5	Davis Pond
Outwash Plain Pondshore <i>Three-way sedge – goldenrod outwash plain pondshore</i>	-	S1	G2G3	Round Pond
Narrow-leaved Goldenrod <i>Euthamia caroliniana</i>	Threatened	S2	G5	Round Pond
Fall fimbry <i>Fimbristylis autumnalis</i>	Special Concern	S2S3	G5	Round Pond

*Refer to the Conservation Status Ranks information sheet, attached

This finding is available and appropriate for preparation and review of environmental assessments, but it is not a substitute for on-site surveys. Comprehensive field surveys do not exist for all natural areas in Maine, and in the absence of a specific field investigation, the Maine Natural Areas Program cannot provide a definitive statement on the presence or absence of unusual natural features at this site.

The Maine Natural Areas Program (MNAP) is continuously working to achieve a more comprehensive database of exemplary natural features in Maine. We would appreciate the contribution of any information obtained should you decide to do field work. MNAP welcomes coordination with individuals or organizations proposing environmental alteration or conducting environmental assessments. If, however, data provided by MNAP are to be published in any form, the Program should be informed at the outset and credited as the source.

The Maine Natural Areas Program has instituted a fee structure of \$75.00 an hour to recover the actual cost of processing your request for information as well as the December site visit and mileage. You will receive an invoice for \$1,263.77 for three hours of our services.

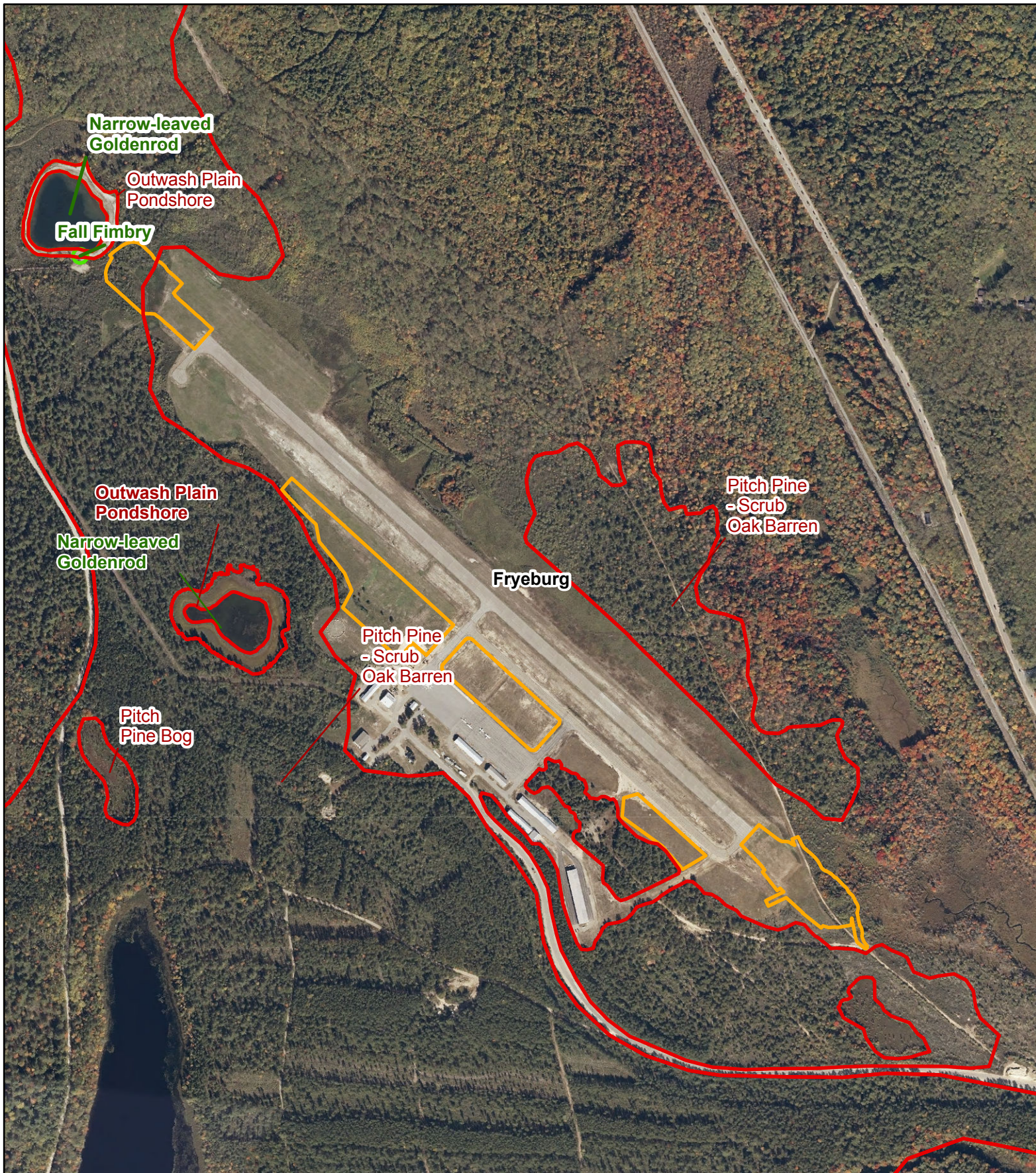
Thank you for using MNAP in the environmental review process. Please do not hesitate to contact me if you have further questions about the Natural Areas Program or about rare or unique botanical features on this site.

Letter to McFarland Johnson
Comments RE: Runway 14/32 Extension Split Alternative, Eastern Slope Regional Airport, Fryeburg
February 20, 2024
Page 4 of 4

Sincerely,

Kristen Puryear

Kristen Puryear | Ecologist | Maine Natural Areas Program
207-287-8043 | Kristen.puryear@maine.gov



Eastern Slopes Regional Airport, Fryeburg, Maine

- Rare Plant - Rare/
Exemplary Natural
Community
- Split RW Ext LOD



0 0.05 0.1 0.2 Miles

Maine Natural Areas Program, February 16, 2024
NAIP 2021 Imagery



Eastern Slopes Regional Airport, Runway 14 Limit of Disturbance, Fryeburg, Maine

- Rare Plant - Rare/Exemplary Natural Community
- 100-foot Buffer Round Pond

- 250-foot Buffer Round Pond
- Split RW Ext LOD



0 87.5 175 350 Feet

Maine Natural Areas Program, February 16, 2024
NAIP 2021 Imagery

Conservation Status Ranks

State and Global Ranks: This ranking system facilitates a quick assessment of a species' or habitat type's rarity and is the primary tool used to develop conservation, protection, and restoration priorities for individual species and natural habitat types. Each species or habitat is assigned both a state (S) and global (G) rank on a scale of critically imperiled (1) to secure (5). Factors such as range extent, the number of occurrences, intensity of threats, etc., contribute to the assignment of state and global ranks. The definitions for state and global ranks are comparable but applied at different geographic scales; something that is state imperiled may be globally secure.

The information supporting these ranks is developed and maintained by the Maine Natural Areas Program (state ranks) and NatureServe (global ranks).

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Visit the Maine Natural Areas Program website for more information
<http://www.maine.gov/dacf/mnap>





STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
17 STATE HOUSE STATION AUGUSTA, MAINE 04333-0017

DEPARTMENT ORDER

IN THE MATTER OF

EASTERN SLOPE AIRPORT AUTHORITY) SITE LOCATION OF DEVELOPMENT ACT
Fryeburg, Oxford County)
RUNWAY 14 OBSTRUCTION REMOVAL)
AND NEW HANGAR) AMENDMENT
L-8645-18-K-A (approval, partial after-the-fact) FINDINGS OF FACT AND ORDER

Pursuant to the provisions of 38 M.R.S. §§ 481–489-E (Site Location of Development Act or “Site Law”) and Chapters 375, 500, 501, and 502 of Department rules, the Department of Environmental Protection has considered the application of the EASTERN SLOPE AIRPORT AUTHORITY with the supportive data, agency review comments, and other related materials on file and FINDS THE FOLLOWING FACTS:

1. PROJECT DESCRIPTION:

- A. History of Project: In Board Order #L-08645-2B-A-X, dated July 13, 1983, the Department approved a runway expansion at the Eastern Slope Regional Airport in Fryeburg. Department Order #L-08645-18-A-A, dated June 23, 1989, approved a new aircraft apron and taxiway, and Department Order #L-08645-18-B-A / #L-08645-31-C-A, dated February 10, 1997, approved the extension of the existing runway and the removal of approximately 45.8 acres of vegetation and the selective cutting of 1.7 acres of forested freshwater wetland to remove ground obstructions and improve airport safety. Department Order #L-008645-18-G-B, dated October 6, 2004, approved the construction of 13 enclosed pre-fabricated T-hangars for aircraft storage.

The project site is located on an approximately 522-acre parcel on Lyman Road, which is located westerly off Routes 5 and 113 in the Town of Fryeburg. The Town of Fryeburg owns the underlying parcel and leases the airfield to the applicant to operate the facility on the town’s behalf. Approximately 110 acres of the total acreage is actively managed with plowing and mowing, with an additional approximately 120 acres within the airfield approaches that require obstruction removal management. Round Pond, a small “kettlehole” pond, is located within the boundaries of the area leased by the applicant.

In Department Order #L-008645-18-H-B / #L-008645-TH-I-N / #L-008645-VP-J-N, dated August 11, 2010, the Department approved a vegetation management program in order to comply with the Federal Aviation Administration (FAA) regulations regarding obstructions in the airport’s protected airspace over a total of 43.8 acres of area surrounding the 4,200 foot-long, 75 foot-wide asphalt runway and its associated taxiway. Cutting was to be done in eight separate areas that are classified as Pitch Pine-Scrub Oak (PPSO) Barren Communities.

Department Order #L-008645-18-H-B / #L-008645-TH-I-N / #L-008645-VP-J-N specified that any removal of trees within 100 feet of Round Pond was to be done by hand to minimize soil compaction, erosion, and impacts to the hydrology around the pond.

- B. Summary: On June 5, 2019, in response to a complaint, Department staff inspected the property covered under the Order and observed that trees had been removed in the area immediately adjacent to Round Pond. The Department determined that this activity did not comply with Department Order #L-008645-18-H-B / #L-008645-TH-I-N / #L-008645-VP-J-N, primarily because the cutting was done via mechanical means and not by hand as specified in the Habitat Management Plan (dated August 2009) that was approved in the Department Order. A Letter of Warning was issued to the applicant on June 19, 2019.

The applicant requests after-the fact approval for the removal of large trees and other vegetative obstructions in specific areas on the property leased by the applicant from the Town of Fryeburg. Cutting activities were performed in the spring of 2019. The applicant submitted a sketch prepared by McFarland Johnson, titled "Eastern Slope Regional Airport – Approximate Tree Removal Areas," dated January 2020 that depicts the cut areas.

In addition to the request for after-the-fact approval of the tree cutting that was done in the spring of 2019, the applicant proposes to construct an approximately 10,000-square foot transient hangar building with a paved apron connecting the hangar door to the existing main apron. The proposed project is as shown on a set of plans the first of which is titled "Eastern Slope Regional Airport – Permitting January 2020," prepared by McFarland Johnson and dated January 10, 2020, with a last revision date of March 5, 2020.

- C. Current Use of Site: The site contains a regional airport with one 4,200-foot long runway (14-32), numerous hangars of varying sizes, a fuel shed, a terminal building, and a small parking area.

2. FINANCIAL CAPACITY:

The total cost of the hangar project is estimated to be \$2,948,508. The applicant stated that there are several funding sources that will be used to finance the project, including grants from the FAA, the Northern Border Regional Commission, the U.S. Department of Agriculture, and the Maine and New Hampshire Departments of Transportation. The applicant submitted copies of letters and agreements between it and the various funding agencies and organizations. The applicant verified that all funding commitments are still current. The aggregate amount of funding from the various sources is adequate to construct the project.

3. TECHNICAL ABILITY:

The applicant has successfully operated the Eastern Slope Regional Airport for many years. The applicant also retained the services of McFarland Johnson, a professional engineering firm, to assist in the design and engineering of the project.

The Department finds that the applicant has demonstrated adequate technical ability to comply with Department standards.

4. WILDLIFE AND FISHERIES:

Department Order #L-008645-18-H-B / #L-008645-TH-I-N / #L-008645-VP-J-N approved a vegetation management program as described in Finding 1. The Department also approved a Habitat Management Plan dated August 2009 that established three management areas and two “nectaring” areas between the eastern edge of Round Pond and the northeasterly end of Runway 14. These nectaring areas were to be protected and maintain for the benefit of an endangered butterfly, the Edwards Hairstreak, further discussed below. The applicant stated that the nectaring areas were brush-hogged to a height of four to six inches and a seed mix was applied in accordance with the Plan.

The application includes a request to extend the submission of an update of its 2009 Habitat Management Plan to coordinate with a proposal to extend the runway at the airport in 2023. The applicant requests a new deadline of December 31, 2022 to submit an updated Habitat Management Plan so the Plan can be developed in coordination with the applicant’s future proposal to construct a runway extension and parallel taxiway. To address the short-term impacts of the vegetative cutting that was done in 2019, the applicant submitted a Corrective Action Plan with the application with a revised date of February 27, 2020, which includes a list of immediate, short-term, intermediate and long-term steps to be taken by the applicant to mitigate for the impacts caused by the cutting. The Department agrees to the request to extend the deadline considering the commitments made by the applicant and the town discussed below, and provided the applicant complies with the special conditions of this Department Order relative to conducting a prescribed burn and compensating for impacts to the habitat.

The Maine Department of Inland Fisheries and Wildlife (MDIFW) staff and staff from the Maine Natural Areas Program (MNAP) attended a site visit with the applicant and Department staff on October 18, 2019. MDIFW considered the impacts of the cutting in two special habitat areas, Outwash Plain Pondshore Community and the PPSO Community described above, both of which are present in the area that was cut around Round Pond.

In comments to the Department dated March 13, 2020, MDIFW stated: “In collaboration with the Maine Natural Areas Program . . . MDIFW has recently reviewed the vegetation clearing impacts to priority fish and wildlife resources at the Eastern Slope Regional Airport (ESRA) in Fryeburg, while also considering previous 2010 Site Location permit obligations for enhanced management of Pitch Pine Scrub Oak (PPSO) and pollinator habitat.

MDIFW's primary concerns in this review are associated with Maine state rare, threatened, and endangered species and their habitats. Site Law regulations Chapter 375 provides for the preservation of "unusually important wildlife habitats, particularly those of rare or endangered species." Rare or "Special Concern" species are defined by MDIFW as species that do not meet the criteria as Endangered or Threatened but are particularly vulnerable and at risk of becoming Endangered, Threatened, or Extirpated due to restricted distribution, low or declining numbers, specialized habitat needs or limits, or other factors."

MDIFW further commented that two priority wildlife species populations have been negatively impacted by the lack of enhanced management for PPSO forest habitat as required by the 2010 SLODA permit, and by the indiscriminate tree and shrub cutting in the immediate area surrounding Round Pond. The New England Bluet (*Enallagma laterale*) is a rare damselfly, endemic to northeastern North America, only known from 23 populations in Maine, including Round Pond. Intensive cutting within 250 feet of occupied waterbodies such as Round Pond is likely to lead to degraded water quality and potential changes to the extent and composition of the aquatic vegetation which is critical to the larval life history of the Bluet. Additionally, adult Bluets mature, forage, and roost on overstory vegetation within the adjacent riparian zone – habitat that is now degraded by recent cutting practices. A second rare species affected by recent cutting of the PPSO habitat surrounding Round Pond is the state endangered Edward's Hairstreak (*Satyrium edwardsii*) butterfly, known from only a few populations in York and southern Oxford Counties, including the portions of the Eastern Slope Regional Airport. This butterfly is a specialist of barrens and dry woodlands where its larvae are obligate scrub oak feeders. These habitats are maintained via prescribed burns and careful management plans. The 2009 Habitat Management Plan for the airport included prescribed burns to maintain this habitat, but none were conducted. The lack of proper management has caused this habitat to revert to a more white pine/red maple stand making it difficult for pitch pine and scrub oak to regenerate. Furthermore, intensive tree and shrub removal by the applicant has adversely impacted the remaining PPSO habitat. The combination of neglectful management of the PPSO woodland community as previously required, and recent intensive cutting has undoubtedly led to mortality of eggs and/or larva of the butterfly and adverse impacts to its habitat.

MDIFW and MNAP recommended avoidance and mitigation measures to restore the integrity of the area around Round Pond that was mechanically harvested. These include:

Avoidance Measures (Actions required as part of the Department's 2010 Order):

- Restore PPSO/Pitch Pine stand within buffer to Round Pond, by allowing revegetation within 100' buffer (to maximum height possible within safety requirements); and
- No further vegetation removal within 100' of Round Pond other than selective removal using hand cutting methods only. Scrub oak that has not reached a height determined to be of safety concern should be left alone, as it does not grow any higher than 30' tall, and generally is significantly shorter.

Minimization Measures:

- Within 100-250' of Round Pond, hand removal of tall woody vegetation only as needed and not to exceed 25% canopy cover.
- Scrub oak that has not reached a height determined to be of safety concern should be left alone, as it does not grow any higher than 30' tall, and generally is significantly shorter.
- Pitch pine generally does not grow very large (<25 m) and should be retained to the greatest extent possible, including trees that are mature and producing seed.
- Remove large slash piles from area that was cut in 2019 to allow seedling germination.

Compensation measures for impacts to Round Pond's buffer:

- Airport should implement clean up within Round Pond by removing trash and debris.
- Airport should work with MDIFW and MNAP to control vehicular access to Round Pond.

Some of these activities are detailed in the revised Corrective Action Plan submitted by the applicant. The applicant submitted a letter from the Manager of the Town of Fryeburg, dated March 13, 2020, that contains a commitment to oversee and assist with the applicant's mitigation efforts, including restricting public access to Round Pond, removing the slash piles that remain in the area of obstruction removal, and any trash in and around the pond.

By June 1, 2020, the applicant must complete the mitigation efforts described above to the Department's satisfaction and submit photographs documenting that the slash piles have been removed from around the pond, that any trash and debris have been removed from the pond, and that steps have been taken to prohibit vehicular access by the public.

Provided the applicant completes the mitigation measures recommended by MNAP and MDIFW, removes any larger birch and maple trees within 100 feet of Round Pond by hand only, submits an updated Habitat Management Plan by December 31, 2022, and complies with additional recommendations and requirements outlined in Finding 5, the Department finds that the applicant has made adequate provision for the protection of wildlife and fisheries.

5. UNUSUAL NATURAL AREAS:

The 2009 Habitat Management Plan referenced above and approved in Department Order #L-008645-18-H-B / #L-008645-TH-I-N / #L-008645-VP-J-N detailed "prescribed burns" in the pitch pine stands and scrub oak communities as a long-term management strategy. This type of controlled burning is effective in eliminating competitive species, while scrub oak and pitch pine species can resist the fire's effects and regenerate. These areas must be burned on a regular cycle to sustain these unique communities. Two of the management areas were to be burned on a six-year rotation, and one was to be burned every 15 years.

The applicant stated that it was unable to secure services for a controlled burn because contractors were not willing to assume liability, thus the areas were left to grow until the applicant determined that removal of obstructions through mechanical means became necessary.

The applicant contacted The Nature Conservancy (TNC), a non-profit advocacy group that owns and manages lands across Maine to protect and preserve natural and unique resources. TNC manages other land in Fryeburg that contains PPSO communities, and regularly conducts prescribed burns of these areas, often coordinating these activities with MDIFW. TNC visited the project site and indicated that it is willing to work with the applicant and the town to conduct a burn in 2020 or 2021 and is currently drafting a Memorandum of Agreement among the parties. The March 13, 2020 letter from the town confirms that the town will take part in coordination between the applicant and TNC to conduct a prescribed burn. The applicant submitted a draft letter from TNC, dated March 12, 2020, that confirms that TNC is committed to continue coordination with the applicant to conduct a prescribed burn on airport property in the vicinity of Round Pond, and is in the process of formalizing a Memorandum of Understanding between the parties. In the event the agreement with TNC is not executed, the applicant must conduct a prescribed burn of the area on its own by December 31, 2021. The PPSO area is delineated by MNAP on a map titled "Eastern Slope Regional Airport, Fryeburg," dated March 2020.

In the agency comments from MDIFW referenced above, MDIFW and MNAP collaborated to recommend measures to compensate for impacts to the PPSO natural community and Edwards' Hairstreak, based on the calculated direct impacts to PPSO from tree removal of approximately 5.74 acres. The area that has been recommended for compensation by MNAP for impacts to the rare PPSO natural community is 45.92 acres. Recognizing that the habitat may provide partial habitat value to Edward's Hairstreak in its degraded state, MDIFW recommends additional acreage for impacts to the endangered butterfly, or 22.96 acres. The recommended combined compensation acreage for impacts to an endangered species and a globally rare natural community is 68.9 acres (69 acres).

To help facilitate the compensation recommendations of both resource agencies, MDIFW recommended that an area be identified as potential for fee transfer to MDIFW to be managed as part of the Fryeburg Wildlife Management Area, as indicated in Figure 1 created by MNAP. This area totals approximately 74 acres as currently drawn. The polygon was crafted to include the higher value PPSO habitat, connectivity between and buffer to the two ponds (both of which are mapped as Critically imperiled Outwash Plain Pondshore communities and host three rare plant populations and several rare aquatic insects), follow many "hard" features, provide at least 100' separation from developed airport property, avoid areas identified for future airport development, and connect directly to existing MDIFW land.

If this compensation acreage is transferred in ownership to MDIFW, responsibility for vegetation management would also transfer and could be worked into an acceptable agreement by all parties (for example by deed covenant) to accommodate specific FAA requirements for tree heights, public access, and other safety concerns.

In lieu of transferring acreage to MDIFW as part of their Fryeburg Wildlife Management Area, MDIFW recommends that a financial contribution be made to the Department's Endangered and Nongame Wildlife Fund to be used for off-site habitat acquisition and/or habitat management practices designed to protect and enhance habitat for rare and endangered species associated with PPSO woodlands. In calculating the amount of this recommended compensation, consideration will be given to the total amount of adversely impacted acreage as detailed above (approximately 69 acres) and the current market value of similar lands in Oxford County.

Both the applicant and the Town agreed to pursue the recommendation of a land transfer, which would require approval by Town vote and by the FAA. The March 13, 2020 letter from the Town confirms that the Town will coordinate with the applicant to determine if suitable airport property exists and if transfer of such land is a viable option for satisfying any compensation requirements with the understanding that the transfer of land is subject to approval by the town voting body.

By December 31, 2022, the applicant must demonstrate that a parcel of land, reviewed and approved by MDIFW and MNAP as appropriate compensation for the loss of habitat value caused by the cutting and lack of proper management, has been conveyed by deed to MDIFW to be added to that agency's regular management of similar habitats in and around Fryeburg. If the applicant fails to find a suitable parcel or is unable to complete a transfer, by December 31, 2022, the applicant must submit to the Department a payment based on the amount of PPSO habitat that was adversely affected to MDIFW's Endangered and Nongame Wildlife Fund.

Provided the applicant conducts the prescribed burn (either in coordination with TNC or on its own) and works with the Town and FAA (if necessary) to either facilitate the transfer of the land delineated by MNAP in Figure 1, or pays the fee to the Endangered and Nongame Wildlife Fund as described above, the Department finds that the vegetative cutting that was done by the applicant in 2019 and the lack of proper management of the PPSO habitat will not have an adverse effect on the preservation of unusual natural areas either on or near the development site.

6. SOILS:

The applicant submitted a medium-intensity Class D soil survey map and report, a geotechnical report based on the soils found at the project site, and a soil evaluation for the stormwater treatment system. The geotechnical report was prepared by a registered professional engineer (R.W. Gillespie and Associates, Inc.) and the soil evaluation report was prepared by Mark Hampton, a licensed site evaluator and certified soil scientist. The reports were reviewed by staff from the Division of Environmental Assessment (DEA) of the Bureau of Water Quality (BWQ). The Department finds that the soils on the project site present no limitations to the proposed project that cannot be overcome through standard engineering practices.

7. STORMWATER MANAGEMENT:

The proposed project includes approximately 0.65 acre of developed area of which 0.34 acre is impervious area. It lies within the watershed of Lovewell Pond. The applicant submitted a stormwater management plan based on the Basic, General, and Flooding Standards contained in Chapter 500 Stormwater Management rules (06-096 C.M.R. ch. 500, effective August 12, 2015). The proposed stormwater management system consists of a vegetated soil filter without a liner or underdrain that meets the standards of Chapter 500 Appendix E, § 4(c).

A. Basic Standards:

(1) Erosion and Sedimentation Control: The applicant submitted an Erosion and Sedimentation Control Plan (Section 14 of the application) that is based on the performance standards contained in Appendix A of Chapter 500 and the Best Management Practices outlined in the Maine Erosion and Sediment Control BMPs, which were developed by the Department. This plan and plan sheets containing erosion control details were reviewed by, and revised in response to the comments of, the Bureau of Land Resources (BLR).

Erosion control details will be included on the final construction plans and the erosion control narrative will be included in the project specifications to be provided to the construction contractor.

(2) Inspection and Maintenance: The applicant submitted a maintenance plan that addresses both short and long-term maintenance requirements. The maintenance plan is based on the standards contained in Appendix B of Chapter 500. This plan was reviewed by, and revised in response to the comments of, BLR. The applicant will be responsible for the maintenance of the stormwater management system.

(3) Housekeeping: The proposed project will comply with the performance standards outlined in Appendix C of Chapter 500.

Based on BLR's review of the erosion and sedimentation control plan and the maintenance plan, the Department finds that the proposed project meets the Basic Standards contained in Chapter 500, § 4(B).

B. General Standards:

The applicant's stormwater management plan includes general treatment measures that will mitigate for the increased frequency and duration of channel erosive flows due to runoff from smaller storms, provide for effective treatment of pollutants in stormwater, and mitigate potential temperature impacts. The project area is eligible for reduced treatment under the Redevelopment standard in Chapter 500 § 4(C)(2)d. BLR determined that, based on pollutant loadings under the current and proposed conditions, the project is required to provide treatment of 60% of developed area.

The proposed project exceeds the Redevelopment standard using Best Management Practices (BMPs) to treat 67.2% of the developed area.

BLR commented that the channel protection volume requirement may be waived because the native soil at the bottom of the BMP is classified as hydrologic soil group A soil and has a higher permeability than the soil filter media.

The stormwater management system proposed by the applicant was reviewed by, and revised in response to comments from, BLR. After a final review, BLR commented that the proposed stormwater management system is designed in accordance with the General Standards contained in Chapter 500, § 4(C).

Based on the stormwater system's design and BLR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the General Standards contained in Chapter 500, § 4(C) provided the applicant submits as-built drawings within 60 days of completion of construction to the BLR for review.

C. Flooding Standard:

The applicant is proposing to utilize a stormwater management system based on estimates of pre- and post-development stormwater runoff flows obtained by using Hydrocad, a stormwater modeling software that utilizes the methodologies outlined in Technical Releases #55 and #20, U.S.D.A., Soil Conservation Service and detains stormwater from 24-hour storms of 2-, 10-, and 25-year frequency. The post-development peak flow from the site will be increased by an insignificant amount over the pre-development peak flow from the site.

BLR commented that the proposed system is designed in accordance with the Flooding Standard contained in Chapter 500, § 4(F).

Based on the system's design and BLR's review, the Department finds that the applicant has made adequate provision to ensure that the proposed project will meet the Flooding Standard contained in Chapter 500, § 4(F) for peak flow from the project site, and channel limits and runoff areas.

8. GROUNDWATER:

The project is located over a significant sand and gravel aquifer as confirmed by a DEA geologist. The proposed project includes a connection to an existing drinking water well that serves the terminal building and a new subsurface wastewater disposal system that will serve the hangar building.

A geologist from the Division of Environmental Assessment (DEA) reviewed the application. In response to a question from DEA, the applicant confirmed, in a letter dated February 28, 2020, that the existing well does not qualify as a public water supply because it does not have at least 15 service connections or regularly serves an average of 25 individuals daily for at least 60 days per year, which is the threshold established by the

Department of Health and Human Services' Drinking Water Program. The existing well is an individual well because it serves a facility with a demand of less than 300 gallons per day. Therefore, the proposed soil filter appears to meet the 300-foot setback from the well as required by Chapter 500.

The applicant's February 28 letter also stated that the airport does not use fertilizer as a normal maintenance practice and that fertilizer will not be used in the area in and around the proposed soil filter unless necessary for revegetation of eroded or regraded areas. The applicant also stated that the authorized non-stormwater discharges will be consistent with Chapter 500 standards, Appendix C. The applicant confirmed that currently, the airport has a designated vehicle washing area located on the existing apron. This area is graded so that runoff will drain away from the fueling area and the proposed soil filter. It is unlikely for washing to occur within the proposed hangar; however, if it does occur, the slab foundation is pitched to collect the water and direct it to a holding tank. No vehicle can be parked on the proposed access apron in front of the proposed hangar. This is an FAA standard safety requirement for aircraft wing-tip clearance. Therefore, no washing can occur in this location, nor adjacent to the proposed taxi lane. Dust control activities are unusual for airports because the aircraft typically clear active pavements with prop-wash and jet blast. In the rare event that dust control is needed on the proposed access apron to the proposed hangar, this area discharges to a sedimentation forebay prior to entering the soil filter.

Finally, the letter addressed maintenance and storage issues by stating that the proposed aircraft hangar is for storage of aircraft only. No maintenance will take place within the facility, and parking of aircraft, vehicles or equipment will not be allowed in any area that drains to the soil filter. The proposed hangar will not be used for maintenance and there will be no storage of fuel, fresh or waste oil, paint, solvents, or similar materials in or around the hangar.

The Department finds that, based on DEA's comments and the applicant's responses, the proposed project will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur. Therefore, the Department further finds that the proposed project will not have an unreasonable adverse effect on ground water quality.

9. WATER SUPPLY:

The proposed hangar building will be connected to the existing water supply well for the airport as discussed in Finding 8. The applicant stated that the water demand is not anticipated to increase as a result of the proposed project because it will be offset by a reduction in use of the terminal building facilities.

10. WASTEWATER DISPOSAL:

Wastewater will be disposed of by an individual subsurface wastewater disposal system. The applicant submitted the soil survey map and report discussed in Finding 9 and an HHE-200 form prepared by a Licensed Site Evaluator. This information was reviewed by, and revised in response to comments from, DEA.

Based on DEA's comments, the Department finds that the proposed wastewater disposal system will be built on suitable soil types.

11. SOLID WASTE:

No new general solid wastes are expected to be generated when the hangar building is occupied. The project area is grassed and contains no trees; therefore, no wood waste will be generated.

The proposed project will generate approximately 30 cubic yards of construction debris. All construction and demolition debris generated will be disposed of at Juniper Ridge Landfill, which is currently in substantial compliance with the Maine Solid Waste Management Rules.

Based on the above information, the Department finds that the applicant has made adequate provision for solid waste disposal.

12. ALL OTHER:

All other Findings of Fact, Conclusions and Conditions remain as approved in Board Order #L-08645-2B-A-X, and subsequent Orders.

BASED on the above findings of fact, and subject to the conditions listed below, the Department makes the following conclusions pursuant to 38 M.R.S. §§ 481–489-E:

- A. The applicant has provided adequate evidence of financial capacity and technical ability to develop the project in a manner consistent with state environmental standards.
- B. The applicant has made adequate provision for fitting the development harmoniously into the existing natural environment and the development will not adversely affect existing uses, scenic character, air quality, water quality or other natural resources in the municipality or in neighboring municipalities provided the mitigation measures discussed are completed by the applicant, any larger birch and maple trees within 100 feet of Round Pond are removed by hand only and the Habitat Management Plan is updated as discussed in Finding 4, and provided the applicant conducts a prescribed burn and either facilitates the future transfer of land to MDIFW or pays fee as discussed in Finding 5.
- C. The proposed development will be built on soil types which are suitable to the nature of the undertaking and will not cause unreasonable erosion of soil or sediment nor inhibit the natural transfer of soil.
- D. The proposed development meets the standards for storm water management in 38 M.R.S. § 420-D and the standard for erosion and sedimentation control in 38 M.R.S. § 420-C provided as-built drawings are submitted for review as discussed in Finding 7B.
- E. The proposed development will not pose an unreasonable risk that a discharge to a significant groundwater aquifer will occur.

- F. The applicant has made adequate provision of utilities, including water supplies, sewerage facilities and solid waste disposal required for the development and the development will not have an unreasonable adverse effect on the existing or proposed utilities in the municipality or area served by those services.
- G. The activity will not unreasonably cause or increase the flooding of the alteration area or adjacent properties nor create an unreasonable flood hazard to any structure.

THEREFORE, the Department APPROVES the partial after-the-fact application of EASTERN SLOPE AIRPORT AUTHORITY for vegetation removal and to construct a new hangar building as described in Finding 1, SUBJECT TO THE FOLLOWING CONDITIONS and all applicable standards and regulations:

1. The Standard Conditions of Approval, a copy attached.
2. In addition to any specific erosion control measures described in this or previous orders, the applicant shall take all necessary actions to ensure that its activities or those of its agents do not result in noticeable erosion of soils or fugitive dust emissions on the site during the construction and operation of the project covered by this approval.
3. Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.
4. The applicant shall submit as-built drawings of the soil filter within 60 days of completion of construction to the BLR for review.
5. By June 1, 2020, the applicant shall complete the mitigation efforts discussed above to the Department's satisfaction and submit photographs documenting that the slash piles have been removed from around the pond, that any trash and debris have been removed from the pond, and that steps have been taken to prohibit vehicular access by the public.
6. The applicant shall remove any larger birch and maple trees within 100 feet of Round Pond by hand only.
7. By December 31, 2022, the applicant shall submit an updated Habitat Management Plan to the Department for review and approval.
8. In the event the agreement with TNC is not executed, the applicant shall conduct a prescribed burn of the affected habitat on its own by December 31, 2021.
9. By December 31, 2022, the applicant shall demonstrate that a parcel of land, reviewed and approved by MDIFW and MNAP as appropriate compensation for the loss of habitat value caused by the cutting and lack of proper management, has been conveyed by deed to MDIFW to be added to that agency's regular management of similar habitats in and around Fryeburg.

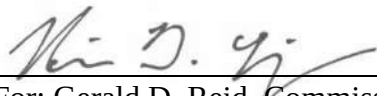
If the applicant fails to meet this requirement, by December 31, 2022, the applicant shall submit to the Department a fee to be paid into the Endangered and Nongame Wildlife Fund based on the amount of PPSO habitat that was adversely affected by the mechanical cutting.

10. All other Findings of Fact, Conclusions and Conditions remain as approved in Board Order #L-08645-2B-A-X, and subsequent Orders, and are incorporated herein.

THIS APPROVAL DOES NOT CONSTITUTE OR SUBSTITUTE FOR ANY OTHER REQUIRED STATE, FEDERAL OR LOCAL APPROVALS NOR DOES IT VERIFY COMPLIANCE WITH ANY APPLICABLE SHORELAND ZONING ORDINANCES.

DONE AND DATED IN AUGUSTA, MAINE, THIS 23RD DAY OF MARCH, 2020.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: 
For: Gerald D. Reid, Commissioner

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES.

MR/L8645KA/ATS#85631

FILED MAR 23, 2020 State of Maine Board of Environmental Protection

Department of Environmental Protection
SITE LOCATION OF DEVELOPMENT (SITE)
STANDARD CONDITIONS

- A. Approval of Variations from Plans.** The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the applicant. Any variation from these plans, proposals, and supporting documents is subject to review and approval prior to implementation. Further subdivision of proposed lots by the applicant or future owners is specifically prohibited without prior approval of the Board, and the applicant shall include deed restrictions to that effect.
- B. Compliance with All Applicable Laws.** The applicant shall secure and comply with all applicable federal, state, and local licenses, permits, authorizations, conditions, agreements, and orders prior to or during construction and operation, as appropriate.
- C. Compliance with All Terms and Conditions of Approval.** The applicant shall submit all reports and information requested by the Board or the Department demonstrating that the applicant has complied or will comply with all preconstruction terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- D. Advertising.** Advertising relating to matters included in this application shall refer to this approval only if it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
- E. Transfer of Development.** Unless otherwise provided in this approval, the applicant shall not sell, lease, assign or otherwise transfer the development or any portion thereof without prior written approval of the Board where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval shall be granted only if the applicant or transferee demonstrates to the Board that the transferee has the technical capacity and financial ability to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant.
- F. Time frame for approvals.** If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the Board for a new approval. The applicant may not begin construction or operation of the development until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- G. Approval Included in Contract Bids.** A copy of this approval must be included in or attached to all contract bid specifications for the development.
- H. Approval Shown to Contractors.** Work done by a contractor pursuant to this approval shall not begin before the contractor has been shown by the developer a copy of this approval.

(2/81)/Revised December 27, 2011

STORMWATER STANDARD CONDITIONS

STRICT CONFORMANCE WITH THE STANDARD AND SPECIAL CONDITIONS OF THIS APPROVAL IS NECESSARY FOR THE PROJECT TO MEET THE STATUTORY CRITERIA FOR APPROVAL

Standard conditions of approval. Unless otherwise specifically stated in the approval, a department approval is subject to the following standard conditions pursuant to Chapter 500 Stormwater Management Law.

- (1) Approval of variations from plans. The granting of this approval is dependent upon and limited to the proposals and plans contained in the application and supporting documents submitted and affirmed to by the permittee. Any variation from these plans, proposals, and supporting documents must be reviewed and approved by the department prior to implementation. Any variation undertaken without approval of the department is in violation of 38 M.R.S. §420-D(8) and is subject to penalties under 38 M.R.S. §349.
- (2) Compliance with all terms and conditions of approval. The applicant shall submit all reports and information requested by the department demonstrating that the applicant has complied or will comply with all terms and conditions of this approval. All preconstruction terms and conditions must be met before construction begins.
- (3) Advertising. Advertising relating to matters included in this application may not refer to this approval unless it notes that the approval has been granted WITH CONDITIONS, and indicates where copies of those conditions may be obtained.
- (4) Transfer of project. Unless otherwise provided in this approval, the applicant may not sell, lease, assign, or otherwise transfer the project or any portion thereof without written approval by the department where the purpose or consequence of the transfer is to transfer any of the obligations of the developer as incorporated in this approval. Such approval may only be granted if the applicant or transferee demonstrates to the department that the transferee agrees to comply with conditions of this approval and the proposals and plans contained in the application and supporting documents submitted by the applicant. Approval of a transfer of the permit must be applied for no later than two weeks after any transfer of property subject to the license.
- (5) Time frame for approvals. If the construction or operation of the activity is not begun within four years, this approval shall lapse and the applicant shall reapply to the department for a new approval. The applicant may not begin construction or operation of the project until a new approval is granted. A reapplication for approval may include information submitted in the initial application by reference. This approval, if construction is begun within the four-year time frame, is valid for seven years. If construction is not completed within the seven-year time frame, the applicant must reapply for, and receive, approval prior to continuing construction.
- (6) Certification. Contracts must specify that "all work is to comply with the conditions of the Stormwater Permit." Work done by a contractor or subcontractor pursuant to this approval may not begin before the contractor and any subcontractors have been shown a copy of this approval with the conditions by the permittee, and the permittee and each contractor and subcontractor has certified, on a form provided by the department, that the approval and conditions have been received and read, and that the work will be carried out in accordance with the approval and conditions. Completed certification forms must be forwarded to the department.

