

**NUMBER NINE WIND FARM
MDEP NRPA/SITE LOCATION OF DEVELOPMENT COMBINED APPLICATION**

Section 30.
Visual Impact

SECTION 30. VISUAL IMPACT

30.1 VISUAL IMPACT ASSESSMENT

Terrence J. DeWan and Associates (TJD&A) conducted a Visual Impact Assessment (VIA) for the Number Nine Wind Farm LLC (Applicant) in support of the Number Nine Wind Farm (Project), including the Turbine Area, the Northern Generator Lead Line (North Line) and the Bridal Path Generator Lead Line (Bridal Path Line) (Exhibit 30-A).

During the development of the VIA, TJD&A and the Applicant consulted with the Maine Department of Environmental Protection (MDEP), including a meeting on January 24, 2014 with MDEP staff and a field visit on November 20, 2014 with both MDEP staff and Dr. James Palmer, the MDEP peer reviewer for this Project.

30.1.1 Turbine Area

The Turbine Area includes 129 turbine locations and the VIA assumes that all 129 turbines are operating; however the Applicant will ultimately select 119 of these turbine sites for construction.

The VIA evaluated the impact of the turbines on scenic resources of state or national significance (SRSNS), as defined by the Wind Energy Act (35-A MRSA §3452). There are two SRSNS within 8 miles of proposed turbine locations: a portion of Aroostook State Park in Presque Isle, and the Bridgewater Town Hall and Jail. There are no visible turbines within 8 miles of either SRSNS, and therefore, they will not be affected by the Project.

The associated facilities for the Project include access roads; electrical collection lines; electrical collector substation; an Operations and Maintenance Building; and temporary and permanent meteorological towers, all of which were evaluated under the VIA standards of 35-A MRSA §3452(1). These associated facilities will not be visible from any SRSNS, and therefore, will not be affected by the Project.

The VIA evaluated the potential cumulative impacts of the Project. Portions of the study area within 8 miles of Project turbines are also within the 8-mile study area of either the Mars Hill Wind Project (Mars Hill) or the Oakfield Wind Project (Oakfield). In the area that overlaps with Mars Hill, the only SRSNS in both study areas is the Bridgewater Town Hall and Jail. As discussed above, there are no visible turbines from this location; therefore there will be no cumulative impact on this SRSNS from these 2 projects. In the area that overlaps with Oakfield, there are no SRSNS; therefore, there will be no cumulative visual impact from these 2 projects.

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Project lighting will be based on recommendations from the Federal Aviation Administration (FAA) for aviation safety. The lighting plan for the Project proposed to the FAA is included in Exhibit 30-A, Appendix F. Because there are no turbines visible within 8 miles of any SRSNS, the Project does not have any impacts to SRSNS, and therefore, no best practical mitigation has been proposed.

30.1.2 North Line

The North Line is a generator lead line defined as an “associated facility” under 35-A MRSA §3451(1). Although associated facilities are eligible for consideration under the VIA standards of 35-A MRSA §3452(1), the VIA evaluated the North Line using the traditional visual impact standards of 38 MRSA §484(3) and Chapter 375.14 of Maine Department of Environmental Protection (MDEP) regulations.

The VIA identified all scenic resources within 4 miles of the North Line. Most of the North Line is located in commercial forestland. With the exception of road and river crossings, the North Line will not be highly visible from the scenic resources within 1 mile. Based on an inventory and analysis of scenic resources and the affected populations, the VIA concluded the North Line will not have an unreasonable adverse visual effect on the scenic values and existing uses of scenic resources in the study area.

30.1.3 Bridal Path Line

The Bridal Path Line is a generator lead line defined as an “associated facility” under 35-A MRSA §3451(1). Although associated facilities are eligible for consideration under the VIA standards of 35-A MRSA §3452(1), the VIA evaluated the Bridal Path Line using the traditional visual impact standards of 38 MRSA §484(3) and Chapter 375.14 of Maine Department of Environmental Protection (MDEP) regulations.

The VIA identified all scenic resources within 4 miles of the Bridal Path Line. With the exception of road and river crossings, the Bridal Path Line will not be highly visible from the scenic resources within 1 mile. Based on an inventory and analysis of scenic resources and the affected populations, the VIA concluded the Bridal Path Line will not have an unreasonable adverse visual effect on the scenic values and existing uses of scenic resources in the study area.

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EXHIBIT 30-A VISUAL IMPACT ASSESSMENT

Visual Impact Assessment

NUMBER NINE WIND FARM

Aroostook County, Maine



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1.0 EXECUTIVE SUMMARY

1.1 Overview

Number Nine Wind Farm LLC (Applicant), a wholly owned subsidiary of EDP Renewables NA LLC (EDPR), is proposing the Number Nine Wind Farm Project (NNWF or Project), a grid-scale wind energy generation facility in Aroostook County. The Project consists of the Turbine Area, North Generator Lead Line (North Line), and Bridal Path Generator Lead Line (Bridal Path Line). The following is a summary of each of these Project components:

Turbine Area

The Turbine Area includes turbines located in the unorganized townships of T10 R3 WELS, E Township, T9 R3 WELS, TD R2 WELS, Saint Croix Township, and T8 R3 WELS, as well as associated access roads in Saint Croix Township and Bridgewater. All are within the area designated as expedited for permitting under the Maine Wind Energy Act (WEA). Project components located in the Turbine Area include 119 wind turbine generators (129 are being permitted) with a nameplate capacity of approximately 250 megawatts (MW), up to 4 permanent and 4 temporary meteorological (met) towers with a maximum height of 93m (305 feet), a collector substation in T9 R3, an operations and maintenance (O&M) building adjacent to the collector substation, access roads, overhead and underground collection lines, and laydown areas.

North Generator Lead Line

The North Line is an approximately 26.2 mile long 345 kV generator lead line that will be installed in a new 170-foot wide easement corridor. The North Line will begin at the collector substation in T9 R3 and run south through T8 R3, TC R2 WELS, Hammond, Littleton, and Houlton, and end north of Ludlow Road in Houlton. Clearing of vegetation along the corridor length will be up to 150 feet.

Bridal Path Generator Lead Line

The Bridal Path Line is an approximately 25.4 mile long 345 kV generator lead line that will be installed in an existing utility-owned 225-foot wide transmission corridor known as the Bridal Path. The Bridal Path Line runs south from south of Ludlow Road in Houlton through Hodgdon, Linneus, TA R2 WELS, Forkstown Township, and Haynesville to terminate at the Interconnection Switchyard north of Route 2A in Haynesville¹. Clearing of vegetation along the corridor length will be up to 150 feet. There currently are no transmission lines in the Bridal Path. Portions of the corridor have been cleared in the past and have partially revegetated; other portions have never been cleared.

1.2 Project Visibility

Generating Facilities. There are two scenic resources of state or national significance (SRSNS) as defined by the WEA within eight miles of the Number Nine Wind Farm: Aroostook State Park in Presque Isle and the Bridgewater Town Hall and Jail. However, applying the requisite 8-mile radius surrounding the turbine generators, none of the wind turbines within 8 miles will be visible from either of these scenic resources.

Associated Facilities. The associated facilities for the Project include access roads, collector electrical lines, collector substation, operations & maintenance facility, crane roads and assembly areas, meteorological towers, and two segments of a generator lead line. The associated facilities located in the Turbine area will not be visible from Aroostook State Park or the Bridgewater Town Hall and Jail.

¹ The Interconnection Switchyard will be permitted by Central Maine Power under a separate permit application.

The VIA provides an assessment of potential impacts from the generator lead line to scenic resources² as defined in the Natural Resource Protection Act (NRPA) Chapter 315 Regulations and the standards in the Site Law's Chapter 375.14 (Scenic Character). For purposes of this assessment, the viewshed to be evaluated will generally extend one mile from the generator lead line.³ The analysis documents all scenic resources that may be present within four miles of the corridor.⁴ With the exception of the road and river crossings, the associated facilities will not be highly visible from the scenic resources within a mile.

1.3 Overview of Conclusions

Generating Facilities. Aroostook State Park and Bridgewater Town Hall and Jail are the only two scenic resources of state or national significance (SRSNS) as defined by the WEA within eight miles of the Number Nine Wind Farm. However, neither of these resources will have views of any wind turbines within 8 miles and will not be affected by the project.

The 8-mile study area surrounding the wind turbine generators does not contain any of the following scenic resources:

- National natural landmarks
- No other properties listed on the National Register of Historic Places, other than the Bridgewater Town Hall and Jail
- Federally designated wilderness areas
- National parks or any additional state parks, other than Aroostook State Park
- Great ponds listed as 'significant' or 'outstanding' from a scenic perspective
- River segments with unique or outstanding scenic attributes
- Scenic viewpoints on public reserve lands, or trails used exclusively for pedestrian use, that have been designated by the Maine Department of Conservation
- Maine DOT scenic turnouts on a designated scenic byway
- Scenic viewpoints within the coastal area.

Associated Facilities. None of the associated facilities will be visible from any SRSNS or will be highly visible from any defined scenic resources. The associated facilities will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic character of the study area.

² A Scenic Resource is a public natural resource or public land visited by the general public, in part for the use, observation, enjoyment, and appreciation of natural or cultural visual qualities. The attributes, characteristics, and features of the landscape of a scenic resource provide varying responses from and varying degrees of benefits to, humans. Chapter 315, *Maine Department of Environmental Protection*.

³ The one-mile limit is derived from the Maine Department of Environmental Protection's Visual Evaluation Field Survey Checklist. In most instances new structures or the transmission corridor will not be highly visible at distances greater than one mile.

⁴ The four-mile limit is derived from *Landscape Aesthetics: A Handbook for Scenery Management*. United States Department of Agriculture Forest Service, Agricultural Handbook Number 701, December 1995.

2.0 INTRODUCTION

2.1 Background

Terrence J. DeWan and Associates (TJD&A), landscape architects in Yarmouth, Maine, prepared this visual impact assessment (VIA) for the Number Nine Wind Farm. The methodology for assessing the potential visual impacts of the project involves the judgment of experienced landscape architects in the selection of factors chosen to evaluate scenic quality and determine the magnitude of visual impact. This approach, widely used in permitting work in Maine and elsewhere throughout the country, is based upon current studies of what constitutes scenic landscapes and visual impacts.

The study area includes the seven unorganized townships where turbines will be located, plus abutting towns and unorganized townships within an eight-mile radius of the project (see Figure 1: [Expedited Windpower Permitting Areas in the Vicinity of the Number Nine Wind Farm](#) on the following page). The limits of the eight-mile study are based upon the WEA, which instructs the primary siting authority (Maine Department of Environmental Protection (DEP)) to *'consider insignificant the effects of portions of the development's generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance.'* (§ 3452.3.)

This report is based upon topographic mapping and design plans for the proposed Number Nine Wind Farm provided by EDPR, with input from other professional members of the design team. TJD&A created a series of viewshed maps with WindPRO software to help determine the limits of potential project visibility. See Appendix A:

- Map 1: Project Area Map
- Map 2: Project Study Area Elevation Map
- Map 3: Topographic Viewshed for Blades
- Map 4: Vegetated Viewshed A for Blades
- Map 5: Vegetated Viewshed A for Nacelles
- Map 6: Vegetated Viewshed B for Blades
- Map 7: Vegetated Viewshed B for Nacelles
- Map 8: Vegetated Viewshed C for Blades for Aroostook State Park
- Map 9: 8-Mile Study Areas for Number Nine Wind Farm, Mars Hill Wind Project, and Oakfield Wind Project

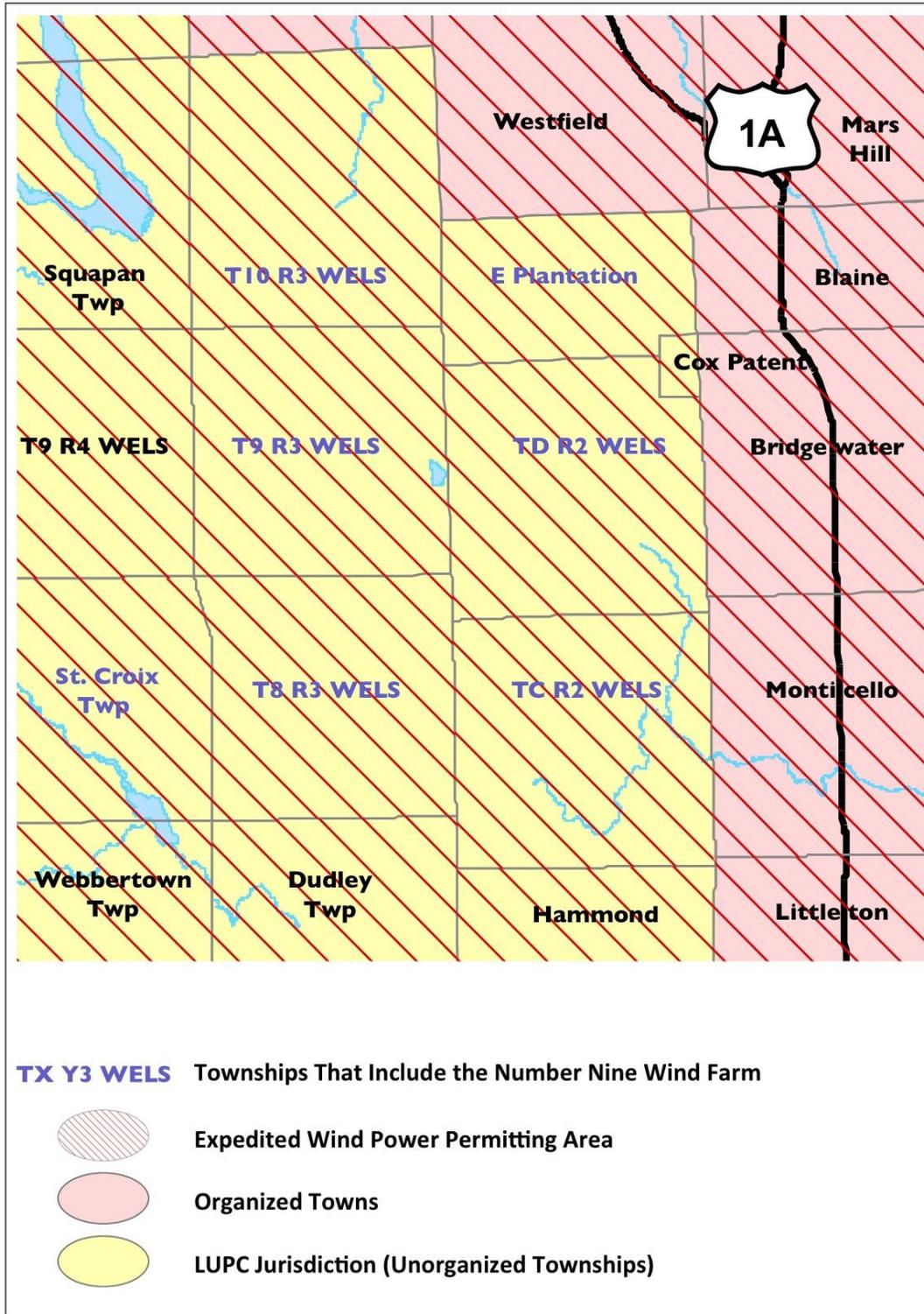
In addition to field investigations, TJD&A used the three-dimensional resources of Google Earth Pro and WindPRO to look at the study area from the air, various waterbodies, and on the ground. These digital tools provide the capability to experience the physical characteristics of the landscape and develop a better understanding of the Project setting relative to surrounding topographic features.

2.2 Field Investigations

TJD&A personnel collected field data by a variety of means during site visits on May 13 and 14, August 6 and 7, and November 19, 2014. Fieldwork concentrated on evaluating and photographing SRSNSs and other components of the visible landscape within eight miles of the turbine area and within one mile of the generator lead line. TJD&A personnel visited the study area by automobile, boat, all-terrain vehicle (ATV), snowmobiles, and on foot. Fieldwork was limited to lands and waterbodies that are open to the public; no attempt was made to investigate potential impacts on private properties.

Photographs of the project area were taken with Nikon digital cameras (a D300 and D7100), recording at the highest resolution (fine). The cameras were equipped with a Nikon 35mm lens (equivalent to a 50mm 'normal' lens in a film camera).

Figure 1: Expedited Windpower Area in Vicinity of Proposed Number Nine Wind Farm Wind



GPS coordinates of the photographs were recorded with a camera-mounted GPS unit. An annotated selection of representative views within the study area is included in Appendix B: Study Area Photographs. Photographs were also used in the preparation of the photosimulations and illustrations in Appendix C: Photosimulation in Aroostook State Park; Appendix D: Bridgewater Town Hall and Jail Computer Model Overlay; and Appendix E: Interstate 95 Photosimulation.

2.3 Viewshed Mapping and Photosimulations

Computer-generated images (i.e., viewshed maps and photosimulations) have been prepared to illustrate the relationship between the scenic resources within the study area and the Number Nine Wind Farm. The following section describes the methodology used to develop these images:

2.3.1 Viewshed Mapping

- TJD&A prepared an initial viewshed map of the eight-mile generating facility study area with WindPRO⁵ software to determine maximum potential turbine visibility (Map 3: Topographic Viewshed for Blades). Topographic information (Digital Elevation Model (DEM)) was obtained from GIS Data Depot. This map was designed to answer the question “Where might someone see at least the turbine blades within 8 miles if there were no trees, buildings, or other obstacles to block the view?” This map shows maximum *potential* Project visibility. However, it grossly over-represents actual Project visibility since it does not take into account the abundant tree cover or other obstacles that will limit or block views of those turbines within 8 miles.
- To gain a more realistic understanding of project visibility, two additional sets of viewshed maps were prepared, using vegetative cover data from the Maine Office of GIS Data Catalog, to show the effect of tree cover on Project visibility. With this set of maps, conservative estimated heights of vegetation were assigned to the various cover types.⁶ These composite maps are based on the assumption that observers would not be able to see turbines a) where their view is blocked by topography, b) while in deciduous or evergreen woodlands within the study area, and c) on waterbodies where the view is blocked by trees on forested ridgelines and along the shoreline. Map 4: Vegetated Viewshed A for Blades shows where a viewer would see at least the blade tip of turbines within 8 miles. This map may overstate Project visibility, since many of the trees between the observer and the turbines will be greater than 40 feet in height and thus will block views of the turbine blades. It also overstates potential Project visibility, since blades are difficult to see at distances beyond 3-4 miles. Map 5: Vegetated Viewshed Map A for Nacelles is more realistic in that it shows where the viewer would see nacelles plus the blades within 8 miles.
- To add further clarity to potential project visibility, two additional viewshed maps were prepared using eight different vegetative cover types and conservative height estimates: 40’ for deciduous, evergreen, mixed forest types as well as light and heavy partial cut areas; 20’ for forested

⁵ WindPRO software was developed for the wind energy industry and is used world-wide for planning, design, and visual representation.

⁶ The land cover data for Viewshed Maps 3 and 4 assumes that the typical tree height is 40’ for deciduous, evergreen, and mixed forest types as determined by the Maine Office of GIS. To be conservative, wetlands, regenerating forests, and harvested areas were assigned a tree height value of 0’ (i.e., no vegetation cover). These values are assigned as standards of practice, as recommended by Dr. James Palmer, a DEP peer reviewer for visual assessments. Field investigations have shown that the actual tree heights are greater than 40 feet in many locations, especially at the edges of lakes and ponds. Likewise, wooded wetlands, regenerating forests, and areas that have been harvested more than a decade ago often are covered with vegetation of significant height that would block views of turbines.

wetlands and regeneration forest; and 10' for scrub/shrub areas. See [Map 6: Vegetated Viewshed B for Blades](#) and [Map 7: Vegetated Viewshed B for Nacelles](#). These maps recognize that harvest cuts are a temporary phenomenon and that forested wetlands and scrub/shrub areas typically have substantial amounts of vegetation that limit visibility.

- [Map 8: Vegetated Viewshed C for Blades – Aroostook State Park](#) was prepared to determine how many turbines within 8 miles of Aroostook State Park might be visible from the Park. The map indicates that there may be potential visibility along the ridge trail between the South and North Peaks. Field visits have determined that there would be no visibility in these areas due to forest cover.
- A composite study area map ([Map 9: 8- Mile Study Areas for Number Nine Wind Farm, Mars Hill Wind Project, and the Oakfield Wind Project](#)) was prepared to evaluate potential cumulative visual impact from the combination of the existing Mars Hill Project, the Oakfield Wind Project (under construction), and the proposed Number Nine Wind Farm. The Bridgewater Town Hall and Jail is the only scenic resource within the overlapping study areas for Mars Hill and Number Nine. There are no SRSNS within the overlapping study areas for the Number Nine and Oakfield Wind Project.

2.3.2 Photosimulations

- Field studies begin with an evaluation of the viewshed maps to determine where the maximum number of turbines may be visible from SRSNSs. The photographs used for the photosimulation in Aroostook State Park were selected after evaluating relative Project visibility in Google Earth and the viewshed maps, and visiting the site on the South Peak of Quaggy Jo Mountain.
- The photosimulation for Aroostook State Park was prepared using WindPro's Visual-Photo Montage module. A digital elevation model (DEM) of the Project area was created in WindPRO, using topographic data from GIS Data Depot, an online data source. The specifications of the wind turbines (location, manufacturer, model number, base height, rotor diameter, color) were entered into WindPRO, which created three-dimensional images of the turbines and placed them in the proper location on the model. Digital photographs of the selected view taken by TJD&A were imported into the computer and merged with the DEM, matching the lens focal length, date and time of photograph, digital resolution, and lighting. The DEM was then matched with the photograph using the known elevation, latitude, and longitude data from the PhotoGPS log. Visible elements in the landscape (e.g., ridgelines, roads, landfill, buildings) were used to register the photographs to actual ground conditions.
- Post-production editing involved eliminating parts of towers on the computer model that will be blocked by terrain or trees. The images were fine tuned in Photoshop to account for time of day, weather conditions, haze, and other environmental factors and to maximize visibility of the turbine components.
- The Project model was also inserted into Google Earth to verify the registration of the photographs with the computer model, to determine the extent that existing vegetation blocks views of the turbines, and to verify the accuracy of the viewshed maps and photosimulations.
- The photosimulations (single images) were also merged with adjacent photographs of existing conditions in Photoshop to create panoramas that give a more contextual view of the landscape.

- WindPro's Visual Photo Montage module was also used to create a computer model overlay which verifies the lack of project visibility from the Bridgewater Town Hall. Structures visible in the foreground were used to vertically and horizontally register the image with the model. A model view of the turbines is shown as red circles (representing the blade path) and overlaid on the image. The existing intervening vegetation and buildings will screen views of the Project from the Town Hall. See Appendix D.
- Google Earth Pro and WindPro's Visual Photo Montage module were used to create the photosimulation of the proposed generator lead line crossing of Interstate 95 in Appendix E. A 3D model of the generator lead line structures and conductors were registered to the photograph using known vertical and horizon controls.

The legend in the panoramic views provides the following information:

- **Turbine Model:** Gamesa 114. The Gamesa 114s may also be used, both have the same dimensions.
- **Hub Height:** 93 meters (305 feet)
- **Rotor Diameter:** 114 meters (374 feet)
- **View Coordinates:** Latitude and Longitude of the photograph and computer model.
- **Viewer Elevation:** Approximate distance above mean sea level, in meters and feet.
- **Direction of View:** The compass direction from the viewpoint (indicated by the red arrows on the USGS Viewpoint Location map) to the center of the turbine array.
- **Closest/Furthest Turbine:** The horizontal distance in miles between the viewpoint and the closest and furthest turbines.
- **Turbines Visible within 8 Miles:** As noted above, none of the turbines within 8 miles of either the South Peak of Quaggy Jo Mountain or the Bridgewater Town Hall and Jail would be visible. The photosimulations from South Peak includes 5 turbines that would be in view but beyond eight miles from the overlook.
- **Date/Time:** When the photograph was taken.

The normal view also provides the distance that the viewer should hold the photosimulation from the eye to accurately replicate real-world conditions.

3.0 REGULATORY REQUIREMENTS

On April 18, 2008 the Governor signed into law LD 2283 An Act to Implement Recommendations of the Governor's Task Force on Wind Power Development. As part of this legislation, the Legislature found that certain aspects of the State's regulatory process for determining the environmental acceptability of wind energy projects should be modified to encourage the siting of projects in Expedited Permitting Areas.

3.1 Modified Visual Impact Standard

Expedited Permitting Areas include all of the organized areas of the State and limited locations within Maine Land Use Planning Commission's (LUPC's) jurisdiction. All seven of the unorganized townships where the Project will be located have been designated as Expedited Windpower Permitting Areas. See Figure 1: Expedited Windpower Permitting Areas in Vicinity of Number Nine Wind Farm.

Modifications to the permitting process include, but are not limited to:

- A. Making wind energy development an allowed use within certain parts of the State's unorganized and deorganized areas;
- B. Refining certain permitting procedures of the Department of Environmental Protection and the Maine Land Use Planning Commission; and
- C. Modifying the scenic standard to reflect the nature of turbine visibility and the desire to facilitate wind energy development in areas determined by the Legislature to be most compatible with existing patterns of development and resource values when considered from a landscape level.

3.2 Scenic Resources of State or National Significance (Wind Energy Act)

"Scenic resources of state or national significance" as defined under State law means: an area or place owned by the public or to which the public has a legal right of access that is:

- A. A national natural landmark, federally designated wilderness area or other comparable outstanding natural and cultural feature, such as the Orono Bog or Meddybemps Heath;
- B. A property listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, including, but not limited to, the Rockland Breakwater Light and Fort Knox;
- C. A national or state park;
- D. A great pond that is:
 - (1) One of the 66 great ponds located in the State's organized area identified as having outstanding or significant scenic quality in the "Maine's Finest Lakes" study; or
 - (2) One of the 280 great ponds in the State's unorganized or deorganized areas designated as outstanding or significant from a scenic perspective in the "Maine Wildlands Lake Assessment";
- E. A segment of a scenic river or stream identified as having unique or outstanding scenic attributes listed in Appendix G of the "Maine Rivers Study";
- F. A scenic viewpoint located on state public reserved land or on a trail that is used exclusively for pedestrian use, such as the Appalachian Trail, which the Department of Conservation designates by rule adopted in accordance with section 3457;
- G. A scenic turnout on a scenic highway constructed by the Department of Transportation; or
- H. Scenic viewpoints located in the coastal area that are ranked as having statewide significance or national importance in terms of scenic quality in: (1) One of the scenic inventories prepared for and published by the Executive Department, State Planning Office: "Method for Coastal Scenic Landscape Assessment with Field Results for Kittery to Scarborough and Cape Elizabeth to South Thomaston," Dominie, et al., October 1987; "Scenic Inventory Mainland Sites of Penobscot Bay," DeWan and Associates, et al., August 1990; or "Scenic Inventory: Islesboro, Vinalhaven, North Haven and Associated Offshore Islands," DeWan and Associates, June 1992; or (2) A scenic inventory developed by or prepared for the Executive Department, State Planning Office.