- (7) Maintenance. The components of the stormwater management system must be adequately maintained to ensure that the system operates as designed, and as approved by the Department. If maintenance responsibility is to be transferred from the permittee to another entity, a transfer request must be filed with the Department which includes the name and contact information for the person or entity responsible for this maintenance. The form must be signed by the responsible person or agent of the responsible entity.
- (8) Recertification requirement. Within three months of the expiration of each five-year interval from the date of issuance of the permit, the permittee shall certify the following to the department.
- (a) All areas of the project site have been inspected for areas of erosion, and appropriate steps have been taken to permanently stabilize these areas.
 - (b) All aspects of the stormwater control system are operating as approved, have been inspected for damage, wear, and malfunction, and appropriate steps have been taken to repair or replace the system, or portions of the system, as necessary.
 - (c) The stormwater maintenance plan for the site is being implemented as approved by the Department, and the maintenance log is being maintained.
 - (d) All proprietary systems have been maintained according to the manufacturer's recommendations. Where required by the Department, the permittee shall execute a 5-year maintenance contract with a qualified professional for the coming 5-year interval. The maintenance contract must include provisions for routine inspections, cleaning and general maintenance.
 - (e) The Department may waive some or all of these recertification requirements on a case-by-case basis for permittees subject to the Department's Multi-Sector General Permit ("MSGP") and/or Maine Pollutant Discharge Elimination System ("MEPDES") programs where it is demonstrated that these programs are providing stormwater control that is at least as effective as required pursuant to this Chapter.
- (9) Transfer of property subject to the license. If any portion of the property subject to the license containing areas of flow or areas that are flooded are transferred to a new property owner, restrictive covenants protecting these areas must be included in any deeds or leases, and recorded at the appropriate county registry of deeds. Also, in all transfers of such areas and areas containing parts of the stormwater management system, deed restrictions must be included making the property transfer subject to all applicable terms and conditions of the permit. These terms and conditions must be incorporated by specific and prominent reference to the permit in the deed. All transfers must include in the restrictions the requirement that any subsequent transfer must specifically include the same restrictions unless their removal or modification is approved by the Department. These restrictions must be written to be enforceable by the Department, and must reference the permit number.
- (10) Severability. The invalidity or unenforceability of any provision, or part thereof, of this permit shall not affect the remainder of the provision or any other provisions. This permit shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.



DEP INFORMATION SHEET

Appealing a Department Licensing Decision

Dated: November 2018

Contact: (207) 287-2452

SUMMARY

There are two methods available to an aggrieved person seeking to appeal a licensing decision made by the Department of Environmental Protection's (DEP) Commissioner: (1) an administrative process before the Board of Environmental Protection (Board); or (2) a judicial process before Maine's Superior Court. An aggrieved person seeking review of a licensing decision over which the Board had original jurisdiction may seek judicial review in Maine's Superior Court.

A judicial appeal of final action by the Commissioner or the Board regarding an application for an expedited wind energy development (35-A M.R.S. § 3451(4)) or a general permit for an offshore wind energy demonstration project (38 M.R.S. § 480-HH(1)) or a general permit for a tidal energy demonstration project (38 M.R.S. § 636-A) must be taken to the Supreme Judicial Court sitting as the Law Court.

This information sheet, in conjunction with a review of the statutory and regulatory provisions referred to herein, can help a person to understand his or her rights and obligations in filing an administrative or judicial appeal.

I. ADMINISTRATIVE APPEALS TO THE BOARD

LEGAL REFERENCES

The laws concerning the DEP's *Organization and Powers*, 38 M.R.S. §§ 341-D(4) & 346; the *Maine Administrative Procedure Act*, 5 M.R.S. § 11001; and the DEP's *Rules Concerning the Processing of Applications and Other Administrative Matters* ("Chapter 2"), 06-096 C.M.R. ch. 2.

DEADLINE TO SUBMIT AN APPEAL TO THE BOARD

The Board must receive a written appeal within 30 days of the date on which the Commissioner's decision was filed with the Board. Appeals filed more than 30 calendar days after the date on which the Commissioner's decision was filed with the Board will be dismissed unless notice of the Commissioner's license decision was required to be given to the person filing an appeal (appellant) and the notice was not given as required.

HOW TO SUBMIT AN APPEAL TO THE BOARD

Signed original appeal documents must be sent to: Chair, Board of Environmental Protection, 17 State House Station, Augusta, ME 04333-0017. An appeal may be submitted by fax or e-mail if it contains a scanned original signature. It is recommended that a faxed or e-mailed appeal be followed by the submittal of mailed original paper documents. The complete appeal, including any attachments, must be received at DEP's offices in Augusta on or before 5:00 PM on the due date; materials received after 5:00 pm are not considered received until the following day. The risk of material not being received in a timely manner is on the sender, regardless of the method used. The appellant must also send a copy of the appeal documents to the Commissioner of the DEP; the applicant (if the appellant is not the applicant in the license proceeding at issue); and if a hearing was held on the application, any intervenor in that hearing process. All of the information listed in the next section of this information sheet must be submitted at the time the appeal is filed.

INFORMATION APPEAL PAPERWORK MUST CONTAIN

Appeal materials must contain the following information at the time the appeal is submitted:

1. *Aggrieved Status.* The appeal must explain how the appellant has standing to maintain an appeal. This requires an explanation of how the appellant may suffer a particularized injury as a result of the Commissioner's decision.
2. *The findings, conclusions, or conditions objected to or believed to be in error.* The appeal must identify the specific findings of fact, conclusions regarding compliance with the law, license conditions, or other aspects of the written license decision or of the license review process that the appellant objects to or believes to be in error.
3. *The basis of the objections or challenge.* For the objections identified in Item #2, the appeal must state why the appellant believes that the license decision is incorrect and should be modified or reversed. If possible, the appeal should cite specific evidence in the record or specific licensing requirements that the appellant believes were not properly considered or fully addressed.
4. *The remedy sought.* This can range from reversal of the Commissioner's decision on the license or permit to changes in specific permit conditions.
5. *All the matters to be contested.* The Board will limit its consideration to those matters specifically raised in the written notice of appeal.
6. *Request for hearing.* If the appellant wishes the Board to hold a public hearing on the appeal, a request for public hearing must be filed as part of the notice of appeal, and must include an offer of proof in accordance with Chapter 2. The Board will hear the arguments in favor of and in opposition to a hearing on the appeal and the presentations on the merits of an appeal at a regularly scheduled meeting. If the Board decides to hold a public hearing on an appeal, that hearing will then be scheduled for a later date.
7. *New or additional evidence to be offered.* If an appellant wants to provide evidence not previously provided to DEP staff during the DEP's review of the application, the request and the proposed evidence must be submitted with the appeal. The Board may allow new or additional evidence, referred to as supplemental evidence, to be considered in an appeal only under very limited circumstances. The proposed evidence must be relevant and material, and (a) the person seeking to add information to the record must show due diligence in bringing the evidence to the DEP's attention at the earliest possible time in the licensing process; or (b) the evidence itself must be newly discovered and therefore unable to have been presented earlier in the process. Specific requirements for supplemental evidence are found in Chapter 2 § 24.

OTHER CONSIDERATIONS IN APPEALING A DECISION TO THE BOARD

1. *Be familiar with all relevant material in the DEP record.* A license application file is public information, subject to any applicable statutory exceptions, and is made easily accessible by the DEP. Upon request, the DEP will make application materials available during normal working hours, provide space to review the file, and provide an opportunity for photocopying materials. There is a charge for copies or copying services.
2. *Be familiar with the regulations and laws under which the application was processed, and the procedural rules governing your appeal.* DEP staff will provide this information on request and answer general questions regarding the appeal process.
3. *The filing of an appeal does not operate as a stay to any decision.* If a license has been granted and it has been appealed, the license normally remains in effect pending the processing of the appeal. Unless a stay of the decision is requested and granted, a license holder may proceed with a project pending the outcome of an appeal, but the license holder runs the risk of the decision being reversed or modified as a result of the appeal.

WHAT TO EXPECT ONCE YOU FILE A TIMELY APPEAL WITH THE BOARD

The Board will formally acknowledge receipt of an appeal, and will provide the name of the DEP project manager assigned to the specific appeal. The notice of appeal, any materials accepted by the Board Chair as supplementary evidence, any materials submitted in response to the appeal, and relevant excerpts from the DEP's application review file will be sent to Board members with a recommended decision from DEP staff. The appellant, the license holder if different from the appellant, and any interested persons are notified in advance of the date set for Board consideration of an appeal or request for public hearing. The appellant and the license holder will have an opportunity to address the Board at the Board meeting. With or without holding a public hearing, the Board may affirm, amend, or reverse a Commissioner decision or remand the matter to the Commissioner for further proceedings. The Board will notify the appellant, the license holder, and interested persons of its decision.

II. JUDICIAL APPEALS

Maine law generally allows aggrieved persons to appeal final Commissioner or Board licensing decisions to Maine's Superior Court (see 38 M.R.S. § 346(1); 06-096 C.M.R. ch. 2; 5 M.R.S. § 11001; and M.R. Civ. P. 80C). A party's appeal must be filed with the Superior Court within 30 days of receipt of notice of the Board's or the Commissioner's decision. For any other person, an appeal must be filed within 40 days of the date the decision was rendered. An appeal to court of a license decision regarding an expedited wind energy development, a general permit for an offshore wind energy demonstration project, or a general permit for a tidal energy demonstration project may only be taken directly to the Maine Supreme Judicial Court. See 38 M.R.S. § 346(4).

Maine's Administrative Procedure Act, DEP statutes governing a particular matter, and the Maine Rules of Civil Procedure must be consulted for the substantive and procedural details applicable to judicial appeals.

ADDITIONAL INFORMATION

If you have questions or need additional information on the appeal process, for administrative appeals contact the Board's Executive Analyst at (207) 287-2452, or for judicial appeals contact the court clerk's office in which your appeal will be filed.

Note: The DEP provides this INFORMATION SHEET for general guidance only; it is not intended for use as a legal reference. Maine law governs an appellant's rights.



Proposed Runway Extension and Mitigation Meeting Notes

1. General:

1. Airport: Eastern Slope Regional Airport (IZG), Fryeburg, Maine
2. Date/time: November 29, 9:30 am to 11:00 am
3. Location: Virtual Teams Meeting
4. Attendance:

<u>ESAA</u>	<u>MaineDEP</u>	<u>MDIFW</u>	<u>MNAP</u>	<u>FAA</u>	<u>MaineDOT</u>	<u>NHDOT</u>	<u>MJ</u>
Allison Navia	Marybeth Richardson	Robert Stratton	Kristen Puryear	Cheryl Quaine	Tim LeSiege	Carol Niewola	Matt O'Brien
	Alex Groblewski	Ciara Wentworth	Lisa St. Hilaire	Jason Homiak	Jeanne Kannegiser		Jed Merrow
							Sydney Seney
							Jordan Tate

5. Project Title: **Runway 14-32 Extension (Approx.802 LF x 75 Ft)**

2. Alternatives Discussion

1. Known Habitats on Airport Property

MJ shared existing habitat figure with group to talk through the following areas:

- a. MJ Site – September 2023
- b. Maine Natural Areas Program – Nov. 9, 2023
 - i. Habitats identified on airport property – not within proposed limits
 1. Pitch Pine – Scrub Oak Barren
 2. Davis Pond
 - a. Outwash Plain Pondshore
 - b. Narrow-leaved Goldenrod
- c. Maine Department of Inland Fisheries and Wildlife Response – Nov. 21, 2023
 - i. IFW not prepared to make habitat determination. IFW would need narratives and photos and wants Phillip DeMaynadier to review prior to any determination being delivered.
 - ii. No Essential Habitats impacted

1. IFW - Three coastal bird habitats are Essential Habitats, none found in the Fryeburg region
- iii. Endangered, Threatened, and Special Species of Concern
 1. Bat – no significant impacts
 - a. MJ coordinating with USFWS on this topic
 2. Grasshopper Sparrow – Avoidance
 - a. No clearing or construction from May 1 to Aug 1
 - b. Tim LeSiege – MaineDOT understanding that if you get a survey and do not identify any grasshopper sparrow in the area, you can work. Can this be confirmed?
 - i. Bob Stratton– The agencies must be properly coordinated with during this effort and could only be identified then
 - c. IFW – Grasshopper sparrow presence is confirmed at airport
 - i. A survey on a specific day may not be indicative of the habitat as a whole
 3. Pine Barrens Moth
 - a. Found only in Pitch Pine-Scrub Oak Barrens
 4. Twilight Moth
 - a. Outside of project limits
 5. Eastern Buckmoth
 - a. Is mitigation required?
 - i. Confirmation required with Phil DeMaynadier of MDIFW
 6. Inland Waterfowl Wading Bird Habitat – avoidance
 - a. No Construction from April 1 to July 15
 7. Vernal Pools
 - a. None identified within project limits during MJ site visit
 8. Streams
 - a. Minimum of 100 foot buffer
 - b. IFW Clarified the 100 foot buffer is from from upland edge, not from the stream
 - i. MJ confirmed that this area is in fact impacted then
 9. Wetland
 - a. Wetland habitat impacted
 - b. Confirm Wetland Mitigation Ratio
 - i. ACOE has the highest ration that would be used

- c. Marybeth - There is a fee that can be paid for wetland mitigation, is this being considered as an option?
 - i. MJ stated cost is expected to be too high for the project budget

2. No Build vs. Build Alternatives

- a. Build Alternative is preferred – MJ displaying the Build Alternative Figure for reference in conversation
- b. Impacts are anticipated
 - i. MNAP stated they will provide updated comments now that stormwater treatment areas are identified
 - 1. Jordan Tate confirmed that all impacts shown on this figure are still within her original study area that was sent to the agencies for comment – no new disturbance is shown, just confirmation of specific use within the limit.
 - ii. Bob Stratton IFW recommends focusing on the 69-acre habitat management plan for impact mitigation.
 - 1. This could provide the airport with “credits” for long term usage
 - iii. Jordan Tate – are there specific ratios for impact to mitigation ratios?
 - 1. Marybeth – there is no regulatory apparatus. There is nothing in MaineDEP that would acknowledge or address these types of impacts. There are no guidelines for this that she is aware of.
 - 2. Bob – IFW has the following guidelines for mitigation:
 - a. 4:1 – rare species
 - b. 8:1 – endangered or threatened species
 - 3. IFW reminded everyone that these ratios are recommendations from IFW and that MaineDEP is the final approving entity.

3. Mitigation Requirements for Build Alternative

- a. Wetland Mitigation
 - i. Bob Stratton – IFW does not typically support onsite preservation of areas that are already regulated
 - 1. IFW recommends using the 69 acre conservation area
 - a. MaineDEP noted that preservation needs to be a similar use habitat
 - ii. Marybeth – MaineDEP seconds the thought of on-site preservation stated by IFW
 - 1. She would be surprised if the ACOE would accept this

- iii. Matt O'Brien – MJ has engaged ACOE but have not received their comments
- iv. Marybeth – The town of Fryeburg may be able to preserve some land offsite that would meet this requirement
 - 1. Bob – IFW has identified some potential areas nearby that may be possibilities
 - 2. Marybeth – Another option could be partnering with a local organization and hold a piece of property in trust
- v. Matt – if ACOE accepts this onsite preservation, will MaineDEP accept this?
 - 1. Marybeth – DEP cannot provide that answer right now
 - 2. Allison Navia – Sanford recently did onsite preservation specifically for wetland resource with no issues

b. Grassland Mitigation

- i. Bob – IFW has an 8:1 mitigation requirement regardless of presence of grasshopper sparrow
 - 1. IFW states that MJ cannot use mitigation area inside areas mowed frequently – specifically RSA
- ii. Matt – Does the RSA or frequently mowed areas count as habitat and need to be mitigated?
 - 1. Bob – IFW does not have that answer and would need to confirm
- c. MNAP habitats fall outside of proposed limit of disturbance
 - i. No mitigation required

3. Other:

- 1. MNAP – may need to do a site visit to confirm presence of pitch pine scrub oak
 - a. MJ asked how quickly this could be done, since the schedule is extremely tight for this project
 - b. MNAP stated the person completing site visits is extremely busy and they would need to confirm possible dates

Follow-up Items:

- MJ to share the on-site survey information with specific areas with agencies
 - Notes/Photos/Report from Jordan Tate's site visit in September 2023
 - Written narrative to be provided this week
- MJ to develop meeting minutes and send out to the entire group
- MNAP to provide revised comments
 - MNAP to confirm availability for a site visit with a rushed timeline
- MJ to follow-up with coordination with ACOE regarding wetland mitigation
- MJ to confirm wetland ILF cost



Proposed Runway Extension and Mitigation Meeting #2 Notes

1. General:

1. Airport: Eastern Slope Regional Airport (IZG), Fryeburg, Maine
2. Date/time: December 5, 8:30 am to 10:00 am
3. Location: Virtual Teams Meeting
4. Attendance:

<u>ESAA</u>	<u>MaineDEP</u>	<u>MDIFW</u>	<u>MNAP</u>	<u>FAA</u>	<u>MaineDOT</u>	<u>NHDOT</u>	<u>MJ</u>
Allison Navia	Marybeth Richardson	Robert Stratton	Kristen Puryear	Cheryl Quaine		Carol Niewola	Matt O'Brien
	Alex Groblewski	Ciara Wentworth	Lisa St. Hilaire	Jason Homiak			Jed Merrow
		Scott Lindsay					Sydney Seney
		Phil deMaynadier					Jordan Tate

5. Project Title: **Runway 14-32 Extension (Approx.802 LF x 75 Ft)**

2. MJ On-Site Investigation

a. September 2023

- i. Jordan Tate walked through her report
 1. Jordan clarified that wetland delineation is separated from IWWH
- ii. IFW and MNAP thumbed through but were not able complete a full review
- iii. Phil deMaynadier IFW - Photo 7 and 8 of the report seem like habitats that could be grass hopper sparrow habitats. Is this an isolated area or are these photos pieces of large areas?
- iv. Phil Question 2 – a couple of those areas also looked like areas for buckmoth and possibly twilight moth, and Edwards hairstreak
- v. Marybeth MaineDEP – Were those areas with peat bog dominated by peat?
 1. Jordan – it was a floatings peat
- vi. Jordan Tate – ACOE did not state they were against preservation, but wanted preservation to be through a third party group.

- vii. Marybeth – because this is a wetland of special conditions, “all impacts to wetlands are considered unreasonable unless...” and one caveat is “expansion of an existing facility that cannot be relocated elsewhere.” This is the language that we would use to push this forward.
 - 1. This wetland is significantly documented in having rare species
- viii. Matt O’Brien – would the preference be to disturb the other side of the airport?
 - 1. Marybeth – We cannot make this determination at this time, we would need to review the area specifically
- ix. Kristen – the Type 2 habitat fits with what we would call the PPSO Barren Habitat
 - 1. My original work on that airport was focused in the solar farm area, but from the photos I would assume this is that natural habitat
 - 2. I would be willing to go out and confirm that as required
 - 3. The type 3 habitat is likely managed and prior to any development, was likely a rare community.
 - a. Matt – can you please clarify if this type is a rare community?
 - b. Kristen – because it is part of the larger continuous PPSO habitat, that this area is within the conditions that would support that community type
- x. Matt – Does MNAP (Kristen) have the availability to get to the site?
 - 1. Kristen – I couldn’t this week but likely could by the end of the month. I can coordinate with IFW this effort to make sure we get all the information we need.
 - 2. Matt – Can Jordan join this group?
 - 3. Kristen – Yes of course

3. Onsite Habitats:

- a. Pitch Pine Scrub Oak
- b. Grassland Habitat
 - i. Airport Mowing Regiments
 - 1. Airport mows the entire airport a minimum of 2 times per year
 - 2. Throughout the summer, if there is a lot of rain, he will mow again
 - 3. In the fall, he mows a second time
 - 4. In the Runway Safety Areas, he mows likely 3 to 5 times per year

- ii. IFW Bob – No clearing or construction between May 1 and August 1 and mowing limited to twice in that time period
 - 1. Phil – IFW will need to check the nesting timeframes; I do not believe anyone has done a springtime grasshopper sparrow investigation
 - a. This would take 2-3 visits by a licensed biologist to confirm presence
 - 2. Matt – would IFW lead that investigation?
 - a. Scott MaineDEP – we do have a good history of data for nesting and arrival of grasshopper sparrows; we would be able to do that study if that would help the project
 - iii. Matt O'Brien
 - 1. Because of the schedule, we need to propose mitigation earlier, prior to having data, then come the springtime we will identify the habitats more precisely
 - iv. Jed Merrow – the purpose of this is to identify habitat
 - 1. Is the RSA, which is mowed multiple times a year, a grassland habitat for grasshopper sparrow?
 - 2. IFW – we can get out next week or late winter when the snow is melted and decide if it does or does not have the desired habitat
 - v. Scott Lindsay – It's not just the mowing schedule, but the type of mowing that is done
 - 1. Ideally looking at 50% of the area up higher and mowing deck was 4" to 12", essentially limiting the low mowing areas
 - vi. Matt – It seems like IFW needs to get a site visit in next week and speak to the airport maintenance supervisor to confirm grassland habitats
- c. IWWH Habitat

4. Wetland Mitigation

- a. Matt – Can IFW speak to how this habitat is defined?
 - i. Marybeth – in terms of significant wildlife habitat rules specifically for wetland, Chapter 335 contains definition with IWWH and buffer of IWWH to incorporate in calculations
 - ii. IFW – IWWH contains wetland and a 250' buffer, and buffer cannot be eliminated;
 - 1. Chapter 310 defines what types of activities can be done in there and what impact mitigation can be done for those activities

- iii. Matt – asking for clarification that wetland delineation plus a 250' buffer is the IWWH habitat
 - 1. It includes the upland buffer
- iv. Matt – how do you mitigate for upland impacts?
 - 1. IFW – there is another in lieu fee for this
 - 2. MaineDEP – you should confirm the fee cost
- b. Fee is approximately \$433,517.84
 - i. \$5.13/SF and a 2x multiplier for 0.97 acres
 - ii. Matt – this is something that the project cannot afford
 - 1. We have the resources to mitigate, is there any possibility to do both preservation and in lieu fees?
 - 2. Even 10% is extremely high
 - 3. Likely will have \$4,000 in extra money in the end
 - iii. Marybeth – it's unusual to not do an in lieu fee, it seems like we are headed for a trainwreck. She can virtually guarantee that onsite preservation will not work.
- c. IFW – no new comments, just refer back to the formal agency comments
- d. MNAP – Kristen – I can do the site visit to get a better handle on what impacts might be there, and then we can have further dialog on what mitigation or minimization may be recommended

5. Project Schedule

- a. The environmental assessment will be drafted and issued in January
 - i. Public meeting held for this
 - ii. 30 day comment period
 - 1. February being the closure of this period
- b. We will formally address those comments and submit the document to FAA
 - i. MaineDEP and this project need to have an understanding of the mitigation being feasible
 - 1. Marybeth – we should have a specific meeting with ACOE and other agencies to confirm this
- c. Once FAA comments received, then MaineDEP permitting process begins
 - i. Marybeth – reminder that MaineDEP requires a meeting to be held
 - ii. Pre-submission meeting will be held
 - iii. Formal submission meeting
- d. Approvals in July – 120 days from submission
- e. After that, would pursue grants from FAA

Follow-up Items:

- [Jordan Tate coordinating with Kristen from MNAP on site visit in December](#)



Proposed Runway Extension and Mitigation Meeting #3 Notes

1. General:

1. Airport: Eastern Slope Regional Airport (IZG), Fryeburg, Maine
2. Date/time: February 5, 2024 - 2:00 pm to 3:30 pm
3. Location: Virtual Teams Meeting
4. Attendance:

<u>MaineDEP</u>	<u>MDIFW</u>	<u>MNAP</u>	<u>USACE</u>	<u>FAA</u>	<u>MaineDOT</u>	<u>MJ</u>
Marybeth Richardson	Ciara Wentworth	Kristen Puryear	Jami MacNeil	Cheryl Quaine	Tim LeSiege	Matt O'Brien
Alex Groblewski	Scott Lindsay	Lisa St. Hilaire		Jason Homiak		Jed Merrow
	Phil deMaynadier			Ralph Nicosia-Rusin		Sydney Seney
	John Perry					Jordan Tate

5. Project Title:

Runway 14-32 Extension: Alternative 3 – Runway 14 390' Extension and Runway 32 412' Extension

2. New Preferred Alternative

- a. Jordan Tate provided an overview of the split runway extension. 390 ft on Runway 14 end and 412 ft on Runway 32 end. Primary changes on impacts to protected resources are:
 1. Reduces wetland impacts from 0.97 acres from previous preferred alternative to 0.32 acres.
 - a. Marybeth Richardson asked if other wetlands will be impacted with this alternative. Jordan responded saying no, just the one wetland (wetland B) at the 32 end.
 2. This does result in impacts to the Round Pond outwash plain pondshore 100ft buffer, but not the habitat itself.
- b. Matt O'Brien: This alternative had been rejected during previous master planning due to the resources on the Runway 14 end. However, according

to wetland rules, impacts to the wetland on Runway 32 end cannot be permitted if another reasonable alternative exists. Therefore, this alternative had to be considered and due to reduced impacts to the IWWH wetland, this is the new preferred alternative.

- c. Tim LeSiege: Will there be a taxiway delta turnaround or will the taxiways be extended to the new runway ends, in accordance with FAA design guidelines? Matt answered that because of the limited budget, full parallel taxiways and/or turnarounds are not being considered at this time, nor in the near future. This project is only for the runway extension.

3. Onsite Habitats and Mitigation:

a. Pitch Pine Scrub Oak Barrens (PPSOB)

- i. Kristen Puryear: Updated shapefiles for PPSOB habitat on site were provided on morning of 2/5/24, which may alter the impacts and required mitigation.
- ii. Jordan: We haven't had time to look at those yet but will and adjust accordingly. Based on our previous shapefiles, impacts to PPSOB would be 2.4 acres and at an 8:1 ratio for mitigation would therefore require 19.2 acres of habitat preservation. The preferred location is around Davis Pond, and would be in perpetuity. An alternative location would be the PPSOB on the north side of the Runway 32 end. Proposed habitat preservation would serve as mitigation for impacts to rare natural community and rare lepidoptera species habitat.
- iii. Phillip deMaynadier: The PPSOB habitat on the Runway 14 end includes a high density of four different lepidoptera species (including sleepy duskywing) that is not typical in other PPSOB habitats, therefore, Phillip doesn't think that the 8:1 ratio total is sufficient for impacts to both the rare natural community and to rare species habitat.
- iv. Matt: Explained that the area of impact on the Runway 14 end has a powerline corridor and has already been impacted.
- v. Phillip responded that lower ratios may be appropriate in habitats that have already been compromised, perhaps to a 4:1 ratio, with an 8:1 ratio in areas that haven't been.

b. Grassland Habitat

- i. Grassland impacts are 0.47 acres of impact and net increase of 2.17 acres. Jon Perry asked for clarification of grassland impacts as he is new to the project, taking over for Bob Stratton who retired in January. Net increase primarily comes from conversion of PPSOB into grasslands.
- ii. Temporary impact of 10.79 of grasslands is associated with the borrow pits, and will be revegetated.

- iii. Phillip: there are concerns from MDIFW about the classification of temporary impacts, due to whether the revegetated habitat will be suitable for grasshopper sparrows.
 - iv. Jordan: That was mentioned during the site visit with the agencies in December. Are there BMPs we can follow and implement in bid documents, and perhaps perform monitoring to determine if revegetation is successful or not. The goal would be to give the Airport a chance before considering these impacts permanent.
 - v. Jed Merrow: MJ has experience with other Airports, including Nantucket and Martha's Vineyard, with sandplain grassland habitat management. We can implement similar strategies.
 - vi. Phillip: A monitoring effort with a permit condition can be considered for the borrow pit grassland impacts. IFW can see what guidance or BMPs they have.
- c. Round Pond Outwash Plain Pondshore
- i. Kristen: There is a 250 ft buffer associated with this habitat type that she thinks has been previously discussed in other projects at the airport, primarily with the obstruction removal after-the-fact permit. There may be a limitation on canopy removal (25%) within the 250ft buffer.
 - ii. Phillip: A 100ft vs 250ft buffer is a large discrepancy and needs to be confirmed.
 - iii. Jordan: Much of this area is within the recently submitted updated habitat management plan and includes vegetation management activities. Therefore, this area is already proposed for mowing and/or selective tree removal. Additionally, depending on mitigation for impacts to outwash plain pondshore buffer, if PPSOB area surrounding Davis Pond is preserved for mitigation, this would also be preserving the Davis Pond outwash plain pondshore community and buffer. Could this be sufficient as mitigation for this habitat type? Kristen said it was possible, she will have to review.
- d. Wetland/IWWH Habitat
- i. Impacts to Wetland B, a wetland of special significance due to its status as significant Inland Waterfowl and Wading Bird Habitat (IWWH), consist of 0.32 acres of fill.
 - ii. Impacts to the IWWH upland buffer total 1.80 acres.
 - iii. Mitigation options
 - 1. The preferred mitigation option for both Airport and agencies would be to pay the in-lieu fee of approximately \$150,276, which covers both impacts to the wetland and the regulatory upland buffer for IWWH.

2. The funding for the project is capped, and there is potential that with continuing inflation, the Airport may not be able to afford the fee once the project proceeds to the permitting/construction phase. If the Airport cannot cover the in-lieu fee, the second preferred mitigation option would be 100% on-site preservation of a portion of the wetland near the Airport boundary at a 20:1 ratio, which is approximately 6.40 acres.
 - a. During a conversation with the US Army Corps (USACE), Jami MacNeil said that USACE is willing to consider this option. There are challenges with this option, it is not the preferred method, and there may be difficulty proving the wetland's threat of being developed. Preserving a wetland that is already protected by law and a Site Law state permit makes this option less desirable. However, USACE cannot commit to a mitigation plan until the permitting process begins. The benefits of preserving this portion of the wetland include its similar functions and values, which Marybeth agreed may be difficult to find elsewhere due to the wetland's unique type and proximity of existing conservation land abutting the Airport. There is ability to preserve upland buffer and a larger portion of the wetland if necessary.
 - b. Jami asked if the ratio of preservation would need to be higher than 20:1 since this is a wetland of special significance and has a 2x multiplier for the in-lieu fee. Preservation needs to be of similar mitigation value to the fee. Determination of how to calculate credits for preservation would need to be determined in permitting.
 - c. There would also need to be an upland buffer preservation component for impacts to the IWWH upland buffer at the state level.
 - d. MaineDEP said they would consider this as an option, however, they also cannot commit to this mitigation strategy until the permitting phase where more evaluation would occur.
3. If both 1 and 2 above (i.e., mitigation solely via in-leu fee or solely via on-site preservation) are not considered viable options, then a combination with a reduced in-lieu fee and

reduced preservation ratio would be proposed for mitigation to wetland impacts and the upland buffer.

- iv. Jordan asked if, for the purpose of the EA, these options can be considered at least feasible, that the agencies are willing to consider them. Both USACE and MaineDEP agreed they are up for consideration. Jordan explained that these options will be listed in detail in the Draft EA and state that mitigation coordination is ongoing.

e. Tree Removal

- i. Jordan explained that there will be approximately 3.40 acres of tree removal throughout the limits of disturbance, and MJ has consulted with USFWS and received a Not Likely to Adversely Affect determination in regards to northern long-eared bats.
- ii. Matt showed a figure of several tree obstructions that would be removed from the Runway 14 approach so the agencies are aware of approximate locations.
- iii. John asked if this would be through mechanical means or chainsaws. Matt answered saying that it's assumed existing tote roads can be used to access these obstructions, and single tree removal with mechanical equipment is expected. However, if a tree is not accessible via existing tote roads, hand removal methods (e.g. chainsaws) may be necessary.
- iv. Kristen asked if Matt can provide the figure showing tree removal locations, which he agreed to.

4. Project Schedule

- a. The draft environmental assessment was provided to the FAA on January 25th for internal review. They estimated three weeks to provide comments.
- b. MJ will make applicable revisions within one week after receiving comments from FAA, after which period a public notice will be issued.
- c. The Draft EA will be published for public review and comments for a 30-day period. During this time, a public information meeting will be held.
- d. We will formally address those comments and submit the draft Final EA with responses to comments to FAA.
- e. FAA will determine either that the project will not result in significant impacts to the human environment or that the project would have significant impacts and an environmental impact statement is required. The Final EA is then published with the FAA determination.
- f. John asked if updated comments should be provided by the agencies and when those would be needed. Jordan explained that if we can get updated resource letters within the next few weeks, they will be included in the Draft EA released to the public which would be preferred.

Follow-up Items:

- MJ to provide updated Limits of Disturbance shapefiles and obstruction removal figure to the agencies for their reviews.
- MJ and agencies to determine what buffer distance is applicable to Round Pond and/or the associated outwash plain pondshore habitat.
- IFW to see what guidance they have for sandplain grassland establishment.

Jordan Tate

From: Macneil, Jami E CIV USARMY USACE (USA) <Jami.E.Macneil@usace.army.mil>
Sent: Monday, January 29, 2024 11:05 AM
To: Jordan Tate
Cc: Matthew T. O'Brien; Jed S. Merrow; Sydney Seney
Subject: Eastern Slope Regional Airport, Fryeburg

Some people who received this message don't often get email from jami.e.macneil@usace.army.mil. [Learn why this is important](#)

Good Morning,

Thank you for the pre-application meeting last week regarding the proposed runway extension at the Eastern Slope Regional Airport in Fryeburg. I understand the preliminary proposal for compensatory mitigation consists of on-site preservation of wetlands, at a ratio of at least 20:1. As you know, the Corps' general preference is for in-lieu fee (per [33 CFR § 332.3\(b\)\(2\)-\(6\)](#)). However, we will consider permittee-responsible mitigation, including preservation, on a case-by-case basis.

The Corps would need to review a full mitigation proposal to determine that the compensation plan is sufficient, and the mitigation plan must include a survey of the proposed preservation area, including a functions and values assessment that we can compare against the functions and values of the wetland areas proposed for alteration. However, based on the preliminary information available, it does appear there is enough undeveloped wetland area on the project parcel to meet and exceed the 20:1 preservation ratio, and the wetland may provide important functions including wildlife habitat. Further, it appears there is existing conserved land nearby. The Corps sees it as a positive if the proposed preservation area will abut and enlarge an existing conserved area. The Corps would also see it as a positive if any upland buffer around the wetlands can be included in the preservation area. And as we discussed, the preserved area would need a third-party holder, which you indicated is feasible.

One of the challenges with on-site preservation is making the case that the preservation area is under plausible threat of development, such that the preservation plan provides an additive benefit. That would need to be a part of the narrative in the mitigation proposal submitted to the Corps.

In consideration of these factors, the preliminary plan for on-site preservation is one that the Corps can seriously consider, provided the necessary details (as noted above and more fully described in the [2020 Compensatory Mitigation SOP](#)) are included in the application we eventually receive.

Please let me know if you have any questions.

Best,
Jami

Jami MacNeil (she/her)
Project Manager
U.S. Army Corps of Engineers
New England District – Regulatory Division
Maine Project Office
978-778-6497

Jordan Tate

From: Groblewski, Alex <Alex.Groblewski@maine.gov>
Sent: Tuesday, February 13, 2024 12:24 PM
To: Jordan Tate; Matthew T. O'Brien
Cc: Richardson, Marybeth; Wentworth, Ciara; Macneil, Jami E CIV USARMY USACE (USA); Perry, John
Subject: RE: IZG Mitigation Meeting #3 Notes, Figures, and Shapefiles

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jordan,

Thank you for presenting last week.

As presented, the project proposes 0.32 acres of impact to a Wetland of Special Significance (WOSS) and 1.80 acres of impact to Inland Wading Bird and Waterfowl Habitat. This exceeds an alteration of 500 square feet in a freshwater wetland of special significance (WOSS), the threshold for which compensation is typically required. The types of compensation, as listed in Chapter 310(5)(C)(4) (Wetlands and Waterbodies Protection) are listed below.

The mitigation presented, depicted on the plan sheet entitled, "Preferred Alternative Mitigation Plan," identifies the preservation of 6.40 acres of the impacted WOSS as preferred. While this option is preservation of existing wetlands, identified as 4(C) below, the information provided to the Department at this time does not demonstrate that this is a site that might otherwise be degraded by unregulated activity, criteria that is reflected in the compensation standards for Chapter 335 (Significant Wildlife Habitat) as well.

The site is already subject to the Site Location of Development Act and is further protected by the Natural Resource Protection Act regulations in Chapter 310 and Chapter 335; any new activity would require permitting. With this consideration, the preservation plan presented is not a suitable type of compensation because there is not an identifiable potential for unregulated activity.

I apologize if this had been presented, but is there information on other sites that have been considered for preservation or other types of compensation?

"(4) Types of compensation. Compensation may occur in the form of:

- (a) Restoration of previously degraded wetlands;
- (b) Enhancement of existing wetlands;
- (c) Preservation of existing wetlands or adjacent uplands where the site to be preserved provides significant wetland functions and might otherwise be degraded by unregulated activity; or
- (d) Creation of wetland from upland.

More than one method of compensation may be allowed on a single project. Preference is generally given to restoration projects that will off-set lost functions within, or in close proximity to, the affected wetland. However, other types of compensation may be allowed by the department if the result is an equal or higher overall net benefit for wetland systems."

Land Trusts:

- [Greater Lovell Land Trust](#)
- [Western Foothills Land Trust](#)
- [Trust for Public Land](#)
- [Upper Saco Valley Land Trust](#)

Best,
 Alex Groblewski
 she/her
 Environmental Specialist, Southern Maine
 Maine Department of Environmental Protection, Bureau of Land Resources
 (207)699-9352
www.maine.gov/dep

Correspondence to and from this office is considered a public record and may be subject to a request under the Maine Freedom of Access Act.

From: Jordan Tate <jtate@mjinc.com>
Sent: Friday, February 9, 2024 11:59 AM
To: Groblewski, Alex <Alex.Groblewski@maine.gov>; deMaynadier, Phillip <Phillip.deMaynadier@maine.gov>; Wentworth, Ciara <Ciara.Wentworth@maine.gov>; Puryear, Kristen <Kristen.Puryear@maine.gov>; St.Hilaire, Lisa <Lisa.St.Hilaire@maine.gov>; Lindsay, Scott <Scott.Lindsay@maine.gov>; Matthew T. O'Brien <mobrien@mjinc.com>; Macneil, Jami E CIV USARMY USACE (USA) <Jami.E.Macneil@usace.army.mil>; Quaine, Cheryl J (FAA) <Cheryl.J.Quaine@faa.gov>; LeSiege, Tim <Tim.LeSiege@maine.gov>; Robinson, Emily <Emily.Robinson@maine.gov>; Lambert, Alan D <Alan.D.Lambert@maine.gov>; Perry, John <John.Perry@maine.gov>; Nicosia-Rusin, Ralph (FAA) <ralph.nicosia-rusin@faa.gov>; Allison Navia <info@raivan.co>; Jed S. Merrow <jmerrow@mjinc.com>; Sydney Seney <sseney@mjinc.com>; Richardson, Marybeth <Marybeth.Richardson@maine.gov>
Subject: IZG Mitigation Meeting #3 Notes, Figures, and Shapefiles

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello all,

Thank you again for meeting with us on Monday to discuss the updated preferred alternative, mitigation options, and schedule for the IZG runway extension EA.

Attached please find the meeting notes, the figures that were shown during the meeting, and the limits of disturbance for the split runway extension. For any updated comments from the agencies, please provide them no later than February 19th for them to be included in the Draft EA to be distributed to the public. The meeting notes include a correction on the process for the EA, which includes 1) the draft to the public with a 30-day comment period and public information meeting 2) a revised EA with responses to comments will be submitted to FAA 3) FAA will make a federal determination that will then be published with the Final EA.

Jordan Tate



JORDAN TATE
 ASSISTANT ENVIRONMENTAL ANALYST

207-869-5419

JTATE@MJINC.COM

WWW.MJINC.COM

Jordan Tate

From: Macneil, Jami E CIV USARMY USACE (USA) <Jami.E.Macneil@usace.army.mil>
Sent: Wednesday, February 14, 2024 12:03 PM
To: Jordan Tate; Matthew T. O'Brien
Cc: Groblewski, Alex; Richardson, Marybeth; Wentworth, Ciara; Perry, John; Quaine, Cheryl J (FAA); St.Hilaire, Lisa
Subject: RE: IZG Mitigation Meeting #3 Notes, Figures, and Shapefiles
Attachments: Compensatory-Mitigation-SOP-2020.pdf; Eastern Slope Regional Airport, Fryeburg

Some people who received this message don't often get email from jami.e.macneil@usace.army.mil. [Learn why this is important](#)

Hi Jordan,

Thank you for the meeting and the follow-up notes and materials.

The Corps echoes the DEP's interest in a thorough investigation of whether there are opportunities for wetland restoration, enhancement, creation, or even preservation at off-site locations in the watershed that may be under a stronger threat or would provide more of an additive benefit than on-site preservation. Perhaps some Town-owned land other than the airport parcel would meet this purpose.

If the above is not possible and has been thoroughly addressed, the Corps will consider on-site preservation. However, with regards to the property being under threat, I want to bring up a footnote in Section 2f of the Corps' 2020 Compensatory Mitigation SOP, which states "According to [Regulatory Guidance Letter 02-02](#): 'The existence of a demonstrable threat will be based on clear evidence of destructive land use changes that are consistent with local and regional (i.e., watershed) land use trends, and that are not the consequence of actions under the permit applicant's control.'" Taylor Bell, the Corps' lead on mitigation issues, clarified for me that this does not preclude all on-site preservation, but the proposal must highlight a different threat to the area other than expansion/development by the applicant.

The SOP does allow the Corps to exercise flexibility in our assessment of a mitigation proposal, but all effort should be made to meet the criteria laid out. And as Alex pointed out, a combination of compensation methods could also be acceptable.

Best,
Jami

Jami MacNeil (she/her)
Project Manager
U.S. Army Corps of Engineers
New England District – Regulatory Division
Maine Project Office
978-778-6497

From: Groblewski, Alex <Alex.Groblewski@maine.gov>
Sent: Tuesday, February 13, 2024 12:24 PM
To: Jordan Tate <jtate@mjinc.com>; Matthew T. O'Brien <mobrien@mjinc.com>
Cc: Richardson, Marybeth <Marybeth.Richardson@maine.gov>; Wentworth, Ciara <Ciara.Wentworth@maine.gov>; Macneil, Jami E CIV USARMY USACE (USA) <Jami.E.Macneil@usace.army.mil>; Perry, John <John.Perry@maine.gov>
Subject: [Non-DoD Source] RE: IZG Mitigation Meeting #3 Notes, Figures, and Shapefiles

Appendix C

Runway Extension Habitat Assessment

HABITAT ASSESSMENT TECHNICAL MEMO

**EASTERN SLOPE REGIONAL AIRPORT (IZG)
PROPOSED RUNWAY EXTENSION
TOWN OF FRYEBURG
OXFORD COUNTY, MAINE**

DECEMBER 1, 2023

PREPARED FOR

**EASTERN SLOPE AIRPORT AUTHORITY (ESAA)
210 LYMAN DRIVE
FRYEBURG, ME 04037**

PREPARED BY



McFarland Johnson

5 Depot Street, Suite 25
Freeport, Maine 04032
PH: (207) 869-5419

**HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE**

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HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

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HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

1 INTRODUCTION

McFarland-Johnson, Inc. (MJ) was retained by Eastern Slope Airport Authority (ESAA), to provide environmental consulting services for the characterization of existing habitats and delineation of wetlands for their proposed runway extension project at Eastern Slope Regional Airport (IZG) in Fryeburg, Maine (Figure 1).

This Habitat Assessment Technical Memo has been prepared to document the potentially regulated habitat types in regard to rare natural communities and endangered, threatened, or species of special concern (ETSC) habitats within the study area, which encompasses approximately 43 acres as shown on the site figures.

2 METHODS

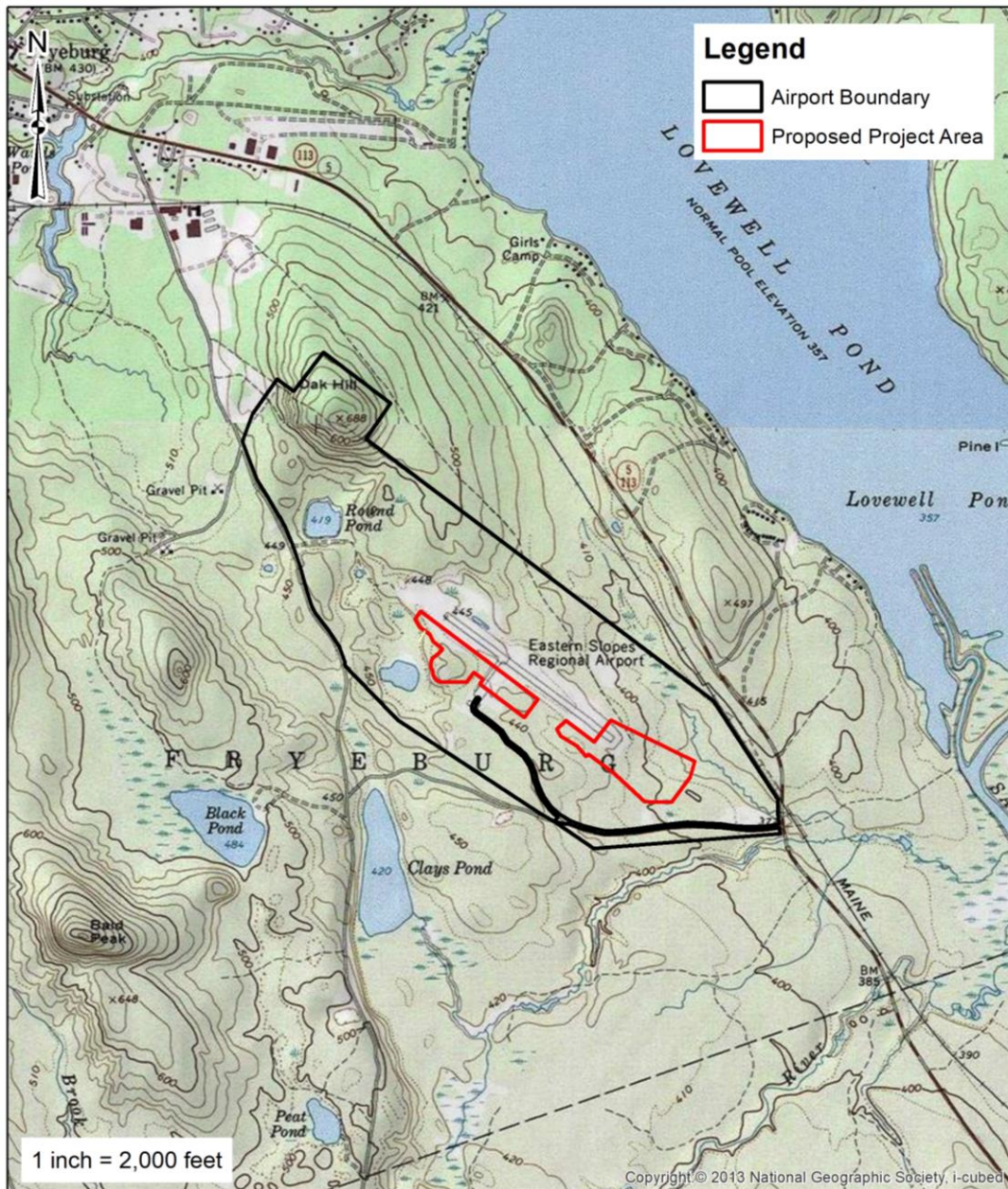
2.1 AGENCY RESOURCE INFORMATION

Prior to the field delineations of the Project Study Area (PSA), aerial photographs and various mapping resources were reviewed, including the following:

- a) Geological Survey (USGS) Topographic Map (SGS 7.5 Minute Quadrangle) (Figure 1);
- b) Aerial Location Map (Figure 2);
- c) National Wetlands Inventory (NWI) Map (Figure 3);
- d) Maine Department of Inland Fisheries and Wildlife (MDIFW) Environmental Review Resource Map Tool (Figure 4); and
- e) Maine Natural Areas Program (MNAP) rare plants and natural communities shapefile provided by Kristen Puryear via email on June 6, 2022 (Figure 5).

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 1: USGS Location Map



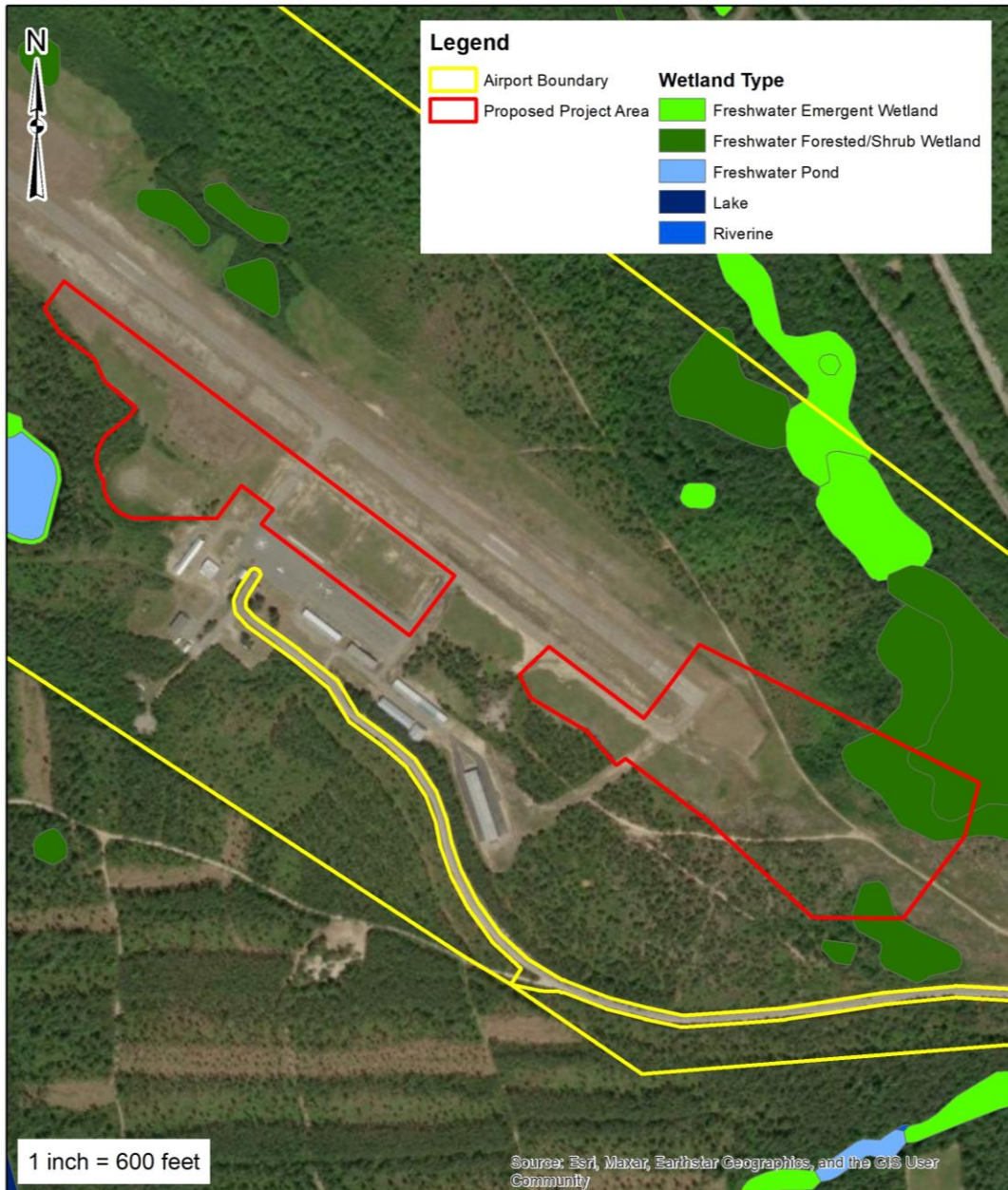
HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 2: Aerial Map



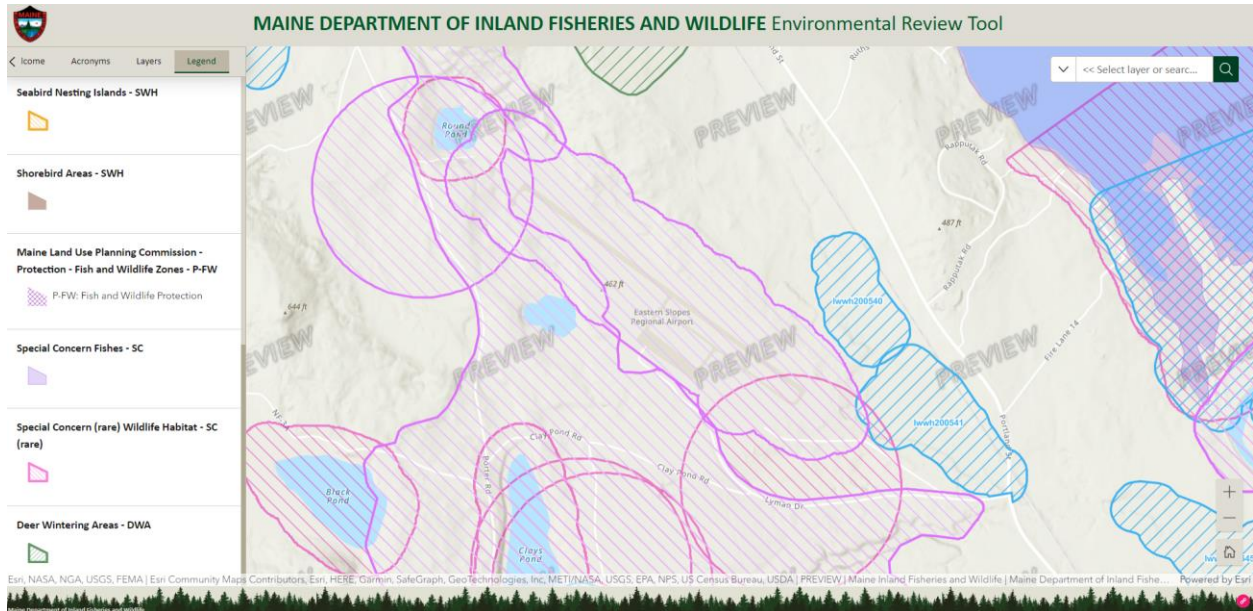
HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 3: NWI Mapped Wetlands



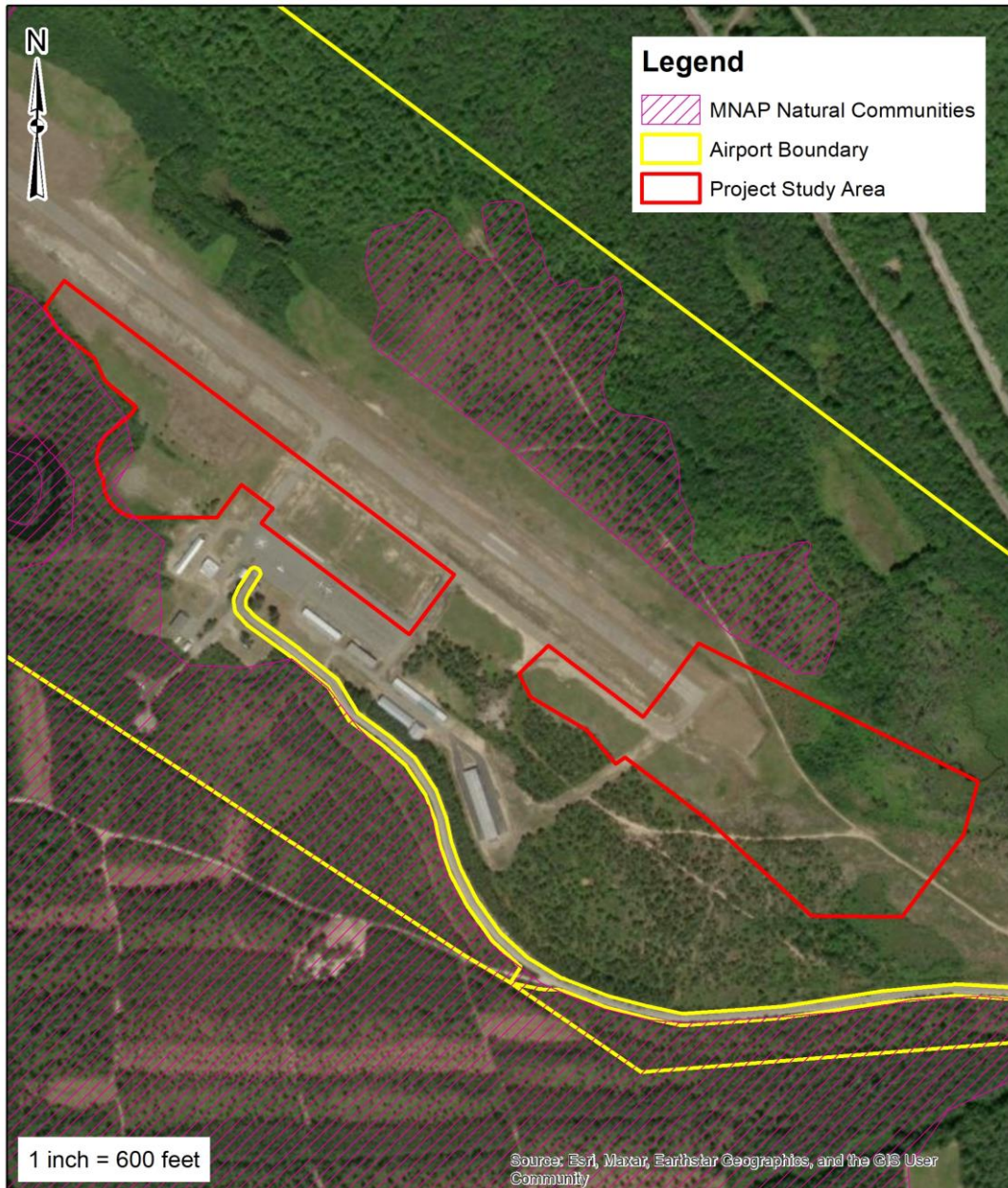
HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 4: MDIFW Environmental Review Tool



HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 5: MNAP Rare Natural Communities



HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

2.2 FIELD DATA COLLECTION

The field visit of the 43-acre PSA was completed by MJ on September 25-27, 2023.

The wetland delineation was conducted through field investigations of vegetation, soils and hydrology in accordance with the United States Army Corps of Engineers (USACE) protocols outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 USACE Manual), and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Regional Supplement), dated January 2012. The USACE ordinary high water (OHW) mark for any surface waters located within the PSA were field delineated in accordance with the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328 (33 CFR 328).

The Pitch Pine – Scrub Oak Barren (PPSOB) community factsheet and the species profiles for the state endangered grasshopper sparrow (*Ammodramus savannarum*) and Species of Special Concern eastern buckmoth (*Hemileuca maia maia*) were used as guidance for determining potential habitat boundaries and/or suitable habitat conditions. Two other state-listed Lepidoptera have also been identified nearby that utilize similar habitat and include the twilight moth (*Lycia rachelae*) and pine barrens zanclognatha (*Zanclognatha martha*). Presence of the host plant species for the ETSC Lepidoptera species were noted, and are shown below in Table 1.

Table 1: ETSC Host Plants

<u>Species</u>	<u>Host Plant</u>
Eastern Buckmoth	Scrub Oak
Twilight Moth	Apples, birches, chokecherries, elms, poplars, willows, and other trees
Pine Barrens Zanclognatha	Pitch Pine

All boundaries were recorded using a hand-held Trimble Nomad GPS unit.

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

3 RESULTS

3.1 SURFACE WATERS

One (1) freshwater, perennial, unconsolidated bottom stream was delineated within the PSA. The stream bisected Wetland B and continued to the southeast, outside of the PSA and roughly parallel to the Airport boundary. The stream had an approximate average width of 12 feet with a peat substrate. The stream is shown on Figure 6.



Photo 1: Stream bisecting Wetland B, facing east.

3.2 WETLANDS

Two (2) wetlands, identified as Wetlands A and B, with an approximate total delineated area of 5.25 acres, were identified within the 43-acre PSA. Wetlands are shown on Figure 6.

Wetland A

Approximately 0.59 acres of Wetland A was delineated. Wetland A is a palustrine shrub-scrub (PSS) wetland located in the southeastern portion of the PSA. Dominant species in this wetland included gray birch (*Betula populifolia*), mountain holly (*Ilex mucronata*), rhodora (*Rhododendron canadense*), northern wild raisin (*Viburnum nudum*),

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

and leather leaf (*Chamaedaphne calyculata*). Soils within this wetland were peat and muck in texture, with saturation at the surface and a high water table.



Photo 2: Wetland A, facing southeast.

Wetland B

Approximately 4.66 acres of Wetland B was delineated. Wetland B is a palustrine forested (PFO)/palustrine scrub-shrub (PSS) wetland complex located southeast of the runway and extending to the Airport boundary. Dominant species in this wetland within the scrub-shrub portions are similar to those of Wetland A, and within the forested portions included balsam fir (*Abies balsamea*), red maple (*Acer rubrum*), spinulose wood fern (*Dryopteris carthusiana*) and sweet woodreed (*Cinna arundinacea*). Soils within this wetland were peat and muck in texture, with saturation at the surface and a high water table.

HABITAT ASSESSMENT TECHNICAL MEMO
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Photo 3: PFO section of Wetland B, facing north.



Photo 4: PSS section of Wetland B with snags, facing northeast.

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE



Photo 5: PSS section of Wetland B, facing east.

3.3 HABITAT CHARACTERIZATION

This section describes the three different types of upland habitats identified that may contain rare natural communities or be considered potential habitat for ETSC species. Areas that were not considered potential rare natural communities or ETSC habitats were not delineated. The different habitat areas are shown on Figures 6.

Type 1

Habitat Type 1 consists of managed grassland habitat consisting of maintained airport grounds regularly mowed by mechanical means, which accounts for the majority of the study area at approximately 18.5 acres. These managed grassland areas are predominantly well-drained sandy soils comprised of both warm and cold season grasses with intermixed forbs.

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
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Photo 6: Grass area east of runway, facing southeast.



Photo 7: Grass area south of runway, facing northeast.



Photo 8: Grass area between taxiway and runway, facing northwest.



Photo 9: Grass area north terminal apron, facing north.

Type 2

Habitat Type 2 is an upland forested habitat. The canopy of this habitat type is dominated by pitch pine (*Pinus rigida*) and gray birch (*Betula populifolia*) and to a lesser extent, white pine (*Pinus strobus*). The midstory consists primarily of scrub oak (*Quercus ilicifolia*) and gray birch and pitch pine saplings. Prominent species in the understory include lowbush blueberry (*Vaccinium angustifolium*), bracken fern (*Pteridium aquilinum*), sweet fern (*Comptonia peregrina*), eastern spicy wintergreen (*Gaultheria procumbens*), woodland sedge (*Carex spp.*), and reindeer lichen (*Cladonia spp.*). This habitat type accounted for approximately 7.2 acres of the study area.

HABITAT ASSESSMENT TECHNICAL MEMO
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Photo 10: Forested area, 25-30ft canopy height, west of the taxiway, facing east.



Photo 11: Forested area, 15-20ft canopy height, southwest of the taxiway, facing west.



Photo 12: East of the runway, canopy height <15ft, facing east.



Photo 13: Forested area north of the terminal, canopy height approximately 25ft, facing north.

Type 3

Habitat Type 3 was predominantly shrubland areas located within the Runway 32 approach, with the tallest shrubs of gray birch reaching approximately 10 to 12 feet tall. Vegetation within this habitat was similar to that of Habitat Type 2, but lacked pitch pine. This habitat type accounted for approximately 3.08 acres of the study area.

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE



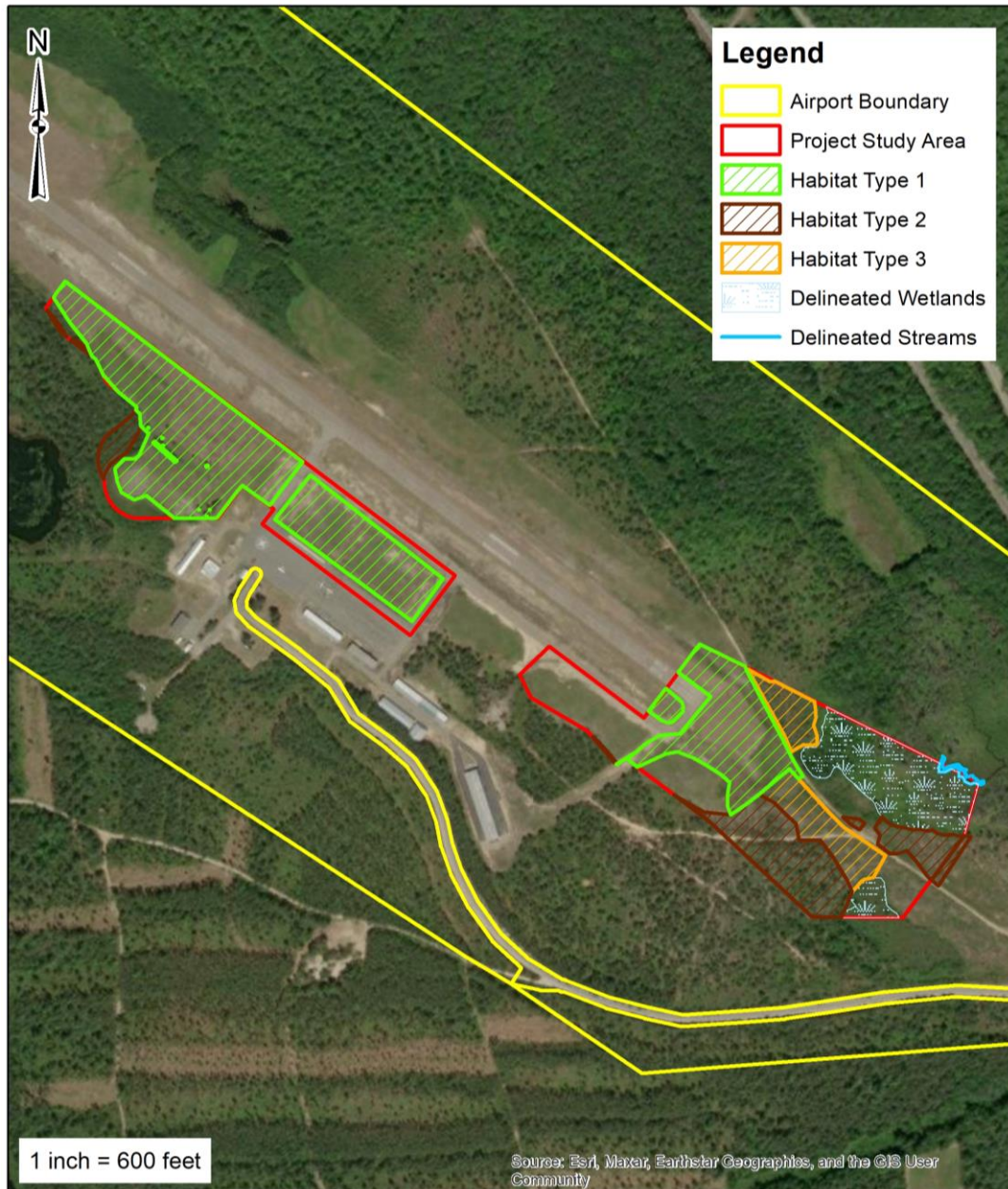
Photo 14: Shrub area within runway approach, facing northwest.



Photo 15: Shrub area east of the runway, facing east.

HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

Figure 6: Habitat Assemblages

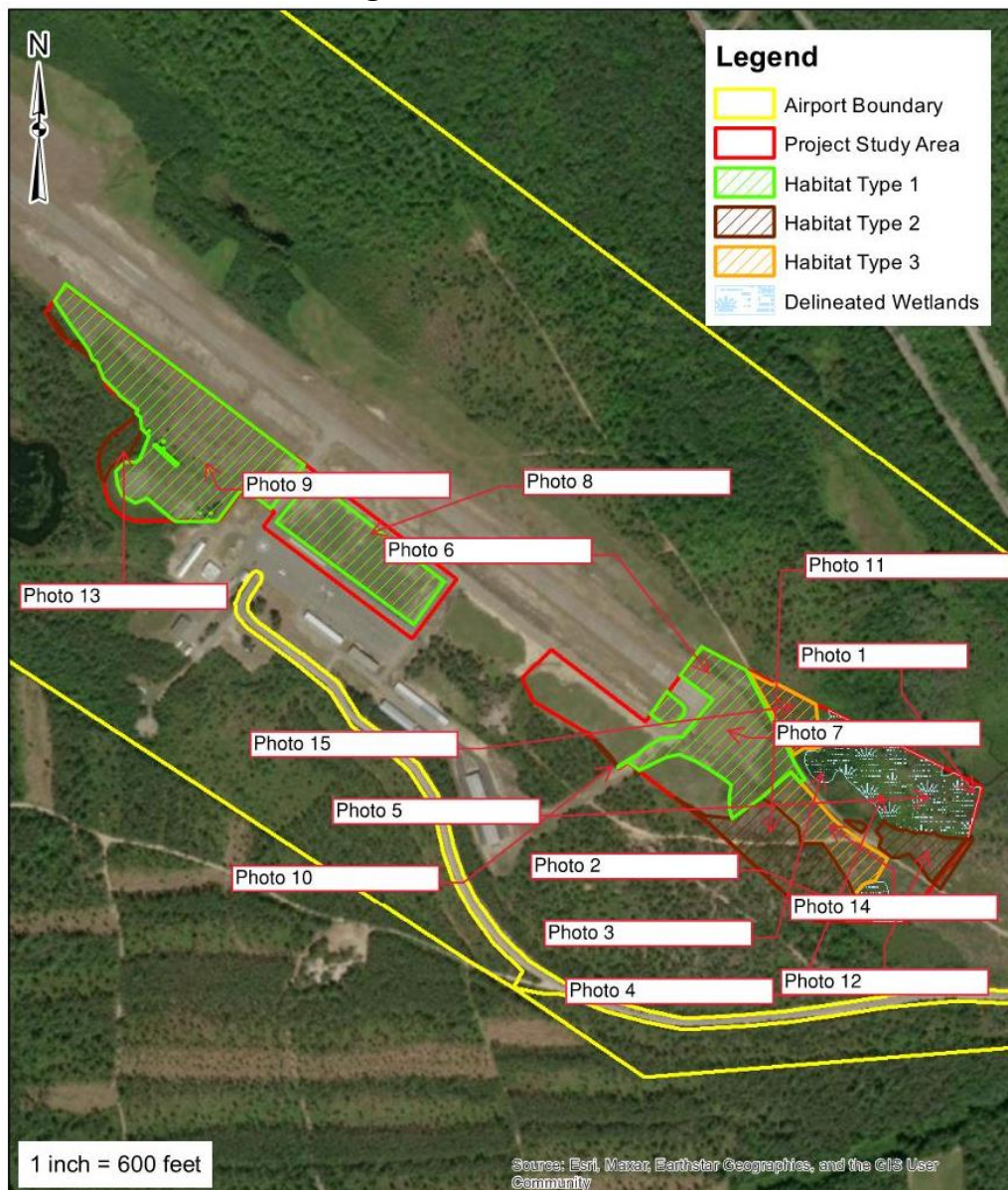


HABITAT ASSESSMENT TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

4 SUMMARY

Based on review of mapping resources and field surveys, MJ presents the following information to be reviewed by MNAP, MDIFW, and MDEP to make a determination on whether these areas are considered rare natural communities and/or suitable habitat for ETSC species. A figure showing the photo locations is shown below on Figure 7.

Figure 7: Photo Locations



Appendix D

Wetland Delineation Technical Memo

WETLANDS AND SURFACE WATERS TECHNICAL MEMO

EASTERN SLOPE REGIONAL AIRPORT (IZG)

PROPOSED RUNWAY EXTENSION

TOWN OF FRYEBURG

OXFORD COUNTY, MAINE

JANUARY 2024

PREPARED FOR

EASTERN SLOPE AIRPORT AUTHORITY (ESAA)

210 LYMAN DRIVE

FRYEBURG, ME 04037

PREPARED BY



5 Depot Street, Suite 25
Freeport, Maine 04032

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

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WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
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Appendices

Appendix A- Site Figures

Appendix B-NRCS Web Soil Survey Report

Appendix C- Wetland and Surface Water Delineation Figure

Appendix D- Wetland Determination Data Forms

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

1 INTRODUCTION

McFarland-Johnson, Inc. (MJ) was retained by Eastern Slope Airport Authority (ESAA), to provide environmental consulting services for the delineation of wetlands and surface waters for their proposed runway extension project at Eastern Slope Regional Airport (IZG) in Fryeburg, Maine (Figure 1).

This Wetlands and Surface Waters Technical Memo has been prepared to document the wetland and surface water boundaries located within the study area, which encompasses approximately 43 acres as shown on the attached site figures (Appendix A) and Wetland and Surface Waters Delineation Figure (Appendix C).

2 METHODS

2.1 AGENCY RESOURCE INFORMATION

Prior to the field delineations of the PSA, aerial photographs and various mapping resources were reviewed, including the following:

- a) Geological Survey (USGS) Topographic Map (Newark USGS 7.5 Minute Quadrangle) (Figure 1);
- b) Aerial Location Map (Figure 2);
- c) National Wetlands Inventory (NWI) Map (Figure 3);
- d) Federal Emergency Management Agency (FEMA) Floodplain Map (Figure 4; and
- e) Web Soil Survey Map provided by the Natural Resources Conservation Service (NRCS) (Appendix B).

2.2 FIELD DATA COLLECTION

The wetland and surface water delineations of the 43-acre PSA were completed by MJ on September 25-27, 2023.

The wetland delineation was conducted through field investigations of vegetation, soils and hydrology in accordance with the United States Army Corps of Engineers (USACE) protocols outlined in the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

USACE Manual), and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Northcentral and Northeast Region* (Regional Supplement), dated January 2012.

The USACE ordinary high water (OHW) mark for any surface waters located within the PSA were field delineated in accordance with the definitional criteria as presented in Title 33, Code of Federal Regulations, Part 328 (33 CFR 328).

The wetland and surface water boundaries were recorded using a hand-held Trimble Nomad GPS unit. USACE Wetland Determination Data Forms were recorded to the document the wetlands (Appendix D). Representative photographs of the wetlands were also collected and are shown below. Further descriptions on the field criteria and methods used to identify wetlands within the PSA are described in the subsequent subsections.

3 RESULTS

3.1 AGENCY RESOURCES INFORMATION

Review of the USGS topographic mapping indicated the potential for wetlands and a surface water to exist within the PSA.

NWI wetland mapping showed two mapped wetlands within the PSA, one consisting of: one large wetland complex to the southeast of the runway including a freshwater forested and shrub-scrub wetland adjacent to a freshwater perennial stream, and a freshwater forested and shrub-scrub wetland to the south of the runway.

Review of the FEMA Floodplain Map indicated an area with 0.2% chance of annual flood hazard (Zone X) at the southeastern most corner of the study area associated with a stream.

Based on soils information provided by the NRCS, soils mapped within the PSA include Adams loamy sand, Croghan loamy fine sand, and muck soils (hydric).

Soils Mapped within 43-acre PSA			
Map unit symbol	Map unit name	Hydric Rating	Acres in PSA

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
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AdA	Adams loamy sand, 0 to 3 percent slopes	No	25.8
AdB	Adams loamy sand, 3 to 8 percent slopes	No	9.6
AdC	Adams loamy sand, 8 to 15 percent slopes	No	0.7
CrB	Croghan loamy fine sand, 3 to 8 percent slopes	No	1.7
Va	Vassalboro mucky peat	Yes	0.4
Wk	Wonsqueak muck, 0 to 2 percent slopes	Yes	3.3

3.2 SURFACE WATERS

One (1) freshwater, perennial, unconsolidated bottom stream was delineated within the PSA. The stream bisected Wetland B and continued to the southeast, outside of the PSA and roughly parallel to the Airport boundary. The stream had an approximate average width of 12 feet with a peat substrate.



Photo 1: Stream flowing through Wetland B, facing east.

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

3.3 WETLANDS

Two (2) wetlands, identified as Wetlands A and B, with an approximate total delineated area of 5.25 acres, were identified within the 43-acre PSA. The wetland boundaries are as identified on the Wetland and Surface Water Delineation Figure (Appendix C). Additional information on the delineated wetlands can be found in Appendix D (Wetland Determination Data Forms).

Wetland A

Approximately 0.59 acres of Wetland A was delineated. Wetland A is a palustrine shrub-scrub (PSS) wetland located in the southeastern portion of the PSA. Dominant species in this wetland included gray birch (*Betula populifolia*), mountain holly (*Ilex mucronata*), rhodora (*Rhododendron canadense*), northern wild raisin (*Viburnum nudum*), and leather leaf (*Chamaedaphne calyculata*). Soils within this wetland were peat and muck in texture, with saturation at the surface and a high water table.



Photo 2: Wetland A, facing southeast.

Wetland B

Approximately 4.66 acres of Wetland B was delineated. Wetland B is a palustrine forested (PFO)/palustrine shrub-scrub (PSS) wetland complex located southeast of the runway and extends to the Airport boundary. Dominant species in this wetland within the shrub-scrub portions are similar to those of Wetland A, and within the forested

WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

portions included balsam fir (*Abies balsamea*), red maple (*Acer rubrum*), spinulose wood fern (*Dryopteris carthusiana*) and sweet woodreed (*Cinna arundinacea*). Soils within this wetland were peat and muck in texture, with saturation at the surface and a high water table.



Photo 3: PFO Portion of Wetland B, facing northeast.



Photo 4: PSS portion of Wetland B with snags, facing northeast.



Photo 5: PSS portion of Wetland B near stream, facing northeast.