The two SRSNSs that are found within the study area are described more thoroughly in Section 6.

This conclusion regarding the number of scenic resources within the 8-mile study area was presented at a consultation meeting with DEP staff members Jessica Damon and Jim Beyer on January 24, 2014. At that time we presented a preliminary scenic resources map of the study area and a written memorandum summarizing our findings.

3.3 Regulatory Standard: Associated Facilities

The associated facilities may be reviewed under the scenic impact standard applicable to the wind generating facilities, unless DEP determines that the application of the WEA standard may result in unreasonable adverse effects on scenic character and existing uses due to the scope, scale, location or other characteristics of the associated facilities. If DEP makes that determination, the associated facilities will be evaluated under traditional standards found in 06-096 CMR 375(14) (No Unreasonable Effect on Scenic Character in the Site Law) and 06-096 CMR 315 (Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses in the Natural Resources Protection Act). Based upon discussions with DEP staff and the DEP peer reviewer during the November 20, 2014 field visit, it was decided –due to the length of the generator lead line and the number of scenic resources within four miles of the line – the potential visual impacts of the line should be evaluated under the Site Law and NRPA standards. All other associated facilities within the 8-mile turbine study area (access roads, collector lines, collector substation, O&M, and met towers) have been reviewed under the Wind Energy Act.

3.4 Scenic Resources (Natural Resources Protection Act)

Scenic resources as defined in the Maine DEP’s Natural Resource Protection Act (NRPA) Chapter 315 Regulations are “Public natural resource(s) or public land(s) visited by the general public, in part for the use, observation, enjoyment, and appreciation of natural or cultural visual qualities. The attributes, characteristics, and features of the landscape of a scenic resource provide varying responses from and varying degrees of benefits to, humans.”⁷

For purposes of this assessment, the viewshed of the generator lead line to be evaluated generally extends one mile from the corridor.⁸ The analysis documents all scenic resources that may be present within four miles of the corridor.⁹ The scenic resources assessed for both portions of the generator lead line include:

North Generator Lead Line

- **Road crossings:** Route 2, Interstate 95, Route 2A, and local roads.
- **Historic structures:** Putnam Blackhawk Tavern and First National Bank, both about a mile from the line on the west side of Houlton. There are 6 additional structures and one historic district on the NRHP in Houlton within 4 miles of the project.
- **International Appalachian Trail.** The line will cross the IAT in the section of the trail located along Ludlow Road, adjacent to the Mullen Substation.
- **River Crossings.** The line will cross B Stream and the Meduxnekeag River in Houlton. IF&W has an access point on the Meduxnekeag River in Houlton.

Bridal Path Generator Lead Line

- **Nickerson Lake State Park/Crescent Park,** New Limerick.
- **Road crossings:** Route 2, Interstate 95, Route 2A, and local roads.

⁷ Chapter 315, *Maine Department of Environmental Protection*.

⁸ The one-mile limit is derived from the Maine Department of Environmental Protection’s Visual Evaluation Field Survey Checklist. In most instances new structures of the type anticipated for the NNWF generator lead line will not be highly visible at distances greater than one mile.

⁹ The four-mile limit is derived from *Landscape Aesthetics: A Handbook for Scenery Management*. United States Department of Agriculture Forest Service, Agricultural Handbook Number 701, December 1995. Within this area the VIA will primarily be evaluating the potential visibility of new cleared corridors from scenic resources at higher elevations (e.g., mountaintops).

- **Historic structures:** Putnam Blackhawk Tavern and First National Bank, both about a mile from the line on the west side of Houlton. There are 6 additional structures and one historic district on the NRHP in Houlton within 4 miles of the project.
- **International Appalachian Trail.** The line will cross the IAT in the section of the trail located along Ludlow Road, adjacent to the Mullen Substation.
- **Interconnected Trail System.** The line parallels ITS 83 for approximately 8 miles in Linneus.
- **Wildlife Management Areas.** Hodgdon Deadwater WMA, Gordon Manuel WMA is beyond one mile but a portion is within 4 miles.
- **Great Ponds.** Portions of Nickerson Lake (234 acres) in New Limerick and Linneus, and Beaver Brook Lake (64 acres) in Linneus are within one mile of the line.
- **River Crossings.** The line will cross the East and West Branches of the Mattawamkeag River near Haynesville.

4.0 PROJECT DESCRIPTION

The following section describes the visible components of the generating components of the Number Nine Wind Farm and its associated facilities.¹⁰ The Number Nine Wind Farm will consist of the Turbine Area, North Line, and Bridal Path Line. The Turbine Area includes wind turbines, lighting, access roads, electrical collection lines, generator lead line, collector substation, O&M facility, meteorological towers, and crane paths and assembly areas. The evaluation of the visual impact of the generating facilities is found in Section 6; the evaluation of the visual impacts of the associated facilities within the 8-mile turbine study area (roads, O&M facility, collector lines, etc.) are reviewed under the WEA in Section 7; and the evaluation of visual impacts of the North Line and Bridal Path Line is reviewed under Site Law/NRPA and is found in Section 8.

4.1 Wind Turbines

A total of 119 turbines (129 turbines are being permitted), along with associated electrical interconnection infrastructure, will be installed in groups of 2 to 8 turbines on low rounded hills and ridges that are characteristic of this part of Aroostook County. The assessment evaluates the maximum number of turbines (129) to be permitted. The hills range in height between 400 and 600 feet above the surrounding landscape.

- **T10 R3 WELS:** 17 turbines in two groups located in the southern portion of the township, west and east of Presque Isle Stream
- **E TWP:** 19 turbines in the western portion of the township in several small groups
- **T9 R3 WELS:** 24 turbines will be located in the eastern portion of the township to the north, west, and south of Number Nine Lake and east/southeast of Presque Isle Lake
- **TD R2 WELS:** 22 turbines will be located in the northwest portion of the township on both sides of Number Nine Lake Road
- **Saint Croix TWP:** 1 turbine will be located in the southeast corner of the township
- **T8 R3 WELS:** 46 turbines will be located in several groups

This assessment assumes the turbines will be Gamesa G114s with a 93m hub height, a rotor diameter of 114m, and a maximum tip of blade height of 150m (492 feet). The 2.0 MW Gamesa G114 turbines are

¹⁰ The Maine Wind Energy Act defines ‘associated facilities’ as those ‘elements of a wind energy development other than its generating facilities that are necessary to the proper operation and maintenance of the wind energy development, including but not limited to buildings, access roads, generator lead lines, and substations’.

exactly the same dimensions as the 2.1 MW turbines. The turbines are controlled electronically so they will always face into the wind when operating.

The siting of individual turbines has taken into account the wind resource, site-specific topography, access road locations, proximity to wetlands, wildlife habitat, and other site conditions.

The turbine components (base, nacelle, and blades) will be white to provide contrast for pilots. By using white turbines, which offer a considerable amount of visual contrast, the FAA will not require daytime lighting.

Turbine contrast and visibility is a highly variable phenomenon; the white turbines can appear to change from dark gray to a shade that almost matches the background sky, depending upon the time of day, orientation of the viewer, atmospheric conditions, and weather. In the midground and background viewing distances where the Project will typically be seen, the turbines will appear as light gray due to the effects of atmospheric perspective, especially on hazy or overcast days.

4.2 Project Lighting

Project lighting will follow the Federal Aviation Administration (FAA) recommendations for aviation safety. Traditional lighting involves the use of red lights mounted on the top of some of the nacelles in accordance with an FAA approved lighting design. Typically this involves lights mounted at the end of turbine strings and at 0.5-mile intervals as a minimum. Under normal operations, the lights will be synchronous, red, flashing, with a slow-on, slow-off profile. The permanent meteorological towers will also have FAA approved lighting.

4.3 Access Roads

Existing gravel roads currently being used for commercial timber production will be used to the greatest extent possible to provide access to the project. Approximately 15 miles of existing roads will be widened to provide construction and maintenance access to the project areas and to connect turbine locations. Another 74 miles of existing roads will be used and maintained but not widened. Additionally, 50 miles of new roads will be constructed; 8.5 miles of those new roads will be temporary for construction purposes.

The applicant will maintain access roads developed for the Project. Roads outside of the project area, and therefore under the control of the landowners, will continue to be maintained by the landowners. In most locations the access roads are screened by existing vegetation and will not be highly visible from outside the immediate area.

4.4 Electrical Collection System

Power from the turbines will be collected in a series of 34.5 kilovolt (kV) collection lines and flow to a collector substation in T9 R3. Most of the collector system that connects individual turbines will be located underground. The majority of the collection lines in the valleys below the turbines will be located above ground and adjacent to project roads, thereby minimizing potential visual impacts.

4.5 Collector Substation

A new collector substation will be constructed in a forested location off Hovey Mountain Road in the southeast corner of T9 R3 at the start of the 345 kV generator lead line. The 4.33-acre substation site will be enclosed with an 8-foot high chain link fence. The majority of the substation components will be 25-35' in height.

4.6 Operations and Maintenance Facility

An Operations and Maintenance (O&M) facility will be adjacent to the collector substation on Hovey Mountain Road in T9 R3. The 5.41-acre facility will consist of a single-story building containing a warehouse and an office, a garage, a parking area, and an outside storage yard for turbine blades and other components.

4.7 Meteorological Towers

Up to 4 temporary meteorological (met) towers will be installed at turbine locations during construction. The project will also include up to 4 permanent met towers 93 meters (305 feet) in height that will remain in place for the life of the project. (See Viewshed maps for possible locations for permanent met towers). The met towers will be lit according to FAA requirements. The towers may be freestanding or of a guyed lattice construction with a triangular cross section approximately 18 inches across.

4.8 Crane Pads and Crane Assembly Area

A cleared and level pad area averaging 2.75 acres in size will be required at the base of each turbine for staging, crane movement, and turbine installation. Additional clearing may be needed in some areas to account for cut/fill slopes. Following construction the majority of crane assembly and turbine pad areas will be allowed to naturally revegetate.

4.9 Generator Lead Line

The 345 kV generator lead line is divided into two segments: the North Line and the Bridal Path Line. The North Line will be approximately 26.2 mile long will be sited in a new 170 foot wide corridor. It begins at the collector substation in T9 R3 and runs south through T8 R3, TC R2 WELS, Hammond, Littleton, and Houlton and ends north of Ludlow Road in Houlton. Clearing limits along the corridor length will be up to 150 feet.

The Bridal Path Line will be approximately 25.4 mile long and sited within an existing (but undeveloped) utility-owned 225-foot wide corridor. The Bridal Path Line runs south from south of Ludlow Road in Houlton through Hodgdon, Linneus, TA R2 WELS, Forkstown Township, and Haynesville and terminates at the Interconnection Switchyard north of Route 2 in Haynesville. Clearing limits along the corridor length will be up to 150 feet.

5.0 PROJECT STUDY AREA

5.1 Aroostook Hills Bioregion

The state of Maine is divided into 19 biophysical regions – distinct geographic areas that are characterized by similarities in physiography, climate, geology, and vegetation. The entire study area is

located in the southeastern portion of the Aroostook Hills bioregion (See Figure 2). The following is a description of the region¹¹:

Physiography

The Aroostook Hills Region extends from the Saint John River near Madawaska south to the Patten area. The western boundary is delineated by the 1,000' contour line and the eastern boundary is defined by the calcareous bedrock and tills that underlie the Aroostook Lowlands. The region is characterized by gently rolling terrain with elevations averaging between 800' and 1,000'. Scattered mountains occur in the Winterville area and on a small pluton north of Shin Pond. Topographic highs include Pennington Mountain (1578'), Green Mountain (1687') and Mount Chase (2440'). Unlike the Saint John Uplands and Aroostook Lowlands, lakes and peatlands are abundant.

Bedrock of the region is almost entirely composed of weakly metamorphosed interbedded pelites, sandstones, and some limestone. Intrusives include a belt of metavolcanic rock that cuts across the central portion of the region and the quartz diorite pluton that underlies Mount Chase.

Climate

Except for maximum July temperature, which averages 78° F throughout the region, climate varies considerably from north to south. Winter temperatures, annual precipitation, and snowfall are lower in the north. On average, the length of the frost-free season is 20 days shorter in the central portion of the region than either the north or the south. The average minimum January temperature ranges from 4° F near Patten to -5° F near Scapan¹². Average annual precipitation ranges from 43" in Patten to 35" in Scapan and average snowfall ranges from 120" in Patten to 100" in the north. The climate is intermediate between the Saint John Uplands and the Aroostook Lowlands.

Surficial Geology and Soils

The eastern portion of the region has extensive but scattered deposits of glaciolacustrine sediments on which cedar swamps and peatlands have developed. The western portion is covered with thin drift and pockets of deeper till. Shallow (10"-20") excessively drained Thorndike silt loams occur on ridge tops, well to moderately well-drained Plaisted silt loams and Chesuncook loams occur on upper slopes, and finer poorly drained Aurelie and somewhat poorly drained Daigle soils are typical of the valleys in the northern portion of the region.

Vegetation and Flora

The western boundary of the region coincides with a vegetation transition zone where species characteristic of temperate regions are replaced by those of more boreal affinity. In addition to this transition zone, two peatland types, eccentric bogs and concentrically patterned raised bogs, reach their western limit in Maine here. This is apparently a topographic rather than a climatic limit- the total number and area of peatlands are generally less in mountainous well-drained terrain. Raised bogs are confined to the limited number of flat basins that are scattered between the hills and mountains, while eccentric bogs occur on the gentle slopes rising from these basins. Forest

¹¹ McMahan, J.S. 1990. The Biophysical Regions of Maine: Patterns in the Landscape and Vegetation. M.S. Thesis. University of Maine, Orono.

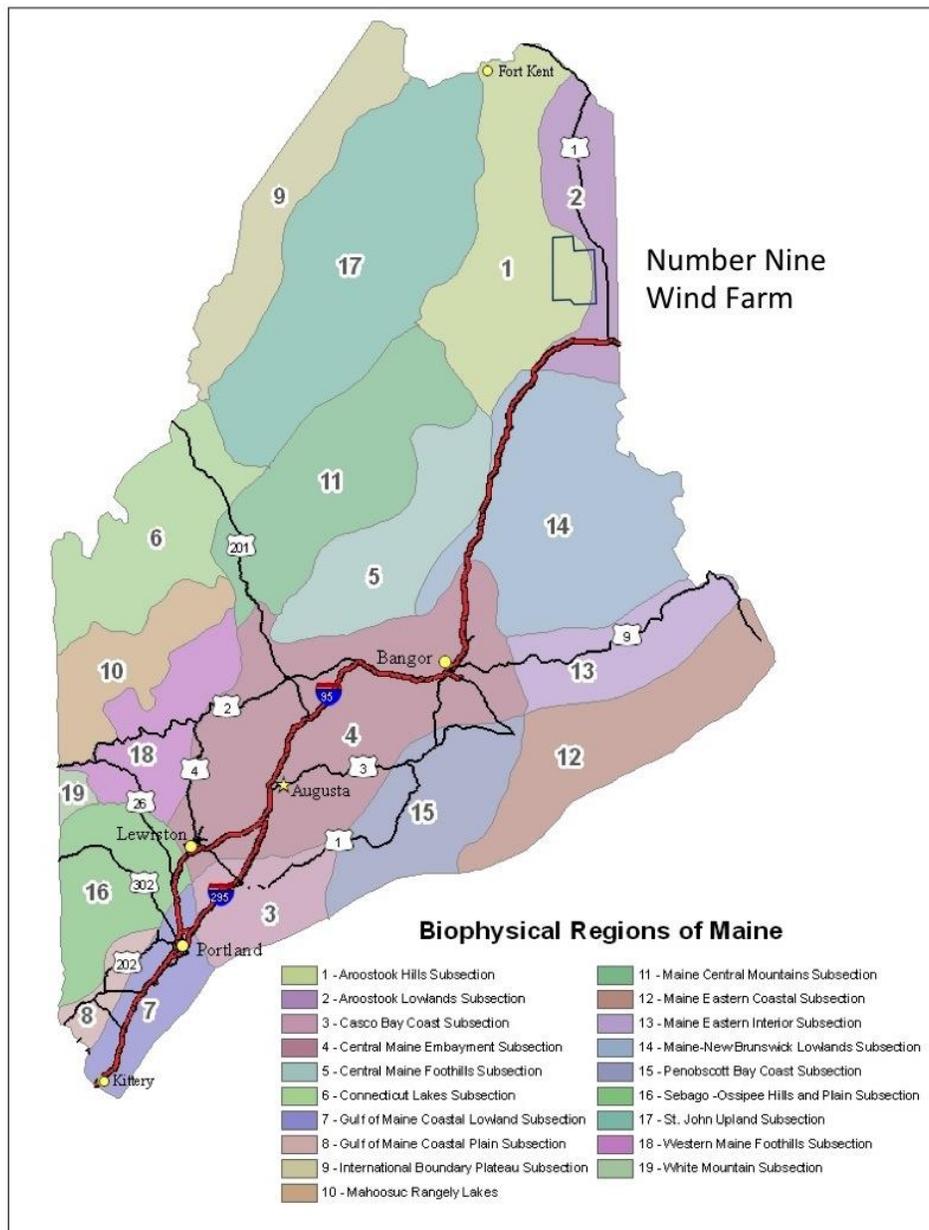
¹² 'Scapan' is the currently accepted name for Squapan. The U.S. Board on Geographic Names approved the change in September 2011.

ecosystems are more diverse in the Aroostook Hills Region than in western portions of Aroostook County.¹³

5.2 Existing Character of the Surrounding Area

The character of the study area is described by the landforms, water resources, vegetation, ownership patterns, and cultural features within eight miles of the proposed turbines and four miles of the generator lead line.

Figure 2: Aroostook Hills Bioregions Map



¹³ McMahon, J.S. 1990. The Biophysical Regions of Maine: Patterns in the Landscape and Vegetation. M.S. Thesis. University of Maine, Orono.

Landform

The Project ridges are similar in elevation to many other landforms in the 8-mile study area. Most of hills in the project area do not have particularly distinct profiles and range in height between 400 and 600 above the surrounding landscape, which make them difficult to distinguish when seen from background distances. The most distinctive mountains in the study area include Number Nine Mountain (elev. 1,638) in TD R2 WELS and Saddleback Mountain (elev. 1,700) in T9 R3 WELS. Other prominent landforms in the vicinity include Quaggy Jo Mountain in Aroostook State Park (elev. 1,213), Mars Hill (elev. 1,660), and Scopan Mountain (elevation 1,460).

The characteristic landforms in the generator lead line study area are relatively flat to gently rolling hills. The most prominent landforms are the Bates Ridge (elev. 1,230) on the southeast side of Meduxnekeag Lake (Drew's Lake), which rises approximately 500' above the surrounding area, and a 300-foot high hill south of Nickerson Lake.

Water Resources

- **Lakes and Ponds.** There are approximately 26 lakes and ponds within the 8-mile radius study area; none are classified as SRSNSs. The larger waterbodies include Scopan Lake in Scopan TWP; Alder Lake in Chapman; Echo Lake in Presque Isle; Number Nine Lake, Presque Isle Lake, and West Lake in T9 R3 WELS; and St Croix Lake in Saint Croix TWP and Webbertown TWP. There are also several smaller waterbodies including: Cranberry Pond in Scopan TWP; Youngs Lake in Westfield; Packard Lake, Whitehead Lake, and Portland Lake in Bridgewater; Alerton Lake in Monticello; B Lake in Hammond; Brandy Pond in Webbertown TWP; and Carlisle Pond and North Pond in T8 R3 WELS.

There are approximately 21 lakes and ponds within 4 miles of the generator lead line: Number Nine Lake, Presque Isle Lake, and West Lake in T9 R3 WELS; B Lake in Hammond, Long Lake, Carry Lake, Deep Lake, Monson Lake in Littleton; Green Pond and Glancy Pond in New Limerick, Nickerson Lake, Champion Pond, Mud Pond, Beaver Brook Lake, Mud Lake, Hunter Pond, Johnson Pond in Linneus; Skitacook Lake and Mud Lake in TA R2 WELS, Elevenmile Lake in TA R2 WELS, and Tenmile Lake in Forkstown TWP. None of the lakes or ponds are classified as SRSNSs.

Nickerson Lake and Beaver Brook Lake in Linneus are the only lakes within one mile of the generator lead line.

- **Rivers and Streams.** The major rivers that drain the turbine study area include Presque Isle Stream flowing from Presque Isle Lake north through Chapman; Prestile Stream flowing southeast from Presque Isle through Mars Hill into Canada; North Branch Meduxnekeag River flowing southeasterly through Monticello into Canada; and Blackwater River and St Croix Stream flowing northwesterly to the Aroostook River in Masardis. There are no rivers or stream segments in the study area that are rated for scenic resources.

Rivers and streams within four miles of the generator lead line include the B Stream, Little Beaver Brook, Beaver Brook, Blither Brook, Tenmile Brook, Foss Brook, South and North Branches of the Meduxnekeag River, West Branch Mattawamkeag River and East Branch Mattawamkeag River.

Vegetation

The predominant forest cover in the turbine and generator lead line study areas is mixed second growth softwood/hardwoods. There are agricultural fields near the generator lead line in Houlton and Linneus.

Ownership Patterns

The majority of the land in the turbine study area is privately owned commercial forestland. The study area includes portions of two Maine Public Reserve Lands and one State Park. The Scopan Public Reserve Land is a 19,936-acre parcel located in Colbrath (T11, R4 WELS) and Scopan (T10, R4 WELS) used primarily by ATV-riders, snowmobilers, and visitors to five campsites on Scopan Lake. Hammond Public Reserve Land is a 960 acre wooded lot in Hammond used primarily for timber harvesting. Aroostook State Park in Presque Isle is nearly 800 acres and provides a boat launch on Echo Lake, camping, picnicking and summer and winter use trails.

The majority of the area surrounding the northern generator lead line is privately owned commercial forestland. In the area near and including Houlton, the line is bordered by privately owned residential and agricultural properties. The Bridal Path is mostly surrounded by privately owned residential and agricultural properties, with the exception of Nickerson Lake State Park/Crescent Park in Linneus and New Limerick, a 22-acre parcel on the northeast end of Nickerson Lake. A portion of the Lt. Gordon Manuel Wildlife Management Area in Linneus, Hodgdon, Cary Plt, and TAR2 WELS is also within four miles of the generator lead line.

Cultural Character

Cultural resources in the turbine study area include several population centers. The Project will not be visible from most of these locations. Photographs of these cultural resources are provided in Appendix B.

- ***Populations Centers: Turbine Area***

Presque Isle (population 9,522) is located to the north of the Number Nine Wind Farm and is the largest community in the turbine study area. Presque Isle is a regional service center containing the University of Maine at Presque Isle, Northern Maine Regional Airport, Aroostook Medical Center and Aroostook State Park.

Mars Hill (population 1,493) is a smaller commercial and residential village located northeast of the project area. The Big Rock Ski Resort, Mars Hill Country Club, and Mars Hill Wind Project are located within the Town. The International Appalachian Trail (a 525-mile footpath that extends from Baxter State Park to the northern tip of Newfoundland) traverses Mars Hill before heading east into Canada.

Bridgewater (population 610) is a rural village with a small commercial district located east of the Project. The only structures in the study area on the National Register of Historic Places, i.e., the Bridgewater Town Hall and Jail, are located on the east side of Route One approximately 6.2 miles east of the Project. See Section 6.2.B.

- ***Populations Centers: Generator Lead Line***

Houlton (population 6,123) is located approximately one mile from the proposed generator lead line. It is another service center community in southern Aroostook County. There are numerous structures on the National Register of Historic Places in Houlton including the Market Square Historic District, but no element of the Project will be visible from these structures. The Houlton Port of Entry is one of the main connections to New Brunswick, Canada.

Hammond (population 118) is located in both the Turbine Study Area and the Generator Lead Line Study Area. The turbines and lead line will not be visible from the town office or cluster of homes near the town office.

Linneus (population 984) is a small residential village containing the Linneus Community Ballfields off Route 2A and Crescent Park on Nickerson Lake. Most of Nickerson Lake State Park and the Department of Conservation's boat launch on Nickerson Lake are located in Linneus. Portions of Drew's Lake are also located within the Town. The lead line is generally located to the west of Route 2A in Linneus.

Haynesville (population 121) is the community at the southern end of the proposed generator lead line and will be the location of the future interconnection switchyard that is being permitted by Central Maine Power. A small cluster of single-family homes is located along Route 2A/Military Road near the confluence of the East and West Branches of the Mattawamkeag River.

- **Lakeside cottages** are found on many of the lakes and ponds in the turbine study area, including Scopan Lake, Number Nine Lake, Presque Isle Lake, St Croix Lake, Echo Lake, Carlisle Pond, and Alerton Lake.

The majority of the cottages (110±) on **Scopan Lake** in Scopan TWP are located on the northern end of the eastern branch, outside the 8-mile study area. There are approximately 16 camps on Scopan Lake in the study area, but only four camps near Big Cove will have Project views.

Number Nine Lake in T9 R3 has a developed shoreline with approximately 26 lakeside cottages oriented in each direction. Approximately 12 to 14 turbines will be visible from the lake but the number of turbines visible from camps may be less depending on their final location and orientation.

Presque Isle Lake in T9 R3 has 3 lakeside cottages located on the south and western shorelines. The camps are oriented toward the north and east. Up to seventeen turbines will be visible from the camps.

St Croix Lake in St. Croix TWP and Webbertown TWP has about fourteen camps on the northeastern shore of the lake, all oriented to the west/southwest, which is the opposite direction of the Project. No turbines will be visible from camps on St Croix Lake.

Echo Lake in Presque Isle has approximately 50 seasonal and winterized cottages along the perimeter of the lake, except for that part of the lake in Aroostook State Park. Quaggy Jo Mountain screens any potential views of the Project from Echo Lake.

Carlisle Pond. One cottage is located on the southeast end of the pond. Although the cottage is surrounded by vegetation, there will be views of approximately 13 turbines toward the north and northwest from the dock.

Alerton Lake in Monticello has one camp on the east side oriented to the west. Intervening topography and vegetation will screen Project views.