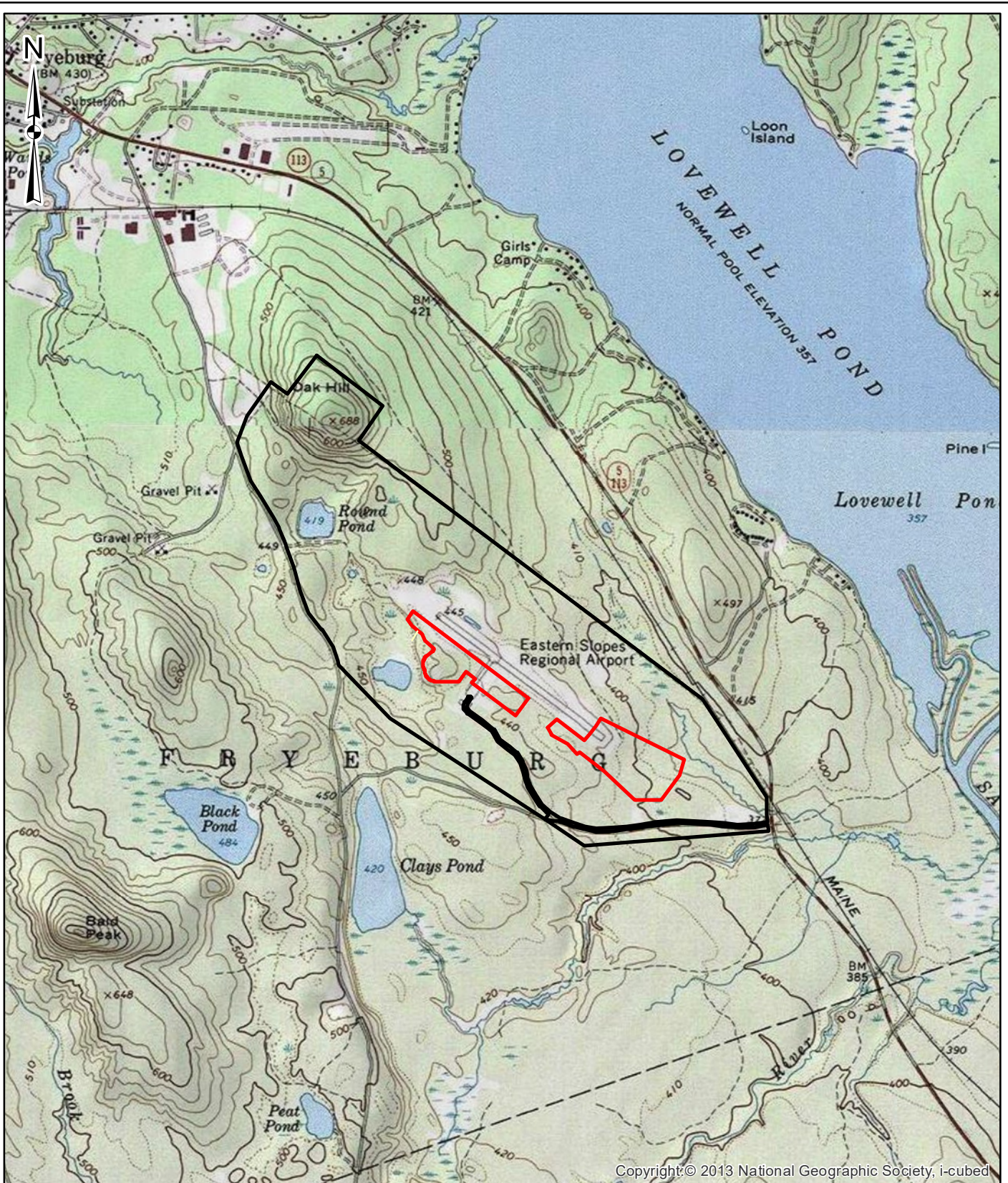
WETLANDS AND SURFACE WATERS TECHNICAL MEMO
IZG RUNWAY EXTENSION
TOWN OF FRYEBURG, OXFORD COUNTY, MAINE

4 SUMMARY

Based on agency resources review and field surveys, MJ presents the following interpretations on the wetlands and waterways delineated within and immediately adjacent to the 43-acre PSA.

- Wetland A is a PSS1E wetland that continues south beyond the PSA.
- Wetland B is a PFO1E/PSS1E wetland complex that continues east outside of the PSA. Wetland B has a direct surficial connection to the unnamed stream, Stream 1, that was delineated, which is a tributary to the Saco River.

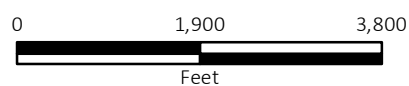
The wetland boundaries presented in this report and accompanying drawings are as determined by MJ and dependent upon review by the MDEP and/or USACE for an official determination should permits be required.



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Legend

- Airport Boundary
- Proposed Project Area



EASTERN SLOPE REGIONAL AIRPORT

RUNWAY 14/32 EXTENSION

LOCATION MAP

SCALE :
1" = 2,000'

DATE :
OCTOBER 2023

FIGURE :
1



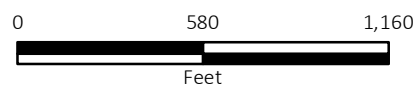


Legend

-  Airport Boundary
-  Proposed Project Area

1 inch = 600 feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



EASTERN SLOPE REGIONAL AIRPORT

RUNWAY 14/32 EXTENSION

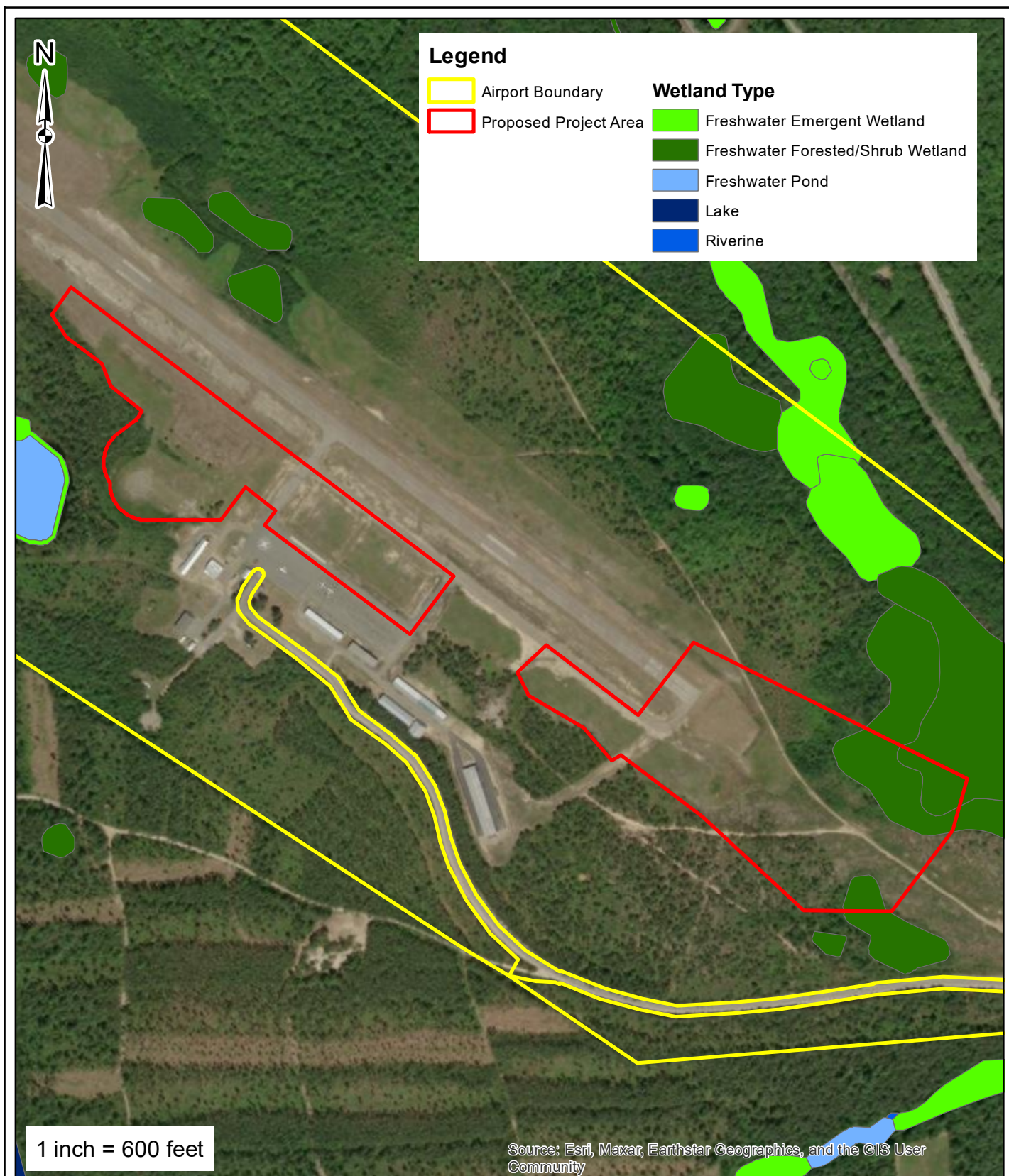
AERIAL MAP

SCALE :
1" = 600'

DATE :
JANUARY 2024

FIGURE :
2





0 580 1,160
Feet

EASTERN SLOPE REGIONAL AIRPORT RUNWAY 14/32 EXTENSION

NWI WETLANDS

SCALE :
1" = 600'

DATE :
OCTOBER 2023

FIGURE :
1



AREA OF MINIMAL FLOOD HAZARD Zone X

Legend

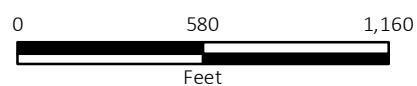
-  Proposed Project Area
-  Airport Boundary

Flood Hazard Zones

-  0.2% Annual Chance Flood Hazard

1 inch = 600 feet

Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community



EASTERN SLOPE REGIONAL AIRPORT

RUNWAY 14/32 EXTENSION

REGULATORY FLOODPLAINS AND FLOODWAYS

SCALE :
1" = 600'

DATE :
JANUARY 2024

FIGURE :
4





United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for **Oxford County Area, Maine**

IZG Runway Extension



October 17, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

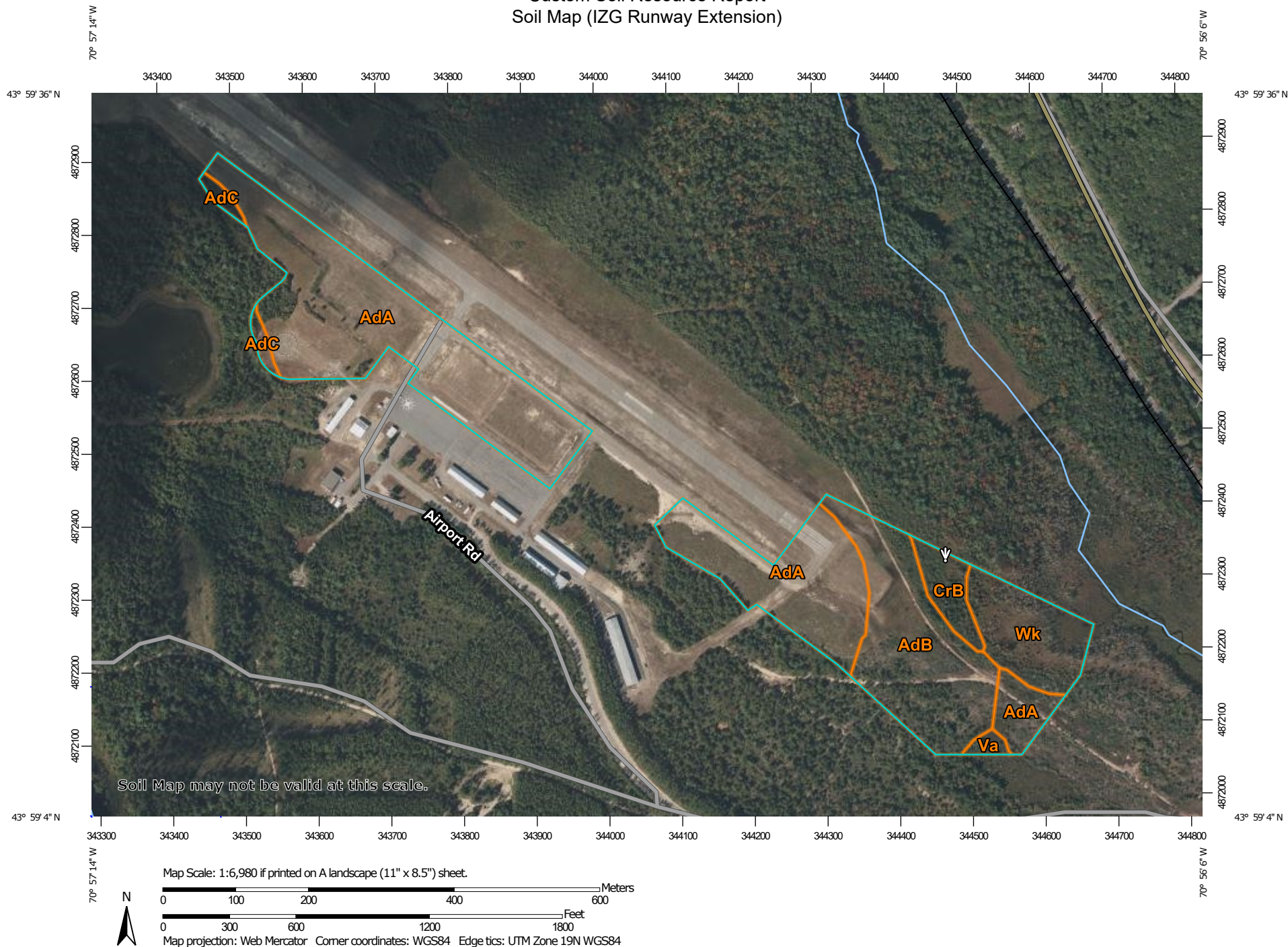
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map (IZG Runway Extension)



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oxford County Area, Maine
Survey Area Data: Version 25, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (IZG Runway Extension)

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdA	Adams loamy sand, 0 to 3 percent slopes	25.8	60.4%
AdB	Adams loamy sand, 3 to 8 percent slopes	9.6	22.5%
AdC	Adams loamy sand, 8 to 15 percent slopes	0.7	1.7%
CrB	Croghan loamy fine sand, 3 to 8 percent slopes	1.7	3.9%
Va	Vassalboro mucky peat	0.4	0.8%
Wk	Wonsqueak muck, 0 to 2 percent slopes	4.5	10.6%
Totals for Area of Interest		42.7	100.0%

Map Unit Descriptions (IZG Runway Extension)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not

mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oxford County Area, Maine

AdA—Adams loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2x1cb

Elevation: 10 to 2,000 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

AdB—Adams loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w40c

Elevation: 250 to 2,940 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Base slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

AdC—Adams loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w40d

Elevation: 250 to 2,940 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Eskers, outwash terraces

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

CrB—Croghan loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2x1f7

Elevation: 150 to 2,300 feet

Mean annual precipitation: 40 to 55 inches

Mean annual air temperature: 37 to 46 degrees F

Frost-free period: 90 to 135 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Croghan and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Croghan

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

Ap - 0 to 7 inches: loamy fine sand

Bs - 7 to 17 inches: loamy fine sand

BC - 17 to 30 inches: fine sand

C - 30 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: A

Ecological site: F144BY602ME - Sandy Toeslope

Hydric soil rating: No

Va—Vassalboro mucky peat

Map Unit Setting

National map unit symbol: 9lfs
Elevation: 10 to 1,800 feet
Mean annual precipitation: 34 to 48 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 90 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Vassalboro and similar soils: 90 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Vassalboro

Setting

Landform: Bogs
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Organic material

Typical profile

Oe - 0 to 12 inches: mucky peat
Oi - 12 to 65 inches: peat

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: RareNone
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very high (about 18.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8w
Hydrologic Soil Group: A/D
Ecological site: F144BY230ME - Acidic Peat Wetland Complex, F144BY120ME - Small Floodplain Riparian Complex (reserved), F144BY110ME - Broad Floodplain Riparian Complex
Hydric soil rating: Yes

Wk—Wonsqueak muck, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 2ty72

Elevation: 300 to 2,000 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Wonsqueak and similar soils: 81 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wonsqueak

Setting

Landform: Mountains, hills

Landform position (two-dimensional): Footslope, toeslope

Landform position (three-dimensional): Mountainbase, interfluvium, base slope

Down-slope shape: Concave

Across-slope shape: Concave

Parent material: Herbaceous organic material over loamy till

Typical profile

Oa1 - 0 to 8 inches: muck

Oa2 - 8 to 32 inches: muck

2Cg - 32 to 65 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Very poorly drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high
(0.14 to 14.17 in/hr)

Depth to water table: About 0 inches

Frequency of flooding: None

Frequency of ponding: Frequent

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Very high (about 18.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 5w

Hydrologic Soil Group: B/D

Ecological site: F144BY302ME - Mucky Swamp, F144BY220ME - Semi-acidic
Peat Wetland Complex

Hydric soil rating: Yes

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- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

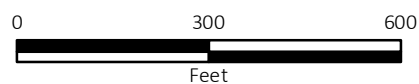
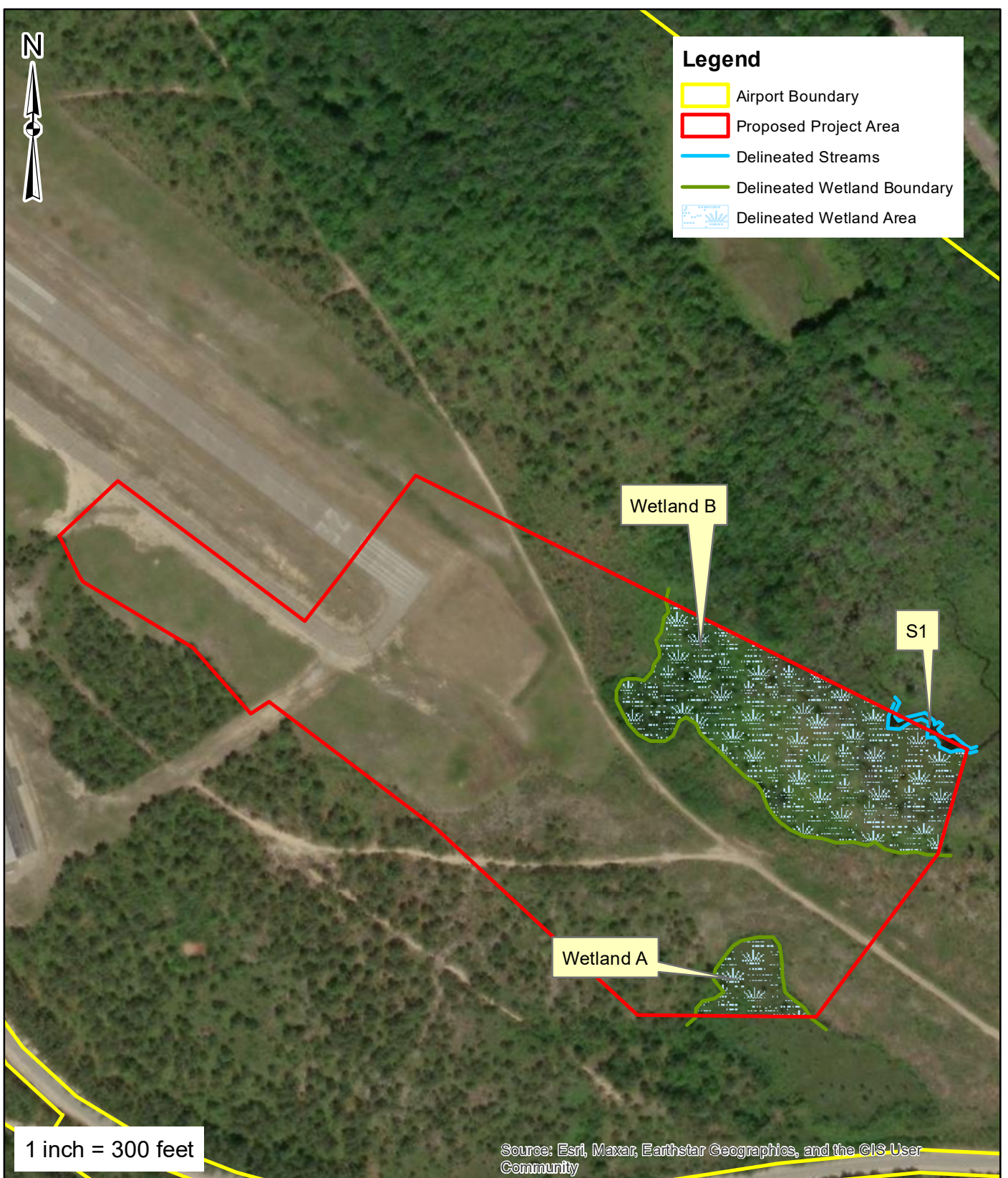
Custom Soil Resource Report

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United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf

K:\Fryeburg\T-18695.07 Runway 14-32 Extension\Draw\GIS\Map Documents\Figure 4-10 Delineated Wetlands and Surface Waters.mxd



EASTERN SLOPE REGIONAL AIRPORT
RUNWAY 14/32 EXTENSION

**DELINEATED WETLANDS AND
SURFACE WATERS**

SCALE :	DATE :	FIGURE :
1" = 300'	JANUARY 2024	1

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: IZG Runway City/County: Fryeburg Sampling Date: 2023-09-25
 Applicant/Owner: ESAA State: ME Sampling Point: A WET
 Investigator(s): Jordan Tate, Claire Hilsinger Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): Depression Local relief (concave, convex, none): Concave Slope (%): 0-2
 Subregion (LRR or MLRA): LRR R, MLRA 144B Lat: 43.985516 Long: -70.938479 Datum: NAD 83
 Soil Map Unit Name: _____ NWI classification: PSS

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐
 Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Hydic Soil Present? Yes ☒ No ☐	Wetland Hydrology Present? Yes ☒ No ☐	Is the Sampled Area within a Wetland? Yes ☒ No ☐
Remarks: (Explain alternative procedures here or in a separate report.)			If yes, optional Wetland Site ID: _____

HYDROLOGY

Wetland Hydrology Indicators: Primary Indicators (minimum of one is required; check all that apply) ☒ Surface Water (A1) ☐ Water-Stained Leaves (B9) ☒ High Water Table (A2) ☐ Aquatic Fauna (B13) ☒ Saturation (A3) ☐ Marl Deposits (B15) ☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1) ☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres on Living Roots (C3) ☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4) ☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6) ☐ Iron Deposits (B5) ☐ Thin Muck Surface (C7) ☐ Inundation Visible on Aerial Imagery (B7) ☐ Other (Explain in Remarks) ☐ Sparsely Vegetated Concave Surface (B8)		Secondary Indicators (minimum of two required) ☐ Surface Soil Cracks (B6) ☐ Drainage Patterns (B10) ☐ Moss Trim Lines (B16) ☐ Dry-Season Water Table (C2) ☐ Crayfish Burrows (C8) ☐ Saturation Visible on Aerial Imagery (C9) ☐ Stunted or Stressed Plants (D1) ☒ Geomorphic Position (D2) ☐ Shallow Aquitard (D3) ☐ Microtopographic Relief (D4) ☒ FAC-Neutral Test (D5)
Field Observations: Surface Water Present? Yes ☒ No ☐ Depth (inches): <u>0</u> Water Table Present? Yes ☒ No ☐ Depth (inches): <u>0</u> Saturation Present? Yes ☒ No ☐ Depth (inches): <u>0</u> (includes capillary fringe)		Wetland Hydrology Present? Yes ☒ No ☐
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: A WET

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. _____	_____	_____	_____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>0</u> = Total Cover		Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>112.00</u></td> <td>x 1 = <u>112.00</u></td> </tr> <tr> <td>FACW species <u>10.00</u></td> <td>x 2 = <u>20.00</u></td> </tr> <tr> <td>FAC species <u>20.00</u></td> <td>x 3 = <u>60.00</u></td> </tr> <tr> <td>FACU species <u>0.00</u></td> <td>x 4 = <u>0.00</u></td> </tr> <tr> <td>UPL species <u>0.00</u></td> <td>x 5 = <u>0.00</u></td> </tr> <tr> <td>Column Totals: <u>142.00</u> (A)</td> <td><u>192.00</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>1.35</u>	Total % Cover of:	Multiply by:	OBL species <u>112.00</u>	x 1 = <u>112.00</u>	FACW species <u>10.00</u>	x 2 = <u>20.00</u>	FAC species <u>20.00</u>	x 3 = <u>60.00</u>	FACU species <u>0.00</u>	x 4 = <u>0.00</u>	UPL species <u>0.00</u>	x 5 = <u>0.00</u>	Column Totals: <u>142.00</u> (A)	<u>192.00</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>112.00</u>	x 1 = <u>112.00</u>																	
FACW species <u>10.00</u>	x 2 = <u>20.00</u>																	
FAC species <u>20.00</u>	x 3 = <u>60.00</u>																	
FACU species <u>0.00</u>	x 4 = <u>0.00</u>																	
UPL species <u>0.00</u>	x 5 = <u>0.00</u>																	
Column Totals: <u>142.00</u> (A)	<u>192.00</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Betula populifolia</u>	<u>15</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Ilex mucronata</u>	<u>12</u>	<u>Y</u>	<u>OBL</u>															
3. <u>Rhododendron canadense</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. <u>Viburnum nudum</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
		<u>37.0</u> = Total Cover																
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Chamaedaphne calyculata</u>	<u>100</u>	<u>Y</u>	<u>OBL</u>															
2. <u>Aronia melanocarpa</u>	<u>5</u>	<u>N</u>	<u>FAC</u>															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
		<u>105.0</u> = Total Cover																
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____															
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
		<u>0</u> = Total Cover																
Remarks: (Include photo numbers here or on a separate sheet.)																		

Hydrophytic Vegetation Indicators:
☐ 1 - Rapid Test for Hydrophytic Vegetation
☒ 2 - Dominance Test is >50%
☒ 3 - Prevalence Index is ≤3.0¹
☐ 4 - Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
☐ Problematic Hydrophytic Vegetation¹ (Explain)

¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Definitions of Vegetation Strata:

Tree – Woody plants 3 in. (7.6 cm) or more in diameter at breast height (DBH), regardless of height.

Sapling/shrub – Woody plants less than 3 in. DBH and greater than or equal to 3.28 ft (1 m) tall.

Herb – All herbaceous (non-woody) plants, regardless of size, and woody plants less than 3.28 ft tall.

Woody vines – All woody vines greater than 3.28 ft in height.

Hydrophytic Vegetation Present? Yes ☒ No ☐

SOIL

Sampling Point: A WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|---|--|
| ☒ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, |
| ☐ Histic Epipedon (A2) | MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Stratified Layers (A5) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Depleted Matrix (F3) |
| ☐ Thick Dark Surface (A12) | ☐ Redox Dark Surface (F6) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Gleyed Matrix (S4) | ☐ Redox Depressions (F8) |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

WETLAND DETERMINATION DATA FORM – Northcentral and Northeast Region

Project/Site: IZG Runway City/County: Fryeburg Sampling Date: 2023-09-26
Applicant/Owner: ESAA State: ME Sampling Point: B WET
Investigator(s): Jordan Tate, Claire Hilsinger Section, Township, Range: _____
Landform (hillslope, terrace, etc.): Toeslope Local relief (concave, convex, none): Concave Slope (%): 0-2
Subregion (LRR or MLRA): _____ Lat: 43.986921 Long: -70.939598 Datum: WGS84
Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☒ No ☐ (If no, explain in Remarks.)

Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed?

Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic?

(If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ☒ No ☐	Hydic Soil Present? Yes ☐ No ☒	Is the Sampled Area within a Wetland? Yes ☐ No ☒ If yes, optional Wetland Site ID: _____
Wetland Hydrology Present? Yes ☒ No ☐		
Remarks: (Explain alternative procedures here or in a separate report.)		

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (minimum of two required)
Primary Indicators (minimum of one is required; check all that apply)		☐ Surface Soil Cracks (B6)
☒ Surface Water (A1)	☐ Water-Stained Leaves (B9)	☒ Drainage Patterns (B10)
☒ High Water Table (A2)	☐ Aquatic Fauna (B13)	☐ Moss Trim Lines (B16)
☒ Saturation (A3)	☐ Marl Deposits (B15)	☐ Dry-Season Water Table (C2)
☐ Water Marks (B1)	☐ Hydrogen Sulfide Odor (C1)	☐ Crayfish Burrows (C8)
☐ Sediment Deposits (B2)	☐ Oxidized Rhizospheres on Living Roots (C3)	☐ Saturation Visible on Aerial Imagery (C9)
☐ Drift Deposits (B3)	☐ Presence of Reduced Iron (C4)	☐ Stunted or Stressed Plants (D1)
☐ Algal Mat or Crust (B4)	☐ Recent Iron Reduction in Tilled Soils (C6)	☒ Geomorphic Position (D2)
☐ Iron Deposits (B5)	☐ Thin Muck Surface (C7)	☐ Shallow Aquitard (D3)
☐ Inundation Visible on Aerial Imagery (B7)	☐ Other (Explain in Remarks)	☒ Microtopographic Relief (D4)
☐ Sparsely Vegetated Concave Surface (B8)		☒ FAC-Neutral Test (D5)
Field Observations:		Wetland Hydrology Present? Yes ☒ No ☐
Surface Water Present? Yes ☒ No ☐ Depth (inches): <u>0</u>		
Water Table Present? Yes ☒ No ☐ Depth (inches): <u>0</u>		
Saturation Present? Yes ☒ No ☐ Depth (inches): <u>0</u> (includes capillary fringe)		
Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:		
Remarks:		

VEGETATION – Use scientific names of plants.

 Sampling Point: **B WET**

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status															
1. <u>Abies balsamea</u>	<u>25</u>	<u>Y</u>	<u>FAC</u>	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>6</u> (A) Total Number of Dominant Species Across All Strata: <u>6</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100.00</u> (A/B)														
2. <u>Acer rubrum</u>	<u>10</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Populus tremuloides</u>	<u>5</u>	<u>N</u>	<u>FACU</u>															
4. <u>Betula populifolia</u>	<u>2</u>	<u>N</u>	<u>FAC</u>															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>42.0</u> = Total Cover				Prevalence Index worksheet: <table style="width: 100%;"> <tr> <td style="width: 50%;">Total % Cover of:</td> <td style="width: 50%;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0.00</u></td> <td>x 1 = <u>0.00</u></td> </tr> <tr> <td>FACW species <u>75.00</u></td> <td>x 2 = <u>150.00</u></td> </tr> <tr> <td>FAC species <u>107.00</u></td> <td>x 3 = <u>321.00</u></td> </tr> <tr> <td>FACU species <u>5.00</u></td> <td>x 4 = <u>20.00</u></td> </tr> <tr> <td>UPL species <u>0.00</u></td> <td>x 5 = <u>0.00</u></td> </tr> <tr> <td>Column Totals: <u>187.00</u> (A)</td> <td><u>491.00</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>2.63</u>	Total % Cover of:	Multiply by:	OBL species <u>0.00</u>	x 1 = <u>0.00</u>	FACW species <u>75.00</u>	x 2 = <u>150.00</u>	FAC species <u>107.00</u>	x 3 = <u>321.00</u>	FACU species <u>5.00</u>	x 4 = <u>20.00</u>	UPL species <u>0.00</u>	x 5 = <u>0.00</u>	Column Totals: <u>187.00</u> (A)	<u>491.00</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0.00</u>	x 1 = <u>0.00</u>																	
FACW species <u>75.00</u>	x 2 = <u>150.00</u>																	
FAC species <u>107.00</u>	x 3 = <u>321.00</u>																	
FACU species <u>5.00</u>	x 4 = <u>20.00</u>																	
UPL species <u>0.00</u>	x 5 = <u>0.00</u>																	
Column Totals: <u>187.00</u> (A)	<u>491.00</u> (B)																	
Sapling/Shrub Stratum (Plot size: <u>15</u>)																		
1. <u>Acer rubrum</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>															
2. <u>Abies balsamea</u>	<u>20</u>	<u>Y</u>	<u>FAC</u>															
3. <u>Alnus incana</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
<u>75.0</u> = Total Cover																		
Herb Stratum (Plot size: <u>5</u>)																		
1. <u>Dryopteris carthusiana</u>	<u>50</u>	<u>Y</u>	<u>FACW</u>	Hydrophytic Vegetation Indicators: ☐ 1 - Rapid Test for Hydrophytic Vegetation ☒ 2 - Dominance Test is >50% ☒ 3 - Prevalence Index is ≤3.0 ¹ ☐ 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ☐ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.														
2. <u>Cinna arundinacea</u>	<u>15</u>	<u>Y</u>	<u>FACW</u>															
3. <u>Rubus hispidus</u>	<u>5</u>	<u>N</u>	<u>FACW</u>															
4. _____	_____	_____	_____															
5. _____	_____	_____	_____															
6. _____	_____	_____	_____															
7. _____	_____	_____	_____															
8. _____	_____	_____	_____															
9. _____	_____	_____	_____															
10. _____	_____	_____	_____															
11. _____	_____	_____	_____															
12. _____	_____	_____	_____															
<u>70.0</u> = Total Cover																		
Woody Vine Stratum (Plot size: <u>30</u>)																		
1. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes ☒ No ☐														
2. _____	_____	_____	_____															
3. _____	_____	_____	_____															
4. _____	_____	_____	_____															
<u>0</u> = Total Cover																		
Remarks: (Include photo numbers here or on a separate sheet.)																		

SOIL

Sampling Point: B WET

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- | | |
|--|---|
| ☐ Histosol (A1) | ☐ Polyvalue Below Surface (S8) (LRR R, MLRA 149B) |
| ☐ Histic Epipedon (A2) | ☐ Thin Dark Surface (S9) (LRR R, MLRA 149B) |
| ☐ Black Histic (A3) | ☐ Loamy Mucky Mineral (F1) (LRR K, L) |
| ☐ Hydrogen Sulfide (A4) | ☐ Loamy Gleyed Matrix (F2) |
| ☐ Stratified Layers (A5) | ☐ Depleted Matrix (F3) |
| ☐ Depleted Below Dark Surface (A11) | ☐ Redox Dark Surface (F6) |
| ☐ Thick Dark Surface (A12) | ☐ Depleted Dark Surface (F7) |
| ☐ Sandy Mucky Mineral (S1) | ☐ Redox Depressions (F8) |
| ☐ Sandy Gleyed Matrix (S4) | |
| ☐ Sandy Redox (S5) | |
| ☐ Stripped Matrix (S6) | |
| ☐ Dark Surface (S7) (LRR R, MLRA 149B) | |

Indicators for Problematic Hydric Soils³:

- ☐ 2 cm Muck (A10) (**LRR K, L, MLRA 149B**)
- ☐ Coast Prairie Redox (A16) (**LRR K, L, R**)
- ☐ 5 cm Mucky Peat or Peat (S3) (**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR K, L**)
- ☐ Polyvalue Below Surface (S8) (**LRR K, L**)
- ☐ Thin Dark Surface (S9) (**LRR K, L**)
- ☐ Iron-Manganese Masses (F12) (**LRR K, L, R**)
- ☐ Piedmont Floodplain Soils (F19) (**MLRA 149B**)
- ☐ Mesic Spodic (TA6) (**MLRA 144A, 145, 149B**)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Wetland Function-Value Evaluation Form

Total area of wetland 0.59 Human made? No Is wetland part of a wildlife corridor? N/A or a "habitat island"? No

Adjacent land use Aviation and forested Distance to nearest roadway or other development 400 ft

Dominant wetland systems present PSS1E Contiguous undeveloped buffer zone present Partial

Is the wetland a separate hydraulic system? Yes If not, where does the wetland lie in the drainage basin? _____

How many tributaries contribute to the wetland? 0 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland A

Latitude 43.985453 Longitude -70.938692

Prepared by: JNT Date 01/05/2024

Wetland Impact:
Type _____ Area _____

Evaluation based on:
Office ^x _____ Field ^x _____

Corps manual wetland delineation
completed? Y ^x _____ N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	3, 4, 11, 13		
 Floodflow Alteration	Y	3, 5, 6, 7, 8, 9, 18		
 Fish and Shellfish Habitat	N			
 Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 9		wetland has saturated organic soils and areas of ponded water
 Nutrient Removal	Y	3, 4, 5, 6, 7, 8, 9, 10		
 Production Export	Y	2, 4, 7, 14		
 Sediment/Shoreline Stabilization	N			wetland not associated with watercourse or waterbody
 Wildlife Habitat	Y	1, 3, 5, 7, 8, 13, 19, 20, 21		
 Recreation	N	5, 7		
 Educational/Scientific Value	Y	2, 4, 5, 10		
 Uniqueness/Heritage	Y	13, 16, 17, 19, 27,		
 Visual Quality/Aesthetics	Y	7, 8, 10, 12		
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Wetland Function-Value Evaluation Form

Total area of wetland 4.66 Human made? No Is wetland part of a wildlife corridor? N/A or a "habitat island"? No

Adjacent land use Aviation and forested Distance to nearest roadway or other development 1400 ft

Dominant wetland systems present PSS1E/PFO1E Contiguous undeveloped buffer zone present Partial

Is the wetland a separate hydraulic system? No If not, where does the wetland lie in the drainage basin? stream adjacent

How many tributaries contribute to the wetland? 1 Wildlife & vegetation diversity/abundance (see attached list)

Wetland I.D. Wetland A

Latitude 43.986968 Longitude -70.938633

Prepared by: JNT Date 01/05/2024

Wetland Impact:

Type _____ Area _____

Evaluation based on:

Office ^x _____ Field ^x _____

Corps manual wetland delineation completed? Y ^x _____ N _____

Function/Value	Suitability Y / N	Rationale (Reference #)*	Principal Function(s)/Value(s)	Comments
 Groundwater Recharge/Discharge	Y	3, 4, 7, 11, 13		
 Floodflow Alteration	Y	1, 3, 5, 6, 7, 8, 9, 10, 13, 18	X	
 Fish and Shellfish Habitat	N	7, 15, 17		
 Sediment/Toxicant Retention	Y	1, 2, 3, 4, 5, 9, 10, 12, 16	X	wetland has saturated organic soils and areas of ponded water
 Nutrient Removal	Y	1, 3, 4, 5, 6, 7, 8, 9, 10, 15		
 Production Export	Y	2, 4, 7, 10, 13, 14		
 Sediment/Shoreline Stabilization	Y	3, 4, 5, 7, 9, 12, 14		
 Wildlife Habitat	Y	1, 3, 5, 6, 7, 8, 13, 19, 20, 21	X	Wetland is designated as waterfowl/wading bird habitat by the state
 Recreation	N	5, 7		
 Educational/Scientific Value	Y	2, 4, 5, 10, 11		
 Uniqueness/Heritage	Y	11, 13, 16, 17, 19, 22, 27, 28	X	
 Visual Quality/Aesthetics	Y	7, 8, 10, 12		
ES Endangered Species Habitat	N			
Other				

Notes:

* Refer to backup list of numbered considerations.

Appendix E

SHPO Project Review Package

Jordan Tate

From: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Sent: Wednesday, November 1, 2023 12:39 PM
To: Jordan Tate
Subject: RE: Section 6(f) and 4(f) properties
Attachments: 1576_23 Fryeburg airport.docx

Good Afternoon,

There are no concerns for architectural or historic archaeological properties within the area defined on the map. However, there is potential for prehistoric archaeological resources in the area. Please see attached.

If you have questions regarding prehistoric archaeology, please contact Dr. Arthur Spiess, Arthur.spiess@maine.gov.

Best,

Megan M. Rideout
Review & Compliance/CLG Coordinator
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, Maine 04333
207.287.2992

From: Jordan Tate <jtate@mjinc.com>
Sent: Monday, October 16, 2023 4:35 PM
To: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Subject: RE: Section 6(f) and 4(f) properties

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Great, thank you, Megan!



McFarland Johnson

Jordan Tate | Environmental Analyst

207-869-5419

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From: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Sent: Monday, October 16, 2023 2:02 PM
To: Jordan Tate <jtate@mjinc.com>
Subject: RE: Section 6(f) and 4(f) properties

Good Afternoon Jordan,

I will have this looked at historic properties as it relates to Section 4(f) but you will need to contact Maine Dept. of Agriculture, Conservation and Forestry for the Section 6(f) properties. I believe Doug Beck would be the correct contact for that information.

Best,

Megan M. Rideout
Review & Compliance/CLG Coordinator
Maine Historic Preservation Commission
55 Capitol Street
65 State House Station
Augusta, Maine 04333
207.287.2992

From: Jordan Tate <jtate@mjinc.com>
Sent: Monday, October 16, 2023 1:40 PM
To: Rideout, Megan M <Megan.M.Rideout@maine.gov>
Subject: Section 6(f) and 4(f) properties

EXTERNAL: This email originated from outside of the State of Maine Mail System. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi Megan,

I'm emailing to see if there are any section 6(f) or 4(f) properties in the vicinity of the attached study area/APE. The proposed project consists of an approximately 800-foot runway extension at the Eastern Slope Regional Airport in Fryeburg Maine. I've included a location map and shapefile of the area. Cheryl Quaine at FAA will be coordinating with MHPC regarding Section 106 consultation.

Jordan



McFarland Johnson

Jordan Tate | Environmental Analyst

207-869-5419

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PENOBSCOT NATION
CULTURAL & HISTORIC PRESERVATION
12 WABANAKI WAY, INDIAN ISLAND, ME 04468

CHRIS SOCKALEXIS – TRIBAL HISTORIC PRESERVATION OFFICER

E-MAIL: chris.sockalexis@penobscotnation.org

NAME	Elisabeth Smeda
ADDRESS	US Department of Transportation Federal Aviation Administration 1200 District Avenue Burlington, MA 01803
OWNER'S NAME	Eastern Slope Regional Airport
TELEPHONE	781-238-7020
EMAIL	elisabeth.smeda@faa.gov
PROJECT NAME	Runway (14/32) Extension
PROJECT SITE	Fryeburg, ME
DATE OF REQUEST	October 19, 2023
DATE REVIEWED	January 8, 2024

Thank you for the opportunity to comment on the above referenced project. This project appears to have no impact on a structure or site of historic, architectural or archaeological significance to the Penobscot Nation as defined by the National Historic Preservation Act of 1966, as amended.

If there is an inadvertent discovery of Native American cultural materials during the course of the project, please contact my office at (207) 817-7471. Thank you for consulting with the Penobscot Nation Tribal Historic Preservation Office with this project.

A handwritten signature in black ink, appearing to read "Chris Sockalexis".

Chris Sockalexis, THPO
Penobscot Nation

Northeast Archaeology Research Center, Inc.

Matthew O'Brien
Project Manager
McFarland Johnson, Inc.
53 Regional Drive, Box 3
Concord, NH 03301

December 11, 2023

RE: Proposed Runway 14/32 Extension Project (MHPC #1576-23), Eastern Slope Regional Airport, Fryeburg, Oxford County, Maine--Archaeological Phase I Survey End of Field Letter Report

Dear Matt,

We write to inform you of the completion of the archaeological phase I survey of the proposed Runway 14/32 Extension Project (MHPC #1576-23) at Eastern Slope Regional Airport (IZG), Fryeburg, Maine (Figure 1). The archaeological work was conducted by the Northeast Archaeology Research Center, Inc. (NE ARC) on behalf of McFarland Johnson, Inc. (MJ) and their client Eastern Slope Airport Authority (ESAA). The archaeological work was conducted as part of the Section 106 review process and also adheres to standards and guidelines as determined by the Maine Historic Preservation Commission (MHPC) for archaeological studies in Maine (MHPC 1992). The goal of the archaeological survey was to determine if archaeological sites of potential significance are present within the area of potential effect (APE) of the Project or to establish that it is unlikely that archaeological site(s) are present. Significant sites are those that meet eligibility criteria for the National Register of Historic Places (NRHP).

The Project involves an extension of runway 14/32, which will necessitate building up the landform at the southern end of the runway to accommodate the proposed extension. Fill material will come from a few locations within the airport, and as such the Project includes areas to be used as borrow sites and an area to be filled. This includes two areas: one 27-acre area at the southeastern extent of Runway 14/32 and one 16-acre former fill disposal area to the southwest of the runway for a total survey area of 43 acres. Within these wider 'survey limits', current Project plans indicate that more limited areas are proposed for ground disturbance, as shown in Figure 2: including areas to be used as borrow sites and an area to be filled (shown in orange). These areas were the focus of the phase I survey. Areas assumed to have been cleared by previous archaeology work are also shown in Figure 2 in green.

As detailed below, the phase I survey included the excavation of 118 0.5 m x 0.5 m test pits (Figure 3). No Native American artifacts were recovered, and it is considered unlikely that significant, NRHP eligible or other archaeological sites are present or will be adversely affected by the Project. Therefore, no additional archaeological work is recommended prior to Project construction.

Project Description

Eastern Slope Regional Airport is located south of the built-up area of the town of Fryeburg, on a wide and predominantly level landform surrounded by a gently rolling landscape and low hills, including Oak Hill to the immediate north (Figure 4). Lovewell Pond sits just over 1 km northeast of the airport and drains southwards into an extensive wetland landscape through which the Saco River flows. At its closest point the Saco passes just over 1 km from the southeastern end of the runway (see Figure 1). The landform on which the airport sits represents a glacial outwash fan formed about 14-13,000 years ago by the deposition of sandy material from a glacial stream as it entered a lake. As such, soils within the Project area are mapped as Adams loamy sands which are derived from a parent material of sandy glaciofluvial deposits (USDA 2023). The lake in question would have been located in the area of what is now Lovewell Pond and the wetlands to its south. Wetlands begin at the eastern side of the airport and a tributary stream of the Saco passes within 140 m of the southern portion of the Project area. As noted in the request for proposals, portions of the Project have clearly been disturbed in the past, including for runway construction and for stockpiling, however undisturbed areas have been determined to be present in certain locations. In addition, areas assumed to have been cleared by previous archaeology work are shown in Figure 2.

As noted, the study area includes areas to be used as borrow sites, located along the southwestern side of the runway, and the area to be filled, beginning at the at the southeastern end of the runway (32 approach) and extending in line with the runway for about 350 m. The landform on which the runway sits slopes gradually to the southeast, and the northwesternmost portion of the study area sits at an elevation of approximately 450 ft above mean sea level (a.m.s.l.), with slightly higher knolls ascending into a wooded area to the west (Figure 5). These knoll landforms were tested during previous archaeological studies undertaken for the airport, as noted briefly below (see green area in Figure 2). The first borrow site to be tested is located between Taxiway A and the airport buildings and between taxiways B and C, and is generally level to gently undulating with a few slightly elevated ridges and micro knolls to the southwest (Figures 6 and 7). The next borrow area lies to the south/southwest of the end of the runway (32 approach) and again is largely level, with a notable drainage swale to the north (south of Taxiway C) (Figures 8 and 9). The area to be filled, located at the end of the runway (32 approach), includes an area of undulating topography that is generally lower than the runway but slightly elevated above the wetland. Between this area and the end of the runway (32 approach) is a gently sloped fill prism and then a low area that appears to have been previously levelled as part of airport construction (Figures 10 and 11). The area to be filled also includes an access road that forks about 250 m from the end of the runway

to provide a route along the northeastern side of the runway and another to the southwestern side and back towards the airport buildings.

Archaeological Sensitivity and Problem Statement

In their review of the Project, the MHPC stated that the Project area is considered sensitive for the presence of pre-contact Native American archaeological sites. In general terms, the Project area is located on a landscape that (in part) meets predictive modeling criteria for the likely presence of prehistoric archaeological sites given the presence of well drained sediments, proximity to water (wetlands and drainages associated with the Saco River), and/or the presence of other archaeological sites in the vicinity (Spiess and Smith 2016). The airport is constructed on well-drained glacial outwash sands, varying in elevation from relatively flat plains to small knolls and terraces, some of which overlook ponds and wetlands. The record of known precontact sites in the region indicates that Paleoindians, the first people to enter the region ca. 11,000 years ago, established small campsites in such terrain. In addition, similar terrain was also used by later people - more specifically, a pre-contact Ceramic period (1000 B.C.-1550 A.D.) site, ME 11.4, was identified ~100 m northwest of the runway. This site was located in 1983 during archaeological survey for an earlier runway extension, and site deposits have since been removed via archaeological excavation and subsequent runway construction. According to the MHPC Archaeological Site Survey Record, site 11.4 represents a low-density occupation on a small knoll overlooking kettle ponds, and recovered cultural material included one stone axe-head and two aboriginal ceramic sherds.

Also of relevance, an archaeological survey was conducted in 1995 in advance of a proposed runway expansion. The runway expansion project called for the construction of a 500 ft runway extension as well as a runway safety area, plus clearing of ~24 acres of trees and brush and removal of ~5.5 acres of ground penetrations. These activities were planned for both sides of the runway. Associated archaeological work included the hand excavation of 200 shovel test pits placed within the area of potential effect of the project, primarily in the vicinity of previously identified site 11.4 and on the most archaeologically sensitive landforms (remnant terraces and sandy knolls and ridges) (including areas marked in green on Figure 2). However, no precontact artifacts were recovered as a result of that survey work (Mosher 1995). Also of relevance, NE ARC recently completed phase I survey work in advance of construction of a solar facility located just north of Fryeburg Airport; no precontact sites were identified as a result of that work (Bartone 2021).

Archaeological Phase I Survey

The archaeological phase I survey of the Runway 14/32 Extension Project was conducted from November 28 to December 1, 2023. The work was initiated with a visual inspection of the Project area to document observable natural and cultural surface features indicative of human occupation. As requested by the MHPC, the dirt roads to the SE of the runway approach portion of the Project were walked to search for any signs of human occupation potentially exposed on the ground surface. Any areas of soil exposure within the study area were also assessed. A light snowfall prior to the initiation of the fieldwork meant that the ground surface was approximately 50% visible in these areas. No artifacts or signs of human occupation were identified during the walkover.

Subsurface testing included the hand excavation of 118 0.5 m x 0.5 m test pits placed along 23 linear sampling transects, T1 through T23 (Figures 12-14; see Figure 3). These were positioned in areas of proposed ground disturbance and focused in areas of most archaeological sensitivity, including on small knolls and terraces overlooking wetlands and natural drainage swales. In areas alongside Taxiway A, sampling transects were placed parallel with the taxiway/runway (transects T1 through T11), utilizing 20.0 m sampling intervals closest to the taxiway and 10.0 m sampling intervals farther from the taxiway (see Figures 4 through 9). The wider interval was utilized to sample the extent of disturbance associated with the taxiway. At the end of the runway, transects were placed generally parallel with the edge of the wetlands, or along the tops of ridges and knolls (T12 through T23), with test pits placed at 5.0 m intervals along sampling transects (Figures 15 and 16). Exceptions include T22 and T23, which both consisted of individual test pits (see Figure 14).

Test pits were excavated to depths of 25 to 106 cm below ground surface and averaged 67 cm in depth. As noted, soils are mapped as Adams loamy sands, and test pit profiles corroborate this soil classification. Typical profiles illustrate a natural forest soil sequence and include an uppermost relatively thin 'Ao' horizon ranging from 9 to 19 cm in depth, overlying a developed 'B' horizon from 10 to 34 cm in thickness, in turn overlying a 'C' horizon within which excavations were terminated. Sediments were sandy loams increasing in coarse sand content with depth. Test pits placed alongside Taxiway A (transects T1, T4, T11) evidenced a particularly thin 'B' horizon that is either a truncated remnant of the natural soil or is a newly developing 'B' horizon; this therefore suggests that the area closest to Taxiway A has been disturbed (Figure 17). Test pits placed closest to the airport buildings (transects T3, T5 and T6) also possessed profiles that suggest disturbance (Figure 18). The other transects placed parallel to the taxiway and runway evidenced natural soil profiles with a fairly thick developed 'B' horizon (Figure 19). At the end of the runway, most test pits also evidenced natural soil profiles, occasionally terminating in a mottled wetland 'C' horizon (Figures 20 and 21). The two isolated test pits, T22P1 and T23P1, placed closest to the

end of the runway, both evidenced disturbance consistent with a number of push piles observed in the area (Figure 22).

No artifacts of any kind were recovered from any of the test pits.

Conclusions and Recommendations

NE ARC has completed an archaeological phase I survey of the proposed Runway 14/32 Extension Project (MHPC #1576-23) at Eastern Slope Regional Airport (IZG). No artifacts were recovered and thus no precontact Native American or postcontact Euroamerican sites were identified. As such, it is considered unlikely that significant, i.e., National Register of Historic Places eligible or other archaeological sites are present or will be adversely affected by the Project. Therefore, no additional archaeological work is recommended prior to Project construction. Please let us know if you have any questions or comments and thank you for the opportunity to conduct this study.

Sincerely,



Gemma-Jayne Hudgell, Ph.D.
Assistant Director, NE ARC

References

Bartone, Robert N.

2021 *BD Solar Fryberg LLC Project, MHPC # 1350-21--Archaeological Phase I Survey End of Field Letter Report*. Prepared for Haley Ward and BD Fryeburg Solar by the Northeast Archaeology Research Center, Inc. Farmington, Maine.

Maine Historic Preservation Commission

1992 *Contract Archaeology Guidelines*. Manuscript on file at the MHPC. Augusta, Maine.

Mosher, John

1995 *Report of a Phase I Archaeological Survey of the Eastern Slope Regional Airport Runway Extension Project in Fryeburg, Maine*. Prepared for Dufresne-Henry, Inc.

Spiess, Arthur, and Leith Smith

2016 *Predictive Models for Maine Prehistoric Sites*. On file at the MHPC. Maine Historic Preservation Commission.

USDA

2023 Web Soil Survey. Electronic Source, <http://websoilsurvey.nrcs.usda.gov>. Accessed 2023.

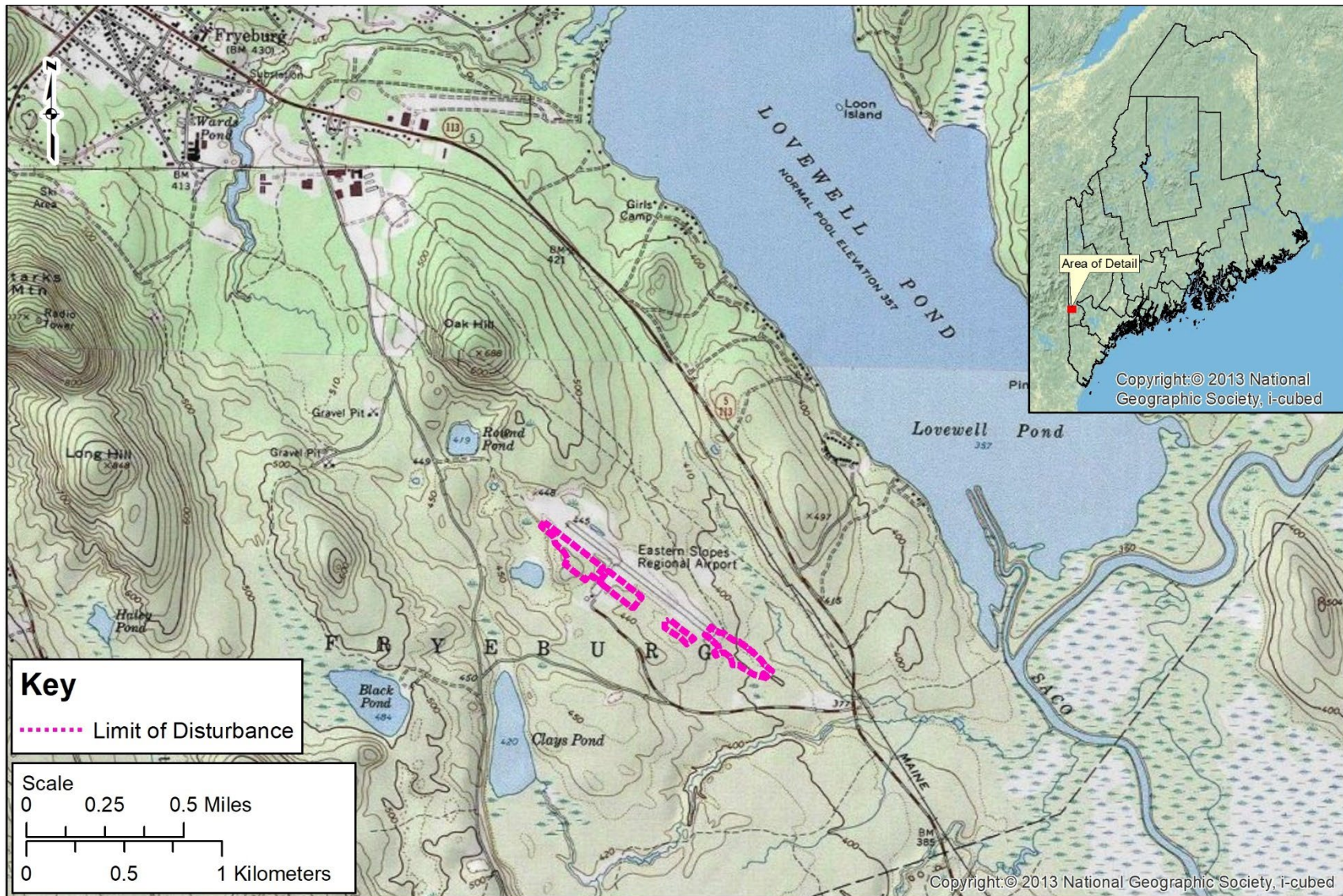


Figure 1. Topographic map showing the location of proposed Eastern Slopes Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.

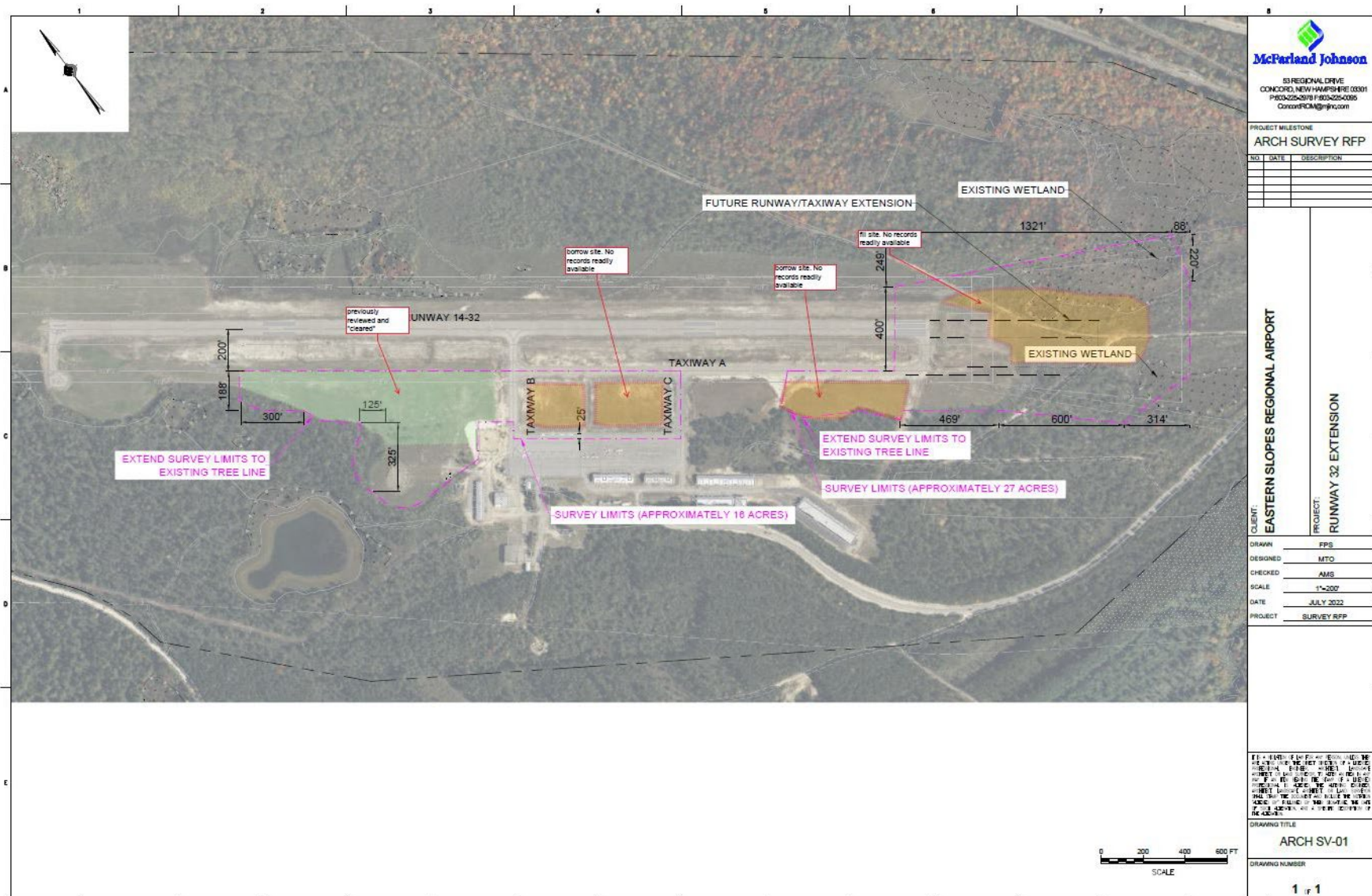


Figure 2. Project plans for the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note the area proposed for ground disturbance (orange areas) which were the primary focus of the phase I survey. Also note an area which has been previously archaeologically reviewed (green).

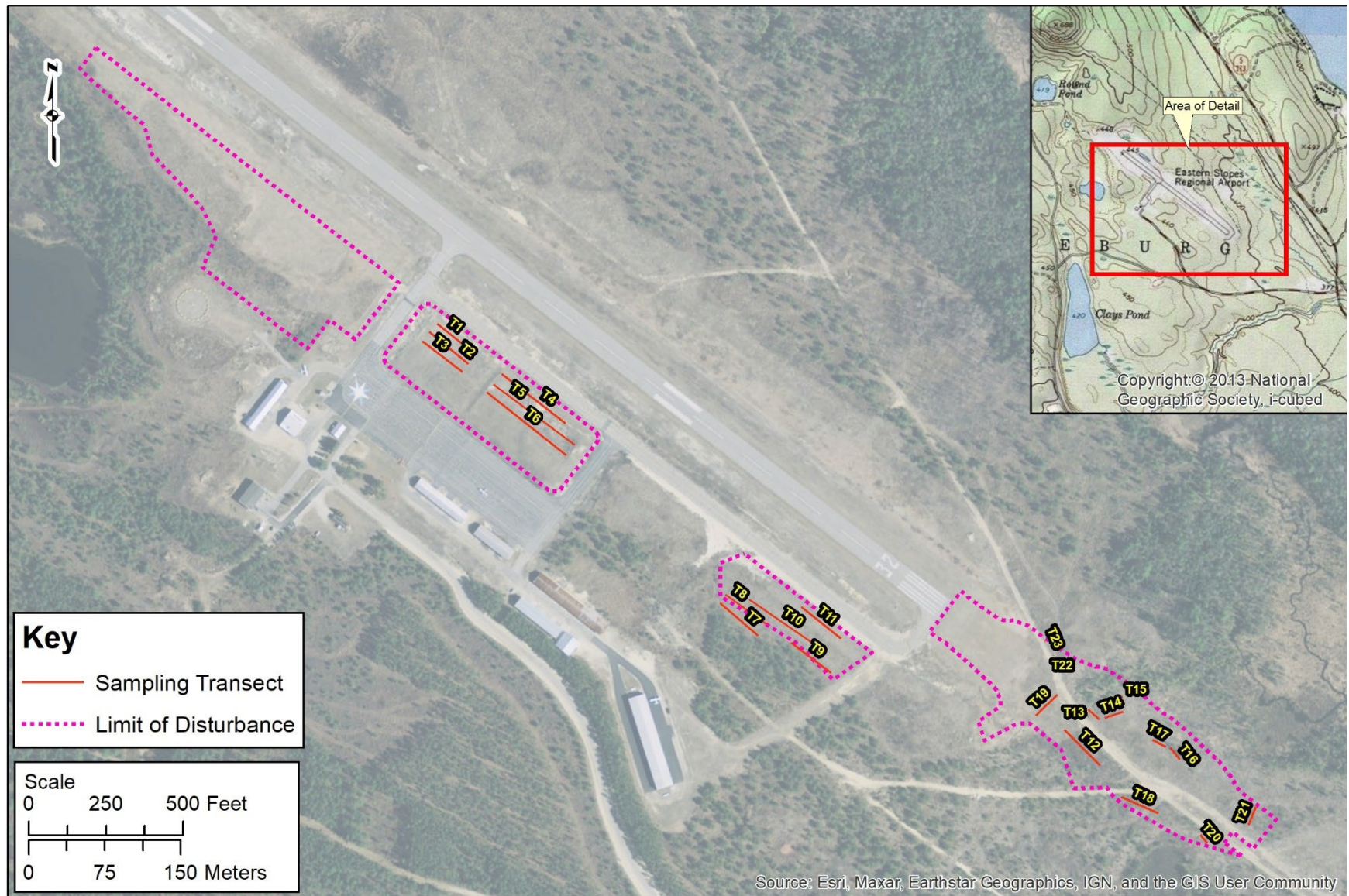


Figure 3. Aerial photograph showing the location of archaeological phase I survey sampling transects within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Figure 4. View northwest of crew member excavating test pit T1P1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note the flat landform of the airport surrounded by hills and knolls of higher elevation. Note aircraft on Taxiway B.



Figure 5. View northwest of crew members excavating along sampling transect T1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note the flat landform of the airport surrounded by hills and knolls of higher elevation.



Figure 6. View east of crew members excavating along sampling transects T5 and T6 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note gentle knolls and ridge and swale topography.



Figure 7. View west of crew members at T2P1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note hangars and terminal buildings.



Figure 8. View east of crew members excavating along transect T8 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note gentle knolls and ridge and swale topography. Also note aircraft landing via the 32 approach.



Figure 9. View northwest of crew members excavating along transect T8 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note gentle knolls and ridge and swale topography and deeper swale at the treeline.



Figure 10. View east of landforms beyond the end of the runway (32 approach) within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. Note fill prism in the foreground, artificially levelled area in the midground, and natural low knolls beyond.

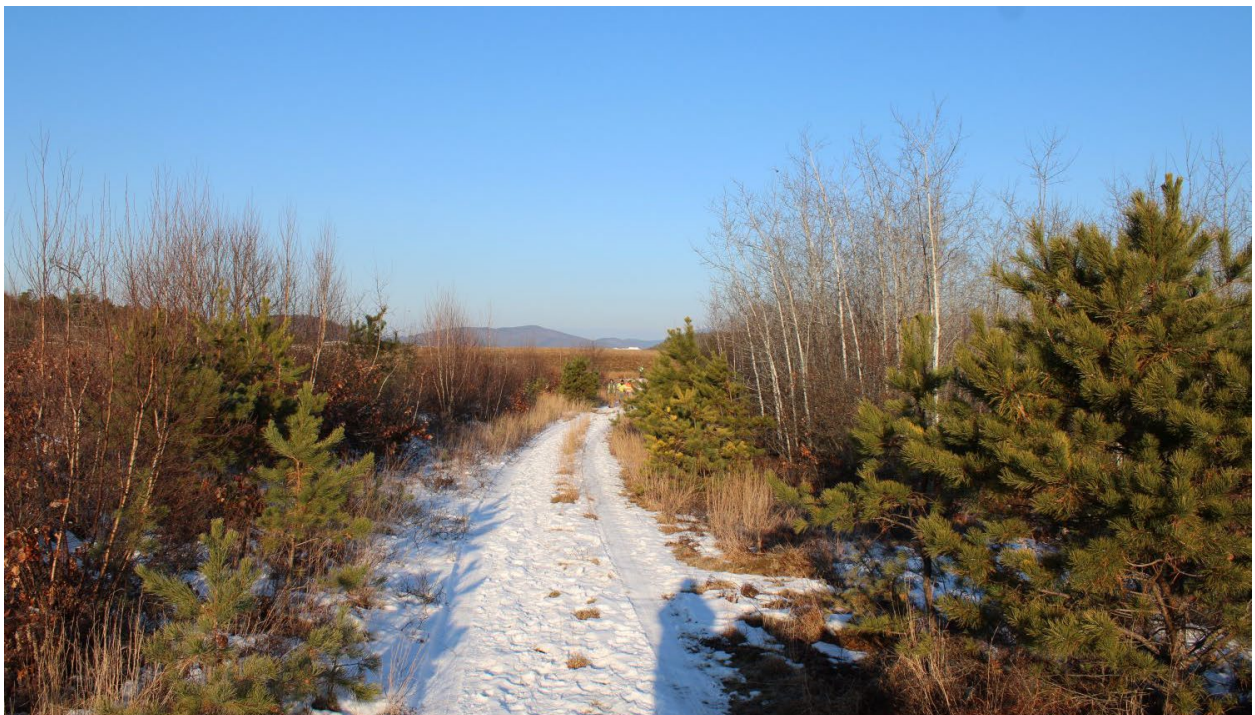


Figure 11. View west of access road and landforms beyond the end of the runway (32 approach) within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine. The crew are visible in proximity to sampling transect T13.



Figure 12. Aerial photograph showing the location of archaeological phase I survey sampling transects in the northwestern portion of the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.

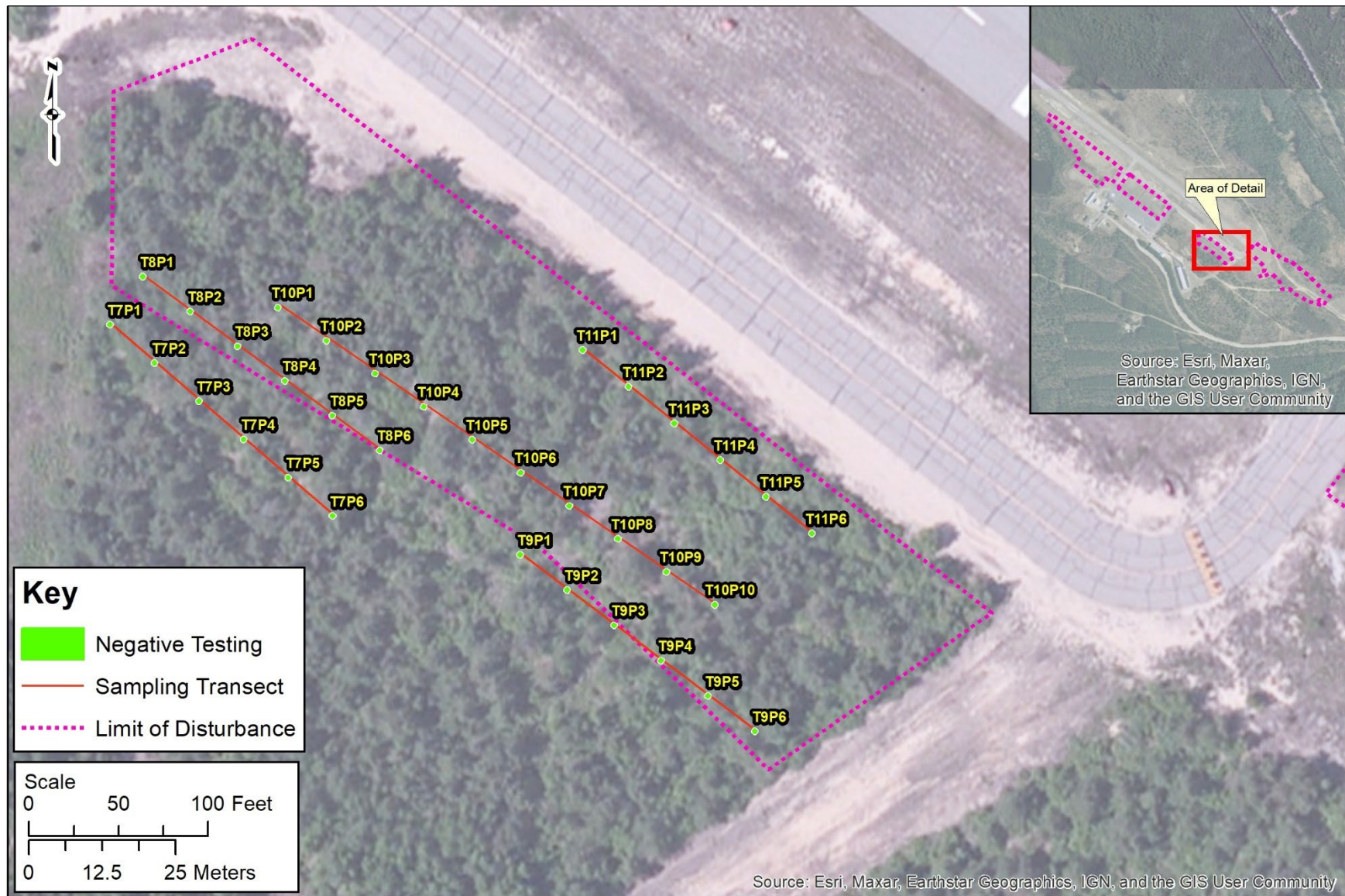


Figure 13. Aerial photograph showing the location of archaeological phase I survey sampling transects in the central portion of the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.

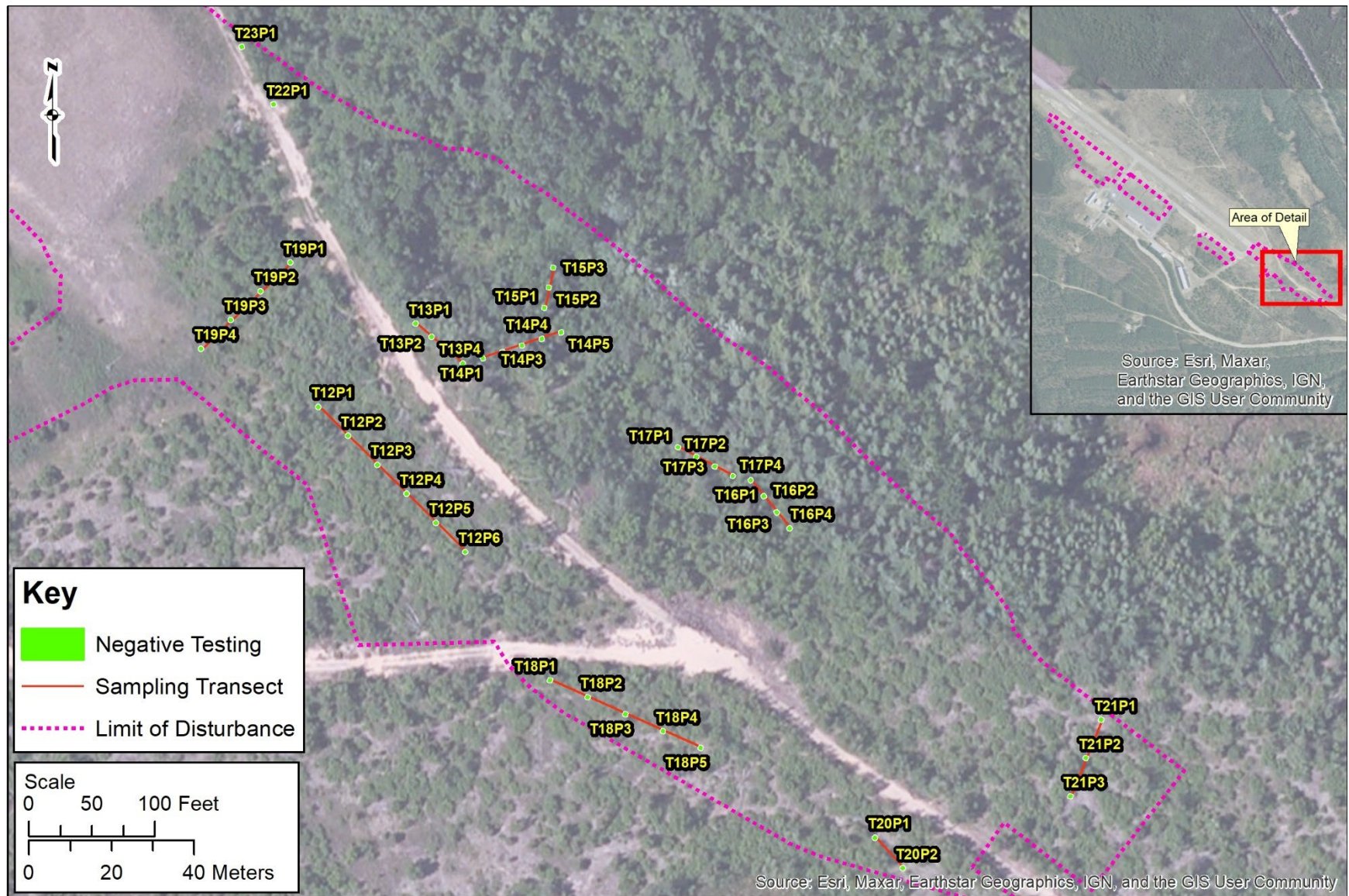


Figure 14. Aerial photograph showing the location of archaeological phase I survey sampling transects in the southeastern portion of the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Figure 15. View southwest of crew members excavating along sampling transect T12 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Figure 16. View northeast of crew members excavating along sampling transect T21 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form

Project Fryeburg Airport State Site # Test Pit T1 P2

Area/Locus PN Area 1-100 PROV# 1 Feature #(s)

Supervisor MWB Exc. Team CEC, VMA Recorder VMA Date 11-28-23

0cm		PN's / Artifacts, by level (see reverse for codes)	Soil Descriptions
A	L1	NAR	Ap (10YR 3/3) (0-14 cm)
B	2		10YR 3/3 B1 (10YR 3/6) (14-34 cm)
C ₁	5		10YR 3/3 C ₁ (10YR 3/3) (34-71 cm)
C ₂	6		sand (very coarse) w/ gravel C ₂ (2.5 Y 3/4) (71-100 cm)
	9		micaceous sand
	11		
	12		
	13		

Comments* NAR

Snow on ground. Litter very siftable. Just west of Runway.

Number of bags: 0

* Provide comments on Artifacts, Soils, Disturbances, Context, etc.

Figure 17. Photo and schematic profile of test pit T1P2 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form

Project Fryeburg Airport State Site # — Test Pit T5 P1
 Area/Locus — PN Area 101-200 PROV# 106 Feature #(s) —
 Supervisor MNB Exc. Team JCE, AMH Recorder JCE Date 11/28/22

PN's / Artifacts, by level (see reverse for codes)		Soil Descriptions
0cm	Ap	Ap (0-10cm)
10	Fill ₁ (?)	-silt
20		-10YR 7/4
30		
40		
50	Fill ₂ (?)	Fill ₁ (10-24cm)
60		-silt
70		-10YR 6/4
80		
90		
100		Fill ₂ (24-100cm)
110		-silt
120		-2.5Y 7/4
130		

Comments* NCM

Number of bags: 0

* Provide comments on Artifacts, Soils, Disturbances, Context, etc.

Figure 18. Photo and schematic profile of test pit T5P1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form

Project Fryeburg Airport State Site # Test Pit T8 P3
 Area/Locus PN Area 101-200 PROV# 117 Feature #(s)
 Supervisor MNB Exc. Team JCE AMH Recorder JCE Date 1/29/23

Depth (cm)	Soil Profile	PN's / Artifacts, by level (see reverse for codes)	Soil Descriptions
0	Ao	L1	NAR
10	B	2	A (0-10cm) - Lo-sd - 10YR 2/1 - Black
20		3	
30		4	
40		5	
50	C	6	B (10-46cm) - Lo-sd - 10YR 5/8
60		7	
70		8	
80		9	
90		10	C (46-70cm) - coarse sand - 2.5 YR/6
100		11	
110		12	
120		13	
130			

Comments* NCM

Number of bags: 0

* Provide comments on Artifacts, Soils, Disturbances, Context, etc.