The largest concentration of lakeside cottages in the generator lead line study area is found on **Nickerson Lake**. Approximately 55 cottages are within one mile of the line but very few are oriented east towards the lead line.

- **Residential development.** Low density rural residential development, primarily single family homes and farmsteads, are found along the Route One corridor on the east side of the turbine and generator lead line study areas.
- **Recreational areas and facilities** within the turbine study area include a public boat launch on Number Nine Lake; a campground, boat launch and year-round trails in Aroostook State Park; ATV and snowmobile trails throughout the area; the International Appalachian Trail; five campsites on Scopan Lake in the Scopan Public Reserve Land; and downhill ski trails at the Big Rock Ski Resort on Mars Hill.
- **Designated snowmobile trails:** According to the Maine Snowmobile Trails map, three segments of the Interconnected Trail System (ITS) cross portions of the study area: ITS 81, ITS 83, and ITS 86.¹⁴ ITS 81 is a 27-mile trail that passes through the northern turbine area, connecting to ITS 83 on the east in Blaine and ITS 105 in the Scopan Public Reserve Land on the west. ITS 83 begins north of Presque Isle and passes through Aroostook State Park and generally runs parallel to Route One to Houlton. A portion of ITS 83 is co-located with the Houlton to Presque Isle Multi-Use Recreational Trail. South of Interstate 95, ITS 83 is partially located within the Bridal Path corridor and is generally parallel to Route 2A to Linneus. ITS 86 is a 48-mile trail located south of the southernmost turbines in Webbertown TWP, Dudley TWP, TC R2 WELS, Hammond. and Littleton.
- **Wind energy development:** The Project is located between the Mars Hill project to the northeast and the Oakfield Wind Project to the south. Mars Hill consists of 28 turbines and associated facilities that went on line in 2006. The Oakfield Wind Project currently under construction includes 48 turbines and is expected to be complete by the end of 2015.

5.3 Distance Zones

The concept of distance zones is used as a frame of reference to discuss the characteristics of the visible landscape and the scenic effects of human activities in the surrounding landscape. The concept is based upon the USDA Forest Service visual analysis criteria for forested landscapes and addresses the amount of detail that an observer can differentiate at varying distances.¹⁵ The evaluation of foreground, midground, and background, as defined below, provides a useful framework for evaluating the significance of wind turbines and their related facilities in the larger landscape. While the size of contemporary wind turbines may require a different understanding of how wind power components relate to the surrounding landscape, the distance zone concept remains a helpful reference tool in such evaluations. The distance zones used for the Number Nine Wind Farm are defined as:

- **Foreground:** 0 to 1/2 mile from the observer. Within the foreground, observers are able to detect surface textures, details, and a full spectrum of color. The details of the turbines (blades, nacelles, support towers) will be readily apparent. There are no SRSNS within one-half mile of the turbine area.

The majority of public views described in Section 8 for the generator lead line are in the foreground where the line crosses public roads, streams, and rivers. Nickerson Lake State Park on

¹⁴ Maine Snowmobile Trails, 2014 Map of the Interconnected Trail System. Maine Snowmobile Association and Maine Department of Conservation. Augusta, Maine.

¹⁵ Landscape Aesthetics: A Handbook for Scenery Management. USDA Forest Service. Agricultural Handbook Number 701. December 1995.

Nickerson Lake is within a 1/2 mile from the generator lead line but there will be no views of the line due to intervening vegetation.

- **Midground:** 1/2 mile to 3-5 miles from the observer. The midground is a critical part of the natural landscape. The WEA presumes that a visual impact assessment will be required to evaluate potential scenic impacts to scenic resources within three miles. Within this zone the details found in the landscape become subordinate to the whole: individual trees lose their identities and become forests; buildings are seen as simple geometric forms; roads and rivers become lines. Edges define patterns on the ground and hillsides. Development patterns are readily apparent, especially where there is noticeable contrast in scale, form, texture, or line. Colors of structures become somewhat muted and the details become subordinate to the whole. This effect is intensified in hazy weather conditions, which tend to mute colors and de-sharpen outlines even further. In panoramic views, the midground landscape is the most important element in determining visual impact. There are no SRSNS within the midground viewing zone in the turbine area.

Because of the lack of topography and wooded nature of the landscape surrounding the generator lead line, the corridor will generally not be visible in the midground except approaching the I-95 crossing where the structures and conductors may be visible at 1/2 mile.

- **Background:** greater than 3–5 miles.¹⁶ Background distances provide the setting for panoramic views that give the observer the greatest sense of the larger landscape. However, the effects of distance and atmospheric haze will obliterate the surface textures, detailing, and form of project components.

Objects in the background will be highly visible only if they present a noticeable contrast in form or line, and when weather and lighting conditions are favorable. While most structures in typical development proposals cease to be uniquely recognizable at distances greater than 3–5 miles, the color and form of wind turbines are readily distinguishable in the midground and well beyond into the background (up to eight miles from the observer). Due to the thinness of the design, the outer ends of the turbine blades will be minimally visible in the outer portion of the background. The seven turbines visible from the South Peak of Quaggy Jo Mountain are beyond 8 miles from the viewpoint.

6.0 VISUAL IMPACTS ON SCENIC RESOURCES OF STATE OR NATIONAL SIGNIFICANCE

6.1 Evaluation Criteria in the Maine Wind Energy Act

As noted above, there are two SRSNSs within eight miles of the turbines and associated facilities (except for the generator lead line). Section 9.2 evaluates both of these resources, using the following criteria in the WEA:

- **Context.** *The existing character of the surrounding area and the context of the proposed activity.* (§ 3452.3.B and 3452.3.D).
- **Significance.** *The significance of the potentially affected scenic resource of state or national*

¹⁶ For purposes of this visual impact assessment, the background viewing distance is limited to eight miles, since the legislature has determined that “the primary siting authority (DEP) shall consider insignificant the effects of portions of the development’s generating facilities located more than 8 miles, measured horizontally, from a scenic resource of state or national significance.” (§ 3452.3.)

significance (§ 3452.3.A).

- **Public Uses.** *The extent, nature and duration of potentially affected public uses of the scenic resource of state or national significance. (§ 3452.3.E).*
- **Viewer Expectations.** *The expectations of the typical viewer who would be using or enjoying the scenic resource of state or national significance. (§ 3452.3.C).*
- **Project Impact.** *The scope and scale of the potential effect of views of the Project on the scenic resource of state or national significance, including but not limited to issues related to the number and extent of turbines visible from the scenic resource of state or national significance, the distance from the scenic resource of state or national significance, and the effect of prominent features of the development on the landscape. (§ 3452.3.F).*
- **Potential Effect on Public Use.** *The potential effect of the generating facilities' presence on the public's continued use and enjoyment of the scenic resource of state or national significance. (§ 3452.3.E).*
- **Conclusion.** *A determination of whether the development significantly compromises views from a scenic resource of state or national significance such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the scenic resource of state or national significance. (§ 3452.1).*

6.2 Scenic Resources of State or National Significance

A. A national natural landmark, federally designated wilderness area or other comparable outstanding natural and cultural feature, such as the Orono Bog or Meddybemps Heath.

There are no national natural landmarks, federally designated wilderness areas, or other comparable outstanding natural and cultural features in the study area.

B. A property listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966, as amended, including, but not limited to, the Rockland Breakwater Light and Fort Knox.

There is one property on the National Register of Historic Places within 8 miles of the wind turbine generators: **Bridgewater Town Hall and Jail**,¹⁷ 6.2 miles east of the nearest turbine.

When the National Register nomination form for the Town Hall and Jail was submitted, there was no mention made of its landscape context or the role that the setting played in its significance (in either Section 7 or 8). Earle S. Shettleworth, Maine Historic Preservation Office, signed the Certification on July 31, 1978, and noted that it was of local significance.

Bridgewater's Town Hall and Jail are a little altered pair of buildings prominently sited in the center of this rural village's small commercial district. Built in 1894 to house town meetings, community functions, and fraternal gatherings, the Town Hall is locally significant not only for its historical association with these community governmental and civic activities, but also for its architectural prominence. The jail, which appears to date from the 1910s, contributes to the significance of the property. For these reasons the complex is eligible for nomination to the Register under criteria A and C.¹⁸

¹⁷ Both the Town Hall and Jail are listed together on the NPS nomination form but they are separate structures located adjacent to each other on the east side of Route One in Bridgewater.

¹⁸ The National Register has four criteria for evaluation. The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects

Architecturally, the Town Hall stands as one of Bridgewater's preeminent and least altered landmarks. Many of its residential and commercial neighbors are modest buildings dating to the nineteenth and twentieth centuries that have suffered from a variety of inappropriate alterations. Within this context, the integrity and architectural features of the Town Hall lend it considerable local significance.¹⁹

As illustrated in Appendix D, Project turbines will be screened from view from the Bridgewater Town Hall and Jail by the rolling topography and intervening vegetation. There will be no impact on the property. See also Study Area Photos in Appendix B.

C. National or State Parks

Aroostook State Park in Presque Isle. Aroostook State Park is Maine's first and northernmost State Park. The park was created in 1939 with a donation of 100 acres to the State and is now close to 800 acres in size with additional donations and purchases. The Park contains a year round campground with 30 sites, a playground, and restroom facilities. A trailerable boat launch provides access to the southwest end of Echo Lake for boating and fishing. The boat launch area is connected with a trail to open lawn areas and a lakeside picnic area. The park has a diverse trail system maintained for year round hiking, snowshoeing, cross-country skiing, and snowmobiling. There are approximately 11 miles of trails groomed during the winter and the park is also linked to local snowmobile trails. (The Presque Isle Snowmobile Clubhouse is located off Mountain Road on the edge of the Park boundary.)

The Ridge Trail is the primary hiking trail connecting the North and South Peaks of Quaggy Jo Mountain. From the North Peak, hikers are afforded views north and east toward Presque Isle and the agricultural landscape of Aroostook County. There is a recently constructed lean-to located near the North Peak oriented toward Echo Lake. The South Peak of Quaggy Jo contains a communication tower and small building that are accessed via a road connecting to Mountain Road. The communication structures are powered by an overhead transmission line that parallels the access road. A recently constructed platform has been sited on the west side of South Peak. While this platform is labeled as a tent pad on park maps, its primary function appears to be a scenic overlook to observe the views to the west. The platform and overlook are access via a 90-foot long trail off the summit.²⁰

There are no visible turbines within 8 miles of the viewpoints on either the North or South Peak of Quaggy Jo Mountain. See Appendix C: Aroostook State Park and Appendix B: Study Area Photos for more information.

that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and: A. That are associated with events that have made a significant contribution to the broad patterns of our history; or B. That are associated with the lives of persons significant in our past; or C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or D. That have yielded, or may be likely to yield, information important in prehistory or history. National Register Bulletin: How to Apply the National Register Criteria for Evaluation. National Park Service, Cultural Resources. 1995.

¹⁹ Mohny, Kirk F., Architectural Historian, Maine Historic Preservation Commission. National Register of Historic Places Registration Form. Bridgewater Town Hall and Jail. December 20, 1989.

²⁰ http://www.maine.gov/dacf/parksearch/PropertyGuides/PDF_GUIDE/AroostookBrochure.pdf
<http://www.maine-trailfinder.com/trails/trail/aroostook-state-park-crosscountry-ski-trails/>

There are no national parks in the study area.

D. A great pond that is:

- (1) One of the 66 great ponds located in the State's organized area identified as having outstanding or significant scenic quality in the "Maine's Finest Lakes" study; or**
- (2) One of the 280 great ponds in the State's unorganized or deorganized areas designated as outstanding or significant from a scenic perspective in the "Maine Wildlands Lake Assessment."**

There are no lakes or ponds in the study area that are rated as significant or outstanding for scenic quality, as determined by the Maine Wildlands Lake Assessment.

As noted on the Viewshed Maps, there are several waterbodies in the study area that may have views of the project, (i.e., Scopan Lake, Number Nine Lake, Presque Isle Lake, St Croix Lake, and West Lake.) However, none of these were rated for their scenic quality in the Assessment.

E. A segment of a scenic river or stream identified as having unique or outstanding scenic attributes listed in Appendix G of the "Maine Rivers Study."

There are no river or stream segments identified as having unique or outstanding scenic attributes in the study area.

F. A scenic viewpoint located on state public reserved land or on a trail that is used exclusively for pedestrian use, such as the Appalachian Trail, that the Department of Conservation designates by rule adopted in accordance with section 3457.

There are no viewpoints on trails used exclusively for pedestrian use that qualify under this section.

G. A scenic turnout on a scenic highway constructed by the Department of Transportation.

There are no scenic turnouts on any Scenic Byways in the study area.

H. Scenic viewpoints located in the coastal area that are ranked as having statewide significance or national importance in terms of scenic quality in: (1) One of the scenic inventories prepared for and published by the Executive Department, State Planning Office: "Method for Coastal Scenic Landscape Assessment with Field Results for Kittery to Scarborough and Cape Elizabeth to South Thomaston," Dominie, et al., October 1987; "Scenic Inventory Mainland Sites of Penobscot Bay," DeWan and Associates, et al., August 1990; or "Scenic Inventory: Islesboro, Vinalhaven, North Haven and Associated Offshore Islands," DeWan and Associates, June 1992; or (2) A scenic inventory developed by or prepared for the Executive Department, State Planning Office.

There are no scenic viewpoints as defined by the WEA in the study area.

7.0 ASSOCIATED FACILITIES IN THE TURBINE AREA

The associated facilities for the Number Nine Wind Farm reviewed under the Wind Energy Act include the operations and maintenance building, access roads, electrical collector lines, collector substation, crane pads and assembly areas, and meteorological towers.

7.1 Regulatory Requirements

The analysis of associated facilities follows the procedures and standards outlined in the WEA for generating facilities, unless the DEP determines that “application of the standard in subsection 1 to the development may result in unreasonable adverse effects due to the scope, scale, location or other characteristics of the associated facilities.” 35-A MRSA § 3452.2. The Project’s associated facilities are similar in nature, scope, and appearance to similar facilities that are presently found in and near the study area. There should not be an unreasonable adverse effect on scenic character and existing uses of SRSNS due to the scope, scale, location, or other characteristics of these facilities. The associated facilities will not have an adverse visual effect on any locally designated scenic resources that would not be reviewed under the Wind Energy Act.

Based upon our determination of potential visibility and discussion with DEP staff on November 20, 2014, the associated facilities (with the exception of the generator lead line) are evaluated under the standards of the Wind Energy Act. 35-A MRSA § 3452.1. The generator lead line is reviewed under traditional Site Law standards in Section 8.

7.2 Methodology

To be consistent with the evaluation of the Project’s generating facilities, the evaluation of the associated facilities considered an 8-mile viewshed from each of the components. However, as noted below, most of the associated facilities are not visible in the outer limits of this range due to their form and scale, and a 3-mile study area would be more appropriate.

7.3 Visual Impacts from Associated Facilities in the Turbine Area

7.3.1 Access Roads

To the greatest extent possible the Project will utilize gravel haul roads that currently exist in the project area. The Project area has an extensive system of existing roads resulting from previous and ongoing timber harvesting operations. Approximately 15 miles of existing access roads will be upgraded to provide construction and maintenance access to the project areas and to connect turbine locations. Another 80 miles of existing roads will be used and maintained but not widened. Additionally, approximately 46 miles of new roads will be constructed to further connect turbine locations; 8.5 miles of those new roads will be temporary for construction purposes.

There are no SRSNS within 8 miles that would have views of the access roads. In most locations the access roads will be screened by existing vegetation and will not be highly visible from outside the immediate area. The only location where the general public may see the access roads will be off Number Nine Lake Road.

The applicant will maintain the access roads. Roads outside of the project area, and therefore under the control of the landowner, will continue to be maintained by the landowner.

7.3.2 Electrical Collection System

Power from the turbines will be collected in a series of 34.5 kilovolt (kV) collection lines and flow to a collector substation in T9 R3. The majority of the collector system will be located underground, alongside project roads, thereby minimizing its potential visual impact. The structures used for the electrical collection will not be visible from any SRSNS.

7.3.3 Collector Substation

A new collector substation will be constructed in a forested location off Hovey Mountain Road in the southeast corner of T9 R3 at the start of the 345kV generator lead line. The 4.33-acre substation site will be enclosed with an 8-foot high chain link fence. The majority of the substation components will be 25-35' in height. The facility will be surrounded by existing vegetation approximately 25 to 40' in height and will not be visible from any SRSNS.

7.3.4 Operations and Maintenance Facility

The Operations and Maintenance (O&M) facility will be adjacent to the collector substation on Hovey Mountain Road in T9 R3. The 5.41-acre facility will consist of a single-story building containing a warehouse and an office, a garage, a parking area, and an outside storage yard for turbine blades and other components. The building will have a dark roof and be painted a neutral color to minimize contrast in color. The facility is in a wooded location and will not be visible from any SRSNS.

7.3.5 Meteorological Towers

Up to 4 temporary meteorological (met) towers will be installed on turbine pads during construction. The project will also include up to 4 permanent met towers 93 meters (305 feet) in height that will remain in place for the life of the project. The towers may be freestanding or of a guyed lattice construction with a triangular cross section approximately 18 inches across. Their slim profile will greatly reduce their visibility at distances greater than one mile. All towers will be lit according to FAA requirements. Any lighting required will be seen in context with the lights required for the turbines. None of the met towers are within 8 miles of any SRSNS.

7.3.6 Crane Pads and Crane Assembly Area

A cleared and level pad area averaging 2.75 acres in size will be required at the base of each turbine for staging, crane movement, and turbine installation. Additional clearing may be needed in some areas to account for cut/fill slopes. Following construction the majority of crane assembly and turbine pad areas will be allowed to naturally revegetate. Visibility of the crane pads and crane assembly area is limited to the immediate foreground. None of these areas will be visible from any SRSNS.

7.4 Conclusion

The associated facilities reviewed under WEA for the Number Nine Wind Farm include the access roads, electrical collection lines, collector substation, Operations and Maintenance Facility, meteorological towers, and the crane pads and crane assembly areas. None of these associated facilities will be visible from any scenic resource of state or national significance. The associated facilities will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic character of the study area.

8.0 GENERATOR LEAD LINE

The associated facilities for the Number Nine Wind Farm reviewed under Site Location of Development/ Natural Resource Protection Act are limited to the generator lead line beginning at the collection substation in T9 R3 WELS and ending at the interconnection switchyard in Haynesville that will be permitted by Central Maine Power.

8.1 Regulatory Requirements

This section evaluates whether the generator lead line meets the visual quality standards established under 38 MRSA § 484(3) and Chapter 375.14 of the Department regulations, and for those portions of the project that are regulated under the Natural Resources Protection Act (NRPA), 38 MRSA § 480-D(1) and Chapter 315 of the Department regulations.

- 38 MRSA § 484(3) No Adverse Effect on the Natural Environment requires that the developer has made adequate provision for fitting the development harmoniously into the existing natural environment and that 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.
- Chapter 375.14 No Unreasonable Effect on Scenic Character requires an applicant to demonstrate that the development will not have an unreasonable adverse effect on the scenic character of the surrounding area.²¹
- 38 MRSA § 480-D(1) NRPA requires the activity will not unreasonably interfere with existing scenic, aesthetic, recreational or navigational uses.
- Chapter 315 Assessing and Mitigating Impacts to Existing Scenic and Aesthetic Uses requires an applicant to demonstrate that a proposed activity will not unreasonably interfere with existing scenic and aesthetic uses of a scenic resource.²²

8.2 Visual Impacts from Generator Lead Line

The 345 kV generator lead line is divided into two segments: the North Line and the Bridal Path Line. The North Line will be approximately 26.2 mile long and sited in a new 170-foot wide corridor. It begins at the collector substation in T9 R3 and runs south through T8 R3, TC R2 WELS, Hammond, Littleton, and Houlton, and ends north of Ludlow Road in Houlton. Clearing limits throughout the corridor will be up to 150 feet.

The southern portion of the generator lead line will be approximately 25.4 mile long and sited within the Bridal Path, an existing (but undeveloped) utility-owned 225-foot wide corridor. The Bridal Path Line runs south from Ludlow Road in Houlton through Hodgdon, Linneus, TA R2 WELS, Forkstown Township, and Haynesville, and terminates at the Interconnection Switchyard north of Route 2 in Haynesville. Clearing limits along the corridor length will be up to 150 feet.

²¹ Applicants are required to provide evidence that 1) the design of the proposed development takes into account the scenic character of the surrounding area; 2) development which is not in keeping with the surrounding scenic character will be located, designed and landscaped to minimize its visual impact to the fullest extent possible; and 3) structures will be designed and landscaped to minimize their visual impact on the surrounding area. *Chapter 375.14*

²² A Scenic Resource is a public natural resource or public land visited by the general public, in part for the use, observation, enjoyment, and appreciation of natural or cultural visual qualities. The attributes, characteristics, and features of the landscape of a scenic resource provide varying responses from and varying degrees of benefits to, humans. *Chapter 315, Maine Department of Environmental Protection.*

8.2.1 Inventory and Analysis of Scenic Resources

The following Visual Evaluation Checklist is from the NRPA Application (Appendix A). The General Application Instructions for NRPA Applications require that the Checklist be submitted for all activities except for Tier 1 activities not in wetlands of special significance. For purposes of this checklist, the generator lead line is considered as a single entity in two segments, i.e., the North Generator Lead Line and the Bridal Path Generator Lead Line.

MDEP VISUAL EVALUATION FIELD SURVEY CHECKLIST (NRPA, 38 M.R.S.A. §§ 480 A - Z)

Name of applicant: Number Nine Wind Farm, LLC

Application Type: SLODA / NRPA

Activity Type: Construct two segments of a 345 kV Generator Lead Line.

Activity Location: The North Generator Lead Line will be located in: T9 R3 WELS, T8R3 WELS, TC R2 WELS, Hammond, Littleton, and Houlton

The Bridal Path Generator Lead Line will be located in Houlton, Hodgdon, Linneus, Ta R2 WELS, Forkstown TWP, and Haynesville

County: Aroostook

GIS Coordinates, if known: See project location maps

Date of Survey May 13 and 14, August 6 and 7, and November 19, 2014.

Observers: Amy Segal and Danielle Matkoskey, Terrence J. DeWan & Associates

Phone: 207-846-0757

	Distance Between the Proposed Activity and Resource (in Miles)		
	0-1/4	1/4 –1	1+
1. Would the activity be visible from:			
A. A National Natural Landmark or other outstanding natural feature? None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. A State or National Wildlife Refuge, Sanctuary, or Preserve or a State Game Refuge?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The proposed generator lead line corridor is located 1.3 to 2.5 miles northwest of the Gordon Manual Wildlife Management Area (WMA) in Hodgdon. This 6,482-acre WMA has several unimproved dirt roads, a canoe launch into the Meduxnekeag Deadwater, and a variety of successional habitats and fields. The refuge was not established for its inherent scenic resources. The transmission line will not be visible from the WMA.

C. A state or federal trail?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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The proposed generator lead line corridor intersects Interconnected Trail System (ITS) 86 in forestland in TC R2 WELS, and ITS 83 in agricultural fields in Houlton, New Limerick and Linneus. where it generally parallels the Bridal Path section. Snowmobile trail users are accustomed to crossing beneath existing distribution and transmission lines along these roadsides. Visual impact to users should be slight, if any.

The proposed generator lead line crosses the International Appalachian Trail (IAT) (a private enterprise that is not connected with the Appalachian National Scenic Trail that is part of the National Park system) on Ludlow Road in front of Mullen substation. At this point, the IAT is part of

an on-road network that includes Route 2 and Ludlow Road into Houlton. Trail users on Ludlow Road already cross under transmission structures near the Ludlow Substation at the end in front of the Mullen Substation on Ludlow Road in Houlton. There is an expectation to see low-density residential development, commercial buildings, and utility structures along Ludlow Road. Visual impact to trail users should be slight, if any.

D. A public site or structure listed on the National Register of Historic Places?

There are no structures listed on the National Register of Historic Places that will have views of the generator lead line. Potential visual impacts to resources that are on or eligible for inclusion in the National Register have been addressed in the report that has been submitted to the Maine Historic Preservation Commission and included in Section 8 of the Site Location application. The nearest historic resources to the proposed line are in Houlton, with the closest being the Putnam Blackhawk Tavern, 1.0 mile away. The tavern is currently a podiatrist office that will have no views of the proposed structures. There will therefore be no visual impact to historic resources.

E. A National or State Park?

The Conserved Lands kmz file, available from the Maine Office of GIS website, indicates that the Maine Bureau of Parks and Lands owns a 16±-acre property referred to as Nickerson Lake State Park on the southeast side of Nickerson Lake in Linneus. The Park Manager at Aroostook State Park has confirmed the State actually owns 22 acres comprised of several contiguous parcels along Crescent Park Road and Nickerson Lake Park Road, including Crescent Park, which has water frontage along Nickerson Lake. However, there is no other reference to a ‘Nickerson Lake State Park’. The actual boundaries of the State land are not well defined and portions of the park include fields that are currently being farmed. The fields have been posted with private property signs, there does not appear to be any public access to the fields, and there are no public facilities. The generator lead line will not be visible from the State Park.

Crescent Park is a State owned and maintained property on the northeast shoreline of Nickerson Lake in New Limerick, abutting the Nickerson Lake State Park parcels that are indicated on the Conserved Lands files. Facilities include parking for approximately 30 cars, picnic areas, and a swimming beach. The proposed generator line will be 0.5 miles to the southeast and will not be visible from Crescent Park due to the shoreline configuration, orientation of the beach to the west, and intervening topography and vegetation.

The Department of Conservation maintains a boat launch for trailered boats on the southeast end of Nickerson Lake in Linneus. The proposed generator line will be 0.4 miles to the east of the boat launch. Cross sectional analysis has determined the 83 foot tall structures will not be visible from the boat launch due to intervening vegetation. The generator lead line will have no visual impact to the boat launch.

F. 1) A municipal park or public open space?

The closest municipal park is the Linneus Community Ballfields on Bangor Road (Route 2A) in Linneus, which includes a ballfield, basketball court, and picnic shelter. The generator lead line will be 0.4 miles northwest of the park. There will be no views of the line from the park due to intervening vegetation.

The Riverfront Park and associated trails in Houlton are a mile to the southeast of the proposed generator lead line; the project will not be visible from these resources.