Figure 19. Photo and schematic profile of test pit T8P3 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form

Project Fryeburg Airport State Site # Test Pit T13 P2

Area/Locus PN Area 201-300 PROV# 222 Feature #(s)

Supervisor MNB Exc. Team MHA/CWK Recorder NHA Date 11/30/23

Soil Descriptions	PN's / Artifacts, by level (see reverse for codes)	
0-24 cm 10 YR 3/4 Brn sand	L1	NAR
24-47 cm 10 YR 6/4 Brn sand	2	
47-80 cm 2.5 Y 8/6 (Olive Yellow) sand	3	
	4	
	5	
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	

Comments* N/A

Number of bags: 0

* Provide comments on Artifacts, Soils, Disturbances, Context, etc.

Figure 20. Photo and schematic profile of test pit T13 P2 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form			
Project <u>Fryeburg Airport I</u>	State Site # <u> </u>	Test Pit <u>T21P1</u>	
Area/Locus <u> </u>	PN Area <u>001-100</u>	PROV# <u>44</u>	Feature #(s) <u> </u>
Supervisor <u>MWB</u>	Exc. Team <u>CL, MRB</u>	Recorder <u>CL</u>	Date <u>12/1/23</u>
0cm	PN's / Artifacts, by level (see reverse for codes)	Soil Descriptions	
10	L1 <u>NAR</u>	<u>Aa (0-18 cm)</u>	
20	2	<u>10 YR 2/1</u>	
30	3	<u>B (18-33 cm)</u>	
40	4	<u>10 YR 4/6</u>	
50	5	<u>sandy</u>	
60	6	<u>C (33-63 cm)</u>	
70	7	<u>2.5 Y 7/6</u>	
80	8	<u>sandy</u>	
90	9		
100	10		
110	11		
120	12		
130	13		
Comments* <u>NAR</u>			
Number of bags: <u>0</u>			
* Provide comments on Artifacts, Soils, Disturbances, Context, etc.			

Figure 21. Photo and schematic profile of test pit T21P1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



Northeast Archaeology Research Center - Test Pit Profile Form

Project: Fryeburg Airport I State Site # Test Pit T23P1
 Area/Locus PN Area 201-100 PROV# 43 Feature #(s)
 Supervisor MNB Exc. Team CL, MCB Recorder CC Date 12/1/23

0cm	PN's / Artifacts, by level (see reverse for codes)	Soil Descriptions
0-10	11	Mottled A ₀ /B ₀ (0-42 cm)
10-20	2	10 YR 4/6 w/ 10 YR 3/2
20-30	3	loamy sandy
30-40	4	B ₁ (42-61 cm)
40-50	5	10 YR 4/6
50-60	6	comp. sandy
60-70	7	Buried A (61-66 cm)
70-80	8	10 YR 2/1
80-90	9	sandy
90-100	10	B ₂ (66-106 cm)
100-110	11	10 YR 5/6 w/ oxy
110-120	12	sandy
120-130	13	

Comments* NAB

* very disturbed

2d 5-8 cm frozen, unable to sift

Number of bags: 0

* Provide comments on Artifacts, Soils, Disturbances, Context, etc.

Figure 22. Photo and schematic profile of test pit T23P1 within the proposed Eastern Slope Regional Airport Runway 14/32 Extension Project (MHPC #1576-23), Fryeburg, Oxford County, Maine.



MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

January 3, 2024

Ms. Jordan Tate
McFarland Johnson
5 Depot St
Suite 25
Freeport, ME 04032

Project: MHPC# 1576-23 Eastern Slope Regional Airport
800 Foot Runway Extension
Town: Fryeburg, ME

Dear Ms. Tate:

In response to your recent request, I have reviewed the information received from NEARC December 14, 2023 to continue consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Based on the information submitted, I have concluded that there will be no historic properties (architectural or archaeological) affected by this proposed undertaking, as defined by Section 106.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

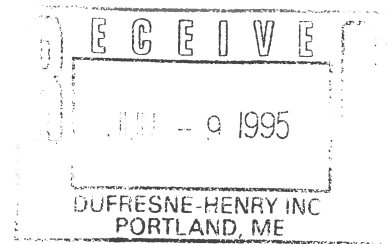
Sincerely,

Kirk F. Mohney
State Historic Preservation Officer



Earle G. Shettleworth, Jr.
Director

MAINE HISTORIC PRESERVATION COMMISSION
55 Capitol Street
State House Station 65
Augusta, Maine 04333



Telephone:
207-287-2132

June 6, 1995

Ms. Kathleen R. Miller
Dufresne-Henry Inc.
22 Free St.
Portland, ME 04101-3900

RE: Fryeburg Airport runway expansion, archaeological survey

Dear Ms. Miller:

Dr. Arthur Spiess of my staff has carefully reviewed the archaeological survey report by John Mosher concerning the Fryeburg Airport runway expansion project. We accept the report and the fieldwork as adequate to address our concerns. We accept the finding of the report that no significant archaeological site was found in the project area.

I find that there are no properties in the project area of historic, architectural, or archaeological significance as defined by the National Historic Preservation Act of 1966.

Sincerely,

Earle G. Shettleworth, Jr.
State Historic Preservation Officer

cc: John Mosher



John P. Mosher
Archaeological Consultant
364 Pinkham Brook Rd.
Durham, Maine 04222
(207) 353-7207



**Report of a Phase I Archaeological Survey of the
Eastern Slope Regional Airport Runway Expansion Project in Fryeburg, Maine**

Prepared for:

Ms. Kathleen R. Miller
Senior Environmental Analyst
Dufresne-Henry, Inc.
22 Free St.
Portland, Maine 04101-3900

by

John P. Mosher
Archaeological Consultant
364 Pinkham Brook Rd.
Durham, Maine 04222-5430

June 2, 1995

Introduction

In May 1995 a phase I archaeological reconnaissance survey of a proposed 500 foot runway expansion at the Eastern Slope Regional Airport in Fryeburg, Maine, was performed by the principal investigator and a three-person field crew. The survey was required under the Historic Preservation Act of 1966 (as amended). A previous survey undertaken in 1982 revealed the presence of a Ceramic period archaeological site, later determined to be insignificant, on a small knoll. Since the topography of the Eastern Slope Airport is marked by many such landforms, the focus of this project was to shovel test remnant terraces and knolls that would be impacted by ground disturbance activities associated with the runway expansion. In five days of shovel testing a total of 200 50 cm² shovel test pits were excavated in eight areas that exhibited good potential for prehistoric archaeological sites. **No prehistoric archaeological sites were discovered.**

The weather throughout the course of the field work was usually cooperative - rains held out until after 4:00 P.M. most days. The greatest annoyance, of course, was the millions of black flies, mosquitos and ticks which greeted us every morning at 8:00 A.M.

The proposed runway expansion project calls for the construction of a 500 foot runway extension as well as a runway safety area. Other activities include the clearing of approximately 24 acres of trees and brush, and the removal of some 5.5 acres of ground penetrations. These activities are planned for both sides of the runway.

Research Strategy

The goal of a phase I archaeological survey is to determine the presence or absence of potentially significant archaeological sites within areas to be impacted by development. Should such sites be found then a phase II archaeological testing program is usually implemented to determine National Register Eligibility and legal protection. Settlement models, the assumptions we make about which types of sites can be found on particular landforms, help guide us in determining where to dig and what level of precision to adopt in terms of a sampling strategy. For instance, the Eastern Slope Regional Airport is constructed on well-drained glacial outwash sands. The outwash landforms vary in elevation from relatively flat plains to small knolls and terraces. Some terraces and knolls overlook ponds and/or wetlands. We know from previous experience that Paleoindians, the first humans to enter the area some 11,000 years ago, established small campsites in such terrain. We also know that similar terrain was chosen by people who lived during the Ceramic period (3000 B.P. to 300 B.P.) since one such site had been found at the airport in 1982, and a similar one discovered in the southern end of the Saco drainage in Waterboro (Mosher 1994).

Potential site size is a major consideration in reconnaissance survey. Paleoindian sites are comprised of small "loci" or scatterings of stone tools and flaking debris. The size of a

locus varies, but they are usually about 20m² in size. Ceramic period sites vary considerably in size although many, including 11.4 excavated in 1982, are about the same size as a Paleoindian locus. In order to find such sites, or to prove that none exist, it is necessary to adopt a sampling strategy that requires a lot of test pits at relatively close intervals. In consultation with MHPC, a sample of 200 test pits was determined appropriate. The interval between test pits was established at 5-10 meters.

A standard field procedure was utilized in the reconnaissance survey at the Eastern Slope Airport. Spiess and Mosher visited the parcel to confer on areas to be tested and those to be written off. A total of 11 areas were designated for possible testing. All are located within areas to be directly impacted by the construction of the runway extension or the clearing of trees for visibility purposes. Of the 11 areas originally designated, three were written off as having no archaeological potential. These include the current runway overrun (Area 5) and Areas 10 and 11 located in featureless terrain on the eastern side of the runway. The remaining areas 1-4 and 6-9 were considered necessary for testing.

In areas requiring survey a series of linear transects were established on top of knolls and terraces. Depending upon the size of the area a minimum of 10 test pits to a maximum of 60 were laid out in 5 to 10 meter intervals along the transects. Test pits were hand excavated by shovel and cleaned up with mason's trowels. Soils were passed through shaker screens onto plastic tarps and backfilled once the stratigraphy had been recorded. In general sandy soils made for easy digging and screening.

Since a number of areas in the parcel exhibit areas of exposed "C" horizon sands, some effort was directed toward surface collecting. Among the areas that were scanned for surface materials is the sandpit and kettle pond at the north end of the project, a dirt road that runs from the sandpit to the runway extension, and the undisturbed margins of the present runway. No artifacts were discovered during surface collecting.

Prehistory of the Upper Saco River Valley

The prehistory of Fryeburg and the surrounding countryside is a patchwork affair since only a handful of archaeological projects have been performed in the general area. If we were to deduce native American activities from the field work of professionals alone, there would be little to say about this portion of Maine. Fortunately, a number of avocational archaeologists from the area have been actively collecting eroded river banks and plowed fields looking for artifacts. Some of these amateurs, in particular Helen Leadbeater of Fryeburg, maintain accurate and detailed field notes of their activities. This kind of documentation complements professional excavations which have taken place in and around the White Mountains of Maine and New Hampshire and in the southern portion of the Saco drainage.

The prehistory of the upper Saco River valley begins as it does elsewhere in much of

the State of Maine, approximately 11,500 years ago with the arrival of people known to archaeologists as Paleoindians. Paleoindians likely entered Maine from the south and west following the retreat of the glaciers. These people were hunter-gatherers who, from the food remains they left behind, hunted a variety of large and small game including caribou, beaver and Arctic fox (Storck and Spiess 1994; Spiess, Curran and Grimes 1985). In other parts of the Northeast, Michigan for example, there is evidence to suggest that Paleoindians hunted Pleistocene megafauna like mammoths and mastodon. They may also have supplemented their diets with wild plants and berries since many including bunchberry, raspberry, etc., have been found in bulk charcoal samples radiocarbon dated to approximately 10,500 years ago (Sidell 1995).

No Paleoindian sites have been found in Fryeburg but Sargeant and Ledoux (1973) reported fluted points from Intervale and possibly near Conway Lake in New Hampshire. Fluted points and a type of tool called an endscraper are the hallmarks of the Paleoindian stone tool kit. The points in particular are certainly an expression of exquisite craftsmanship. It has been speculated that they would have been lashed to the end of a wooden shaft with some type of natural glue and used as a thrusting spear (Gramly 1984).

Sometime around 10,200 (radiocarbon) years ago people abandoned the fluted point in favor of unfluted, parallel-flaked projectile points. The change in point styles coincides with a changing environment in which a mosaic parkland became a closed forest. With this change comes a new cultural period, lasting approximately 700 years, known as Late Paleoindian. The cultures that comprise the Late Paleoindian are best known from the high plains of Canada and the U.S. and from the desert southwest (Frison 1991). Sites attributable to the Late Paleoindian are seemingly more rare than fluted-point Paleoindian sites (probably a function of not digging in the right place). Occasionally a Late-Paleoindian point will show up in an amateur collection (*e.g.* Kopec 1985, Hamilton *et al.* 1985, Spiess 1992a) but few of these sites have ever been professionally excavated. There are a couple of exceptions such as the Nicholas site in Oxford, Maine and the Varney Farm in Turner, Maine. Two possible Late Paleoindian sites were tested in the lower Saco drainage in Sanford and Waterboro. No artifacts attributable to the Late Paleoindian period are present in the Leadbeater collection (Rombola 1995).

Archaic Period

The Archaic period in Maine (9500-3000 B.P.) marks a shift in settlement patterns and the adoption of new lithic technologies. For the first time groundstone woodworking seems to have been an integral part of the material culture. The Archaic is divided in three major blocks of time: Early (9500 - 8000 B.P.), Middle (8000-6000 B.P.) and Late (6000-3000 B.P.). Artifacts found in Fryeburg, or nearby Conway Lake, attributable to the Early and Late Archaic periods are present in the Leadbeater collection.

The Early Archaic period, like the Late Paleoindian, is somewhat of an enigma. Only a handful of sites dating to this time period have been excavated. Many of these tend to be

deeply buried by thousands of years of river sediments so they are less prone to artifact collecting. And they tend to be identified by radiocarbon dated organic remains, not from diagnostic artifacts. Occasionally, however, a diagnostic artifact or two, projectile points in particular, are found. One of these, collected by Helen Leadbeater, was found on Walker's Island in the Saco River east of the Lovewell's Pond in Fryeburg (Rombola 1995). These points have bifurcated bases (two-prong) and look like Kanawah and Kirk stemmed varieties found along the central Atlantic coast (Spiess, Bourque and Gramly 1983).

The lifestyle of the people living in various river drainages of western Maine and eastern New Hampshire seems to have been based on a combination of hunting, fishing and probably gathering. Fishing apparently became an increasingly important activity since most Early Archaic sites are found along lakes, rivers and streams. Calcined (bones burned to a white color) food remains left behind in fire hearths indicate a fairly wide selection of animals. The anadromous species shad and alewives, cousins to the various species of herring living in the Gulf of Maine, are not uncommon (Robinson 1992). Also present in sites of this antiquity are snake and/or turtle remains (Hamilton *et al.* 1990; Spiess 1992b; Waymon and Bolian 1992). The bones of larger animals are sometimes found. Unfortunately the calcination process in conjunction with butchery practices, scavenging and a variety of other possible taphonomic (taphonomy is the science of how archaeological sites are formed) processes has made them virtually unidentifiable.

The Middle Archaic period (8000-6000 B.P.) is likewise not well-known to archaeologists. Sites of the period are found on the banks of rivers or on lakeshores suggesting an increased usage of such water bodies for food and transportation. Currently the Middle Archaic is subdivided into the "Neville Complex" - so-named for the Neville Site which defines it, and the Gulf of Maine Archaic Tradition (Robinson 1992). The Neville complex is known primarily for its diagnostic projectile points - none of which have been found in Fryeburg. These include Starks, Nevilles and Merrimacks. The Gulf of Maine Archaic Tradition is defined more from its mortuary practices rather than from its diagnostic projectile points (of which there are none). Most of the non-mortuary artifacts are steep-sided scrapers and core tools.

The Late Archaic, extending from about 6000 B.P. to 3000 B.P., is divided into a number of traditions and phases. Those that are represented in the Fryeburg area include the Brewerton Aspect of the Laurentian Tradition (people who lived in the interior Northeast on Lakes, Rivers and Streams) and the Moorehead Phase (occasionally called the "Red Paint People"). A single Brewerton "eared" biface was collected by Mrs. Leadbeater from ME 21.11 in Fryeburg Harbor. A single-find Otter Creek corner-notched projectile point was found at the falls in Hiram, Maine (Rombola 1995).

The latest culturally-defined portion of the Archaic period represented in Fryeburg is called Susquehanna after the river in New York and Pennsylvania where it was first defined. In the Leadbeater collection, Susquehanna artifacts, Orient fishtails and Susquehanna Broads, have been recovered from ME 21.14 on Lovewell Pond along with steatite bowl fragments.

Susquehanna materials are also present at ME 21.13 in Fryeburg Harbor (Rombola 1995).

Ceramic Period

The Ceramic Period, known in other parts of the east as "Woodland Period", began in Maine approximately 3000 years ago with the adoption of ceramics. In Maine and the Maritimes, the Ceramic Period is divided into seven subperiods from early to late or 1 to 7 (Petersen and Sanger 1994) based on changing pottery styles. The last of the Ceramic periods coincides with European exploration and settlement of New England and is usually referred to as the Contact Period (sometimes divided into Early Contact and Late Contact). Sites attributable to the Ceramic Period are well-represented in Fryeburg. Rombola (1995) reports on 61 vessels from the Leadbeater collection. The most numerous are those assigned to the Late Ceramic period while only a couple of vessels represent an Early Middle Ceramic period (CP2) affiliation. Cox's 1992 survey of the Swans Falls area (Cox 1992) identified four new Ceramic period sites.

Contemporary Environment

The Eastern Slope Regional Airport is located in the southwestern corner of the Town of Fryeburg, Maine, between Routes 5 and 113 and Porter Road. Fryeburg's commercial center is situated approximately two miles north of the project area (Figure 1).

Located within the upper Saco River valley and in a major ski area, Fryeburg and its neighboring communities are bounded by numerous mountains. These include Mt. Tom at the north of Lovewell Pond, Frost and Peary mountains to the south of the project area, and Pleasant Mountain to the east in nearby Denmark, Maine. According to Fobes (1946) Fryeburg lies on the borderline between the Southern Interior and intermediate uplands and foothills. In terms of general climate the lower elevations are relatively mild with average summer temperatures of about 67.4 to 69.3° F. Occasionally summers can be quite hot with temperatures exceeding 100° F (a temperature of 105° F was reported for North Bridgton by Fobes). The January temperatures average between 13.6 to 19.4° F. In some of the upper elevations, particularly on north facing slopes, patches of snow were still present during the middle of May.

The area is well watered with ponds, lakes, streams and a major river, the Saco. Among the water bodies that are located within the project area, or immediately adjacent, include Lovewell Pond to the east, Round Pond - a small kettle pond at the northern limit of the runway, Davis Pond - a kettle on the west side of the runway - and the Saco River, also to the east. The project area likewise includes a number of unnamed kettle ponds or wetlands. These are situated on the eastern side of the runway.

Soils within the project area are primarily Adams-Crogham-Colton series which are "very deep, nearly level to steep, excessively drained to moderately well-drained ,

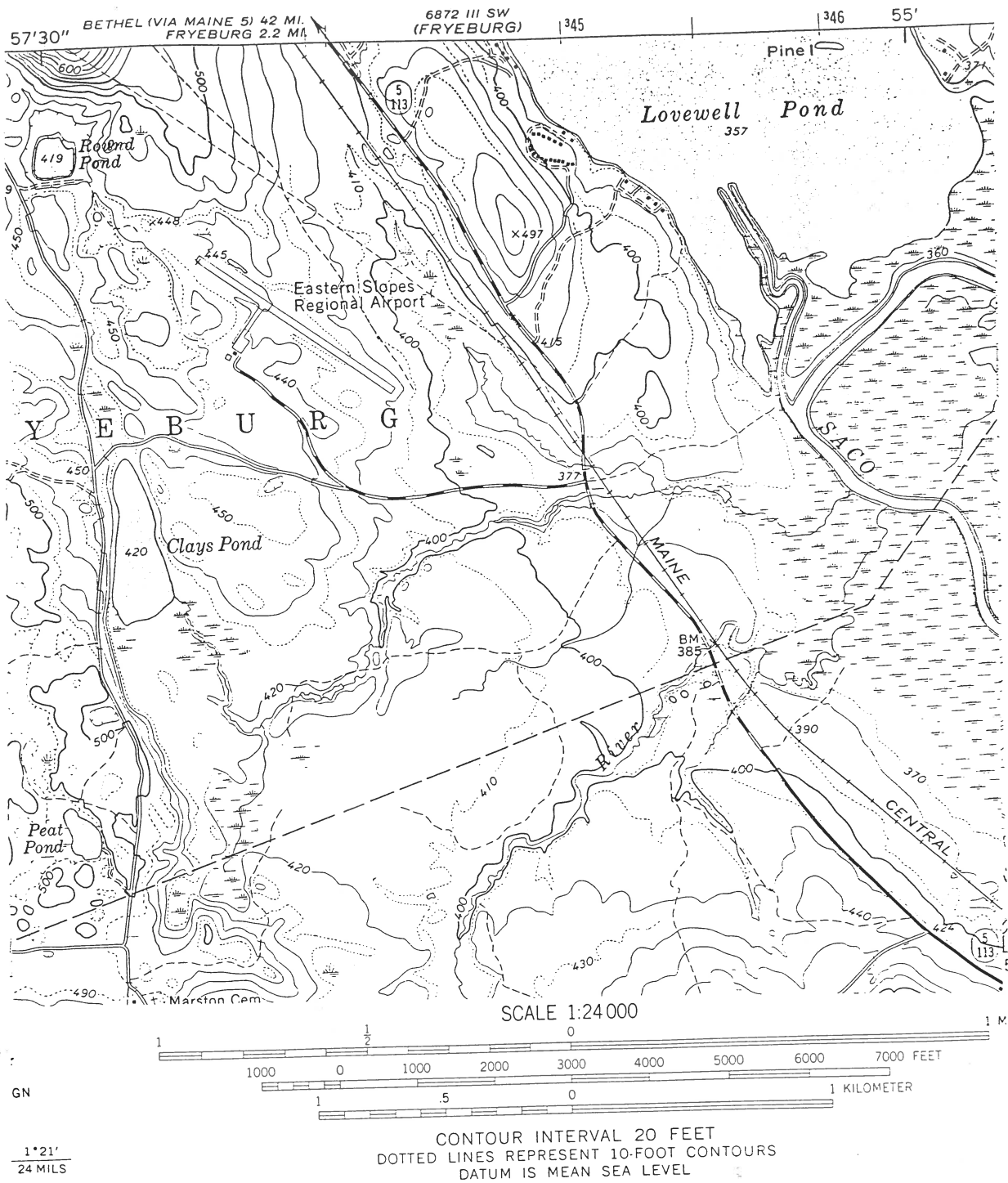


Figure 1. Location of the Eastern Slope Regional Airport, Fryeburg, Maine.

[and] formed in glaciofluvial sand and gravel" (Wilkinson 1995:10). As observed in most of the test pits excavated during the archaeological survey, a forest podsol is present indicating that much of the parcel has not been disturbed. A "typical" soil profile indicates a thin 2-5 cm thick organic mat overlying an equally thin "A" horizon - a black sandy loam. Below the "A" is a pink to gray sandy, sometimes intermittent "E". Underlying the "E" are 25-45 cm of "B" horizon sands. Some immediately below the "E" are highly oxidized and mottled. Generally this highly oxidized sand is up to 5 cm thick. Below the oxidized "B" in most test pits is a yellow-brown sand with gravel which overlies an olive coarse sand and gravel horizon parent material. Not all test pits exhibited this "C" horizon. While this profile is consistent for all areas tested, the texture of the soils varied. Area 4 exhibited fine sand and silts on top of the coarse "C" material. In other areas the sand was usually fine to coarse but predominantly medium to coarse.

Vegetation in the project area is comprised primarily of immature red pine, white oak, white birch, choke cherry, and alder/poplar. The understory is moderately dense with a variety of small bushes and saplings with some "caribou moss".

Wildlife within the area is fairly diverse. During the course of survey, we observed the tracks of large herbivores such as deer (*Odocoileus virginianus*) and moose (*Alces alces*) as well as the prints and scat of coyotes (*Canis latrans*). The remains of animals found during the walkover survey included muskrat (*Ondatra zibethicus*), raccoon (*Procyon lotor*), Canada goose (*Branta canadensis*) and a domestic cat (*Felis familiaris*). Observable in the ponds were common Northern water snakes (*Nerodia sipedon* ssp), brown bullheads (*Ictalurus nebulosus*), turtles (species unknown), and green frogs (*Rana clamitans*). There is also a wide variety of passerine birds, and a couple of harriers which could be observed overhead.

Survey Results

The goal of the phase I survey was to test prehistoric settlement models by determining whether or not potentially significant prehistoric archaeological sites exist within the areas to be impacted by the construction of a 500' runway expansion. Eight areas were deemed worthy of survey efforts (Figure 2). A total of 200 50 cm² shovel test pits were hand excavated in five meter intervals on linear transects to accomplish our goal (See Appendix). In five days of shovel testing and walkover survey, no prehistoric artifacts were found. Thus, no potentially significant archaeological resources will be impacted by the construction of the runway expansion. The remainder of this section will address area descriptions, soils, and transect information.

Areas 1 through 4 are located on the west side of the runway from the windsock to the end of the current overrun. The terrain slopes to the west, in some places rather steeply, from about 450' above sea level to 430'. Areas 1 through 3 are situated, more or less, on the same landform - an outwash ridge that narrows substantially from south to north. Area 4 is situated at the end of this landform on a slightly sloping piece of terrain.

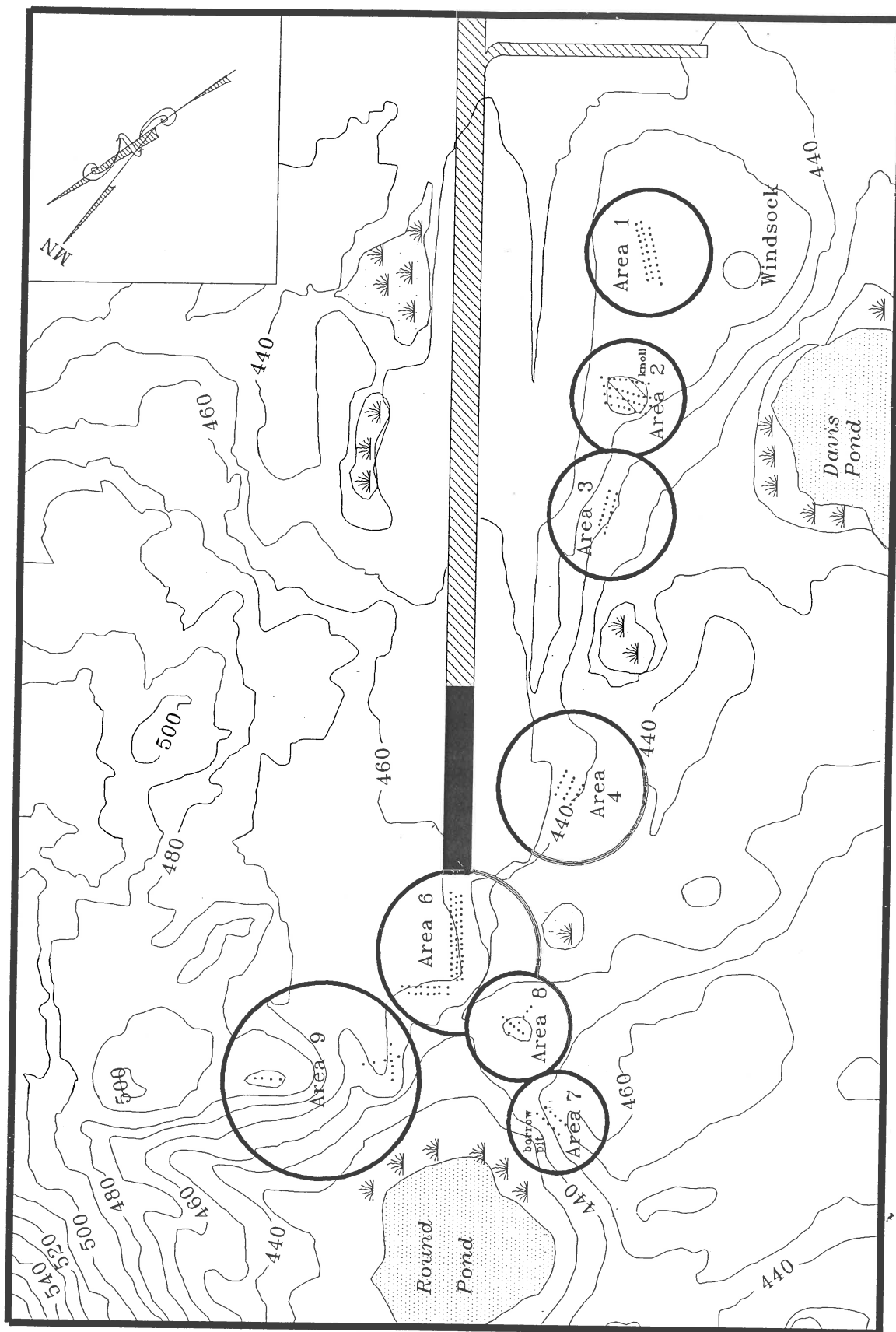


Figure 2. Location of Eight Areas Designated for Shovel Testing at the Eastern Slope Regional Airport, Fryeburg, Maine.

Area 1 is situated on the broadest portion of the outwash ridge within the tree line designated for removal. Three parallel linear transects were established here at an azimuth of $130^{\circ}/310^{\circ}$, or roughly parallel with the runway. Transects 12 and 13 are number from south to north; Transect 14 from south to north. Each is spaced 5 meters apart. The distance between test pits is also 5 meters. Soils consist of an intact A, E, B, C sequence within the tree line. Areas with disturbed "A" horizons were examined for artifacts, but not excavated. No artifacts were found during subsurface testing or from surface collecting.

Area 2 is situated immediately north of Area 1 and its dominant feature is a slight rise or knoll located on the 450' contour. The area slopes steeply to the southwest toward Davis Pond. One can imagine, in a more open, mosaic forest of 11,000 years ago, a fairly clear view to the pond. Today, the view is obstructed by trees. Four linear transects of 35 shovel test pits were aligned on top of the knoll, roughly perpendicular to the runway. Transect 15 is the southerly transect in the area. It consists of 9 test pits at an azimuth of 240° magnetic. Transects 16 -18 are aligned parallel with each other at an azimuth of 258° magnetic. Transects 16 and 17 contain 9 test pits while Transect 18 consists of 8 test pits. Soils are consistent with those in Area 1.

The third part of the landform, Area 3, to be tested is very narrow between the 450' and 440' contour intervals. It slopes fairly steeply to a small wetland feature to the west. Here two linear transects at an azimuth of 338° were established between the 440' contour and the edge of the clearing to the east (runway side). The distance between the two is 7 meters while the interval between test pits is 5 meters. A total of 15 shovel test pits, all negative for cultural remains, were excavated in the two transects.

Area 4 is a nearly featureless expanse of terrain with immature trees and bushes. A slight rise at the edge of the 440' contour was designated for shovel testing. The view from the rise is hardly spectacular but in a late Pleistocene landscape two wet areas and Davis Pond may have been within sight, and Round Pond is just a short walk to the north. Three linear transects were established at an azimuth of 350° . Fifteen test pits were aligned on the transects in 5 meter intervals on top of the rise. The distance between the transects is 10 meters. The soils here grade to a silty sand texture which is much finer than the soils in other areas. The "B" horizon, in general, is also deeper.

Area 6 is situated on the northeast side of the airport and just north of the 500' extension. It is a large, relatively flat landform that will form the proposed runway overrun. It enjoys a southwest exposure to a natural draw that opens into the Round Pond area. Five linear transects were established to take advantage of this draw. Three of the transects were established on or near the 450' contour and roughly parallel with the dirt road that connects the current runway overrun with Round Pond. The other two transects run perpendicular to these and along the 450' contour north toward Area 9. A total of 60 test pits were established on the 5 transects. None contained cultural remains.

Area 7, the first portion of the project tested, is a small knoll feature overlooking Round Pond in the northwest corner of the parcel. Much of the knoll has been destroyed for its wealth of sand and gravel. The borrow pit itself is also a local "hangout" as evidenced by numerous broken beer bottles and other trash. It may also be a favorite spot for poaching since one of the crew, Bill Burgess, spied a pile of bird bones in the leaf litter. These turned out to be at least 4 nearly complete Canada geese carcasses.

This area was considered to have the greatest potential for surface collected artifacts. Lunch breaks and lulls in the digging were spent scouring the margins of the borrow pit and Round Pond for artifacts but none were found. Subsurface testing was achieved with parallel transects of 5 test pits each on top of the knoll overlooking the Pond and the borrow pit. These were established at an azimuth of 40° magnetic and in 5 meter intervals. All test pits were negative.

Area 8 is another small knoll that dots the landscape of the Eastern Slope Airport. On the initial visit to the site on May 9, Spiess remarked that it was very similar to the landform upon which site 11.4 was found. This knoll is situated on the edge of the "draw" opposite of Area 6. The terrain is somewhat hummocky and stony with a number of irratics at its northern edge. All of the trees are immature: the result of a fire that raged through the area a number of years ago (Spiess personal communication, Rombola personal communication). Two linear transects in an "iron cross" configuration were established at the top of the knoll. Here 10 test pits were placed in 5 meter intervals. Digging was perhaps the most difficult in this area due in part to the number of large stones encountered. Soils are similar to those found elsewhere in the project. No artifacts were recovered in the test pits.

The last area subject to subsurface testing is Area 9. It is located in the northeast portion of the parcel overlooking Round Pond. It is comprised of a till-controlled knoll at its northernmost limit, but the remainder is situated on the same landform as is Area 6. Sixteen test pits were established in Area 9 in linear transects. Five test pits were established on top of the knoll in 5 meter intervals. Eleven were placed in an iron-cross down slope of the knoll between the 450' and 460' contours. None of these test pits contained cultural remains.

Conclusions and Recommendations

In five days of reconnaissance survey 200 test pits were excavated in 8 areas designated for shovel testing. Each of the areas was considered to have a good potential for containing prehistoric sites because of their well-drained sands and because of their proximity to a water source. Paleoindian sites tend to be associated with a water body of some type. Some Ceramic periods sites, 11.4 for example, tend to be found away from water so it is imperative that landforms like those within the airport facility get tested. This survey has demonstrated that no potentially significant prehistoric sites exist within the areas to be impacted by the expansion of the runway. Thus, no further archaeology is recommended.

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MAINE HISTORIC PRESERVATION COMMISSION
55 CAPITOL STREET
65 STATE HOUSE STATION
AUGUSTA, MAINE
04333

JANET T. MILLS
GOVERNOR

KIRK F. MOHNEY
DIRECTOR

January 31, 2024

Ms. Jordan Tate
McFarland Johnson
5 Depot St
Suite 25
Freeport, ME 04032

Project: MHPC# 1576-23 Eastern Slope Regional Airport
800 Foot Runway Extension
Town: Fryeburg, ME

Dear Ms. Tate:

In response to your recent request, I have reviewed the information received on January 16, 2024 to continue consultation on the above referenced project in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA).

Based on the information submitted, I have concluded that there will be no historic properties (architectural or archaeological) affected by this proposed undertaking, as defined by Section 106.

Please contact Megan Rideout at (207) 287-2992 or megan.m.rideout@maine.gov if we can be of further assistance in this matter.

Sincerely,

Kirk F. Mohney
State Historic Preservation Officer

Appendix F

NCRS Web Soil Survey Report



United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Oxford County Area, Maine

IZG Proposed Runway Extension LOD



February 16, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

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How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

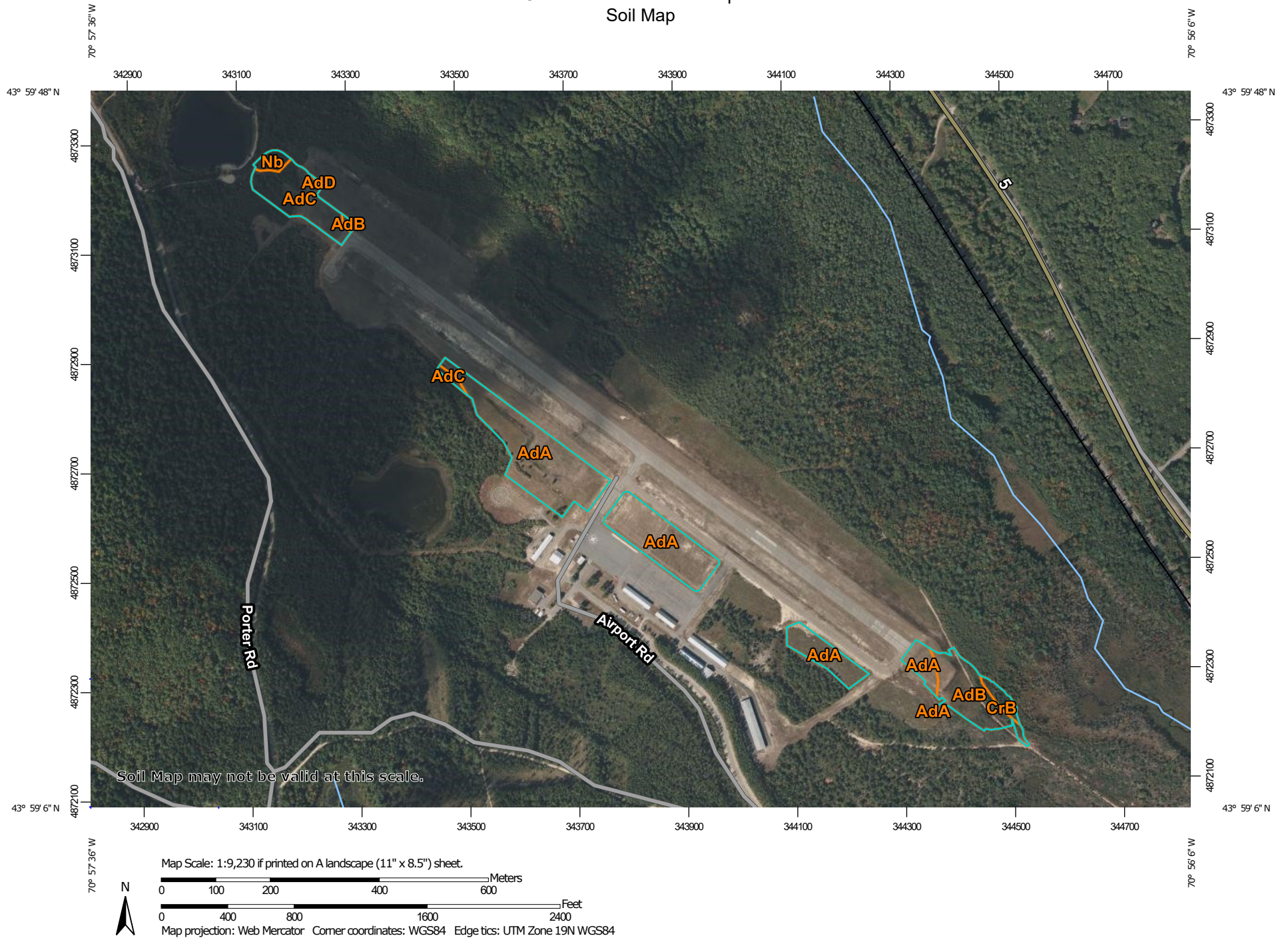
Custom Soil Resource Report

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features

 Blowout

 Borrow Pit

 Clay Spot

 Closed Depression

 Gravel Pit

 Gravelly Spot

 Landfill

 Lava Flow

 Marsh or swamp

 Mine or Quarry

 Miscellaneous Water

 Perennial Water

 Rock Outcrop

 Saline Spot

 Sandy Spot

 Severely Eroded Spot

 Sinkhole

 Slide or Slip

 Sodic Spot

 Spoil Area

 Stony Spot

 Very Stony Spot

 Wet Spot

 Other

 Special Line Features

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

Background

 Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Oxford County Area, Maine
Survey Area Data: Version 25, Sep 5, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 19, 2020—Sep 20, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AdA	Adams loamy sand, 0 to 3 percent slopes	12.8	64.3%
AdB	Adams loamy sand, 3 to 8 percent slopes	3.0	15.3%
AdC	Adams loamy sand, 8 to 15 percent slopes	3.1	15.6%
AdD	Adams loamy sand, 15 to 25 percent slopes	0.0	0.1%
CrB	Croghan loamy fine sand, 3 to 8 percent slopes	0.5	2.5%
Nb	Naumburg loamy sand	0.4	2.2%
Totals for Area of Interest		19.9	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it

was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Oxford County Area, Maine

AdA—Adams loamy sand, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2x1cb

Elevation: 10 to 2,000 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

AdB—Adams loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2w40c

Elevation: 250 to 2,940 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Base slope

Down-slope shape: Convex

Across-slope shape: Convex

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

AdC—Adams loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2w40d

Elevation: 250 to 2,940 feet

Mean annual precipitation: 31 to 95 inches

Mean annual air temperature: 27 to 52 degrees F

Frost-free period: 90 to 160 days

Farmland classification: Not prime farmland

Map Unit Composition

Adams, wooded, and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams, Wooded

Setting

Landform: Eskers, outwash terraces

Landform position (two-dimensional): Summit, backslope

Landform position (three-dimensional): Side slope, crest

Down-slope shape: Linear

Across-slope shape: Convex

Parent material: Sandy glaciofluvial deposits

Typical profile

Oe - 0 to 4 inches: moderately decomposed plant material

E - 4 to 6 inches: loamy sand

Bs - 6 to 21 inches: sand

BC - 21 to 27 inches: sand

C - 27 to 65 inches: sand

Properties and qualities

Slope: 8 to 15 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Somewhat excessively drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: More than 80 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 4e

Hydrologic Soil Group: A

Ecological site: F144BY601ME - Dry Sand

Hydric soil rating: No

Add—Adams loamy sand, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 9lb8
Elevation: 300 to 2,200 feet
Mean annual precipitation: 30 to 48 inches
Mean annual air temperature: 37 to 46 degrees F
Frost-free period: 70 to 160 days
Farmland classification: Not prime farmland

Map Unit Composition

Adams and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Adams

Setting

Landform: Outwash terraces
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Riser
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Sandy glaciofluvial deposits derived from crystallin rock

Typical profile

Oa - 0 to 1 inches: highly decomposed plant material
H1 - 1 to 2 inches: loamy sand
H2 - 2 to 19 inches: loamy sand
H3 - 19 to 65 inches: sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 14.17 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F144BY601ME - Dry Sand
Hydric soil rating: No

CrB—Croghan loamy fine sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2x1f7

Elevation: 150 to 2,300 feet

Mean annual precipitation: 40 to 55 inches

Mean annual air temperature: 37 to 46 degrees F

Frost-free period: 90 to 135 days

Farmland classification: Farmland of statewide importance

Map Unit Composition

Croghan and similar soils: 85 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Croghan

Setting

Landform: Outwash deltas

Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope

Down-slope shape: Linear

Across-slope shape: Linear

Parent material: Sandy glaciofluvial deposits

Typical profile

Ap - 0 to 7 inches: loamy fine sand

Bs - 7 to 17 inches: loamy fine sand

BC - 17 to 30 inches: fine sand

C - 30 to 65 inches: sand

Properties and qualities

Slope: 3 to 8 percent

Depth to restrictive feature: More than 80 inches

Drainage class: Moderately well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 14.17 in/hr)

Depth to water table: About 18 to 30 inches

Frequency of flooding: None

Frequency of ponding: None

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2w

Hydrologic Soil Group: A

Ecological site: F144BY602ME - Sandy Toeslope

Hydric soil rating: No

Nb—Naumburg loamy sand

Map Unit Setting

National map unit symbol: 9ldk
Elevation: 200 to 1,800 feet
Mean annual precipitation: 34 to 50 inches
Mean annual air temperature: 41 to 45 degrees F
Frost-free period: 90 to 130 days
Farmland classification: Not prime farmland

Map Unit Composition

Naumburg and similar soils: 85 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Naumburg

Setting

Landform: Outwash plains, outwash terraces
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy glaciofluvial deposits derived from granite and gneiss

Typical profile

Oa - 0 to 2 inches: highly decomposed plant material
H1 - 2 to 7 inches: loamy sand
H2 - 7 to 38 inches: sand
H3 - 38 to 65 inches: coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
(1.42 to 6.00 in/hr)
Depth to water table: About 6 to 18 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 4.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: A/D
Ecological site: F144BY303ME - Acidic Swamp
Hydric soil rating: Yes

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Appendix G

NETROnline Environmental Data Report

prepared for:
Ref: Runway Extension

2023-10-31

Environmental Radius Report

Summary

Federal

	< 1/4	1/4 - 1/2	1/2 - 1
Lists of Federal NPL (Superfund) sites	0	0	0
Lists of Federal Delisted NPL sites	0	0	-
Lists of Federal sites subject to CERCLA removals and CERCLA orders	0	0	-
Lists of Federal CERCLA sites with NFRAP	0	0	-
Lists of Federal RCRA facilities undergoing Corrective Action	0	0	0
Lists of Federal RCRA TSD facilities	0	0	-
Lists of Federal RCRA generators	0	-	-
Federal institutional control/engineering control registries	0	-	-
Federal ERNS list	0	-	-

State

	< 1/4	1/4 - 1/2	1/2 - 1
Lists of state and tribal Superfund equivalent sites	0	0	0
Lists of state and tribal hazardous waste facilities	0	0	-
Lists of state and tribal landfills and solid waste disposal facilities	0	0	-
Lists of state and tribal leaking storage tanks	0	0	-
Lists of state and tribal registered storage tanks	2	-	-
State and tribal institutional control/engineering control registries	0	-	-
Lists of state and tribal voluntary cleanup sites	0	0	-
Lists of state and tribal brownfields sites	0	0	-

Other

	< 1/4	1/4 - 1/2	1/2 - 1
State and/or tribal lists of registered aboveground storage tanks (ASTs)	0	0	-
U.S. EPA Underground Storage Tanks (UST)	0	-	-

Lists of Federal NPL (Superfund) sites

The National Priorities List (NPL) is the list of sites of national priority among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the EPA in determining which sites warrant further investigation. The NPL is updated periodically, as mandated by CERCLA.

There were no Federal NPL sites found within a one-mile radius of the target property.

Lists of Federal Delisted NPL sites

The EPA may delete a final NPL site if it determines that no further response is required to protect human health or the environment. Under Section 300.425(e) of the NCP (55 FR 8845, March 8, 1990), a site may be deleted when no further response is appropriate if EPA determines that one of the following criteria has been met: 1) EPA, in conjunction with the state, has determined that responsible parties have implemented all appropriate response action required, 2) EPA, in consultation with the state, has determined that all appropriate Superfund-financed responses under CERCLA have been implemented and that no further response by responsible parties is appropriate, 3) A remedial investigation/feasibility study (RI/FS) has shown that the release poses no significant threat to public health or the environment and, therefore, remedial measures are not appropriate.

There were no Federal Delisted NPL sites found within a half-mile radius of the target property.

Lists of Federal sites subject to CERCLA removals and CERCLA orders

CERCLA identifies the classes of parties liable under CERCLA for the cost of responding to releases of hazardous substances. In addition, CERCLA contains provisions specifying when Federal installations must report releases of hazardous substances and the cleanup procedures they must follow. Executive Order No. 12580, Superfund Implementation, delegates response authorities to EPA and the Coast Guard. Generally, the head of the Federal agency has the delegated authority to address releases at the Federal facilities in its jurisdiction.

There were no Federal sites subject to CERCLA removals and/or orders found within a half-mile radius of the target property.

Lists of Federal CERCLA sites with NFRAP

No Further Remedial Action Planned (NFRAP) is a decision made as part of the Superfund remedial site evaluation process to denote that further remedial assessment activities are not required and that the facility/site does not pose a threat to public health or the environment sufficient to qualify for placement on the National Priorities List (NPL) based on currently available information. These facilities/sites may be re-evaluated if EPA receives new information or learns that site conditions have changed. A NFRAP decision does not mean the facility/site is free of contamination and does not preclude the facility/site from being addressed under another federal, state or tribal cleanup program.

There were no Federal CERCLA sites with No Further Remedial Action Planned (NFRAP) decisions found within a half-mile radius of the target property.

Lists of Federal RCRA facilities undergoing Corrective Action

Corrective action is a requirement under the Resource Conservation and Recovery Act (RCRA) that facilities that treat, store or dispose of hazardous wastes investigate and cleanup hazardous releases into soil, ground water, surface water and air. Corrective action is principally implemented through RCRA permits and orders. RCRA permits issued to TSDFs must include provisions for corrective action as well as financial assurance to cover the costs of implementing those cleanup measures. In addition to the EPA, 44 states and territories are authorized to run the Corrective Action program.

There were no Federal RCRA facilities undergoing corrective action(s) found within a one-mile radius of the target property.

Lists of Federal RCRA TSD facilities

The final link in RCRA's cradle-to-grave concept is the treatment, storage, and disposal facility (TSDF) that follows the generator and transporter in the chain of waste management activities. The regulations pertaining to TSDFs are more stringent than those that apply to generators or transporters. They include general facility standards as well as unit-specific design and operating criteria.

There were no Federal RCRA treatment, storage and disposal facilities (TSDFs) found within a half-mile radius of target property.

Lists of Federal RCRA generators

A generator is any person who produces a hazardous waste as listed or characterized in part 261 of title 40 of the Code of Federal Regulations (CFR). Recognizing that generators also produce waste in different quantities, EPA established three categories of generators in the regulations: very small quantity generators, small quantity generators, and large quantity generators. EPA regulates hazardous waste under the Resource Conservation and Recovery Act (RCRA) to ensure that these wastes are managed in ways that protect human health and the environment. Generators of hazardous waste are regulated based on the amount of hazardous waste they generate in a calendar month, not the size of their business or facility.

There were no Federal RCRA generators found at the target property and/or adjoining properties.

Federal institutional control/engineering control registries

Institutional Controls (IC) are defined as non-engineered and/or legal controls that minimize the potential human exposure to contamination by limiting land or resource use. Whereas, Engineering Controls (EC) consist of engineering measures (e.g. caps, treatment systems, etc.) designed to minimize the potential for human exposure to contamination by either limiting direct contact with contaminated areas or controlling migration of contaminants through environmental media.

There were no Federal institutional or engineering controls found at the target property.

Federal ERNS list

The Emergency Response Notification System (ERNS) is a database used to store information on notification of oil discharges and hazardous substances releases. The ERNS program is a cooperative data sharing effort encompassing the National Response Center (NRC), operated by the US Coast Guard, EPA HQ and EPA regional offices. ERNS data is used to analyze release notifications, track EPA responses and compliance to environmental laws, support emergency planning efforts, and assist decision-makers in developing spill prevention programs.

There were no Federally recorded releases of oil and/or hazardous substances at the target property.

Lists of state and tribal Superfund equivalent sites

In order to maintain close coordination with the states and tribes in the NPL listing decision process, the EPA's policy is to determine the position of states and tribes on sites that EPA is considering for listing. Consistent with this policy, since 1996, it has been the EPA's general practice to seek the state or tribe's position on sites under consideration for NPL listing by submitting a written request to the governor/state environmental agency or tribe. Various states may have their own program for identifying, investigating and cleaning up sites where consequential amounts of hazardous waste may have been disposed that work in conjunction with the EPA's Superfund remedial program.

There were no State and/or tribal Superfund equivalent sites found within a one-mile radius of target property.

Lists of state and tribal hazardous waste facilities

EPA established basic hazardous waste management standards for businesses who produce hazardous waste and categorized three businesses based on the volume of hazardous waste produced in a calendar month. On the federal level, there are three generator categories: large quantity generator, small quantity generator, and conditionally exempt small quantity generator. Some states are authorized to establish generator categories that are different from those that federal EPA set up. State regulatory requirements for generators of hazardous waste may be more stringent than the federal program.

There were no State and/or tribal hazardous waste facilities found within a half-mile radius of the target property.

Lists of state and tribal landfills and solid waste disposal facilities

Title 40 of the CFR parts 239 through 259 contain the regulations for non-hazardous solid waste programs set up by the states. EPA has requirements for state solid waste permit programs, guidelines for the processing of solid waste, guidelines for storage and collection of commercial, residential and institutional solid waste, and the criteria for municipal solid waste landfills. State solid waste programs may be more stringent than the federal code requires.

There were no State and/or tribal landfills or solid waste disposal facilities found within a half-mile radius of the target property.

Lists of state and tribal leaking storage tanks

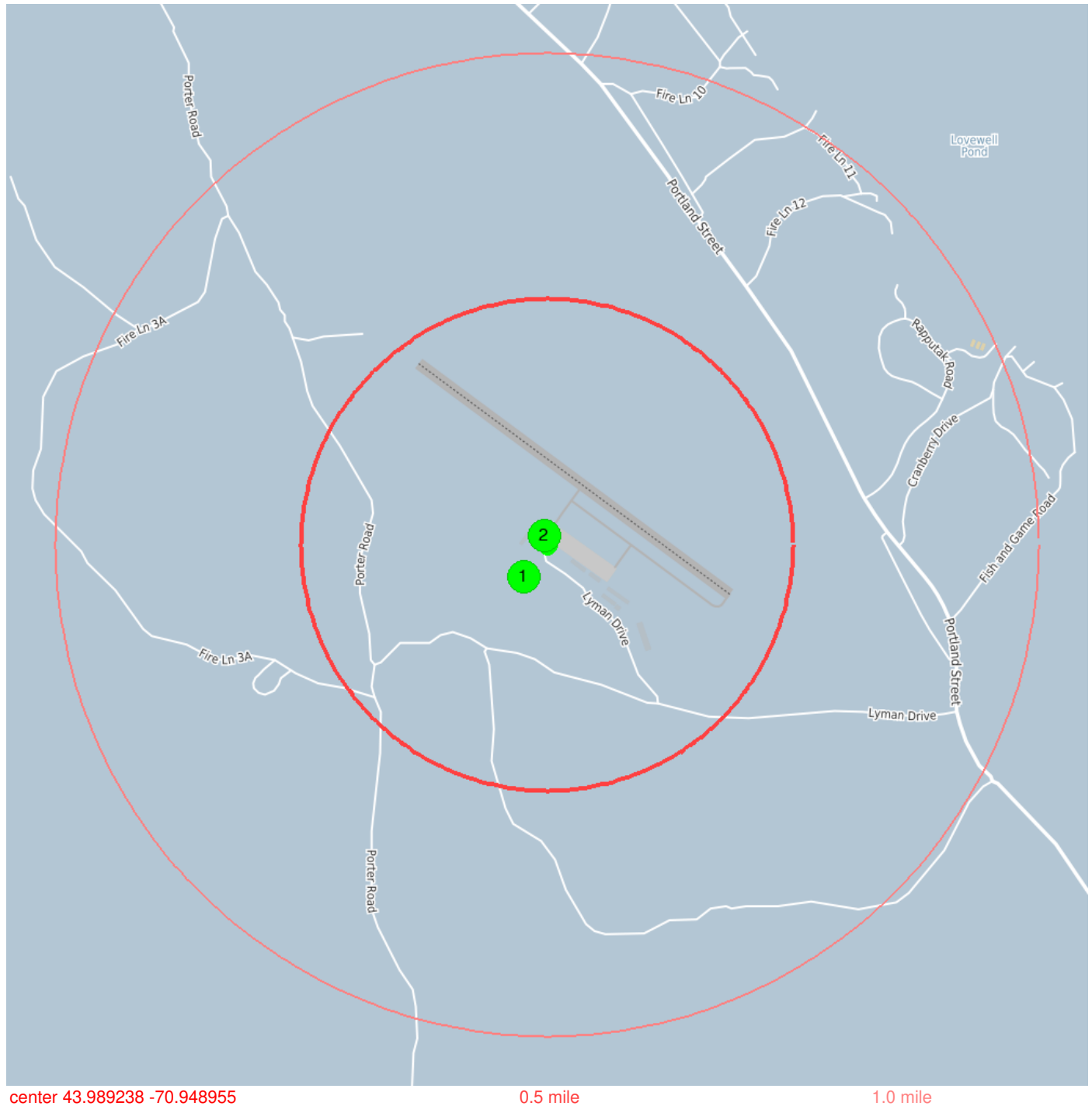
A typical leaking underground storage tank (LUST) scenario involves the release of a fuel product from an underground storage tank (UST) that can contaminate surrounding soil, groundwater, or surface waters, or affect indoor air spaces. Once a leak is confirmed, immediate response actions must be taken to minimize or eliminate the source of the release and to reduce potential harm to human health, safety, and the environment. Each state has unique requirements for initiating responses to a release, and it is up to the UST owner or operator to conduct actions in compliance with his/her local rules.

There were no State and/or tribal leaking storage tanks found within a half-mile radius of the target property.

Lists of state and tribal registered storage tanks

MEDEP - UNDERGROUND STORAGE TANK PROGRAM

The Main Department of Environmental Protection's Underground Storage Tank (UST) Program is responsible for protecting public health and the environment, in particular groundwater, by preventing oil discharges to the greatest extent possible. The UST Program staff provide technical expertise, training, and outreach to UST facility owners and operators.



1

Registration Number	14477
Master Tank ID	14477005
Facility Name	EASTERN SLOPE REG AIRPORT
Address	RT 5
City	FRYEURG
Near Public Water	No
Near Private Water	Yes
Near Other Water	No
On Aquifer	Yes
Tank Number	5
Tank Material	STEEL ASPHALT COATED
Tank Installation Date	2011-06-27
Tank Status	ACTIVE
Status Date	2014-05-27
distance from center (miles)	0.0801
data source	last updated 2021-12-15 from MEDEP-TANKS

2

Registration Number	14477
Master Tank ID	14477004
Facility Name	EASTERN SLOPE REG AIRPORT
Address	RT 5
City	FRYEURG
Near Public Water	No
Near Private Water	Yes
Near Other Water	No
On Aquifer	Yes
Tank Number	4
Tank Material	DBL WALLED CP STEEL
Tank Installation Date	1989-09-30
Tank Status	ACTIVE
Status Date	1989-09-30
distance from center (miles)	0.0206
data source	last updated 2021-12-15 from MEDEP-TANKS

State and tribal institutional control/engineering control registries

Institutional controls are non-engineered instruments such as administrative and legal controls that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy. Engineering controls consist of engineering measures (e.g., caps, treatment systems, etc.) designed to minimize the potential for human exposure to contamination by either limiting direct contact with contaminated areas or controlling migration of contaminants through environmental media. It is EPA's expectation that treatment or engineering controls will be used to address principal threat wastes and that groundwater will be returned to its beneficial use whenever practicable.

There were no State and/or tribal institutional and/or engineering controls found filed against the target property.

Lists of state and tribal voluntary cleanup sites

State cleanup programs play a significant role in assessing and cleaning up contaminated sites. State cleanup programs typically are programs authorized by state statutes to address brownfields and other lower-risk sites that are not of federal interest. The EPA has historically supported the use of state cleanup programs and continues to provide grant funding to establish and enhance the programs. This approach was codified in 2002 as Section 182 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

There were no State and/or tribal voluntary cleanup sites found within a half-mile radius of the target property.

Lists of state and tribal brownfields sites

Since its inception in 1995, EPA's Brownfields and Land Revitalization Program has grown into a proven, results-oriented program that has changed the way communities address and manage contaminated property. The program is designed to empower states, tribes, communities, and other stakeholders to work together to prevent, assess, safely clean up, and sustainably reuse brownfields. Beginning in the mid-1990s, EPA provided small amounts of seed money to local governments that launched hundreds of two-year Brownfields pilot projects and developed guidance and tools to help states, communities and other stakeholders in the cleanup and redevelopment of brownfields sites.

There were no State and/or tribal brownfields sites found within a half-mile radius of the target property.

State and/or tribal lists of registered aboveground storage tanks (ASTs)

No records found

U.S. EPA Underground Storage Tanks (UST)

No records found

This report contains certain information obtained from a variety of public and other sources reasonably available to Nationwide Environmental Title Research, LLC (NETR). It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. **NO WARRANTY EXPRESSED OR IMPLIED, IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. NATIONWIDE ENVIRONMENTAL TITLE RESEARCH, LLC SPECIFICALLY DISCLAIMS THE MAKING OF ANY SUCH WARRANTIES, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE OR PURPOSE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL NATIONWIDE ENVIRONMENTAL TITLE RESEARCH, LLC, BE LIABLE TO ANYONE, WHETHER ARISING OUT OF ERRORS OR OMISSIONS, NEGLIGENCE, ACCIDENT OR ANY OTHER CAUSE, FOR ANY LOSS OF DAMAGE, INCLUDING, WITHOUT LIMITATION, SPECIAL, INCIDENTAL, CONSEQUENTIAL, OR EXEMPLARY DAMAGES. ANY LIABILITY ON THE PART OF NATIONWIDE ENVIRONMENTAL TITLE RESEARCH, LLC, IS STRICTLY LIMITED TO A REFUND OF THE AMOUNT PAID FOR THIS REPORT.** Purchaser accepts this report "AS-IS". Any analyses, estimates, ratings, environmental risk levels or risk codes provided in this report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only a Phase I Environmental Site Assessment performed by an environmental professional can provide information regarding the environmental risk for any property. Additionally, the information provided in this Report is not to be construed as legal advice.

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Appendix H

EPA EIScreen for Fryeburg and Oxford County



EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

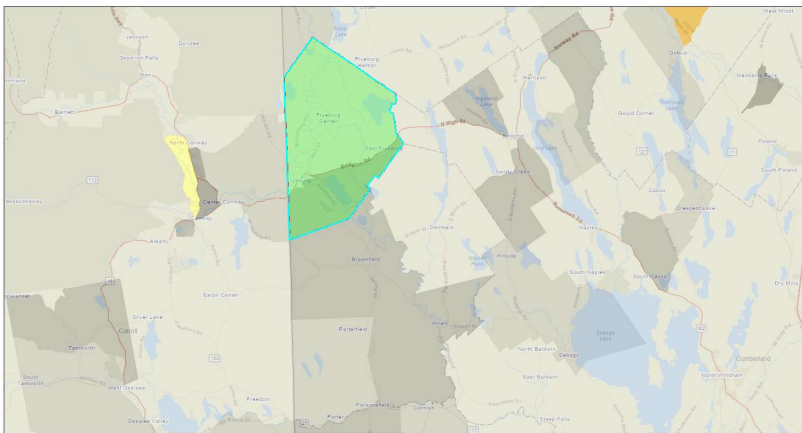
Fryeburg, ME

Tract: 23017966700

Population: 3,384

Area in square miles: 65.87

A3 Landscape



October 25, 2023
Fryeburg EJ Screen Results
Supplemental Demographic Index
(National Percentiles)

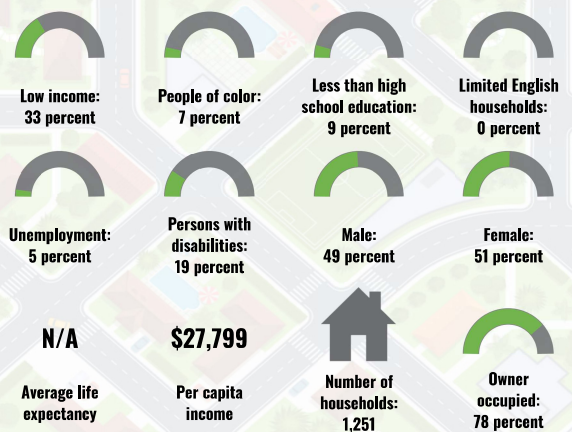
50 - 60 percentile
60 - 70 percentile
70 - 80 percentile
80 - 90 percentile
90 - 95 percentile
Less than 50 percentile

1:288,805
0 2.5 5 10 mi
0 4 8 16 km
EPA, HERE, Garmin, Swire, METANSA, USGS, BPN, NPS, USDA

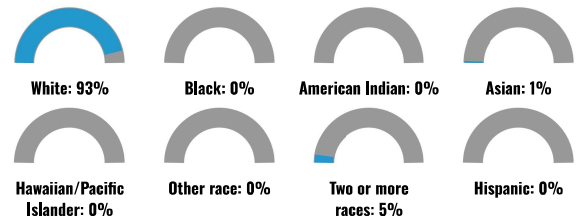
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	99%
French, Haitian, or Cajun	1%
Total Non-English	1%

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

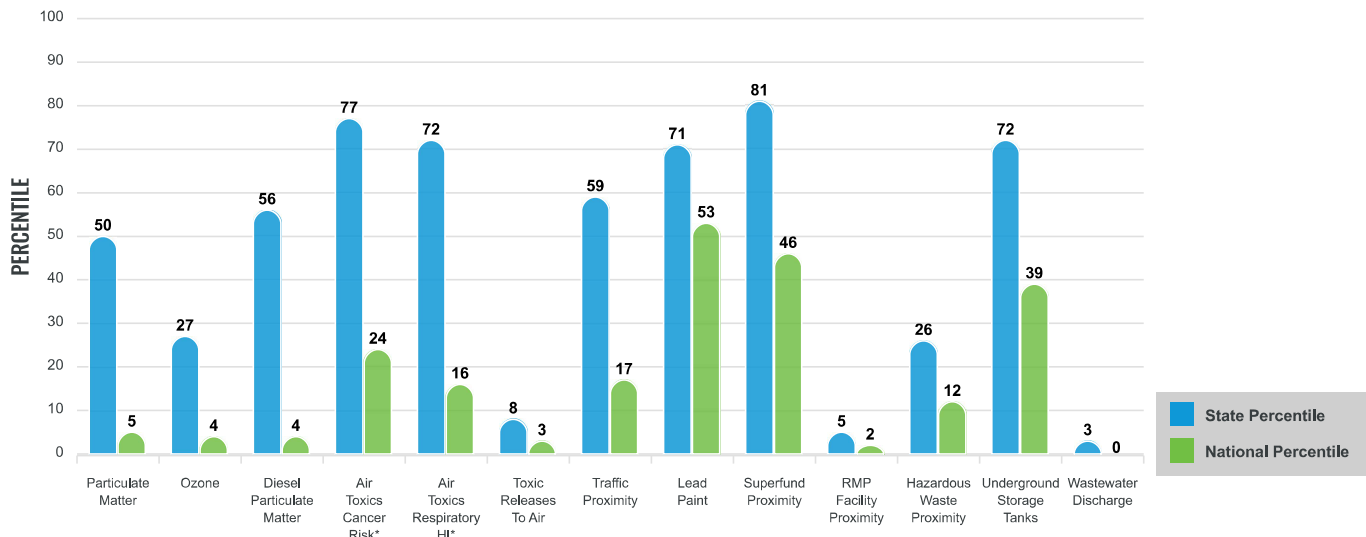
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

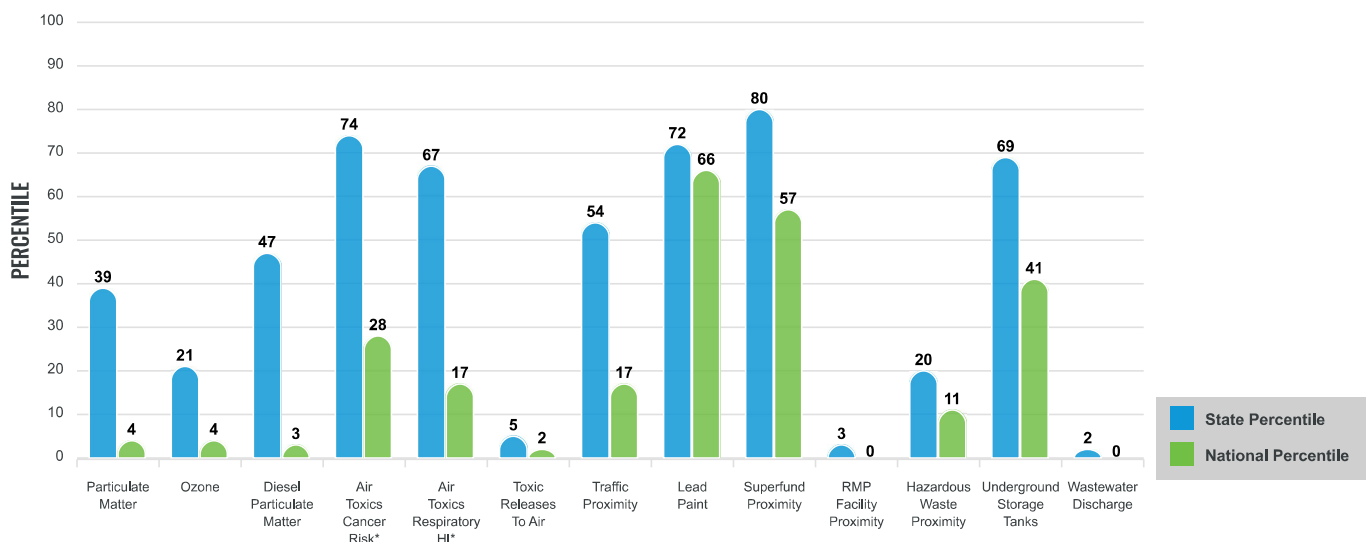
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for Tract: 23017966700

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	4.92	5.59	33	8.08	3
Ozone (ppb)	51.3	52.8	18	61.6	3
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.0426	0.0745	35	0.261	3
Air Toxics Cancer Risk* (lifetime risk per million)	20	17	31	25	5
Air Toxics Respiratory HI*	0.2	0.18	23	0.31	4
Toxic Releases to Air	0.093	370	5	4,600	2
Traffic Proximity (daily traffic count/distance to road)	7.9	66	46	210	14
Lead Paint (% Pre-1960 Housing)	0.45	0.37	71	0.3	70
Superfund Proximity (site count/km distance)	0.064	0.071	70	0.13	51
RMP Facility Proximity (facility count/km distance)	0.019	0.21	3	0.43	1
Hazardous Waste Proximity (facility count/km distance)	0.052	1.1	16	1.9	10
Underground Storage Tanks (count/km ²)	0.44	0.68	68	3.9	38
Wastewater Discharge (toxicity-weighted concentration/m distance)	5.6E-09	0.002	2	22	1
SOCIOECONOMIC INDICATORS					
Demographic Index	20%	18%	62	35%	31
Supplemental Demographic Index	12%	12%	56	14%	45
People of Color	7%	8%	61	39%	17
Low Income	33%	28%	63	31%	59
Unemployment Rate	5%	5%	70	6%	60
Limited English Speaking Households	0%	1%	0	5%	0
Less Than High School Education	9%	6%	74	12%	53
Under Age 5	4%	4%	54	6%	45
Over Age 64	20%	22%	49	17%	67
Low Life Expectancy	N/A	19%	N/A	20%	N/A

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	3
Air Pollution	3
Brownfields	1
Toxic Release Inventory	2

Other community features within defined area:

Schools	1
Hospitals	0
Places of Worship	6

Other environmental data:

Air Non-attainment	No
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	No
Selected location contains a "Justice40 (CEJST)" disadvantaged community	No
Selected location contains an EPA IRA disadvantaged community	Yes

Report for Tract: 23017966700

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	N/A	19%	N/A	20%	N/A
Heart Disease	7	7.1	50	6.1	69
Asthma	11.7	10.9	79	10	88
Cancer	7.7	7.3	66	6.1	84
Persons with Disabilities	18.4%	16.3%	65	13.4%	81

CLIMATE INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	17%	11%	86	12%	81
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	15%	14%	58	14%	62
Lack of Health Insurance	8%	8%	57	9%	57
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Report for Tract: 23017966700



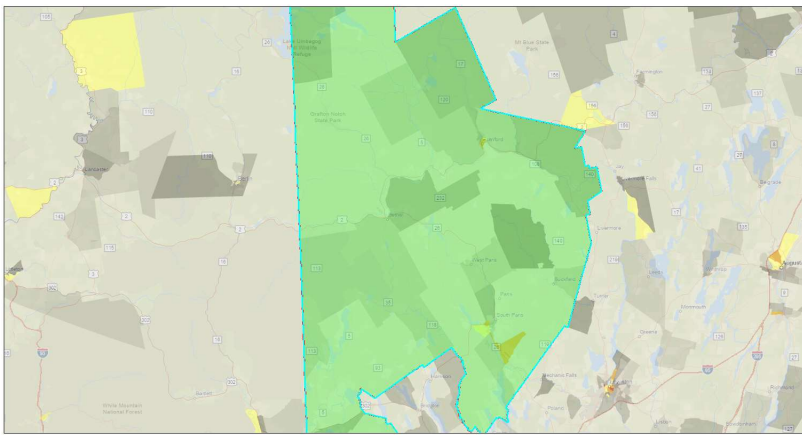
EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Oxford County, ME

County: Oxford
Population: 57,807
Area in square miles: 2175.74

A3 Landscape



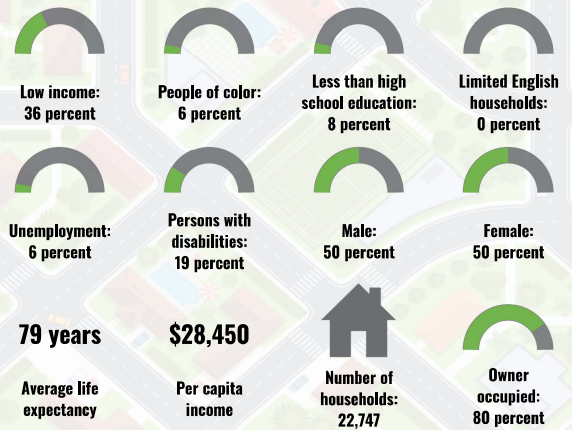
October 25, 2023
Oxford County EJ Screen Results
Supplemental Demographic Index
(National Percentiles)
Less than 50 percentile
50 - 60 percentile
60 - 70 percentile
70 - 80 percentile
80 - 90 percentile
90 - 95 percentile
95 - 100 percentile

1:577,791
0 5 10 20 mi
0 5 10 20 km
EPA, HERE, Garmin, SwgMap, FAO, METRASA, USGS, EPA, NPS

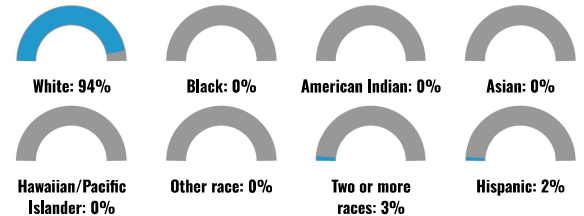
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	97%
French, Haitian, or Cajun	1%
Total Non-English	3%

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE



LIMITED ENGLISH SPEAKING BREAKDOWN



Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race. Source: U.S. Census Bureau, American Community Survey (ACS) 2017-2021. Life expectancy data comes from the Centers for Disease Control.

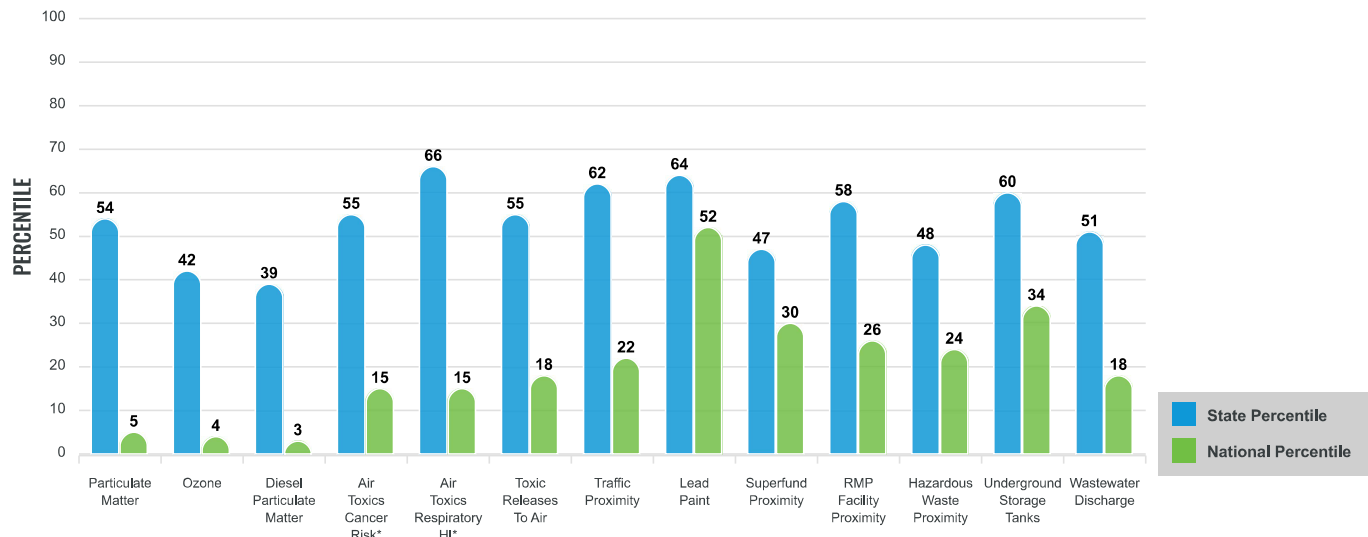
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the [EJScreen website](#).