Nickerson Lake Wilderness Preservation, Inc., a membership organization comprised of Nickerson Lake property owners, holds title to 187 acres of land on the south side of Nickerson Lake. The land is privately held but public access to the land and trails is allowed. The trailheads are accessible only by boat. It is our understanding through communication with the Park Manager at Aroostook State Park that one of the loop trails includes an overlook that is oriented toward the lake to the north and east. There may be distant views of the generator lead line from the overlook; however, it would be over 2.0 miles away from the viewer near Route 2A and would not appear to break the horizon. At that distance, the proposed structures would be perceived as relatively small vertical objects in an open landscape. Visual impact to the property should be minimal, if any.

- 2) **A publicly owned land visited, in part, for the use, observation, enjoyment and appreciation of natural or man-made visual qualities?** None.
- 3) **A public resource, such as the Atlantic Ocean, a great pond or a navigable river?**

Meduxnekeag River (16 miles from the Canadian Border in Houlton to Meduxnekeag Lake) is rated as a ‘C’ river by the Maine Rivers Study for its Critical/Ecologic, Anadromous Fishery, and Inland Fisheries resources. The Study determined that the scenic resources of the river were not unique or significant, i.e., they did not meet a minimum standard of significance. The AMC River Guide²³ describes the scenery in this section of the river as forested and the river as somewhat meandering, growing larger as it joins with the outlet from Nickerson Lake and the South Branch of the Meduxnekeag River. The Guide describes the river in this area as flatwater and quickwater, navigable at high or medium water in spring and early summer. The 150-foot wide corridor will cross the 70- foot wide river at an angle adjacent to Porter Settlement Road in Houlton, in an area that also includes manufacturing facilities at or near the river (Tate & Lyle and Louisiana Pacific facilities). This alignment should minimize the amount of time that a paddler would have visibility of the corridor and the conductors. The 75 to 84 foot tall 345 kV structures will be located approximately 230 to 400 feet back from the edge of the river. Where present, non-capable riparian species will be allowed to grow within the corridor for visual screening as well as for habitat. The generator lead line crossing may be visible for approximately 600 to 800 feet to recreational boaters going down river. For a boater, the line will be viewed in context of the Tate & Lyle Houlton Facility²⁴ on the northern side of the river, which is approximately 1,200 up river from the line crossing. The corridor will have a moderate to strong visual impact on the 70-foot wide river crossing, but overall the impact to the river experience will be low to moderate given the vegetation remaining on either side of the clearing, the visible industrial development as well as the rail and road infrastructure also experienced within two to four miles either side of the proposed generator line.

West Branch of the Mattawamkeag River from Haynesville to its headwaters (40 miles) is rated as a ‘B’ river by the Maine Rivers Study for its Critical/Ecologic, Undeveloped, Anadromous Fishery, Inland Fisheries and Whitewater Boating resources. The Study determined that the scenic resources of the river were not unique or significant, i.e., they did not meet a minimum standard of significance. The AMC River Guide describes the scenery in this section of the river as ‘wild, although

²³ AMC River Guide Maine, Fourth Edition. Appalachian Mountain Club Books, Boston. 2008.

²⁴ Tate & Lyle Houlton is a manufacturing facility that produces processed food and beverage ingredients.

a dozen cabins line the river'. The Guide²⁵ also describes the river as large below Mattawamkeag Lake and containing rapids and quick water for 12.5 miles. The West Branch of the Mattawamkeag River is approximately 200' wide where the generator lead line crosses the river two miles north of the Route 2A bridge in Haynesville. The proposed 84-foot 345kV H-frame structure on the north side of the river will be set back 400' from the river and the 84-foot H-frame structure on the south side of the river will be set back 120 feet. A boater heading downstream will see the conductors for approximately 800 feet, but the H-frame structures will not be fully visible until the boater is within the corridor due to the meandering alignment of the river, vegetation remaining on either side of the clearing and structure setbacks. The corridor will have a moderate to strong visual impact on the 200-foot wide river crossing, but overall the impact to the river experience will be low due to the limited duration of visibility.

The **East Branch of the Mattawamkeag River** is composed of several narrower intertwining segments in a broader vegetated floodplain. The river from Haynesville to its headwaters (32 miles) is rated as a 'B' river by the Maine Rivers Study for its Undeveloped, Anadromous Fishery, Inland Fisheries and Whitewater Boating resources. The Study determined that the scenic resources of the river were not unique or significant, i.e., they did not meet a minimum standard of significance. The AMC River Guide notes this section of the river is seldom run in comparison to the West Branch and that the upper part has to be run in high water. People familiar with the river put in at Red Bridge in Oakfield and paddle downstream to Bell's Bridge in Forkstown, which is just north of the proposed crossing. Some people also put in at Bell's Bridge and paddle both up and downstream. The East Branch is approximately 80 feet wide at the crossing within a 450-foot wide floodplain. The proposed 101.5-foot 345kV H-frame structure on the northeast side of the river will be set back 150 feet from the river and the 79-foot H-frame structure on the southwest side of the river will be set back 725 feet from the river near Bellfield Road. A boater heading downstream would see the conductors and portions of one structure intermittently for between 0.2 and 0.4 miles. The river is shallow and meandering with numerous vegetated islands that periodically screen views toward the structure and conductors. The corridor will have a moderate to strong visual impact on the river crossing within this discrete limited area, but overall the impact to the river experience will be low due to the limited amount and duration of visibility.

Nickerson Lake is a 234-acre waterbody located mostly in New Limerick with a portion of the western and eastern ends in Linneus. Nickerson Lake is not rated for scenic qualities in the Maine Lakes Study. There are approximately 120 camps on the lake, approximately 55 within one mile of the line. At its closest point, the proposed transmission line will be located 1,000 feet southeast of the lake. Viewshed and cross sectional analysis indicate the upper part of one or two H-frame structures and conductors may be visible from the lake at distances of 0.3 to 1.3 miles. Visual impact on the lake should be slight due to the limited visibility of a low number of structures.

Beaver Brook Lake is a 64-acre waterbody located 0.8 miles west of the proposed generator lead line near Fire Road in Linneus. The lake is undeveloped and inaccessible (no boat launch) and is surrounded by commercial forestland. It is not rated for scenic qualities in the Maine Lakes Study. The generator lead line will not be visible from the lake due to intervening vegetation.

Streams. There will be a moderate to strong visual impact on the small streams that intersect the corridor (B Stream in Houlton, Bither Brook in Linneus and Yellow Brook and Tenmile Brook in TA R2 WELS) due to the presence of the transmission structures and the cleared transmission corridor. The number of users who would be affected is anticipated to be very low, given the location of the

²⁵ AMC River Guide Maine, Fourth Edition. Appalachian Mountain Club Books, Boston. 2008.

streams relative to local roads, highways, and other forms of development. Riparian vegetation preserved during construction should minimize the visual impacts of the transmission line. Additionally, the project will only be visible for a relatively short period of time that the occasional user passes the stream crossing.

2. What is the closest estimated distance to a similar activity?

The closest similar facilities are the Maine Public Service 69 kV transmission line that connects the Mullen Substation in Houlton and the 345kV line in Haynesville.

3. Are any of the resources checked in Question 1 used by the public during the time of year during which the activity will be visible? Yes No

The rivers, streams, and trails are used throughout the year for a variety of recreation pursuits, primarily snowmobiling, fishing, picnicking, and boating. Boating is primarily in the springtime during periods of high flow conditions.

8.2.2 Affected Population

There are three general groups of people who may be affected by the construction of the generator lead line. Throughout the majority of its length, the proposed generator lead line will not be visible from public viewpoints, especially during the leaf-on seasons, due to its rural, mostly wooded location and intervening topography. The primary areas where it will be visible are at the following road crossings: Burnt Brow Road in Hammond, Back Ridge Road and Front Ridge Road in Littleton; B Road, Ludlow Road, Interstate 95, Smyrna Street (Route 2), Bartley Drive, Porter Settlement Road, and Drews Lake Road in Houlton; Bangor Road (Route 2A), Burton Road, Horseback Road, Ruth Road, Mill Road, South Oakfield Road, and Fire Road in Linneus; Beaver Brook Road in TA R2 WELS; and Joe Black Road and Bellfield Road in Forkstown TWP.

Motorists

Interstate Motorists. The generator lead line crosses Interstate 95 approximately 0.5 miles east of the Mooers Road overpass in Houlton. The interstate is not part of Maine's Scenic Byway Program. The generator lead line will be located in the Bridal Path and cross the highway on a wooded straightaway section, which should limit the visibility to both north and southbound motorists to less than 0.5 mile. Motorists traveling the posted speed limit of 75 mph will see the structures and conductors for about 24 seconds. As seen in the Interstate 95 Photosimulation in Appendix E, the generator lead line will add a new 345 kV transmission line on wooden H-frame structures, approximately 88 feet tall, set 200 to 220 feet back from the edge of the highway. The visual impact of the conductors and the transmission structures should be moderate, depending upon the distance from the crossing. Motorists on this section are accustomed to seeing occasional transmission and distribution lines crossing I-95, such as those near Town Line Road, French Road, and Mooers Road to the west of the proposed generator lead line crossing and distribution lines crossing parallel to the railroad and Route 1 east of the proposed lead line crossing. Transmission lines are evident at many other locations along I-95.

Local Motorists. Ludlow Road and Smyrna Road (Route 2) in Houlton and Bangor Road (Route 2A) in Linneus are the primary roads that will be crossed by the generator lead line.

Travelers on Ludlow Road are accustomed to seeing a distribution line, two existing substations (the Ludlow Substation at the intersection with Town Line Road, and the Mullen Substation) as well as the 44-kV transmission line connecting them along Ludlow Road. The generator lead line will cross the road approximately 175' west of the Mullen Substation. The 150-foot wide corridor clearing will result in the removal of mature vegetation that currently screens the substation from view for motorists traveling east on Ludlow Road. A 97-foot tall 345 kV H-frame angle structure will be set back approximately 50 feet on the south side of the road, and a 88 foot tall H-frame structure will be set back approximately 215 feet on the north side of the road, 80' further back than the Mullen Substation. Because of the commercial uses of nearby properties and the setbacks, the visibility of the generator lead line should be appropriate to the surrounding context.

The characteristic landscape in the vicinity of the Smyrna Street crossing west of Houlton includes low and medium density residential areas (Bartley Gardens), open agricultural fields, managed woodlands, and a rural cemetery. (See Appendix B.) A local distribution line is located on the south side of the road. The generator lead line will cross Smyrna Street within the Bridal Path, which traverses an open field paralleling the woods edge on the south side of the road. One 97-foot tall 345 kV H-frame structure set back 25' from the north side of the road will be visible for approximately 200 to 300 feet to motorists approaching the crossing. Two 95-foot tall 345 kV H-frame structures will be located in the open field, set back 600 and 1,200 feet from the south side of the road. The top portions of the structures will be seen above the adjacent houses for approximately 2,000 feet traveling east on Route 2. The visibility of the generator lead line in this area will be minimized by the existing vegetation along the east side of the corridor and the curving alignment of the road near the crossing,

There will also be intermittent views of the generator lead line H-frame structures looking west from Bangor Road (Route 2A) between Houlton and Linneus where they will be viewed across open fields at distances of 300 to 2,000 feet for approximately three miles. The structures will be seen in conjunction with existing distribution and transmission lines, residential development, farm fields, and storage buildings. The views from Bangor Road toward the line will be interrupted by vegetation and structures located near the road. The transmission structures will usually be viewed against the woods at the edge of the fields. In some locations the top portions of the H-frames and the conductors will be seen above vegetation line (i.e., near Drew's Lake Road). Even though the generator lead line will be highly visible from some areas along Route 2A, the impact to motorists is expected to be low as a result of the moderating factors described above.

The majority of the other road crossings (Burnt Brow Road in Hammond, Back Ridge Road and Front Ridge Road in Littleton, B Road, Bartley Drive, Porter Settlement Road, and Drews Lake Road in Houlton; Burton Road, Horseback Road, Ruth Road, Mill Road, South Oakfield Road, Fire Road in Linneus; Beaver Brook Road in TA R2 WELS, and Joe Black Road and Bellfield Road in Forkstown TWP) are secondary town roads in low-density residential areas, farm land, and woodlands. In many locations travelers are accustomed to seeing local distribution lines. The proposed crossings will generally be perpendicular to the road. In some instances, the line will cross the road and continue along the edge or through the middle of an open field, such as at the Ruth Road crossing. In these locations, motorists traveling 45 mph will see five structures spanning 1,500 to 2,000 feet over open fields for 20 to 25 seconds. The visual impact to the motoring public on most of these roads should be low to moderate.

Appendix B provides representative photographs of most of the road crossings.

Residents

There are approximately 53 private homes and apartments that would be in proximity to the view of the Bridal Path portion of the generator line, or about one per mile of the 52.6-mile route, though concentrated in certain developed areas. These include:

- Two homes on the west side of Back Ridge Road will see two H-frame structures at distances of 290 to 400 feet.
- One home on the east side of Front Ridge Road will see one H-frame structure close to the road at a distance of 175'. The 150 foot wide corridor clearing will remove most of trees between the home and the corridor.
- Two homes on B Road will have views of two H-frame structures and the cleared corridor parallel to the road and directly west of the Gardner Chip Mills Houlton Plant.
- One home southwest of the existing Mullen Substation on Ludlow Road will have views of portions of approximately three H-frame structures and the corridor clearing.
- Four single family homes on Smryna Road (Route 2), where structures will be seen at distances of 500 feet to 900 feet.
- Seven duplexes (totaling 14 units) on Bartley Drive in a former retirement community (Bartley Gardens) will have views of three H-frame structures. The development is sited in an open field with relatively few trees around the units.
- One home on Porter Settlement Road will have views of two H-frames structures at distances of 240 to 540 feet on either side of the Meduxnekeag River crossing.
- Two farms on Drew Lake Road, where portions of five structures may be visible above over open fields at distances of 340 feet to 1,500 feet.
- Twenty-one homes along Bangor Road (Route 2A) will have limited views of a few structures over open fields as the line parallels the road. The structures would be 300 to 1,000 feet to the northwest from most homes.
- One home on Burton Road may have filtered views of one structure at a distance of 220 feet.
- Three homes on Ruth Road will see two structures across an open field at distances of 320 feet to 620 feet.
- One home on South Oakfield Road, directly adjacent to the generator lead line corridor will have views of one H-frame structure and the cleared corridor at distances at 162 feet.

The visual impact of the project on private residences and rental properties along the generator lead line route will be moderate (in most locations). In a few locations the construction of the generator lead line will require the removal of woodland vegetation adjacent to private homes, which may expose the transmission structures to view. The degree of impact will depend upon the proximity to the proposed structures, the number of structures visible, and the vegetation remaining between the cleared corridor and the residences.

Recreating Population

The primary recreation uses that may be affected are snowmobiling, hunting, fishing, and boating.

Snowmobiling. Route 83 of the Interconnected Trail System (ITS) roughly parallels a portion of the proposed generator lead line between Linneus and Houlton and would cross the corridor in three locations. The proposed generator lead line will have a slight impact on this existing trail. Moreover, this use is generally compatible with the project as transmission line corridors are often used by snowmobilers.

Hunting. Hunting is generally not a sport that is dependent on the aesthetic quality of the surrounding landscape. Hunters may find that the additional open land within the transmission corridor affords greater diversity of habitat and may consider the new transmission lines to be a beneficial addition to the landscape.

Fishing. The generator lead line will cross the Meduxnekeag River and a few small streams (B Stream in Houlton, Bither Brook in Linneus and Yellow Brook and Tenmile Brook in TA R2 WELS), none of which are rated for their scenic resources. Visual impacts to the various streams and rivers will be confined to relatively narrow corridors that are generally in areas of low recreational or other use. While the visual impact at the point where the generator lead line crosses the river may be strong, the angle of the crossing and curving nature of the rivers and streams will limit visibility of the proposed structures and conductors, and the length of time the corridor will be visible will be limited.

Nickerson Lake is rated outstanding for its fisheries in the Maine Lake Study. The lake is known for its excellent coldwater gamefish.²⁶ As noted above, the upper part of up to two single pole transmission structures and conductors may be visible from the lake at distances of 0.3 to 1.3 miles. The sight of a portion of these structures should have a relatively minor to no effect on the experience of people fishing on the lake who are already used to seeing 120± camps that line the shore.

Whitewater Boating. The Meduxnekeag River is used for canoeing and kayaking, primarily in high water conditions. Each spring there is an Annual Canoe Race on the Meduxnekeag River starting in New Limerick and ending in Houlton. The generator lead corridor will be located at a bend in the stream channel, which will minimize the amount of time that boaters come into contact with the corridor and conductors. River users will also experience industrial development, farmland, bridges, residential structures, and nearby roads, which will influence the perception that they have about the character of the land. While the line will be visible from the river, views will be partially screened by riparian vegetation. Given the nature of the activity – with boaters concentrating on the river in the immediate foreground – and other forms of development that are visible, the generator lead line should not be an unreasonable addition to the landscape.

Golfing. The Houlton Community Golf Course is located on the northwest shoreline of Nickerson Lake, over 1.8 miles from the proposed generator lead line. There will be no views of the project from the course due to intervening vegetation and topography.

8.2.3 Conclusion

Based on an inventory and analysis of scenic resources, and the affected and recreating populations, the generator lead line will not have an unreasonable adverse effect on the scenic character of the surrounding area or unreasonably interfere with existing scenic and aesthetic uses of the scenic resources.

²⁶ http://www.maine.gov/ifw/fishing/lakesurvey_maps/aroostook/nickerson_lake.pdf

9.0 EVALUATION

9.1 Overview

The WEA established several criteria to determine whether expedited wind energy development significantly compromises views from a SRSNS such that the development has an unreasonable adverse effect on the scenic character or existing uses related to scenic character of the resource. The summary presented in Table 1 is based upon the information provided in the Visual Impact Assessment, recent indicator-based evaluations of Maine wind projects performed by Dr. James F. Palmer²⁷, and other information on use patterns.

9.2 Evaluation Criteria: Turbine Area (Generators and Associated Facilities)

The first five criteria in the WEA evaluate the 8-mile study area, the immediate project area, the quality of the resource, existing use patterns and viewer expectations, and the purpose of the project. Table 1 presents a listing of the SRSNS that have been evaluated in this VIA. A rating of None, Low, Medium, or High has been given to each of these first five criteria that reflects the relative significance of each SRSNS.

A. Resource Significance: This criterion reflects the designation of scenic significance by the State or Federal Government.

Historic Resources: While the Bridgewater Town Hall and Jail are on the National Register, the nomination forms did not discuss how their landscape setting affected their designation or value. The resource significance rating for this site is Low, based on its evaluation of local significance on the nomination form.

State Park: Aroostook State Park is a designated scenic resource that attracts visitors primarily from Aroostook County. Its resource significance is assigned a rating of Medium.

B. Character of Surrounding Area: This criterion evaluates the setting of the resource and its surrounding area. In all cases the surroundings have been noted as Medium, which is typical of what the visitor would encounter in this part of Aroostook County.

C. Viewer Expectation: The rating for this criterion is based upon the Recreation Opportunity Spectrum (ROS) classification for the scenic resources.²⁸ Two ROS classes have been identified:

Semi-Primitive Motorized (SPM). Moderate probability of experiencing isolation from human development, use, and impact. ...Natural appearing setting may have moderately dominant alterations but would not draw the attention of motorized observers on trails and primitive roads within the area. ... Structures are rare and isolated. Resources in this class include Aroostook State Park.

²⁷ This section and the Summary of Evaluation Criteria is based upon the [Review of the Hancock Wind Project Visual Assessment](#), prepared for Department of Environmental Protection by James F. Palmer, April 22, 2013, and upon the [Review of the Bingham Wind Project Visual Assessment, Part 2: Independent Analysis](#), prepared for Department of Environmental Protection by James F. Palmer, August 23, 2013.

²⁸ In Palmer's [Review of the Bingham Wind Project Visual Assessment, Part 2: Independent Analysis](#), he suggests that Viewer Expectation in Primitive and Semi-Primitive Non-Motorized areas is High; expectation in Semi-Primitive Motorized and Semi-Developed Natural is Medium; and expectation in Developed Natural and more urbanized areas is Low.

Semi-Developed Natural (SDN) (aka Rural Natural). About equal probability of encountering other user groups and isolation from sights and sounds of people. ...Natural appearing setting may have obvious modifications, ranging from easily noticed to strongly dominant. However these alterations remain unnoticed or visually subordinate from visually scenic and heavily traveled routes and use areas. ...Structures generally are scattered, remaining visually subordinate or unnoticed by observers on visually scenic or heavily traveled routes. Structures may include power lines, microwave installations, etc. Resources in this class include the historic resources in Bridgewater.

Aroostook State Park is rated as Medium viewer expectation of scenic quality; Bridgewater Town Hall and Jail are rated Low expectation of scenic quality.

D. Purpose and Context: This criterion is a reflection of how the Project contributes toward the state's goals for energy as per the Wind Energy Act and the presence of other wind projects that may be perceived as a cluster, utilizing existing roads, transmission facilities, and other associated facilities. This column was rated as Low, since the project will make a significant contribution toward achieving the State's energy goals and it will be seen in the context of two other constructed or approved wind energy projects (i.e., Mars Hill and Oakfield).

E.1. Extent, nature & duration of uses: This criterion looks at existing conditions of the resource, relative number of users, the potential for access, the type and extent of facilities, typical length of stay, and applicable information from the intercept survey. The South Peak of Quaggy Jo Mountain in Aroostook State Park was rated as Low-Medium, based upon field observation, discussions with park officials, and knowledge of the site. The Bridgewater Town Hall and Jail was rated as Low-Medium, since the building is still used by the public, but not as a town office building. It is also located in a highly visible, easily accessible site on Route 1.

The last two criteria evaluate the possible effect that the Project may have on the use and enjoyment of the two resource and the likely visual impacts:

E.2. Effect on continued use and enjoyment: Since there will be no visibility of turbines within 8 miles this criteria is rated None.

F. Scope and scale of project views: A rating of None was assigned to the Bridgewater Town Hall and Jail, since the project will not be visible. For the South Peak of Quaggy Jo Mountain, the scope and scale of the view was rated as None, since none of the turbines would be within 8 miles of the viewing location on the mountain.

Overall Scenic Impact. The Overall Scenic Impact evaluates the Project at two levels: scenic impacts on individual SRSNSs, and the scenic impact of the Project as a whole, considering only the area within 8 miles of the turbines. Neither of the SRSNS will have any views of the Project turbines, so the impact on individual resources, as well as the overall scenic impact as a whole, is None.

9.3 Evaluation Criteria: Generator Lead Line

As described in Section 8.2 above, the applicant has made adequate provisions for fitting the generator lead line into the existing natural environment, and it will not adversely affect existing scenic, aesthetic, or recreational uses or scenic character of the surrounding area. In addition to reviewing scenic resources, the VIA also evaluated the potential effect on road crossings, including Route 2, Interstate 95, Route 2A, and local roads.

The construction of the generator lead line will not unreasonably interfere with existing scenic and aesthetic uses of any of the scenic resources that were identified within the one-mile study area. These include:

- **State Parks.** Nickerson Lake State Park/Crescent Park, New Limerick. No visibility.
- **Structures on the National Register of Historic Places.** No visibility from any historic resources including Putnam Blackhawk Tavern and First National Bank, both about one mile from the line on the west side of Houlton. There are 6 additional structures and one historic district on the NRHP in Houlton within 4 miles of the project.
- **International Appalachian Trail.** The line will cross the IAT in the section of the trail located along Ludlow Road, adjacent to the Mullen Substation. The presence of the line should not have an effect on this on-road section of the trail.
- **Interconnected Trail System.** The line parallels ITS 83 for approximately 8 miles in Linneus. Snowmobilers are used to riding in and through transmission corridors.
- **Wildlife Management Areas.** The generator lead line will not be visible from the Hodgdon Deadwater WMA or the Gordon Manuel WMA, which are within 4 miles.
- **Great Ponds.** Portions of Nickerson Lake (234 acres) in New Limerick and Linneus, and Beaver Brook Lake (64 acres) in Linneus are within one mile of the line. The upper part of one or two structures and conductors may be visible from most of Nickerson Lake at distances of 0.3 to 1.3 miles. Visual impact on the lake should be slight due to the limited visibility of a low number of structures.
- **River Crossings.** The line will cross B Stream and the Meduxnekeag River in Houlton and the East and West Branches of the Mattawamkeag River near Haynesville. Project visibility will be limited due to the meandering nature of rivers and streams and the riparian vegetation.

10.0 CUMULATIVE VISUAL IMPACTS

The Site Location of Development Application requires the following information on potential cumulative impacts:

1) Identify any wind projects proposed by the applicant or other applicants which are existing, have been approved, or for which applications have been submitted, at the state or local level that would be within eight miles of any portion of any SRSNS within eight miles of the proposed project. These wind energy projects must include projects subject to the small-scale certification statute (35-A M.R.S.A. §3456).

(2) Identify any projects which the applicant is currently investigating or planning within eight miles of any of the proposed project's SRSNS.

(3) Provide a detailed description of how construction of the proposed project will not cause unreasonable adverse effects to the scenic character of the proposed project's SRSNS, or scenic character related to cumulative impacts related to the existing, previously approved, applications

under review, or planned wind energy projects.

Portions of the Number Nine Wind Farm 8-mile study area are within 8 miles of both the Mars Hill Wind Project and the Oakfield Wind Project. Map 9: 8-Mile Study Areas of Number Nine Wind Farm, Mars Hill Wind Project, and Oakfield Wind Project has been prepared to show the area of overlap between these three projects.

The Mars Hill Project 8-mile study area overlaps the Number Nine Wind Farm 8-mile study in 9 communities: Presque Isle, Easton, Westfield, Mars Hill, E TWP, Blaine, TD R2 WELS, Cox Patent, and Bridgewater. The only SRSNS within both study areas is the Bridgewater Town Hall and Jail on Route One in Bridgewater. None of the turbines from the Number Nine Wind Farm will be visible from the Town Hall and Jail; therefore there will be no cumulative visual impact on this historic resource.

The Number Nine Wind Farm 8-mile study area overlaps the Oakfield Wind Project 8-mile study area in four townships: Smyrna, Merrill, Dudley TWP, and Hammond. There are no SRSNS within the area of overlap; therefore there will be no cumulative visual impact from these two wind energy projects.

No other wind energy projects in the vicinity of the Number Nine Wind Farm have been previously approved, have applications under review, or are in the planning stage, to the best of our knowledge.

11.0 CONCLUSION

The visual impact assessment examined the criteria established by the WEA: i.e., the context, character, significance, existing public use, viewer expectations, project impact, and the potential effect on public use and enjoyment for each of the scenic resources of state or national significance. The assessment also examined the criteria within the SLODA/NRPA. This information was used to make a determination that:

- A) The generating facilities and the associated facilities in the turbine area (i.e., the access roads, the above and underground electrical collection system, O&M facility, and met towers) will not significantly compromise views from any scenic resources of state or national significance or existing uses related to scenic character of any scenic resource of state or national significance, and
- B) The generator lead line will not have an unreasonable adverse effect on the scenic character or the existing uses related to the scenic character of the scenic resources within the study area.

Generating Facilities and Associated Facilities in the Turbine Area

- None of the eight categories of scenic resources described in the Maine Wind Energy Act will be impacted by the project.
- None of the turbines or the associate facilities within the turbine area will be visible from the **Bridgewater Town Hall and Jail**, the only structure on the National Register of Historic Places within eight miles of the Project.
- None of the turbines within 8 miles of the overlook on South Peak Quaggy Jo Mountain in **Aroostook State Park** or the associated facilities in the turbine area will be visible. There are no other state or national parks in the turbine study area.

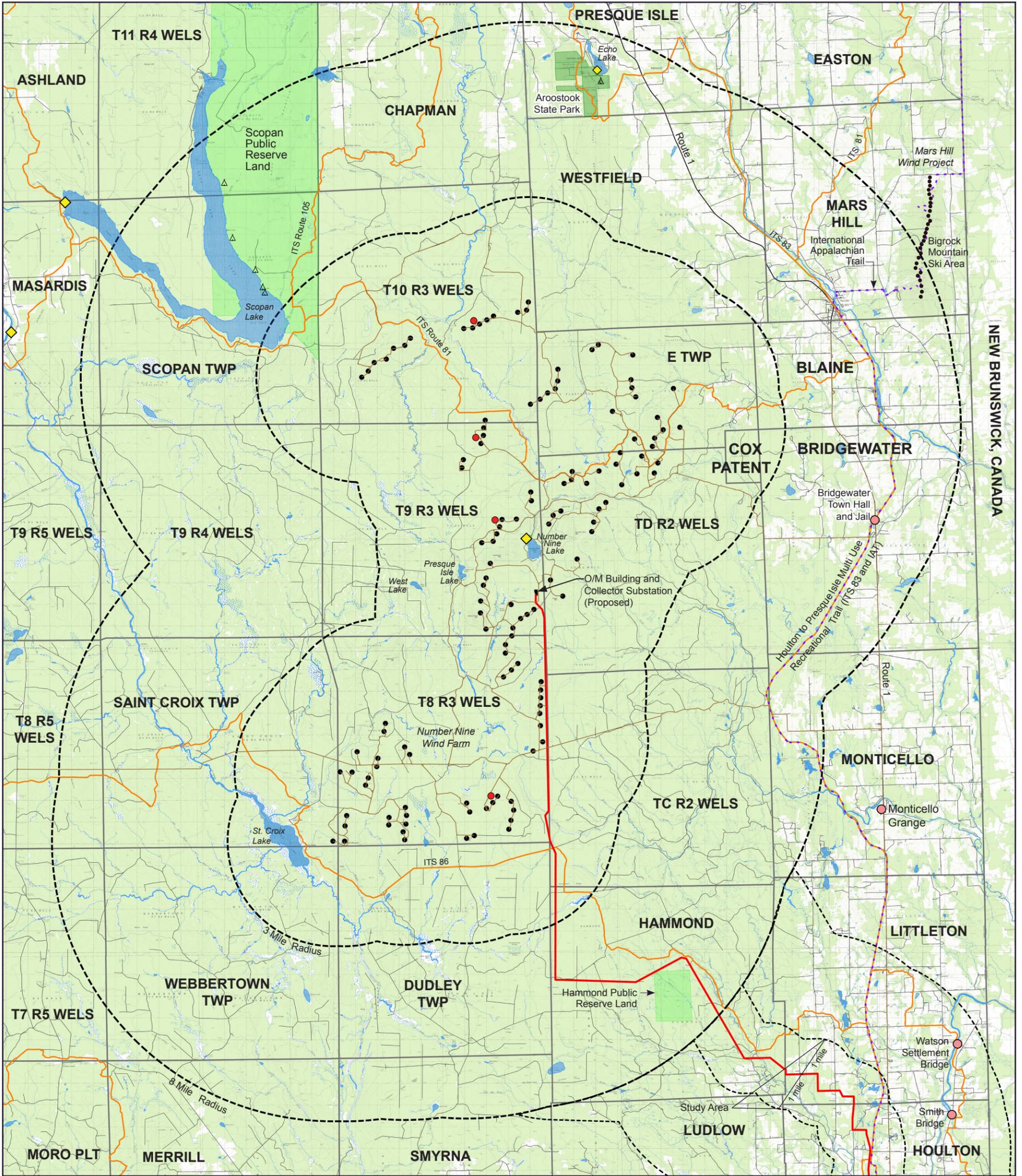
- None of the project turbines or the associated facilities in the turbine area will be visible from any lakes or ponds that have been rated as either significant or outstanding for their scenic resources in the Maine Wildlands Lake Assessment.
- There are no river or stream segments identified as having unique or outstanding scenic attributes – as listed in Appendix G of the Maine Rivers Study – in the study area.
- The Project will not be visible from any National Natural Landmarks, federally designated wilderness areas, MDOT scenic turnouts, or scenic viewpoints located on state public reserved land or on a trail that is used exclusively for pedestrian use. There are no coastal viewpoints in the 8-mile study area.
- The associated facilities in the turbine area are located in actively managed timberland that is generally out of view from the surrounding area. The associated facilities will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic values and existing uses of scenic resources in the study area.
- There will be no cumulative visual effect on SRSNS from the combined views of the Number Nine Wind Farm turbines, the Mars Hill wind project, or the Oakfield Wind project.

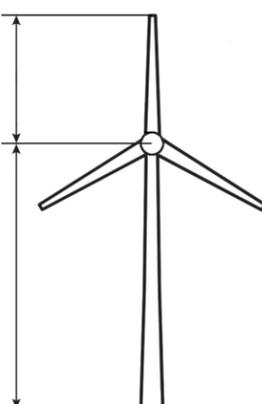
Associated Facilities: Generator Lead Line

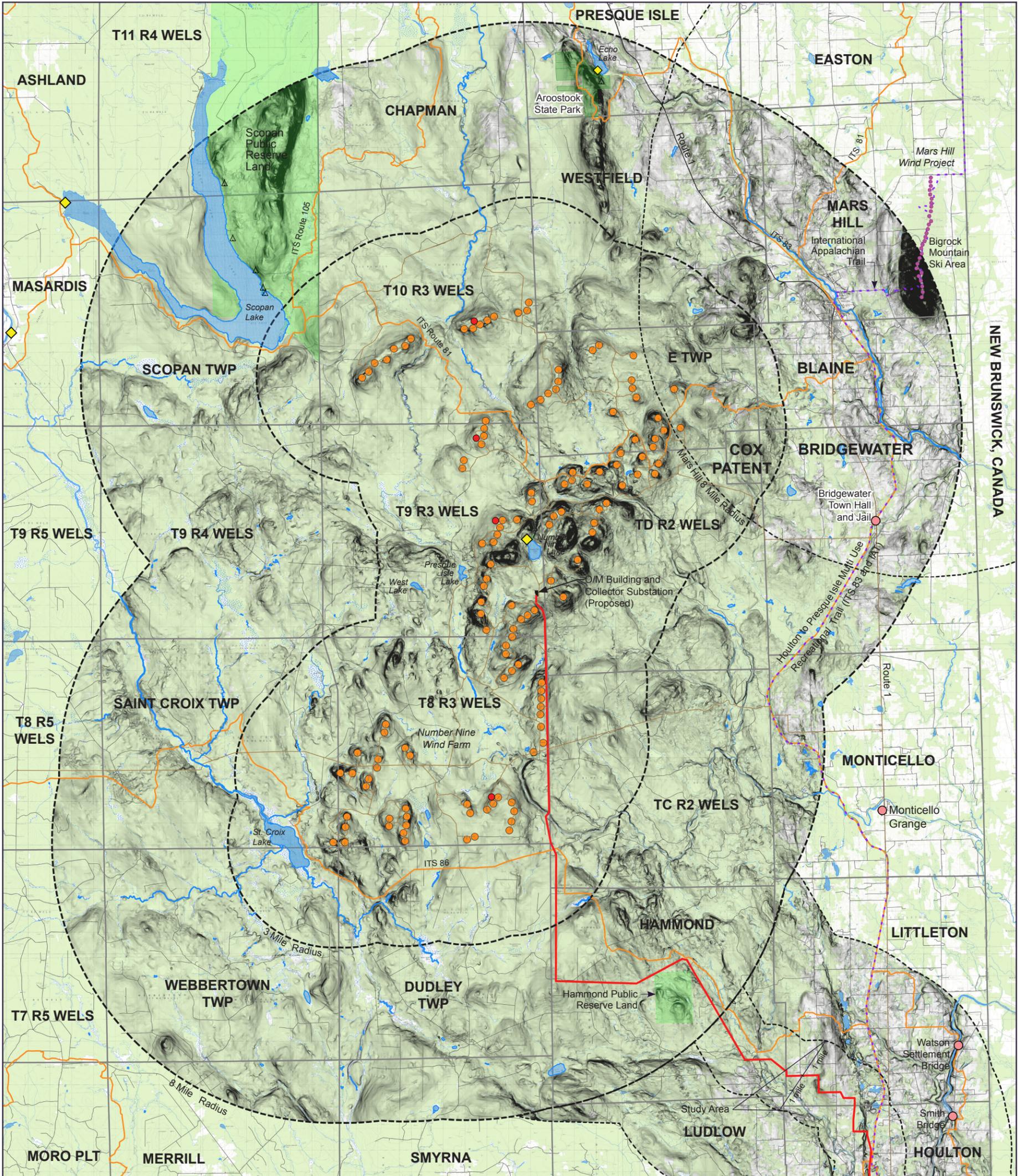
- The North Generator Lead Line and the Bridal Path Generator Lead Line will have no to low impact on scenic resources in the study area between the proposed collector substation in T9 R3 WELS and the proposed interconnection switchyard that Central Maine Power Company is permitting in Haynesville. Most of the north generator lead line is located in commercial forestland. The southern portion the generator lead line is located in the existing Bridal Path corridor and is generally out of view from the surrounding area, except at a few road and river crossings. The generator lead line will not be of a location, character, or size to cause an unreasonable adverse visual effect on the scenic values and existing uses of scenic resources in the study area.

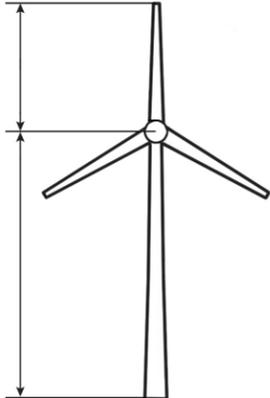
Table 1: Summary of WEA Evaluation Criteria

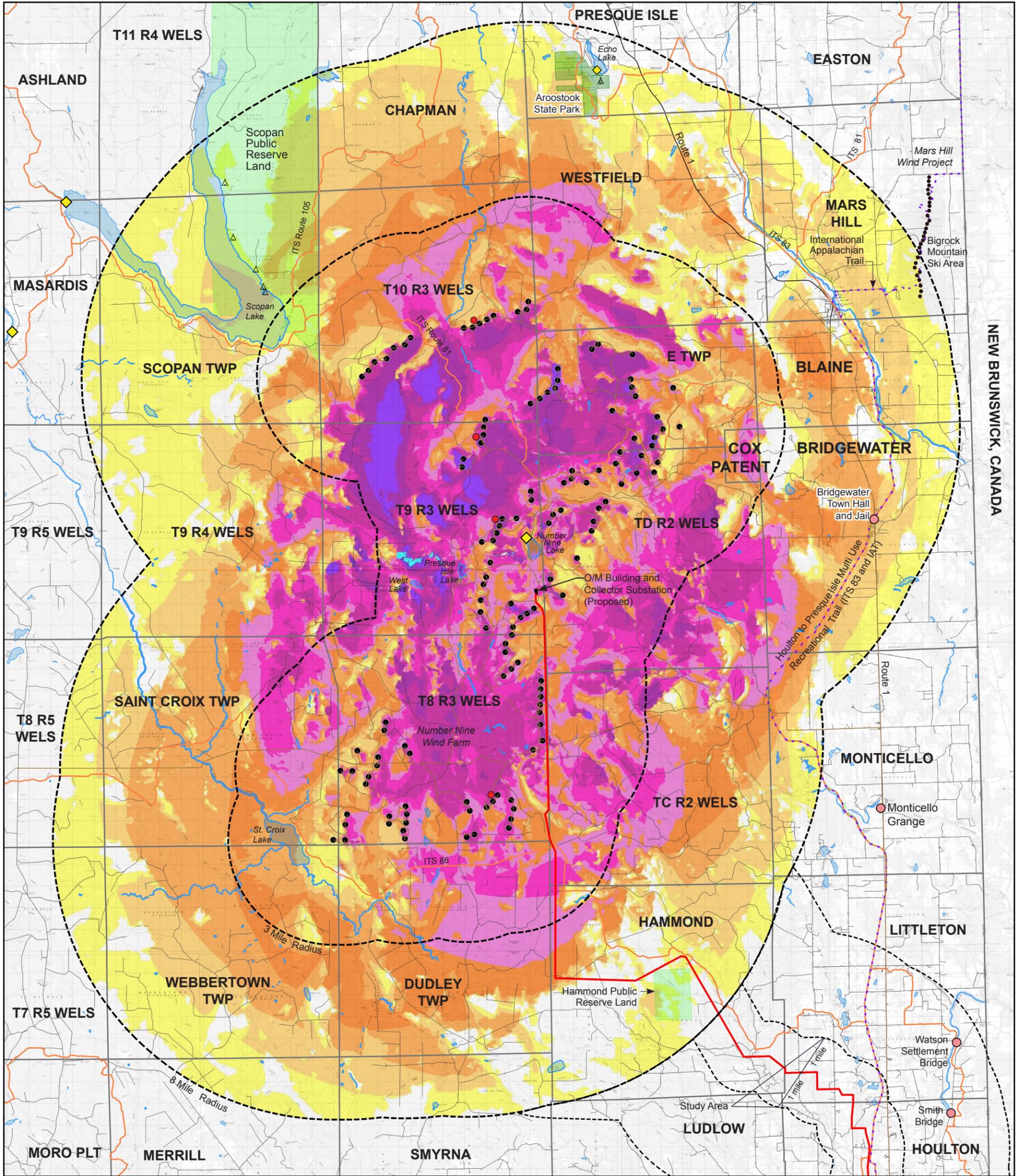
Scenic Resource of State or National Significance	Scenic Impact Evaluation Criteria							Overall Scenic Impact
	A: Resource Significance	B. Character of Surrounding Area	C: Viewer Expectation	D: Purpose and Context	E.1: Extent, Nature, Duration of Use	E.2: Effect on Continued Use and Enjoyment	F: Scope and Scale of Project Views	
6B Historic Sites								
Bridgewater Town Hall and Jail	Low	Medium	Low	Low	Low-Medium	None	None	None
6C. National or State Parks								
Aroostook State Park	Medium	Medium	Medium	Low	Low-Medium	None	None	None



LEGEND		NOTES	
<p>MAP 1: PROJECT STUDY AREA MAP</p>	<ul style="list-style-type: none"> ● Number Nine Wind Farm Turbines (Proposed) ● Number Nine Wind Farm Permanent Met Tower (Proposed) — Access Roads (Proposed) — Northern Generator Lead Line (Proposed) — Municipal Boundaries — International Appalachian Trail (IAT) — Interconnected Trail System (ITS) — Conservation Lands from ME OGIS — State Park ◆ Boat Launch ● Structure on National Register △ Campsites/Campground 	<p>Number Nine Wind Farm Turbine Specifications:</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 20px;"> <p>1/2 rotor diameter (57 meters)</p> </div>  </div> <p>hub height (93 meters)</p> <p style="text-align: center;">Gamesa G114</p>	
	<p>NUMBER NINE WIND FARM</p>	 <p>NUMBER NINE WIND FARM®</p> 	<p style="text-align: center;">NORTH</p> 
		03.26.15	Page 1 of 7



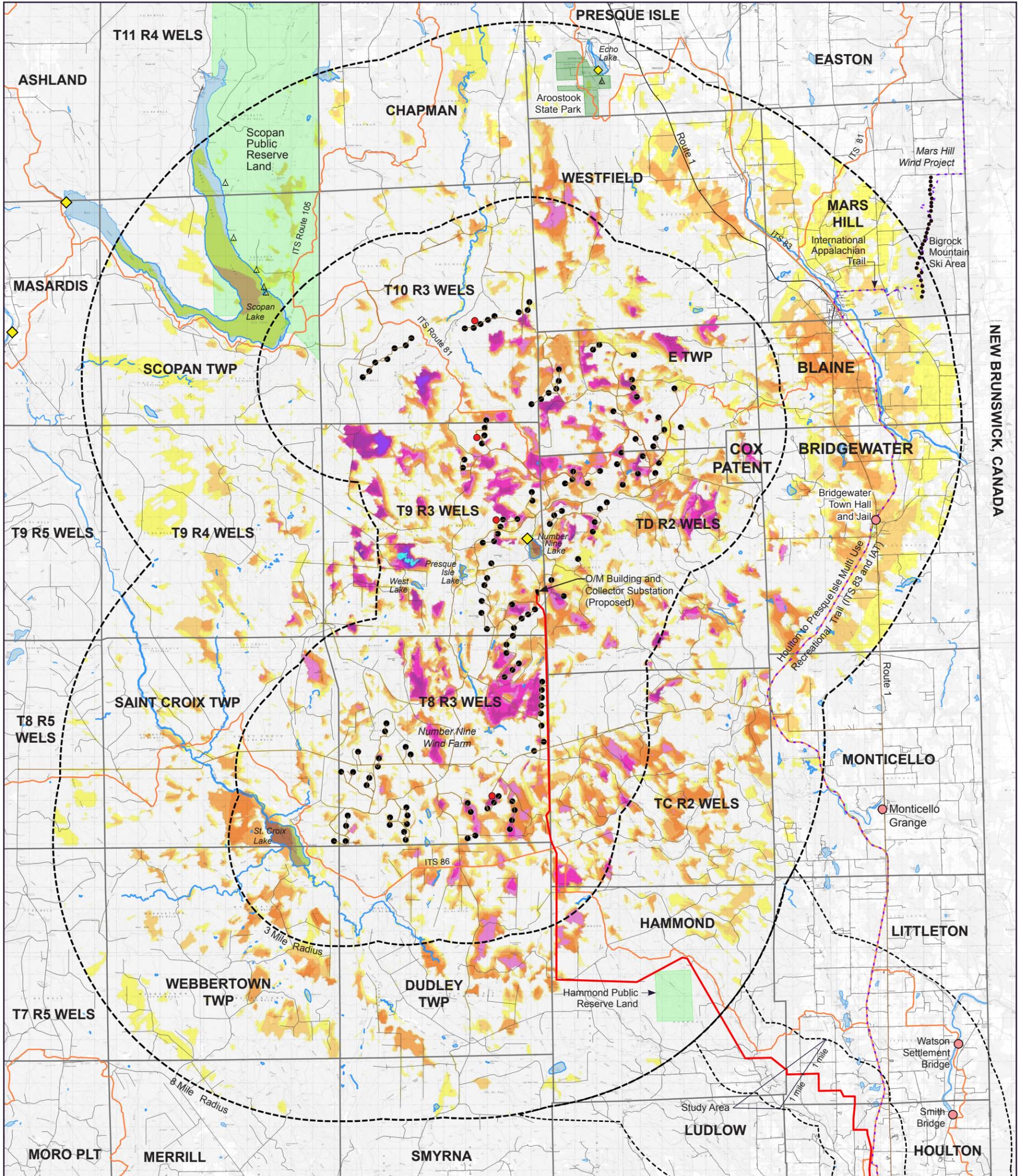
LEGEND		NOTES	
<p>MAP 2: PROJECT STUDY AREA ELEVATION MAP</p>	<ul style="list-style-type: none"> ● Number Nine Wind Farm Turbines (Proposed) ● Number Nine Wind Farm Permanent Met Tower (Proposed) — Access Roads (Proposed) — Northern Generator Lead Line (Proposed) — Municipal Boundaries — International Appalachian Trail (IAT) — Interconnected Trail System (ITS) Conservation Lands from ME OGIS State Park ◆ Boat Launch ● Structure on National Register △ Campsites/Campground 	<p>Number Nine Wind Farm Turbine Specifications:</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;"> <p>1/2 rotor diameter (57 meters)</p> </div>  <div style="margin-left: 10px;"> <p>hub height (93 meters)</p> </div> </div> <p style="text-align: center;">Gamesa G114</p>	
	<p>NUMBER NINE WIND FARM</p>	 <p>NUMBER NINE WIND FARM®</p>	<p style="text-align: right;">tjd&a</p>



LEGEND		TURBINE VISIBILITY	NOTES
<p>MAP 3: TOPOGRAPHIC VIEWSHED FOR BLADES</p> <p>NUMBER NINE WIND FARM</p>	● Number Nine Wind Farm Turbines (Proposed)	1-10	<p>This viewshed map:</p> <ul style="list-style-type: none"> shows the number of turbines that may be visible within 8 miles. accounts for the screening effects of topography only. shows where the viewer may see at least the tip of a blade if no vegetation were present. <p>Turbines visibility should be confirmed with field investigations and other visualization techniques.</p>
	● Number Nine Wind Farm Permanent Met Tower (Proposed)	11-20	
	— Access Roads (Proposed)	21-30	
	— Northern Generator Lead Line (Proposed)	31-40	
	— Municipal Boundaries	41-50	
	— International Appalachian Trail (IAT)	51-60	
	— Interconnected Trail System (ITS)	61-70	
	— Conservation Lands from ME OGIS	71-80	
	— State Park	81-90	
	◆ Boat Launch	91-100	
● Structure on National Register	101-129		
△ Campsites/Campground			



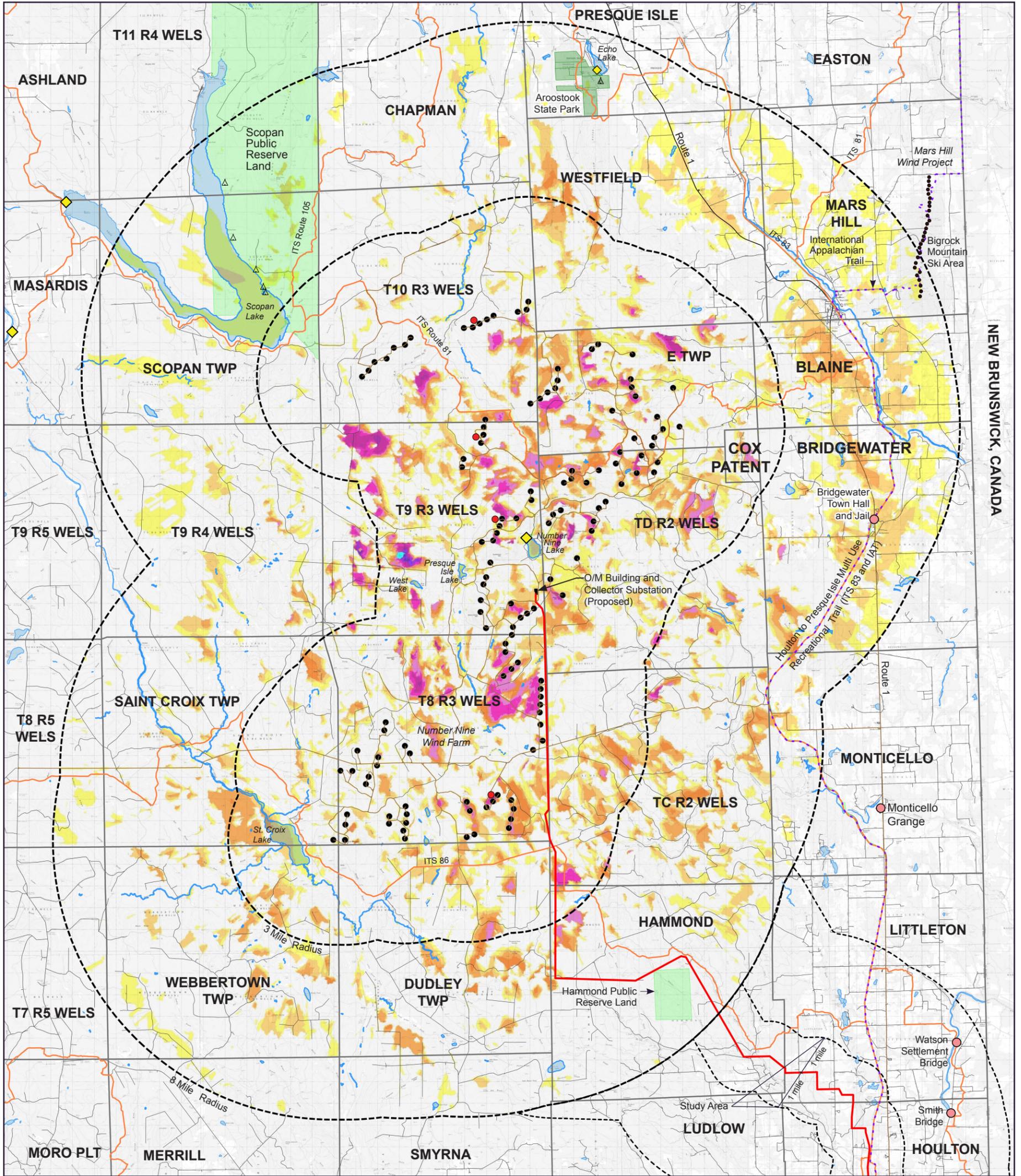
Number Nine Wind Farm Turbine layout as of 02.20.15



LEGEND		TURBINE VISIBILITY	NOTES
<p>MAP 4: VEGETATED VIEWSHED A FOR BLADES</p> <p>NUMBER NINE WIND FARM</p>	● Number Nine Wind Farm Turbines (Proposed)	1-10	<p>This viewshed map:</p> <ul style="list-style-type: none"> shows the number of turbines that may be visible within 8 miles. accounts for the screening effects of topography and 3 types of vegetation (deciduous, evergreen, and mixed). assumes that trees in these cover types are 40' in height. assumes that all other cover types are 0' in height. shows where the viewer may see at least the tip of a blade if vegetation were present. <p>Land cover data is from Maine OGIS. Turbines visibility should be confirmed with field investigations and other visualization techniques.</p>
	● Number Nine Wind Farm Permanent Met Tower (Proposed)	11-20	
	— Access Roads (Proposed)	21-30	
	— Northern Generator Lead Line (Proposed)	31-40	
	— Municipal Boundaries	41-50	
	— International Appalachian Trail (IAT)	51-60	
	— Interconnected Trail System (ITS)	61-70	
	— Conservation Lands from ME OGIS	71-80	
	— State Park	81-90	
	◆ Boat Launch	91-100	
● Structure on National Register	101-129		
△ Campsites/Campground			