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

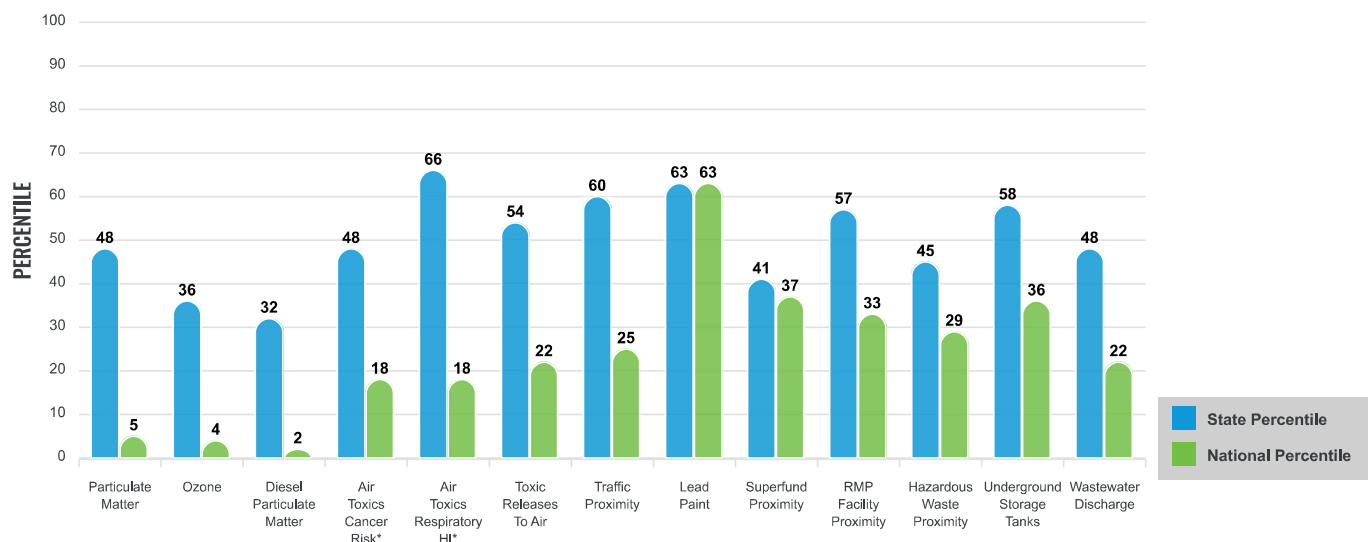
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for County: Oxford

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	5.02	5.59	35	8.08	3
Ozone (ppb)	51.4	52.8	23	61.6	3
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.0344	0.0745	21	0.261	2
Air Toxics Cancer Risk* (lifetime risk per million)	16	17	0	25	1
Air Toxics Respiratory HI*	0.19	0.18	0	0.31	1
Toxic Releases to Air	98	370	65	4,600	23
Traffic Proximity (daily traffic count/distance to road)	16	66	56	210	21
Lead Paint (% Pre-1960 Housing)	0.34	0.37	52	0.3	61
Superfund Proximity (site count/km distance)	0.032	0.071	34	0.13	29
RMP Facility Proximity (facility count/km distance)	0.19	0.21	76	0.43	54
Hazardous Waste Proximity (facility count/km distance)	0.31	1.1	61	1.9	43
Underground Storage Tanks (count/km ²)	0.23	0.68	61	3.9	33
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.00017	0.002	62	22	34
SOCIOECONOMIC INDICATORS					
Demographic Index	21%	18%	66	35%	34
Supplemental Demographic Index	13%	12%	66	14%	53
People of Color	6%	8%	54	39%	14
Low Income	36%	28%	69	31%	64
Unemployment Rate	6%	5%	73	6%	62
Limited English Speaking Households	0%	1%	0	5%	0
Less Than High School Education	8%	6%	69	12%	51
Under Age 5	4%	4%	55	6%	45
Over Age 64	22%	22%	57	17%	73
Low Life Expectancy	13%	19%	1	20%	5

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	2
Water Dischargers	79
Air Pollution	44
Brownfields	28
Toxic Release Inventory	10

Other community features within defined area:

Schools	31
Hospitals	3
Places of Worship	72

Other environmental data:

Air Non-attainment	Yes
Impaired Waters	Yes

Selected location contains American Indian Reservation Lands*	Yes
Selected location contains a "Justice40 (CEJST)" disadvantaged community	Yes
Selected location contains an EPA IRA disadvantaged community	Yes

Report for County: Oxford

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	13%	19%	2	20%	4
Heart Disease	7.8	7.1	70	6.1	80
Asthma	12	10.9	87	10	90
Cancer	7.7	7.3	63	6.1	82
Persons with Disabilities	18.1%	16.3%	63	13.4%	80

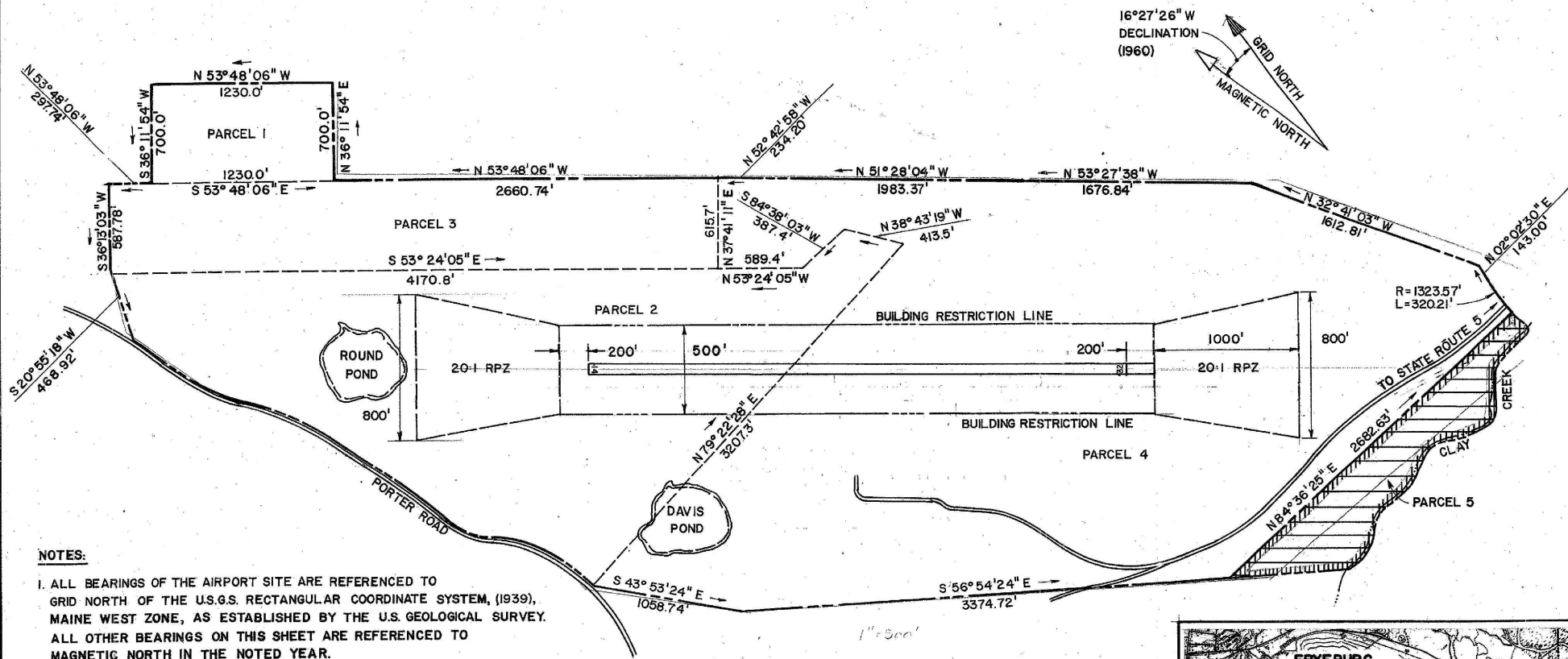
CLIMATE INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	19%	11%	88	12%	84
Wildfire Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	18%	14%	68	14%	69
Lack of Health Insurance	8%	8%	64	9%	60
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for County: Oxford

Appendix I
Exhibit A



INVENTORY OF PARCELS									
PARCEL NO.	GRANTOR	GRANTEE	INSTRUMENT	ACREAGE	DATE	BOOK/PAGE	REMARKS		
1	Asa G. Pike	Town of Fryeburg	Fee	19.8	10/23/60	175/566	FAAP No. 9-17-0025-6101		
2	John F. Weston, et al.	Town of Fryeburg	Fee	153.1	10/12/60	175/528	FAAP No. 9-17-0025-6101		
3	Kenneth A. Lord	Town of Fryeburg	Fee	58.2	10/25/60	175/563	FAAP No. 9-17-0025-6101		
4	Philo T. Farnsworth	Town of Fryeburg	Fee	302.1	10/21/60	175/568	FAAP No. 9-17-0025-6101		
5	Philo T. Farnsworth	Town of Fryeburg	Easement	20.5	10/21/60	175/568	Drainage and Avigation Easement		
6	John F. Weston	Town of Fryeburg	Easement	1.26	04/25/61	177/281	Transmission Line/Hazard Beacon Easement		
7	Saco Valley Timber Co., Inc.	Town of Fryeburg	Easement	1.95	05/31/61	177/278	Transmission Line Easement		
8	Saco Valley Timber Co., Inc.	Town of Fryeburg	Easement	0.29	05/31/61	177/278	Transmission Line Easement		
9	Hugh W. Hastings II et al.	Town of Fryeburg	Easement	2.33	06/28/61	177/282	Transmission Line Easement		
10	Payson G. Weston	Town of Fryeburg	Easement	0.23	06/28/61	177/279	Hazard Beacon Easement		
11	Woodrow D. Kartford	Eastern Slope A/P Authority	Fee	2.0	10/18/60	254/764	NDB Site, AIP No. 5-23-0002-01		
12	Guatav E. & Hanna Papanek	Eastern Slope A/P Authority	Lease	0.01	08/15/83	259/831	Fan Marker Site, AIP No. 3-23-0002-01		
13	TOWN OF FRYEBURG	WALTER K. BUTLER	FEE	2.0	01/05/12	5665/114	SEE RELEASE TABLE		

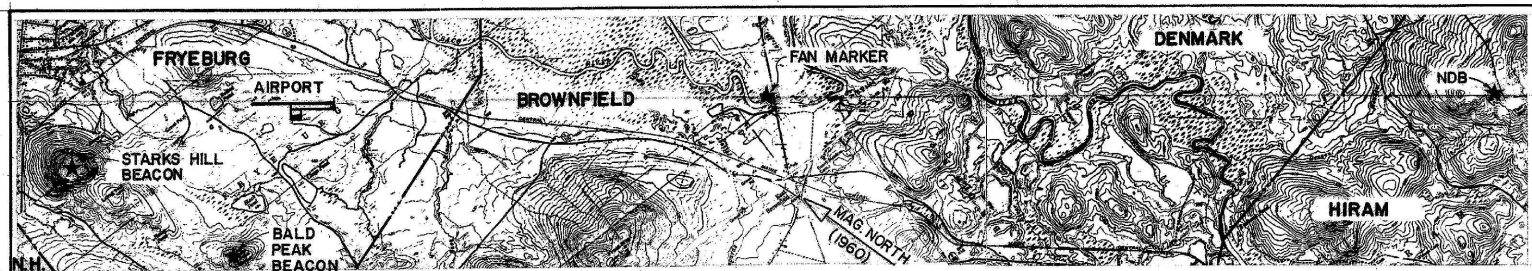
1. Parcel 5 was previously referred to as Area #2 in a letter to FAA by Hastings and Son, Attorneys and Counselors at Law, Fryeburg, Maine dated May 20, 1964.

LEGEND

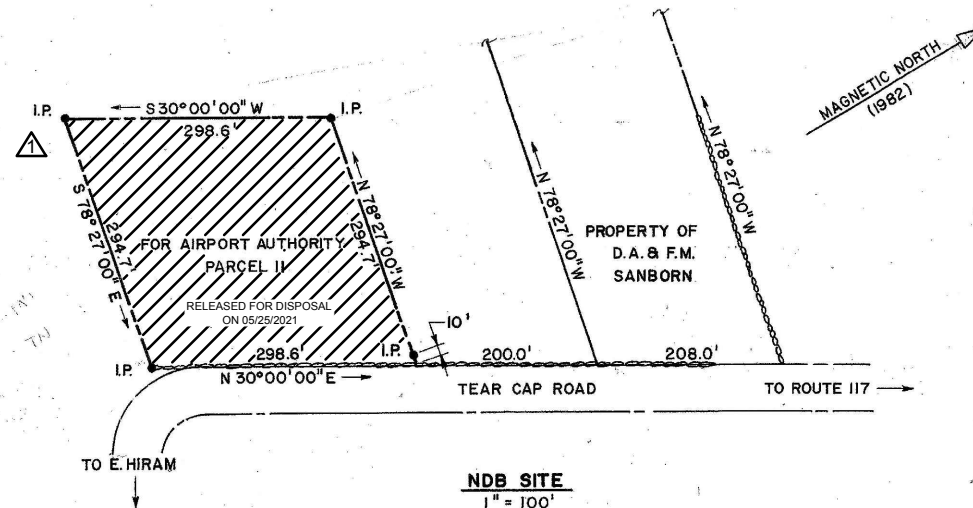
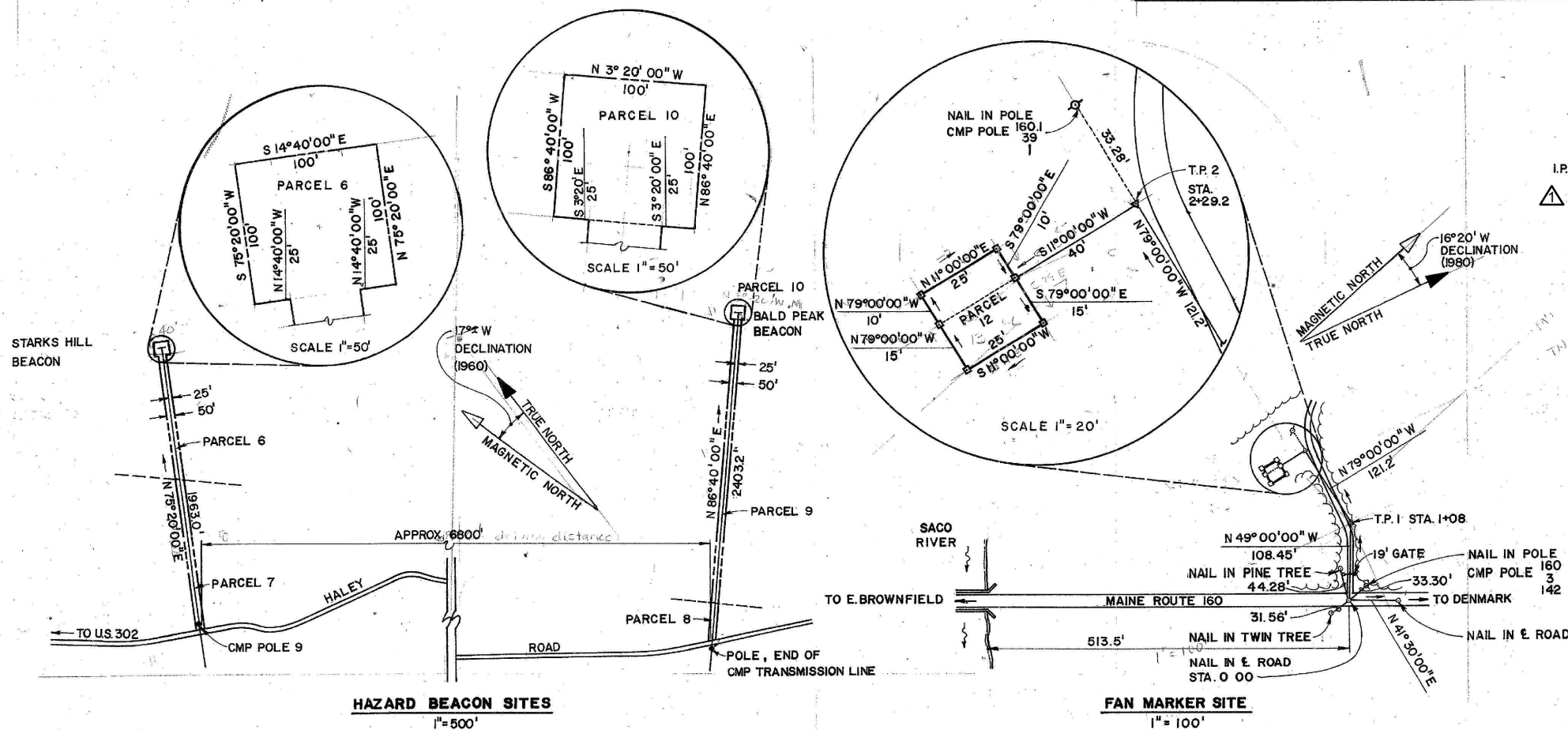
- AIRPORT BOUNDARY
- PARCEL BOUNDARY
- RUNWAY PROTECTION ZONE (RPZ)
- BUILDING RESTRICTION LINE
- RIGHT OF WAY
- LEASE BOUNDARY
- ||||| AVIGATION EASEMENT
- ||||| DRAINAGE EASEMENT
- EASEMENT

LAND RELEASE TABLE						
REFERENCE NUMBER	TAX PARCEL NUMBER	GRANTOR	GRANTEE	ACREAGE	DATE OF FAA APPROVAL	TYPE OF RELEASE
11	R-13/44A	FAA	TOWN OF FRYEBURG	2.0	5/25/2021	SALE/DISPOSAL OF AIRPORT PROPERTY

- NOTES:**
- ALL BEARINGS OF THE AIRPORT SITE ARE REFERENCED TO GRID NORTH OF THE U.S.G.S. RECTANGULAR COORDINATE SYSTEM, (1939), MAINE WEST ZONE, AS ESTABLISHED BY THE U.S. GEOLOGICAL SURVEY. ALL OTHER BEARINGS ON THIS SHEET ARE REFERENCED TO MAGNETIC NORTH IN THE NOTED YEAR.
 - INITIAL PROPERTY SURVEY PERFORMED BY HUGH HASTINGS, JR. FRYEBURG, MAINE. BEARINGS CONVERTED TO GRID NORTH BY THE JAMES W. SEWALL COMPANY.
 - RELATION OF TRUE, GRID AND MAGNETIC NORTH (AIRPORT SITE AND HAZARD BEACON SITES) TRUE 00°00'00", GRID 00°32'34" W, MAGNETIC 17°± W



LOCATION MAP
1"=4000'



NOT FOR RECORDING PURPOSES

EASTERN SLOPE REGIONAL AIRPORT

EXHIBIT A

FRYEBURG,

MAINE



Client No. 810010

Proj. Manager BAR

Proj. Designer BAR

Drawn By CWM

Checked By LJC

Scale AS NOTED

Approved LJC

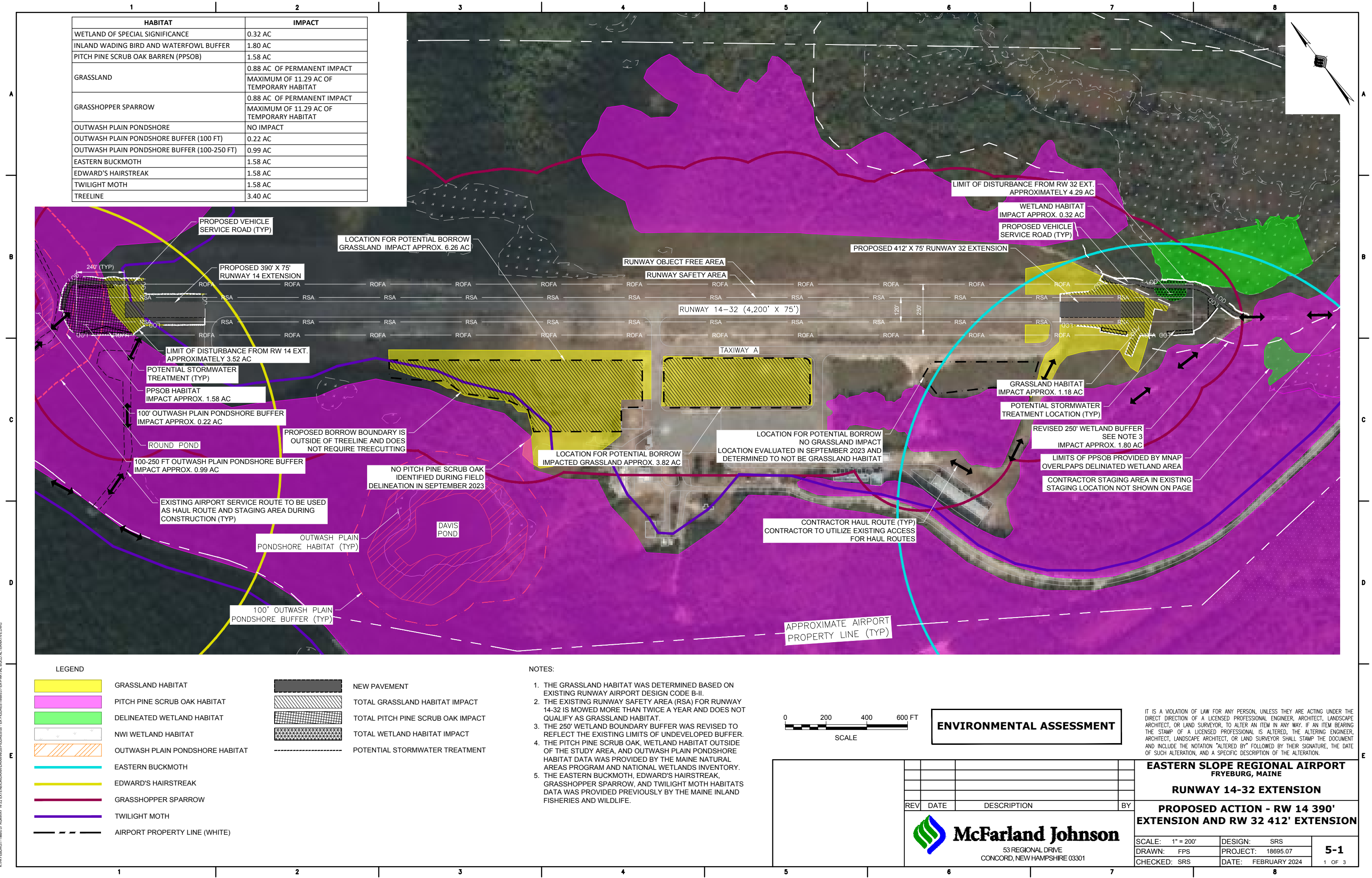
Date 4/19/90

Sheet 1 of 1

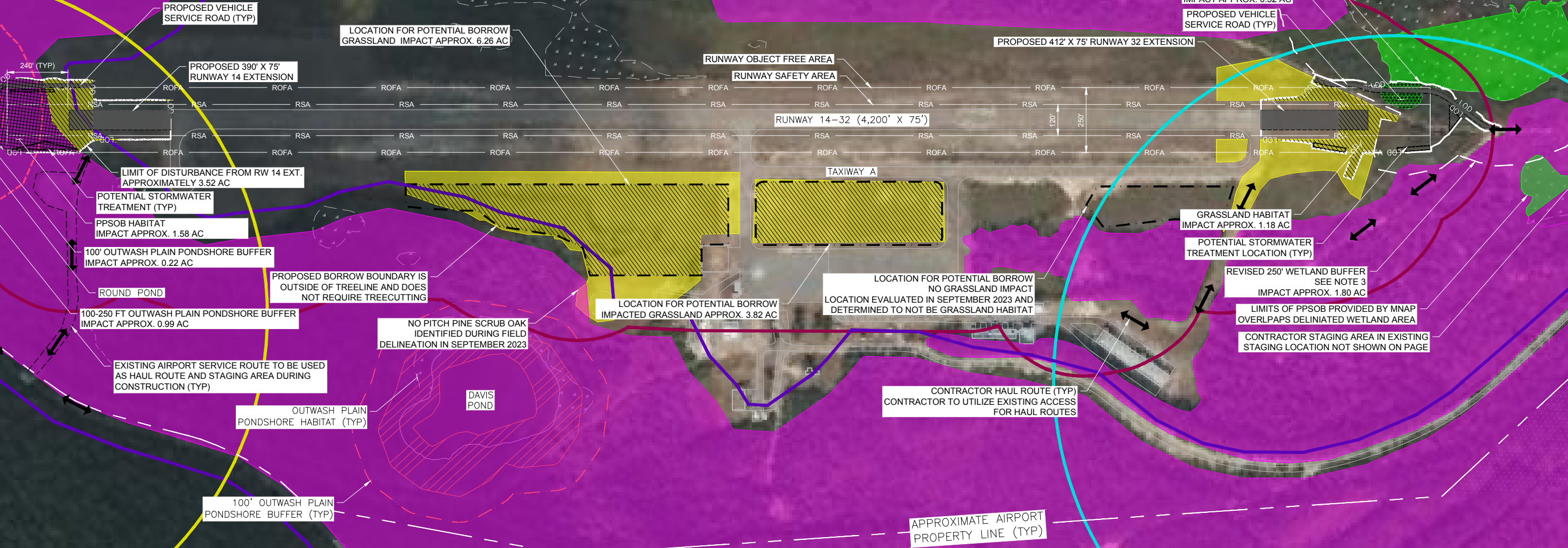
Rev.	Description	By	Date
1	PARCEL NO. 11 LAND RELEASE	RHL	01/17/23

Appendix J

Proposed Action Summary, Tree Clearing, and
Mitigation



HABITAT	IMPACT
WETLAND OF SPECIAL SIGNIFICANCE	0.32 AC
INLAND WADING BIRD AND WATERFOWL BUFFER	1.80 AC
PITCH PINE SCRUB OAK BARREN (PPSOB)	1.58 AC
GRASSLAND	0.88 AC OF PERMANENT IMPACT MAXIMUM OF 11.29 AC OF TEMPORARY HABITAT
GRASSHOPPER SPARROW	0.88 AC OF PERMANENT IMPACT MAXIMUM OF 11.29 AC OF TEMPORARY HABITAT
OUTWASH PLAIN PONDSHORE	NO IMPACT
OUTWASH PLAIN PONDSHORE BUFFER (100 FT)	0.22 AC
OUTWASH PLAIN PONDSHORE BUFFER (100-250 FT)	0.99 AC
EASTERN BUCKMOTH	1.58 AC
EDWARD'S HAIRSTREAK	1.58 AC
TWILIGHT MOTH	1.58 AC
TREELINE	3.40 AC

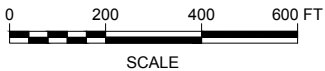


LEGEND

	GRASSLAND HABITAT		NEW PAVEMENT
	PITCH PINE SCRUB OAK HABITAT		TOTAL GRASSLAND HABITAT IMPACT
	DELINEATED WETLAND HABITAT		TOTAL PITCH PINE SCRUB OAK IMPACT
	NWI WETLAND HABITAT		TOTAL WETLAND HABITAT IMPACT
	OUTWASH PLAIN PONDSHORE HABITAT		POTENTIAL STORMWATER TREATMENT
	EASTERN BUCKMOTH		
	EDWARD'S HAIRSTREAK		
	GRASSHOPPER SPARROW		
	TWILIGHT MOTH		
	AIRPORT PROPERTY LINE (WHITE)		

NOTES:

1. THE GRASSLAND HABITAT WAS DETERMINED BASED ON EXISTING RUNWAY AIRPORT DESIGN CODE B-II.
2. THE EXISTING RUNWAY SAFETY AREA (RSA) FOR RUNWAY 14-32 IS MOWED MORE THAN TWICE A YEAR AND DOES NOT QUALIFY AS GRASSLAND HABITAT.
3. THE 250' WETLAND BOUNDARY BUFFER WAS REVISED TO REFLECT THE EXISTING LIMITS OF UNDEVELOPED BUFFER.
4. THE PITCH PINE SCRUB OAK, WETLAND HABITAT OUTSIDE OF THE STUDY AREA, AND OUTWASH PLAIN PONDSHORE HABITAT DATA WAS PROVIDED BY THE MAINE NATURAL AREAS PROGRAM AND NATIONAL WETLANDS INVENTORY.
5. THE EASTERN BUCKMOTH, EDWARD'S HAIRSTREAK, GRASSHOPPER SPARROW, AND TWILIGHT MOTH HABITATS DATA WAS PROVIDED PREVIOUSLY BY THE MAINE INLAND FISHERIES AND WILDLIFE.



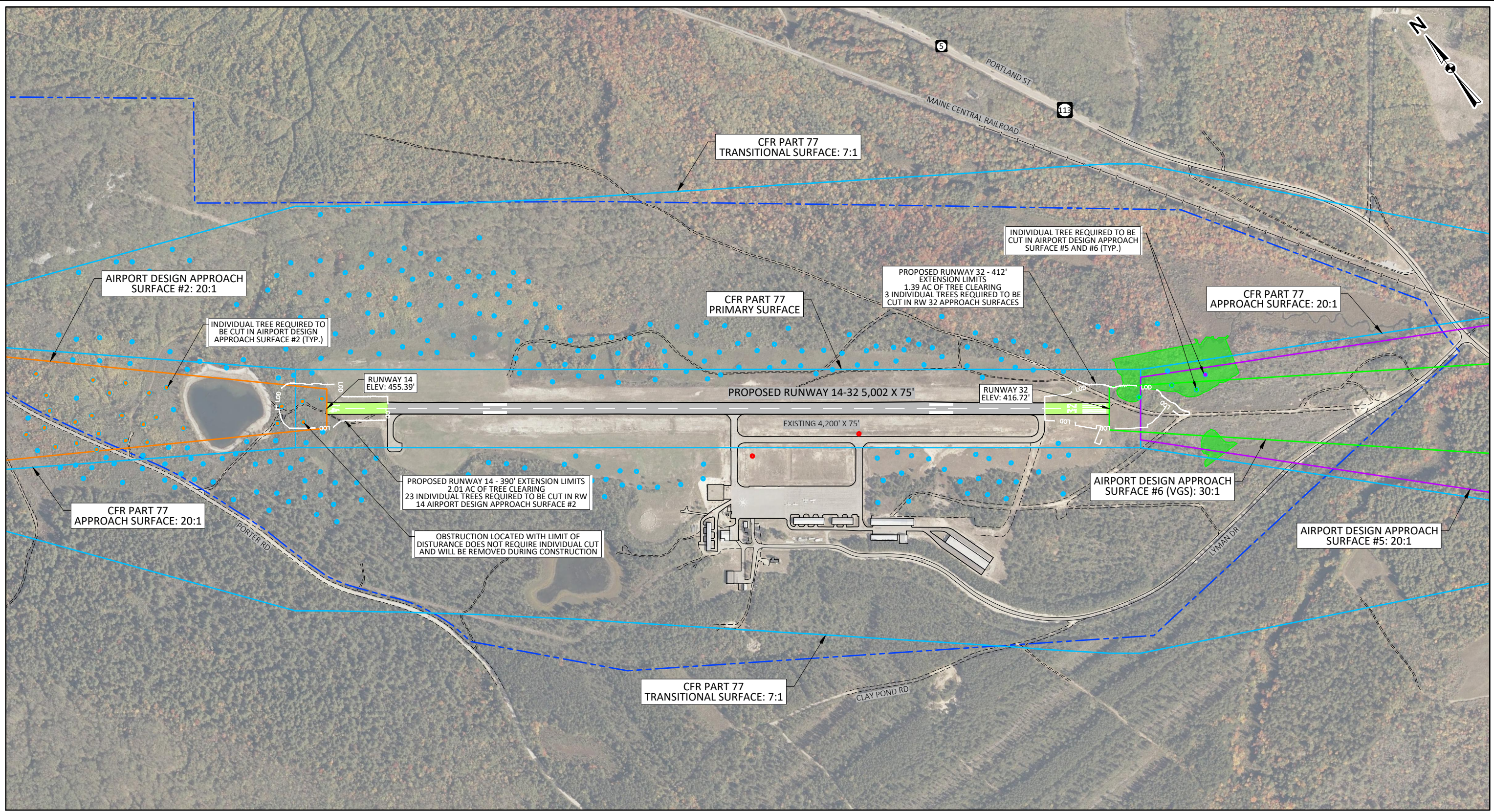
ENVIRONMENTAL ASSESSMENT

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECT DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

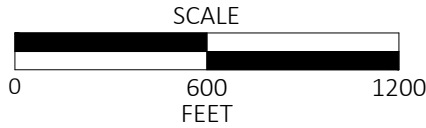
EASTERN SLOPE REGIONAL AIRPORT FRYEBURG, MAINE			
RUNWAY 14-32 EXTENSION			
PROPOSED ACTION - RW 14 390' EXTENSION AND RW 32 412' EXTENSION			
SCALE: 1" = 200'	DESIGN: SRS	5-1 1 OF 3	
DRAWN: FPS	PROJECT: 18695.07		
CHECKED: SRS	DATE: FEBRUARY 2024		

McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NEW HAMPSHIRE 03301

K:\Fryburg\T-18695.07 Runway 14-32 Extension\Drawings\Figures\OBSTRUCTIONS.dwg



LEGEND	
●	ADAS #2: 20:1 VEGETATION OBSTRUCTION
●	ADAS #5: 20:1 VEGETATION OBSTRUCTION
●	ADAS #6 (VGS): 30:1 VEGETATION OBSTRUCTION
●	CFR PART 77 VEGETATION OBSTRUCTION
●	CFR PART 77 MAN-MADE OBSTRUCTION
	PROPOSED PAVEMENT
	AIRPORT PROPERTY BOUNDARY
	AIRPORT PROPERTY BOUNDARY
	AIRPORT PROPERTY BOUNDARY



- NOTES:
- 1) OBSTRUCTION DATA PROVIDED BY FAA AIRPORT DATA AND INFORMATION PORTAL, 2023.
 - 2) THE INTENT OF THE PART-77 IS TO CUT THE TREES IN THE APPROACH SURFACE AND THE PRIMARY SURFACE. TREE REMOVAL IS NOT REQUIRED IN THE TRANSITIONAL SURFACE. THE OBSTRUCTIONS WITHIN THE AIRPORT DESIGN APPROACH ARE REQUIRED TO BE CUT.
 - 3)

EASTERN SLOPE REGIONAL AIRPORT

OXFORD COUNTY, MAINE

PROPOSED OBSTRUCTIONS

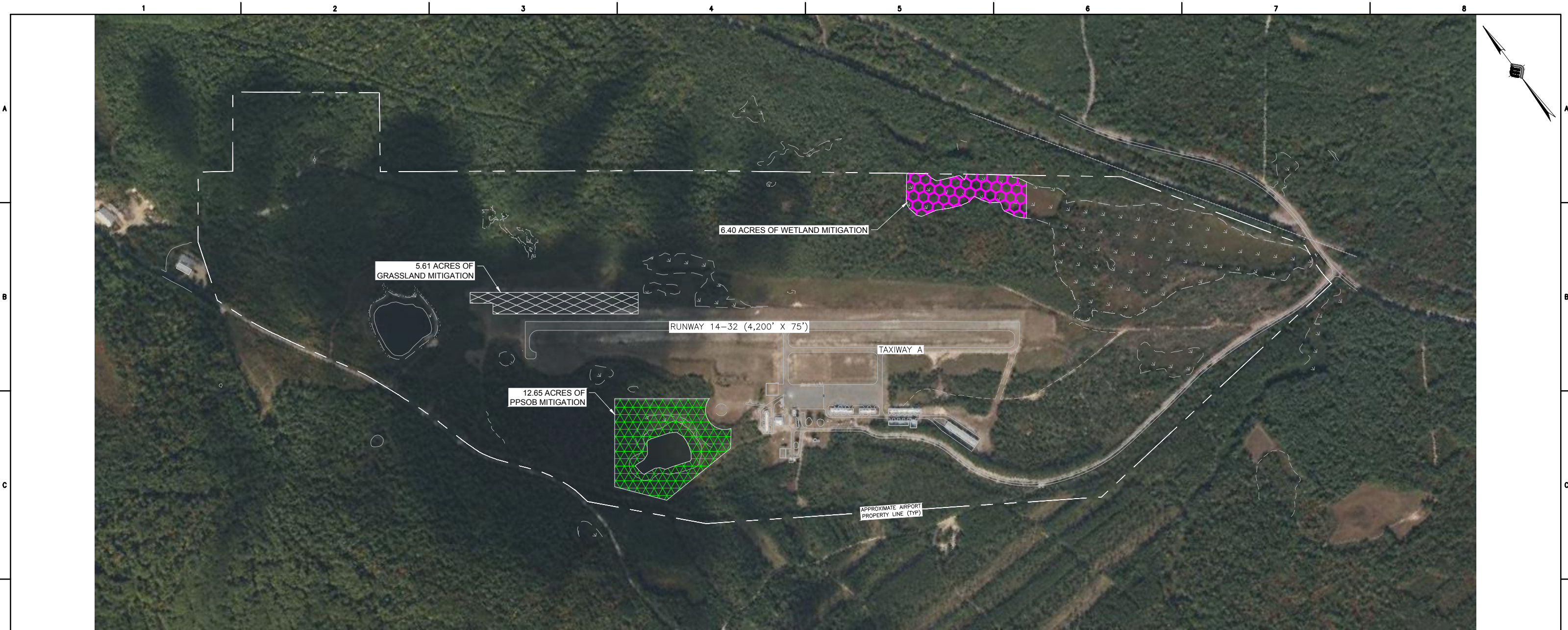
PREFERRED ALTERNATIVE

SCALE: 1" = 600'

DATE: FEBRUARY 2024

FIGURE: 5-2

McFarland Johnson



LEGEND

20:1 WETLAND MITIGATION

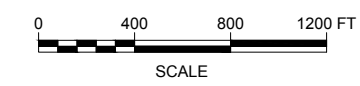
8:1 PPSOB MITIGATION

8:1 GRASSLAND MITIGATION

EXISTING WETLANDS HABITAT

- NOTES:
- PRESERVATION AREAS ARE BASED ON ESTIMATED IMPACTS AND ARE SHOWN IN APPROXIMATE LOCATIONS. ACTUAL IMPACTS AND PRESERVATION VALUES AND LOCATIONS WILL BE DETERMINED DURING DESIGN.
 - PPSOB PRESERVATION ENCOMPASSES THE ENTIRETY OF DAVIS POND AND THE OUTWASH 250' BUFFER.

PROPOSED MITIGATION FOR THE PREFERRED ALTERNATIVE - RUNWAY 14 390' EXTENSION AND RUNWAY 32 412' EXTENSION		
HABITAT	IMPACT	MITIGATION
WETLAND OF SPECIAL SIGNIFICANCE	0.32 AC	PRESERVATION OF 6.40 ACRES OF SIMILAR WETLAND HABITAT (20:1 MITIGATION RATIO)
INLAND WADING BIRD AND WATERFOWL BUFFER	1.80 AC	IN-LIEU FEE PAYMENT
PITCH PINE SCRUB OAK BARREN (PPSOB)	1.58 AC	PRESERVATION OF 12.64 ACRES OF SIMILAR PPSOB HABITAT (8:1 MITIGATION RATIO)
GRASSLAND	0.88 AC OF PERMANENT IMPACT	1.43 ACRES OF NET GAIN GRASSLAND HABITAT & 5.61 ACRES OF GRASSLAND MITIGATION (8:1 MITIGATION RATIO)
	MAXIMUM OF 11.29 AC OF TEMPORARY HABITAT	TEMPORARY IMPACTS TO BE DETERMINED DURING PERMITTING (4:1 MITIGATION RATIO)
GRASSHOPPER SPARROW	0.88 AC OF PERMANENT IMPACT	PRESERVATION OF GRASSLAND HABITAT
	MAXIMUM OF 11.29 AC OF TEMPORARY HABITAT	AVOIDANCE THROUGH SEASONAL CONSTRAINTS
OUTWASH PLAIN PONDSHORE	NO IMPACT	NOT APPLICABLE
OUTWASH PLAIN PONDSHORE BUFFER (100 FT)	0.22 AC	IMPLEMENTATION OF STORMWATER AND EROSION CONTROL BEST MANAGEMENT PRACTICES
OUTWASH PLAIN PONDSHORE BUFFER (100-250 FT)	0.99 AC	IMPLEMENTATION OF STORMWATER AND EROSION CONTROL BEST MANAGEMENT PRACTICES
EASTERN BUCKMOTH	1.58 AC	PRESERVATION OF PPSOB HABITAT
EDWARD'S HAIRSTREAK	1.58 AC	PRESERVATION OF PPSOB HABITAT
TWILIGHT MOTH	1.58 AC	PRESERVATION OF PPSOB HABITAT



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REV	DATE	DESCRIPTION	BY

McFarland Johnson
53 REGIONAL DRIVE
CONCORD, NEW HAMPSHIRE 03301

EASTERN SLOPE REGIONAL AIRPORT
FRYEBURG, MAINE
RUNWAY 14-32 EXTENSION
PREFERRED ALTERNATIVE
MITIGATION PLAN

SCALE: 1" = 400'	DESIGN: SRS	5-3 3 OF 3
DRAWN: FPS	PROJECT: 18695.07	
CHECKED: SRS	DATE: FEBRUARY 2024	