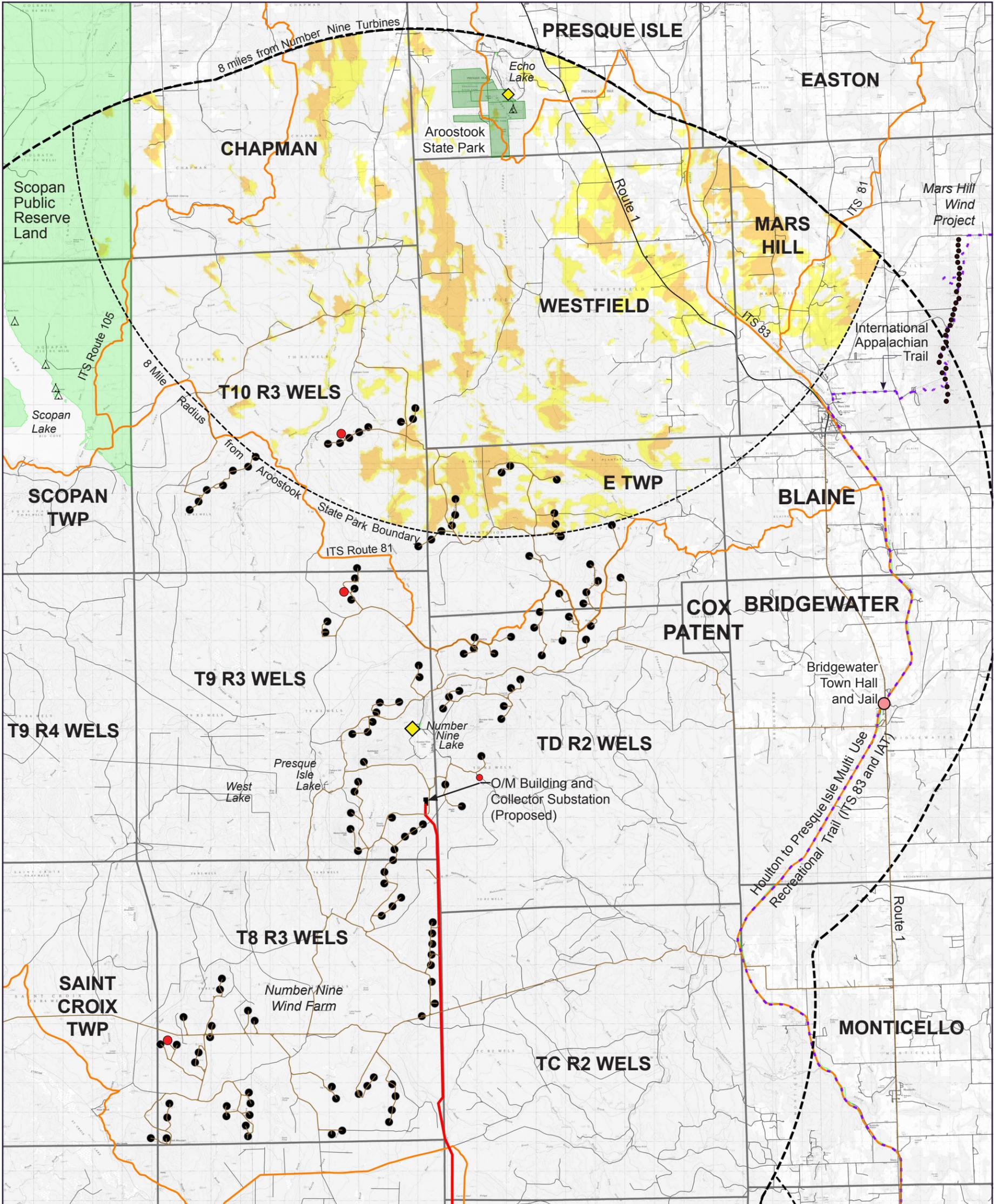
Number Nine Wind Farm Turbine layout as of 02.20.15



LEGEND		TURBINE VISIBILITY	NOTES
<p>MAP 5: VEGETATED VIEWSHED A FOR NACELLES</p> <p>NUMBER NINE WIND FARM</p>	● Number Nine Wind Farm Turbines (Proposed)	1-10	<p>This viewshed map:</p> <ul style="list-style-type: none"> shows the number of nacelles that may be visible within 8 miles. accounts for the screening effects of topography and 3 types of vegetation (deciduous, evergreen, and mixed). assumes that trees in these cover types are 40' in height. assumes that all other cover types are 0' in height. shows where the viewer may see nacelles if vegetation were present. <p>Land cover data is from Maine OGIS. Turbines visibility should be confirmed with field investigations and other visualization techniques.</p>
	● Number Nine Wind Farm Permanent Met Tower (Proposed)	11-20	
	— Access Roads (Proposed)	21-30	
	— Northern Generator Lead Line (Proposed)	31-40	
	— Municipal Boundaries	41-50	
	— International Appalachian Trail (IAT)	51-60	
	— Interconnected Trail System (ITS)	61-70	
	— Conservation Lands from ME OGIS	71-80	
	— State Park	81-90	
	◆ Boat Launch	91-100	
● Structure on National Register	101-129		
△ Campsites/Campground			



Number Nine Wind Farm Turbine layout as of 02.20.15



LEGEND		TURBINE VISIBILITY		NOTES
<p>MAP 6: VEGETATED VIEWSHED B FOR BLADES</p> <p>Aroostook State Park</p> <p>NUMBER NINE WIND FARM</p>	● Number Nine Wind Farm Turbines (Proposed)	■ 1-10	<p>This viewshed map:</p> <ul style="list-style-type: none"> accounts for the screening effects of topography and 3 types of vegetation (deciduous, evergreen, and mixed). assumes that trees in these cover types are 40' in height. assumes that all other cover types are 0' in height. shows where the viewer may see at least the tip of a blade if vegetation were present. <p>This viewshed map only calculates the 17 turbines within 8 miles of Aroostook State Park.</p> <p>Land cover data is from Maine OGIS.</p> <p>Field investigations confirmed that no turbines within 8 miles of the Park will be visible. See Appendix C.</p>	
	● Number Nine Wind Farm Permanent Met Tower (Proposed)	■ 11-17		
	— Access Roads (Proposed)			
	— Northern Generator Lead Line (Proposed)			
	— Municipal Boundaries			
	— International Appalachian Trail (IAT)			
	— Interconnected Trail System (ITS)			
	■ Conservation Lands from ME OGIS			
	■ State Park			
	◆ Boat Launch			
● Structure on National Register				
△ Campsites/Campground				



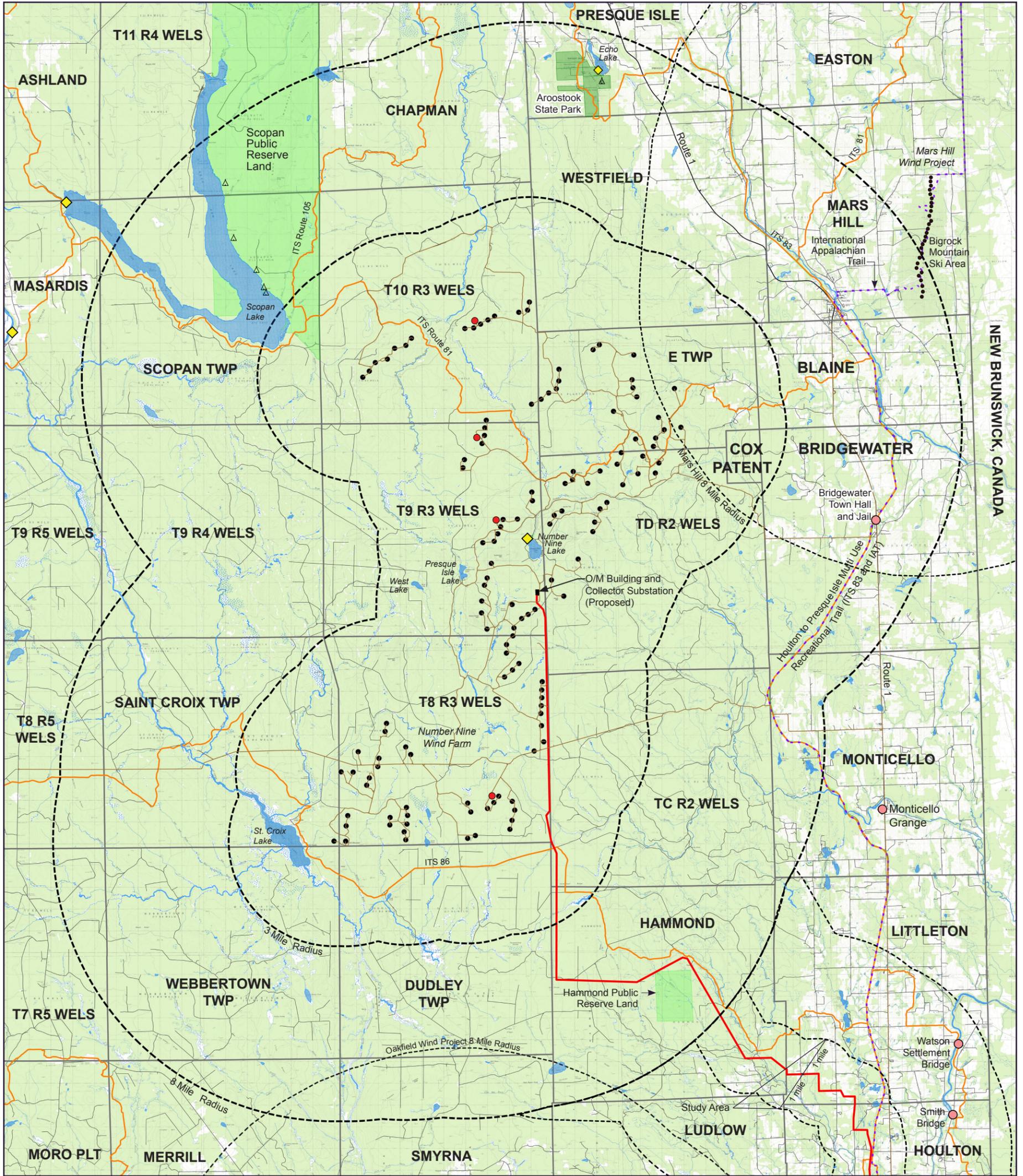
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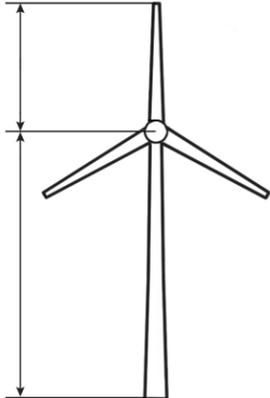
LEGEND		NOTES	
<p>MAP 7: 8-MILE STUDY AREAS FOR NUMBER NINE WIND FARM, MARS HILL WIND PROJECT, AND OAKFIELD WIND PROJECT</p>	<ul style="list-style-type: none"> ● Number Nine Wind Farm Turbines (Proposed) ● Number Nine Wind Farm Permanent Met Tower (Proposed) — Access Roads (Proposed) — Northern Generator Lead Line (Proposed) — Municipal Boundaries — International Appalachian Trail (IAT) — Interconnected Trail System (ITS) — Conservation Lands from ME OGIS — State Park ◆ Boat Launch ● Structure on National Register △ Campsites/Campground 	<p>Number Nine Wind Farm Turbine Specifications:</p> <div style="display: flex; align-items: center; justify-content: center;"> <div style="margin-right: 10px;"> <p>1/2 rotor diameter (57 meters)</p> </div>  </div> <p>hub height (93 meters)</p> <p style="text-align: center;">Gamesa G114</p>	
	<p>NUMBER NINE WIND FARM</p>	 <p>NUMBER NINE WIND FARM®</p> 	<div style="display: flex; justify-content: space-between;"> <div> <p>NORTH</p>  </div> <div>  <p>MILES</p> </div> </div>



Photo 1: Looking south at the entrance to Aroostook State Park in Presque Isle.



Photo 2: Looking northeast from the parking area adjacent to Echo Lake in Aroostook State Park. The Number Nine Wind Farm (Project) will not be visible from the parking area.



Photo 3: Panoramic view looking northeast from the picnic area on Echo Lake in Aroostook State Park. The Project will not be visible from the picnic area or Echo Lake.



Photo 4: Panoramic view looking north toward the boat launch on the western shore of Echo Lake in Aroostook State Park. The Project will not be visible from the boat launch.



Photo 5: Trail along Echo Lake between the boat launch and picnic area. The Project will not be visible from the trail.



Photo 6: Cross country ski trail head off the Park parking lot.



Photo 7: Panoramic view of the South Peak trail head (left in image) in the Aroostook State Park campground. The Project will not be visible from the campground.



Photo 8: Trail head kiosk adjacent to the Aroostook State Park parking lot, the start of the trail to the North Peak of Quaggy Jo Mountain.



Photo 9: Intersection of the Ridge Trail and the South Peak Trail near South Peak in Aroostook State Park. The Project will not be visible from the Ridge Trail.



Photo 10: The start of the North Peak Trail in Aroostook State Park. The Project will not be visible from the North Peak Trail.



Photo 11: The Quaggy Jo Mountain Trail in Aroostook State Park. The Project will not be visible from the lower elevation cross country ski and snowshoe trails.



Photo 12: Panoramic view looking northeast to east from the North Peak in Aroostook State Park toward Presque Isle and Easton. Echo Lake is visible below. The Project will not be visible from this viewpoint.



Photo 13: Looking southwest toward the Project area from the trail near the North Peak in Aroostook State Park. The Project will be screened from view by existing vegetation. No visible turbines will be within 8 miles of this location. (Any potential partial views would be of turbines beyond 8 miles).



Photo 14: Looking northwest from North Peak in Aroostook State Park toward Presque Isle and Haystack Mountain.



Photo 15: Inside of shelter.



Photo 16: The shelter on the Ridge Trail between the North and South Peaks in Aroostook State Park.



Photo 17: Panoramic view looking east to southeast from the shelter on the Ridge Trail toward Presque Isle, Westfield, and Mars Hill. The Mars Hill Wind Project is visible (right of center in image) 10.2 to 11.3 miles from this viewpoint. The Number Nine Wind Farm will not be visible from this location.



Photo 18: Communication tower on South Peak in Aroostook State Park.



Photo 19: Looking south from the clearing beneath the communication tower on South Peak. One Project turbine on the distant ridge may be visible from this location at a distance of 6.2 miles.



Photo 20: Trail sign at the summit of the South Peak leading to overlook on west side of summit.
03.10.15



Photo 21: The clearing and communication building on South Peak. The trail to the overlook is through the trees to left of structure.



Photo 22: Panoramic view looking northwest from the platform at the South Peak overlook on Quaggy Jo Mountain toward Presque Isle. The Presque Isle landfill, the North Peak of Quaggy Jo Mountain, and Arnold Brook Lake are in view. The single turbine at University of Maine at Presque Isle is visible 4.5 miles to the north. No Project turbines will be visible from the platform.

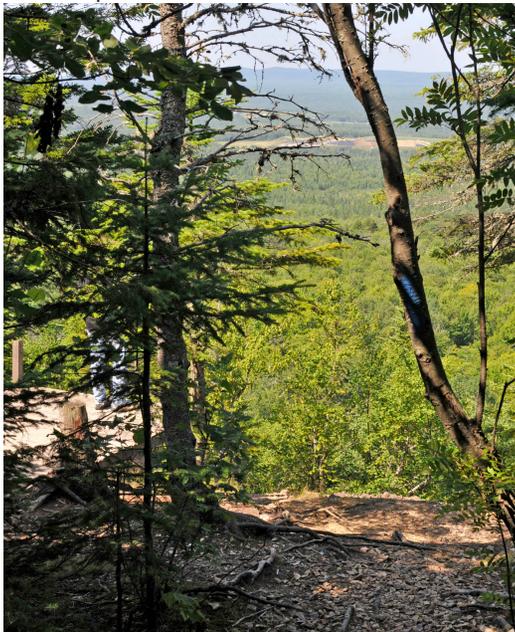


Photo 23: The 90'+/- trail from the South Peak summit leading to the overlook and platform.



Photo 24: The trail from the overlook looking back toward the summit.



Photo 25: The platform at the South Peak overlook. Park maps describe the platform as a tent pad.



Photo 26: Panoramic view looking southwest to west from the overlook on the west side of the South Peak of Quaggy Jo Mountain. The Presque Isle landfill and Scopan Mountain are right of center of the image. Approximately five Project turbines beyond 8 miles will be in view to the far left in image.



Continued panoramic view looking west to northwest from the South Peak overlook. The North Peak of Quaggy Jo Mountain, Arnold Brook Lake, and the City of Presque Isle are visible on the right in image. No project turbines will be visible in this direction.



Photo 27: A private outing club's picnic area located on the north end of the east branch of Scopan Lake. An active rail line runs next to the area and along the north end of Scopan Lake. The Project will not be visible from this picnic area or the adjacent camps.



Photo 28: Camps at the north end of the east branch of Scopan Lake. The majority of the camps on the lake are beyond 8 miles of the Project and will not have Project views.



Photo 29: Looking south from the north end of the east branch of Scopan Lake. The Project will not be visible from this end of the lake.



Photo 30: A camp near Big Cove and the old dam location on the west branch of Scopan Lake. Up to seven turbines may be visible to four camps near Big Cove at distances of 4.5 to 5.7 miles.



Photo 31: Panoramic view looking southeast from the center of Big Cove on Scopan Lake toward the Project. Blades and nacelles of two turbines and blades of three additional turbines will be visible from this location at distances of 3.3 to 4.0 miles over a horizontal view angle of 23°.



Photo 32: Panoramic view looking southeast near the old dam on the west branch of Scopan Lake toward the Project. Approximately 7 turbines (blades and nacelles) will be visible from this location at distances of 5 to 6 miles. Scopan Lake is not rated for scenic resources in the *Maine Wildlands Lake Assessment*.



Photo 33: The 'Halfway Site' Campsite on the eastern shore of the east branch of Scopan Lake within the Scopan Public Reserve Land, halfway between the north end of Scopan Lake and Big Cove. This is the northernmost of five campsites in the Public Reserve Land.



Photo 34: The 'Halfway Site' Campsite is accessed by the water and has a picnic table and camp fire pit. The campsite is also referenced as "Cold Spring" on the DeLorme Atlas & Gazetteer.



Photo 35: Panoramic view looking south from the shoreline of the 'Halfway Site' campsite. The closest Project turbines will be approximately 6.7 miles away and will not be visible due to intervening topography and vegetation.



Photo 36: Panoramic view looking northeast toward the 'White Point' campsite on the eastern shore of Scopan Lake within the Scopan Public Reserve Land, 1.6 miles south of the 'Halfway Site'. This campsite is most commonly accessed by water.



Photo 37: Panoramic view looking southeast from the 'White Point' campsite. The closest Project turbines will be approximately 5.5 miles away and will not be visible from the campsite.



Photo 38: The 'Sylvester North' campsite on Scopan Lake within the Scopan Public Reserve Land, 1.6 mile south of the 'White Point' campsite. This campsite is most commonly accessed by water. This site is also referenced as 'Sylvester Point 3' on the DeLorme Atlas & Gazetteer.



Photo 39: Panoramic view looking southeast from the 'Sylvester North' campsite. The closest Project turbines will be approximately 4.1 miles away and will not be visible from this location.



Photo 40: Panoramic view looking south from the shoreline of the 'Sylvester Point 2' campsite on Scopan Lake within the Scopan Public Reserve Land toward the 'Sylvester Point 1' campsite (on left in image). The closest Project turbines will be approximately 4 miles away and will not be visible from the 'Sylvester Point 2' campsite.



Photo 41: Panoramic view looking south from the 'Sylvester Point 2' campsite, which is approximately 30' above the shoreline of Scopan Lake. The site contains a picnic table and fire pit. The Project will not be visible due to intervening vegetation.



Photo 42: Panoramic view looking northwest toward the shoreline below the 'Sylvester Point 2' campsite on Scopan Lake within the Scopan Public Reserve Land. The low vegetation on the hillside appears to be managed to maintain views of the lake from the campsite. See Photo 41 from the Sylvester Point 2 campsite.



Photo 43: Panoramic view looking south toward the 'Sylvester Point 1' campsite on Scopan Lake within the Scopan Public Reserve Land. The Project will not be visible from the 'Sylvester Point 1' campsite. However, there may be views of portions of three or four turbine from the southern side of Sylvester Point at a distance of 3.7 to 4.4 miles. The campsite includes a picnic table, fire pit, and rope swing.



Photo 44: The multiuse trail leading to the summit of Scopan Knob on Scopan Mountain within the Scopan Public Reserve Land.



Photo 45: Looking east toward Chapman from a multi-use trail near Scopan Knob in Scopan Public Reserve Land. The Project will not be visible from lower elevation ATV trails within the Public Reserve Land nor from the snowmobile trail along the ridge.



Photo 46: The communication tower on the summit of Scopan Knob.



Photo 47: Looking southeast from near the communication structure on Scopan Knob. There are no Project views from the wooded summit of Scopan Knob during leaf on season. There may be very filtered Project views during leaf off season.



Photo 48: Panoramic view looking southwest toward the Department of Conservation boat launch on Number Nine Lake in T9 R3 WELS. Portions of nacelles and blades from four turbines will be visible filtered through vegetation to the right of Saddleback Mountain (landform on left in image) approximately one mile away.



Photo 49: Panoramic view looking south from the boat launch on Number Nine Lake. Approximately six turbines will be visible from this viewpoint at distances of 1.3 to 2.3 miles over a 35° horizontal view angle. Number Nine Lake is not rated for scenic resources in the *Maine Wildlands Lake Assessment*.



Photo 50: Characteristic landscape within the project area, looking northwest from Number Nine Road approximately 5.5 miles east of the Number Nine Lake boat launch. Approximately six turbines will be visible from this viewpoint at distances of 1.2 to



Photo 51: Looking northwest from Number Nine Road, approximately 5.7 miles east of Number Nine Lake boat launch. Two turbines will be visible from this viewpoint at distances of 1.5 to 2.0 miles.

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Photo 52: Looking northeast from Number Nine Lake Road toward the turbines on Mars Hill approximately 9.0 miles away.



Photo 53: Panoramic view looking northwest to north from the center of Number Nine Lake. A total of 12 to 14 turbines will be visible from the lake, depending on location. Six turbines will be visible looking north to northeast from this viewpoint at distances of 1.0 to 1.6 miles. See photos 54-56 for views in east direction.



Continued panoramic view looking north to northeast from the center of Number Nine Lake.



Photo 54: Panoramic view looking east from the center of Number Nine Lake toward Number Nine Mountain. A total of 12 to 14 turbines will be visible from the lake, depending on location. Blades from one turbine will be visible to the right of Number Nine Mountain at a distance of 1.3 miles. No Project turbines will be located on the summit of Number Nine Mountain which currently has several communication towers and maintenance buildings.



Photo 55: Panoramic view looking southeast to south from the center of Number Nine Lake. Five turbines (blades and nacelles) and blades of one turbine will be visible from this location looking south at distances of 1.0 to 2.0 miles.



Photo 56: Panoramic view looking west from the center of Number Nine Lake toward Saddleback Mountain. A total of 12 to 14 turbines will be visible from the lake, depending on location. One turbine (blades and nacelles), and blades from one additional turbine, will be visible looking west and southwest from this viewpoint at distance of 1.1 and 1.7 miles. There will be no Project turbines on Saddleback Mountain.



Continued panoramic view looking southwest from the center of Number Nine Lake toward Saddleback Mountain (Photo overlaps with Photo 53 photos).



Photo 57: Panoramic view looking northeast to east from the western shore of Presque Isle Lake toward the Project area, near the only cabin on the lake. A total of 17 turbines will be visible from the lake, depending on location. Eight turbines (blades and nacelles) and blades of two turbines will be visible looking northeast from this viewpoint at distances of 1.0 to 4.4 miles. No turbines will be located on the top of Saddleback Mountain (high point of the ridge).



Continued panoramic view looking east to southeast toward Presque Isle Lake. Four turbines (blades and nacelles) and blades of three turbines will be visible looking east from this viewpoint at distances of 0.7 to 1.7 miles. Presque Isle Lake is not rated for scenic resources in the *Maine Wildlands Lake Assessment*.



Photo 58: Panoramic view looking northeast toward a camp off Harvey Siding Road on the northeastern shore of St. Croix Lake. There are approximately 14 camps on the eastern shore of the lake, none of which will have views of the Project. An active rail line and rail siding parallel the east side of St. Croix Lake (rail cars in photos are on siding).



Photo 59: Panoramic view looking south from the northeastern shore of St. Croix Lake, in the opposite direction of the Project. Approximately sixteen turbines will be visible from the western portion of the lake at distances of 1.5 to 3.5 miles. There are no camps on the western shoreline. St. Croix Lake is not rated for scenic resources in the *Maine Wildlands Lake Assessment*.



Photo 60: Panoramic view looking south toward the Project from Route 1 in Westfield, 1.4 miles south of Presque Isle town line. Twenty five turbines are within 8 miles of this viewpoint, the closest turbine will be 5.8 miles away. Route 1 is not a Scenic Byway.



Photo 61: Panoramic view looking east towards Mars Hill from Route 1 in Westfield, 1.1 miles west of the Mars Hill town line and 2.8 miles south of the viewpoint shown in Photo 60. The twenty-eight 385-foot tall turbines on Mars Hill are 5.0 to 5.6 miles from this viewpoint.



Photo 62: Panoramic view looking south toward Mars Hill village near the Route 1/ Route 1A intersection. The Project will not be visible from the village due to intervening topography and vegetation.



Photo 63: Panoramic view looking southwest on Route 1 in Blaine, one mile south of the Mars Hill and Blaine town line. There will be thirty visible turbines within 8 miles of this viewpoint with the closest turbine 4.6 miles away.



Photo 64: The Bridgewater Town Hall and Jail, which are on the National Register of Historic Places. The jail structure is the small square building on the right.



Photo 65: Panoramic view looking southwest to northwest from the front steps of the Bridgewater Town Hall toward the Project. The Bridgewater Post Office is located in the building on the right. The Project will not be visible from the Town Hall. See Photo 1: Computer Model Overlay in Appendix D.



Photo 66: Panoramic view looking south toward Bridgewater village. The Bridgewater Town Hall is on left. The Project will not be visible from the village.



Photo 67: The Houlton to Presque Isle Multi Use Trail / ITS 83 / International Appalachian Trail crossing Route 1 in Bridgewater. The Project should not be visible from the trail due to trail side vegetation.



Photo 68: The Houlton Presque Isle Multi Use Trail / ITS 83 / International Appalachian Trail signage.



Photo 69: The Monticello Grange Building, which is on the National Register of Historic Places, on Route 1 in Monticello. The Project is beyond the 8 mile study area and will not be visible from the structure.



Photo 70: The Village Park in Monticello near the intersection of Route 1 and School Street.



Photo 71: Panoramic view looking south from Route 1 in Monticello toward the Project. The Project is beyond the 8 mile study area and will not be visible from the village.

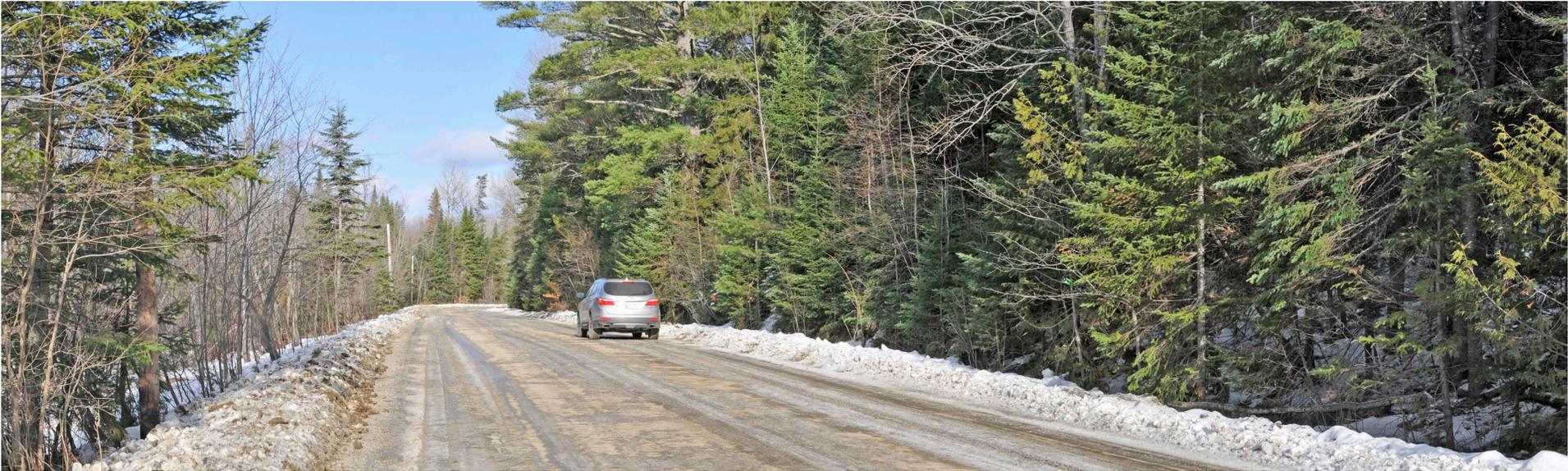


Photo 72: Panoramic view looking northeast on Burnt Brow Road in Hammond, approximately 170 feet south of the proposed generator lead line crossing. The vehicle is parked at the approximate location of the line crossing. The proposed clearing width will be 150 feet and the H-frame 345 kV structures will be set back approximately 150 feet to 500 feet from the road. The structures will not be visible except when crossing the clearing itself. There are no homes directly abutting the corridor.



Photo 73: The Hammond Town Office on B Road in Hammond. The generator lead line will not be visible from the town office or the cluster of homes near the town office.



Photo 74: Looking southwest on Burnt Brow Road approximately 300 feet north of the proposed generator lead line crossing. The vehicle is parked at the approximate location of the crossing.



Photo 75: Panoramic view looking north on Back Ridge Road in Littleton approximately 450 feet south of the proposed generator lead line crossing. One 83-foot tall 345 kV H-frame structure set back approximately 28 feet on the east side of the road (right of road in photo), will be visible to motorists and the abutting homes. Several additional structures will be visible when crossing the 150 foot cleared corridor.



Photo 76: Panoramic view looking south on Back Ridge Road in Littleton approximately 380 feet north of the proposed generator lead line crossing.



Photo 77: Panoramic view looking north on Front Ridge Road in Littleton approximately 300 feet south of the proposed generator lead line crossing. The conductors crossing over the road, and the top of one 79-foot tall 345 kV H-frame structure set back approximately 20 feet on the west side of the road (left of road in photo), will be visible to motorists and abutting homes. The clearing for the 150 foot corridor will remove most of the trees beyond the home.



Photo 78: Panoramic view looking south on Front Ridge Road in Littleton approximately 700 feet north of the proposed generator lead line crossing. Portions of one 345 kV H-frame structure will be visible on the west side of the road (right side of road in image). There will be no views of the cleared corridor from the storage area on right.



Photo 79: Panoramic view looking northwest on B Road in Houlton approximately 460 feet southwest of the proposed generator lead line crossing. The line will cross and be parallel with B Road for approximately 665 feet, which will result in the removal of roadside vegetation on the northeast side of the road (evergreens on right of road). Two 88-foot tall 345 kV H-frame structures will be visible to motorists, the abutting homes, and workers at the adjacent Gardner Chip Mills Houlton Plant and will be seen in conjunction with the existing transmission line that also crosses B Road.



Photo 80: Panoramic view looking southeast on B Road in Houlton approximately 1,300 feet north of the proposed generator lead line crossing. Two of the H-frame 345 kV structures near the crossing will be visible. (See description above.) The closest structure will be 440 feet from the home on the left but should be screened from view by vegetation.



Photo 81: Panoramic view looking east on Ludlow Road in Houlton approximately 460 feet west of the proposed generator lead line crossing. The proposed conductors crossing over the road and the top of one 97-foot tall 345 kV H-frame structure, set back approximately 100 feet on the south side of the road (right of road in photo) will be visible to motorists. The line will cross over the existing distribution line located on the south side of the road and the existing transmission line on the north side of the road. The corridor on the north side of the road will be cleared to 150 feet in width adjacent to the Mullen Substation. The line will continue within the existing 'Bridal Path' section of right of way on the south side of the road, which is already generally cleared.



Photo 82: Panoramic view looking northwest toward the Mullen Substation on Ludlow Road in Houlton. The proposed generator lead line will be on the west side of the substation (left of substation in image). The stand of mixed vegetation to the west of the substation and within the proposed 150-foot wide corridor will be removed. The Project does not interconnect with the Mullen Substation.



Photo 83: Panoramic view looking east on Interstate 95 Northbound in Houlton, approximately 500 feet west of the proposed generator lead line crossing. The conductors crossing over the road, the 150-foot wide corridor clearing, and the top portion of one 88-foot 345 kV dead-end structure (located 300 feet north of the southbound lane) will be visible to motorists. See Photosimulation for Interstate 95 in Appendix D.



Photo 84: Panoramic view looking west on Interstate 95 Southbound in Houlton, approximately 250 feet east of the proposed generator lead line crossing. The conductors crossing over the road, the 150-foot wide corridor clearing, and the top portion of one 88-foot 345 kV dead-end structure (located 250' south of the northbound lane) will be visible to motorists.



Photo 85: Panoramic view looking southwest on Route 2 in Houlton approximately 330 feet west of the proposed generator lead line crossing. One 97-foot 345 kV H-frame structure set back 25' from the road, will be visible on north side of the road (right of road in image).



Photo 86: Panoramic view looking southwest from Route 2 in Houlton within the proposed generator lead line crossing. Two 95-foot 345 kV H-frame structures will be located in the open field; no additional clearing will be required on the south side of the road.



Photo 87: Panoramic view looking south toward the pedestrian bridge over the Meduxnekeag River at the Riverfront Park in Houlton. The proposed generator lead line is approximately one mile from the park and will not be visible from the park.



Photo 88: Looking southwest from the Market Square Historic District from Water Street in Houlton, which is on the National Register of Historic Places. The proposed generator lead line will be 1.1 miles from Historic District and will not be visible due to intervening buildings, topography and vegetation.

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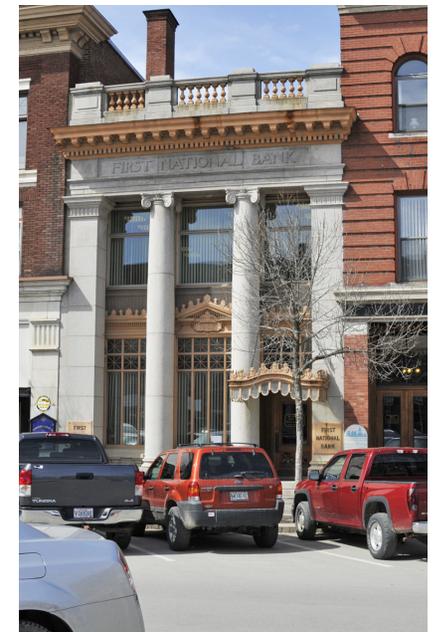


Photo 89: First National Bank in Houlton's Market Square Historic District.



Photo 90: Aroostook County Court House & Jail on Court Street in Houlton.



Photo 91: Cary Library on Main Street in Houlton.



Photo 92: Unitarian Church of Houlton on Military Street.



Photo 93: Amazeen House on Weeks Street in Houlton.



Photo 94: White Memorial Building on Main Street in Houlton.



Photo 95: Edward L. Cleveland House on Court Street in Houlton.



Photo 96: Watson Settlement Bridge off Lowery Road in Littleton.



Photo 98: Putnam Blackhawk Tavern on North Street in Houlton.



Photo 97: Walter P. Mansur House on Water Street in Houlton.

These structures on the National Register of Historic Places are beyond one mile from the generator lead line. The line will not be visible from any of these sites.
03.10.15



Photo 99: Looking northwest from Porter Settlement Road in Houlton approximately 380 feet southeast of the proposed generator lead line crossing. The truck in the road is at the approximate line crossing location. During leaf off conditions, the top portion of one 75-foot 345 kV H-frame structure, set back 130 feet from the road, will be visible on the northeast side of the road (on the hill above the furthest structure on the right side of road).



Photo 100: Looking southeast from Porter Settlement Road in Houlton at the approximate location of the proposed generator lead line crossing. The line will cross the Meduxnekeag River (70' wide in this location) on the right in image. Minimal additional clearing will be required adjacent to the river. This segment of the river is not rated for scenic resources in the *Maine Rivers Study*.



Photo 101: Looking southwest from Route 2A near the intersection of Drews Lake Road in Houlton. The proposed generator lead line will cross over the existing transmission line and open field and generally be parallel to Route 2A in this area. The proposed 345 kV H-frame structures will be 84 to 88 feet in height and spaced approximately 675 feet apart. The existing transmission line structures are approximately 40 feet in height and spaced 240 feet apart.



Photo 102: Looking northwest from Drews Lake Road in Houlton toward a farm located north of the proposed generator lead line crossing. Four proposed H-frame structures will be visible across the adjacent agricultural field southeast of the farm at distances of 1,200 to 2,600 feet.



Photo 103: Looking east from the Department of Conservation Boat Launch on Nickerson Lake in Linneus, approximately 2,000 feet northwest of the proposed generator lead line. The proposed 345 kV H-frame structures and conductors will not be visible from this viewpoint due to intervening topography and vegetation. The top portion of one structure may be visible above the treeline from the western portion of the lake approximately 0.75 miles away. Nickerson Lake is not rated for scenic resources in *Maine's Finest Lakes, The Result of the Maine Lakes Study*.



Photo 104: The parking area at the boat launch on Nickerson Lake in Linneus.



Photo 105: Looking east toward the boat launch and dock on Nickerson Lake in Linneus.

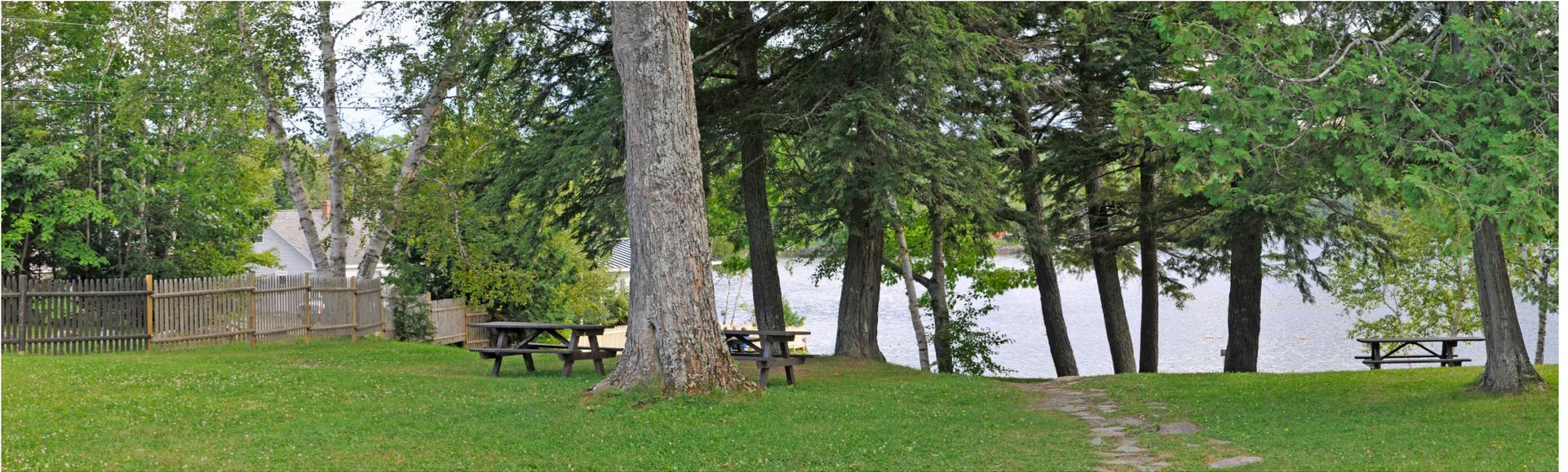


Photo 106: Looking southwest toward Crescent Park in Nickerson Lake State Park on Nickerson Lake in Linneus and New Limerick. There will be no views of the generator lead line from within the park.



Photo 107: Looking southwest from the shoreline of Crescent Park. The proposed generator lead line will not be visible from the shoreline of the park.



Photo 108: The entrance to Crescent Park.



Photo 109: Looking west to northwest near the intersection of Burton Road and Route 2A / Military Road in Linneus. The top portion of several 345 kV H-frame structures will be visible just behind the distant treeline, approximately 1,000 feet from Route 2A.



Photo 110: Looking west on Burton Road approximately 950 feet east of the proposed generator lead line crossing. The top portion of several proposed 345 kV H-frame structures will be visible just behind the distant treeline. There are two houses near the crossing that will have filtered views of the proposed line.



Photo 111: Looking northwest from the intersection of Horseback Road and Route 2A in Linneus, approximately 350 feet east of the proposed generator lead line crossing. The top portions of two proposed 345 kV H-frame structures (97 and 101 feet in height) will be visible above the treeline where the road curves behind vegetation in image. The closest home on Horseback Road, north of the corridor, will be 370 feet from the line but will be screened by 200 feet of remaining vegetation.



Photo 112: Looking west on Ruth Road approximately 630 feet east of the proposed generator lead line crossing in Linneus. Four homes will have views of approximately four 345 kV H-frames structures, ranging in height from 70 to 83 feet in height, crossing the open field on left in image. The structures will be visible between 540 and 1,700 feet away.



Photo 113: Looking east on South Oakfield Road in Linneus approximately 730 feet west of the proposed generator lead line crossing. The proposed H-frame structures will be minimally visible from the road due to intervening topography and vegetation. The home on left will not have views of the line due to intervening vegetation.



Photo 114: View looking west on South Oakfield Road approximately 170 feet east of the proposed generator lead line crossing. The truck is parked in the approximate location of the crossing. One home on the northeast side of the proposed line will have an open view of one 83-foot 345 kV H-frame structure at a distance of 180 feet.



Photo 115: Panoramic view looking south toward the Linneus Community Field on Bangor Road / Route 2A, 2,300 feet southeast of the proposed generator lead line. The line will not be visible from the village of Linneus due to intervening vegetation.



Photo 116: Continued view looking southwest in the village of Linneus along Bangor Road / Route 2A.
03.10.15



Photo 117: Panoramic view looking southwest toward the MDOT Bells Fields Rest Area on Route 2A / Bangor Road in Forkstown TWP. The generator lead line will cross Bellfield Road approximately 1,400 feet from the rest area. The line will not be visible from the rest area due to intervening topography and vegetation. The rest area has a covered picnic shelter and portable rest room. Route 2A is not a scenic byway.



Photo 118: Panoramic view looking southeast from the eastern shore of the East Branch Mattawamkeag River at an informal boat put-in off Bellfield Road in Forkstown TWP. The generator lead line crossing would be approximately 1,500 feet south of this viewpoint. Shoreline vegetation will screen the proposed H-frame structures and the 150-foot wide corridor clearing when approaching the river crossing. The conductors crossing the river will be visible for approximately 0.6 miles to boaters heading down river. This river is not rated for scenic resources in the *Maine Rivers Study*.



Photo 119: Panoramic view looking southwest to northwest from the Military Road bridge over the Mattawamkeag River in Haynesville. The generator lead line will cross the West Branch Mattawamkeag River approximately 2.0 miles north of this bridge. The generator lead line will not be visible from this viewpoint.



Photo 120: Panoramic view looking north to northeast from the boat put-in below the Military Road bridge on the Mattawamkeag River. The generator lead line will not be visible from this viewpoint.



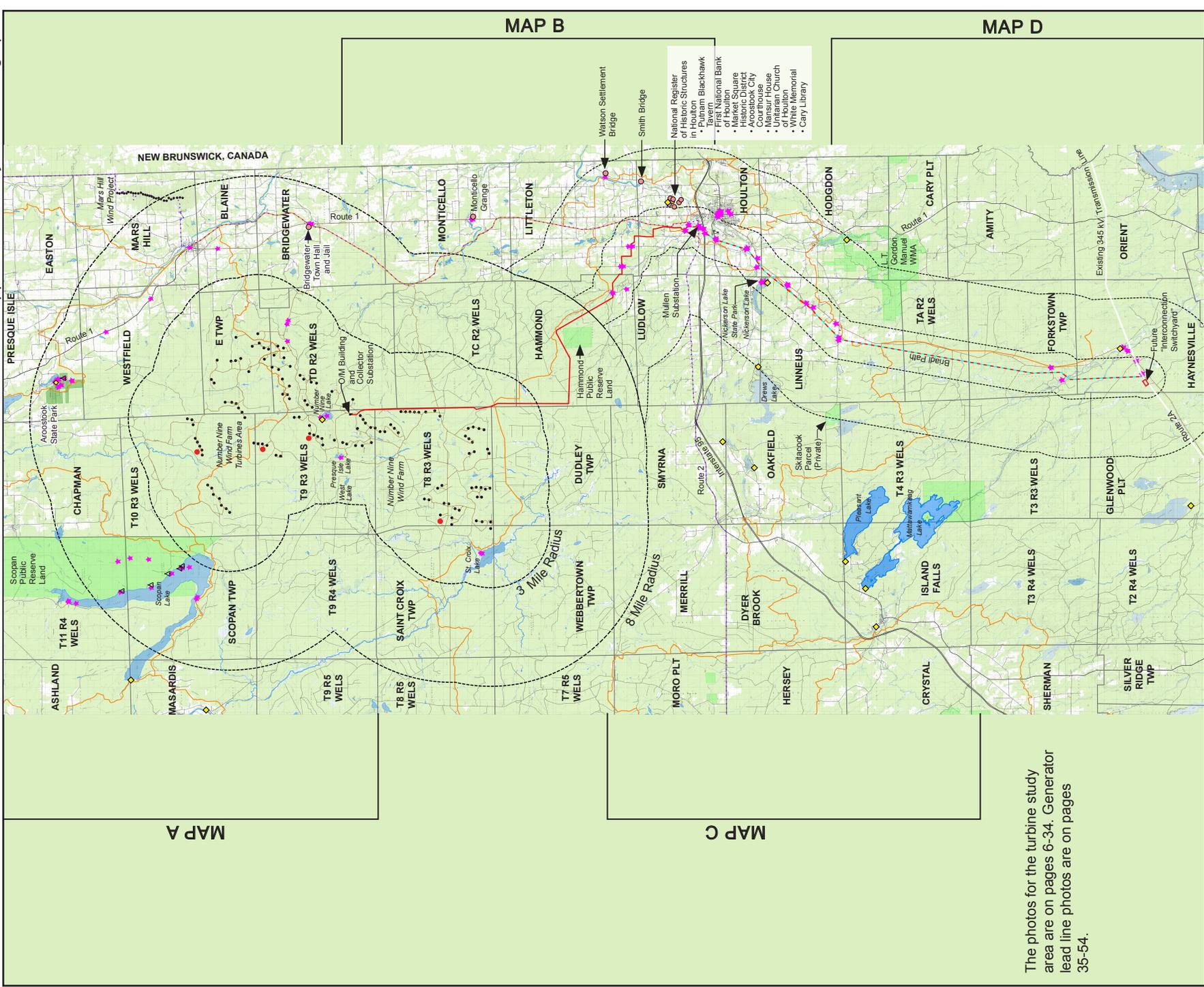
Photo 121: Looking west from the intersection of Military Road and Danforth Road in Haynesville. The proposed switchyard will not be visible from the village of Haynesville.



Photo 122: The existing 345 kV transmission line crossing Military Road/Route 2A near Sweden Road in Haynesville.



Photo 123: Panoramic view looking southwest toward the proposed switchyard site and the existing 345 kV transmission line from Babcock Road in Haynesville. The proposed interconnection switchyard will be located on the northwestern side of the corridor (right of existing corridor in image) approximately 0.5 miles southwest of this viewpoint. The switchyard will not be visible from Military Road / Route 2A due to intervening vegetation on the south side of the existing corridor. The switchyard is being permitted by Central Maine Power and is not part of this application.



The photos for the turbine study area are on pages 6-34. Generator lead line photos are on pages 35-54.

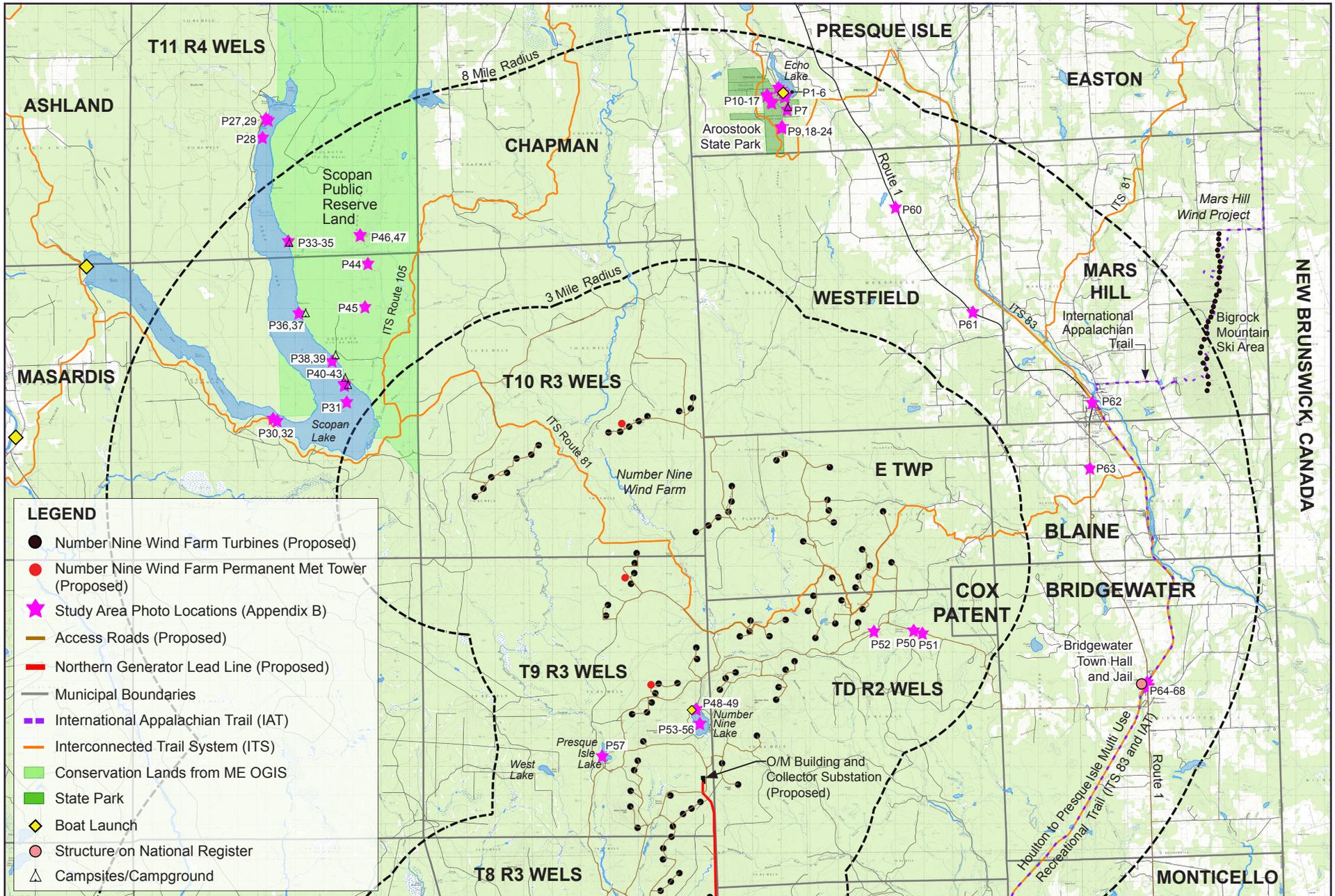
NUMBER NINE WIND FARM

STUDY AREA PHOTO LOCATION MAP

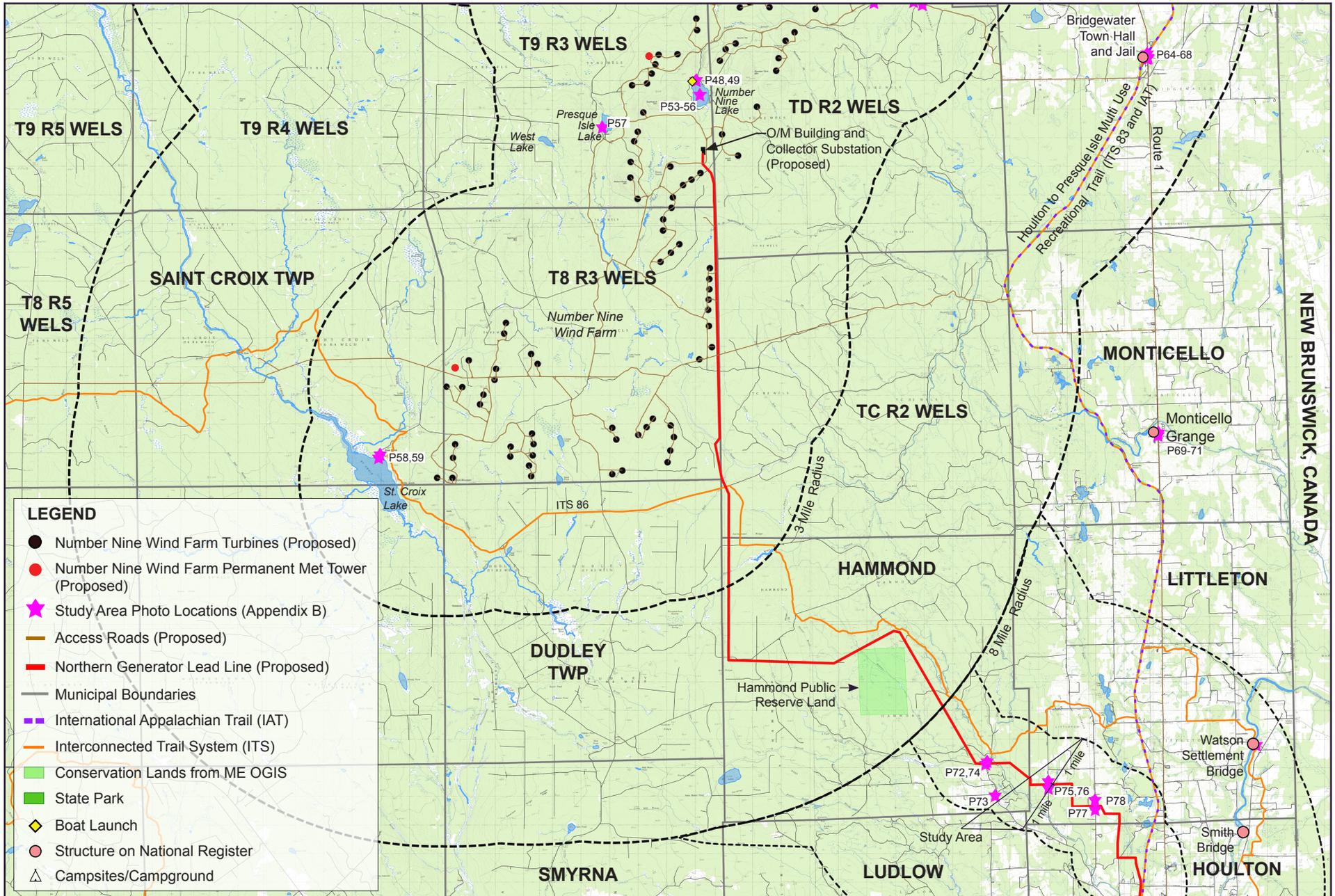


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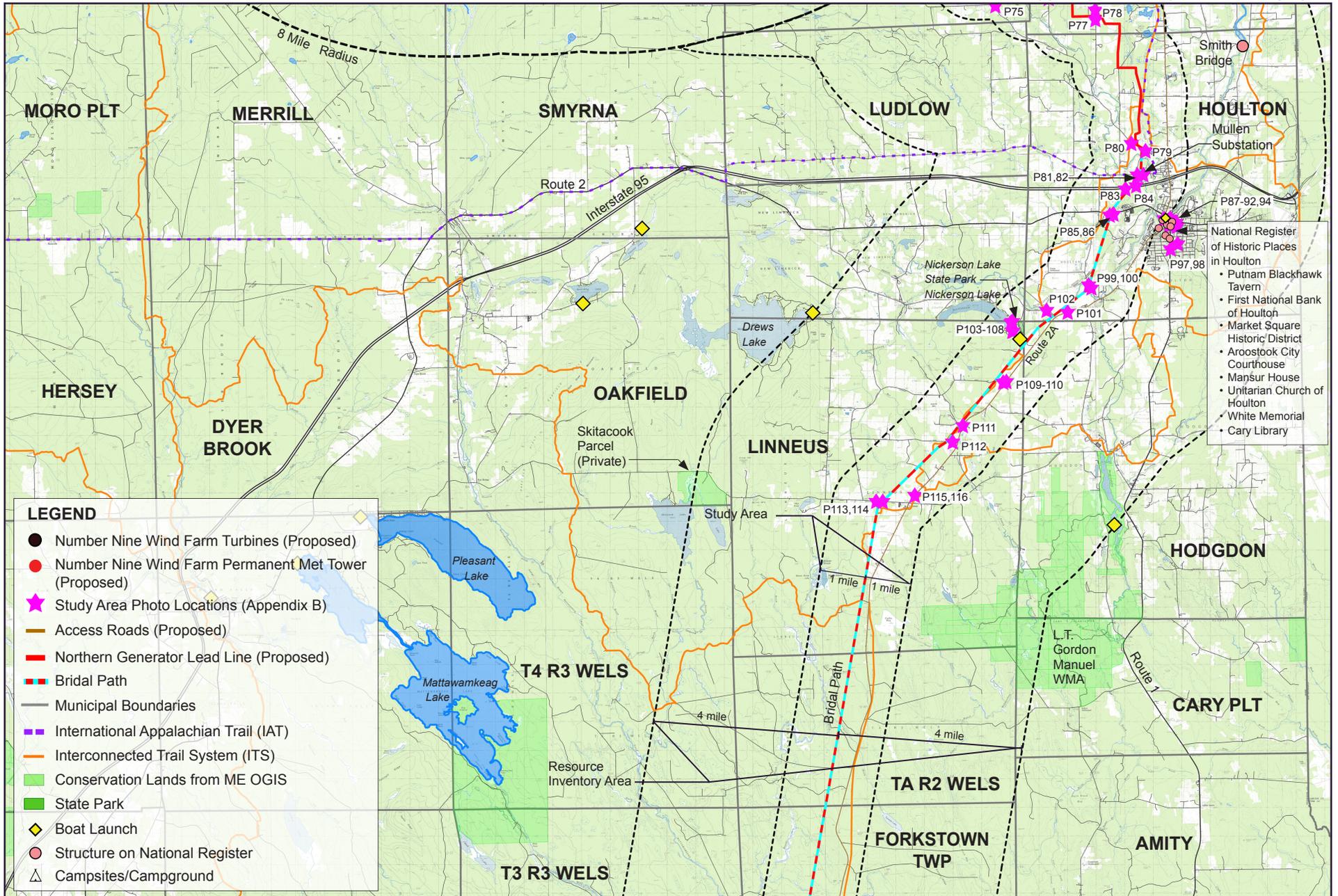
<p>NUMBER NINE WIND FARM</p>	<p>MAP A</p>	<p>STUDY AREA PHOTO LOCATION MAP</p>	<p>0 1 2 3 MILES</p>	<p>NORTH</p>	<p>tjd&a</p>
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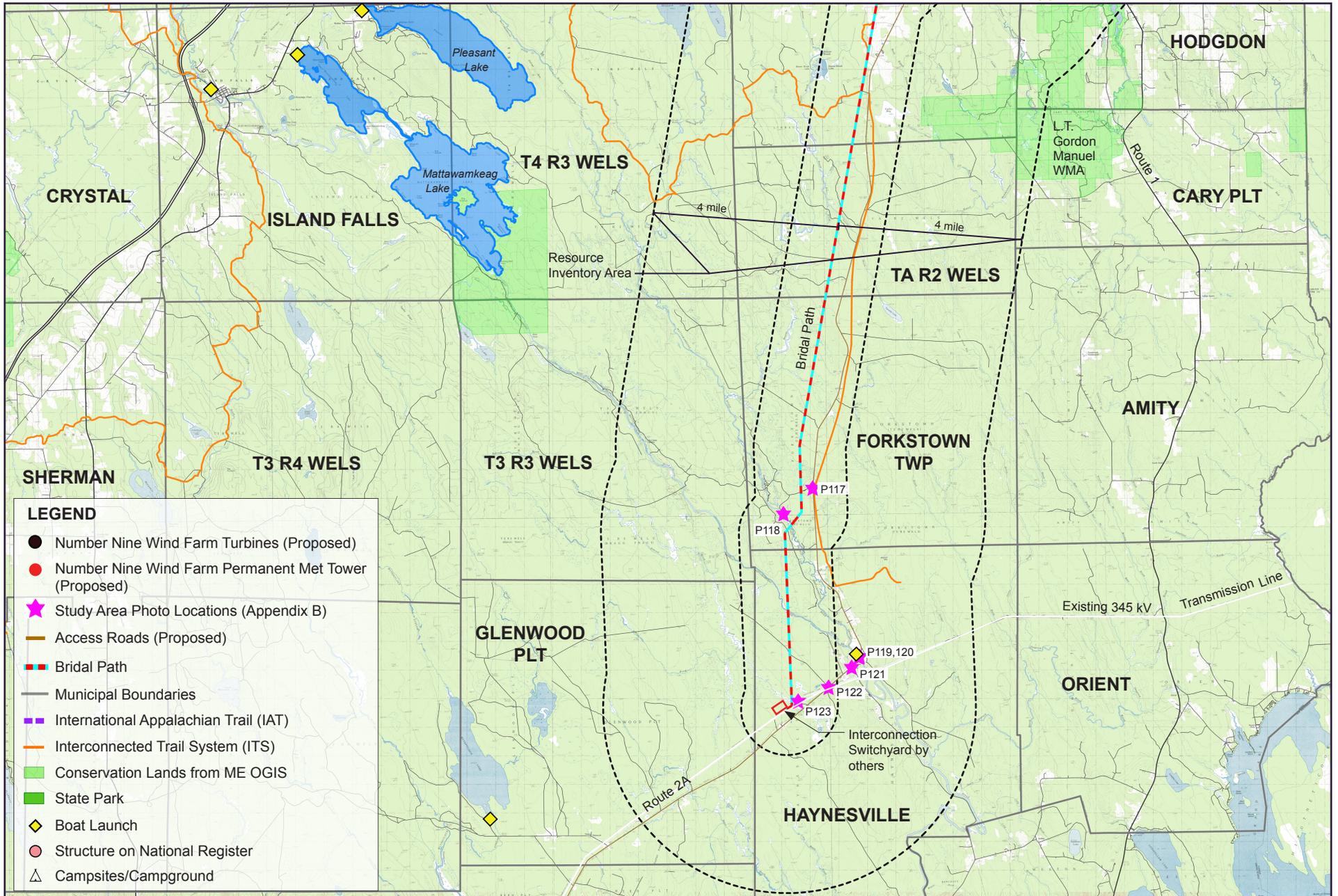
LEGEND

- Number Nine Wind Farm Turbines (Proposed)
- Number Nine Wind Farm Permanent Met Tower (Proposed)
- ★ Study Area Photo Locations (Appendix B)
- Access Roads (Proposed)
- Northern Generator Lead Line (Proposed)
- Municipal Boundaries
- International Appalachian Trail (IAT)
- Interconnected Trail System (ITS)
- Conservation Lands from ME OGIS
- State Park
- ◆ Boat Launch
- Structure on National Register
- △ Campsites/Campground

NUMBER NINE WIND FARM	MAP B	STUDY AREA PHOTO LOCATION MAP	<p>MILES</p>	<p>NORTH</p>	
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<p>NUMBER NINE WIND FARM</p>	<p>MAP C</p>	<p>STUDY AREA PHOTO LOCATION MAP</p>	<p>0 1 2 3 MILES</p>	<p>NORTH</p>	
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<p>NUMBER NINE WIND FARM</p>	<p>MAP D</p>	<p>STUDY AREA PHOTO LOCATION MAP</p>	<p>MILES</p>	<p>NORTH</p>	
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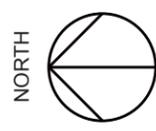


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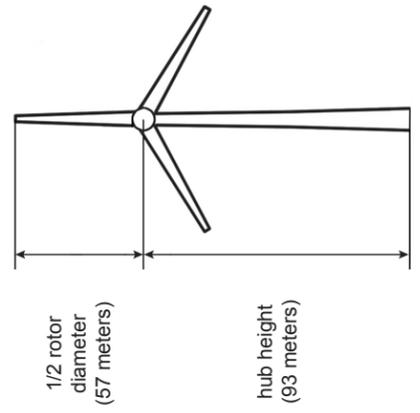
- Number Nine Wind Farm Turbines (Proposed)
- Number Nine Wind Farm Permanent Met Towers (Proposed)
- Access Roads (Proposed)
- Northern Generator Lead Line (Proposed)
- Municipal Boundaries
- International Appalachian Trail (IAT)
- Interconnected Trail System (ITS)
- Conservation Lands from ME OGIS
- State Park
- ◆ Boat Launch
- Structure on National Register
- Photosimulation Location
- Photo Location
- △ Campsites/Campground

STUDY AREA MAP

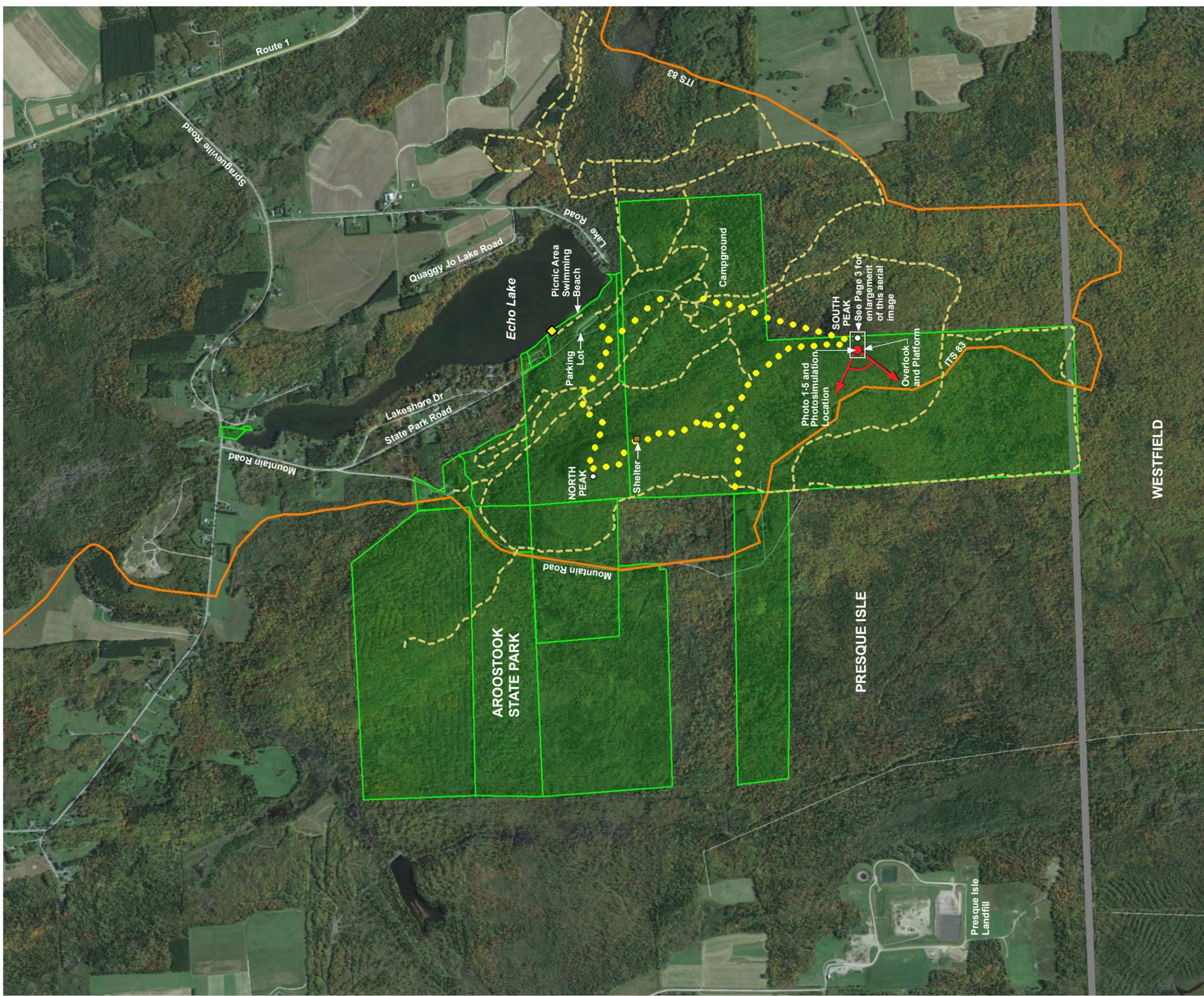
NUMBER NINE WIND FARM



Number Nine Wind Turbine Specifications:



Gamesa G114



LEGEND

- Municipal Boundaries
- Interconnected Trail System (ITS)
- Hiking Trails
- Other Non-Motorized Trails
- State Park
- ◆ Boat Launch
- Photosimulation Location
- Photo Location

AROOSTOOK STATE PARK STUDY AREA AERIAL

NUMBER NINE WIND FARM

NOTES

The conservation lands data provided by Maine OGIS does not accurately depict the Aroostook State Park boundary.

The park boundaries for this map were provided by Maine Bureau of Parks and Lands, Bangor Office, December 2014.

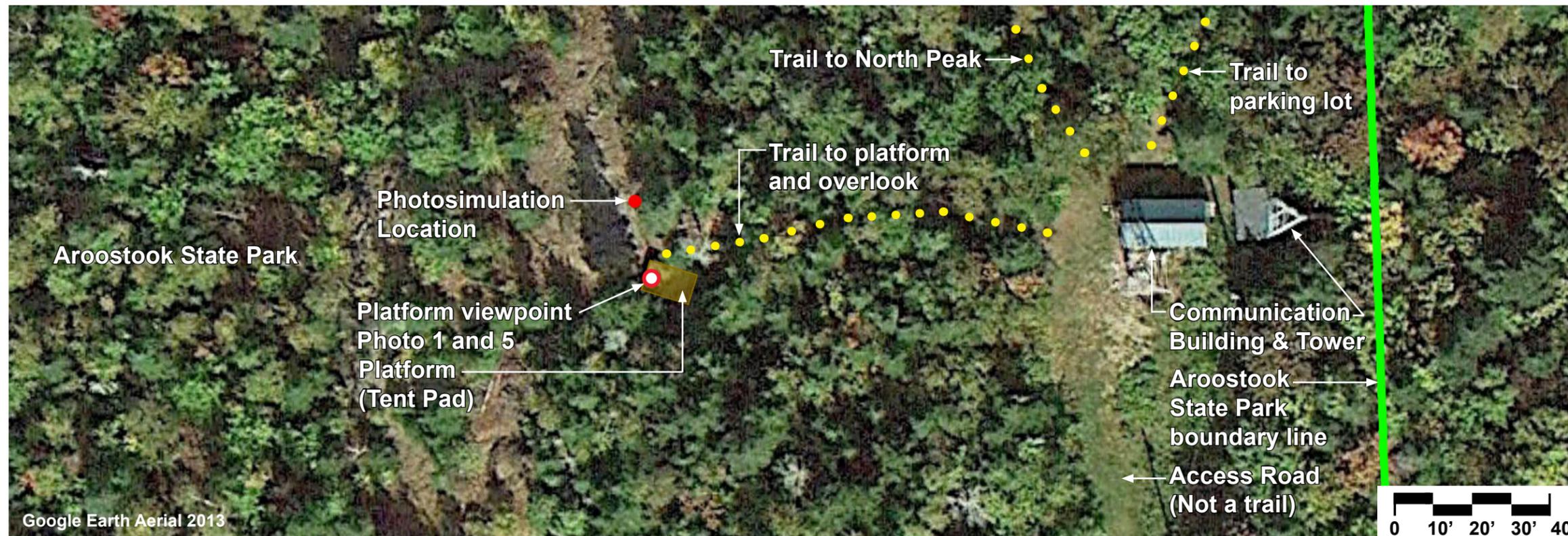
Trail data was provided by the University of Maine Presque Isle, GIS department.

Photos from within Aroostook State Park are included in Appendix B.



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This Google Earth image illustrates the location of the platform and overlook on the South Peak of Quaggy Jo Mountain in Aroostook State Park as well as the location of the photosimulations (indicated by the red dot). The image also shows the adjacent Verizon Communication Building and Tower. See image below.

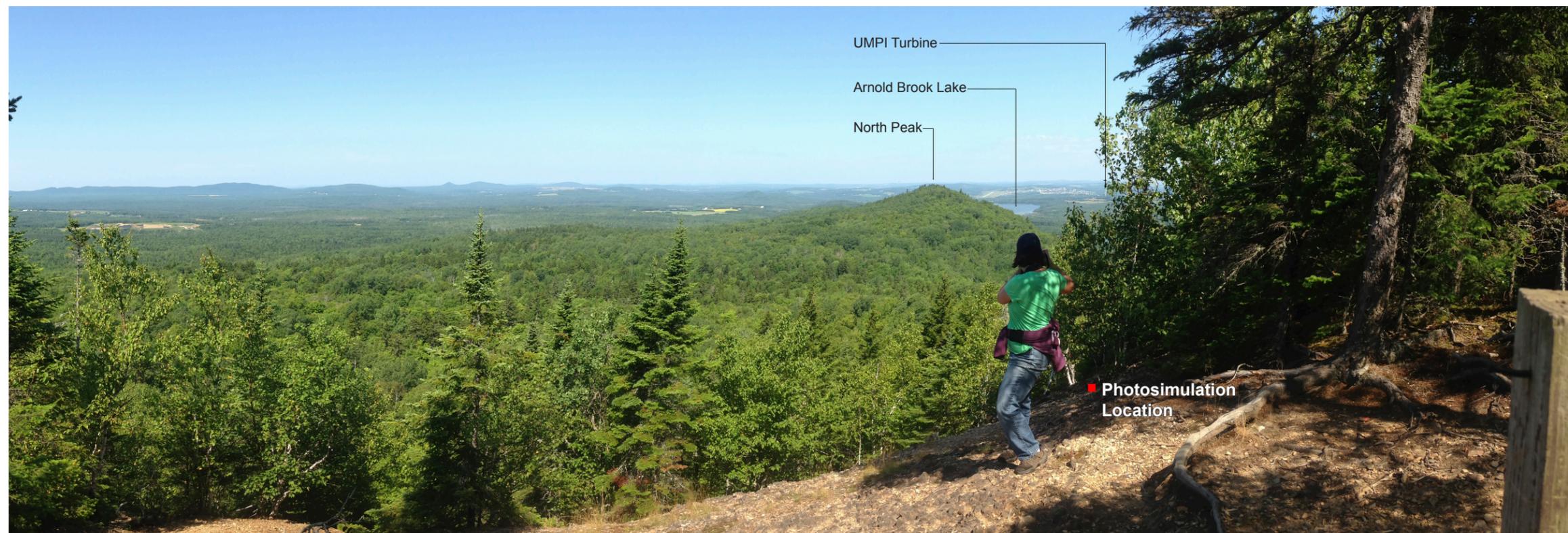


Photo 1: This image was taken from the platform viewpoint on the South Peak of Quaggy Jo Mountain in Aroostook State Park. The person in the foreground is standing approximately 10' from the platform. The photosimulation is approximately 15' from the platform. See diagram above.

Photosimulation Location South Peak	03.11.15
Aroostook State Park	Page 3 of 7

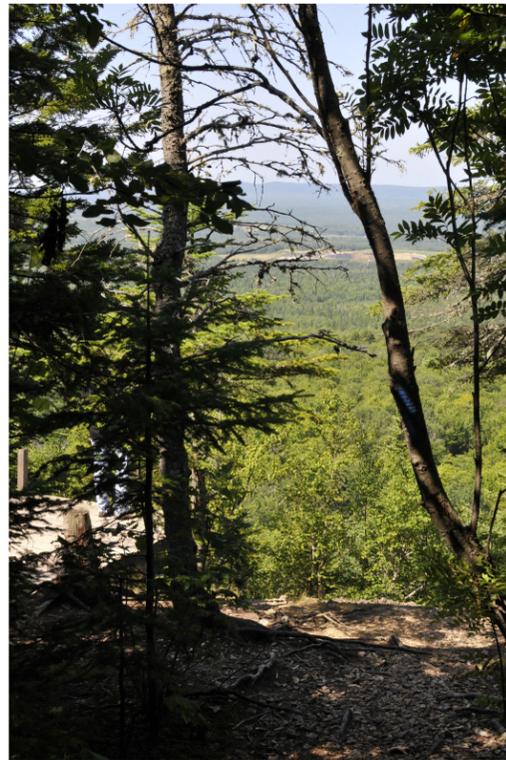


Photo 2: View of the 90± trail from the South Peak summit to the platform and overlook.



Photo 3: View of the trail from next to platform and overlook looking back up toward the summit of South Peak. The overlook is approximately 20' lower than the summit.



Photo 4: The platform and overlook is approximately 8' x 12' and set back approximately 10' from the edge of the overlook clearing.



Photo 5 Platform Viewpoint: Panoramic view looking west to north from the overlook platform on the South Peak of Quaggy Jo Mountain. Because the platform is set back from the edge of the clearing, the evergreen vegetation (seen on the left in image) will screen the Number Nine Wind Farm. No Project turbines will be visible from the platform. The panoramic view includes the Presque Isle Landfill and Scopan Mountain to the west, and the North Peak of Quaggy Jo Mountain, Arnold Brook Lake, and the City of Presque Isle to the north. The University of Maine Presque Isle's single wind turbine is 4.5 miles to the north.

Photosimulation Location South Peak	03.11.15
Aroostook State Park	Page 4 of 7



Photosimulation: Panoramic view looking southwest from the South Peak of Quaggy Jo Mountain toward the proposed Number Nine Wind Farm. This photo location is very close to the top of a drop off and not a common spot for viewers to stand. The seven turbines in view are 8.7 to 10.4 miles from this viewpoint.

LEGEND	VIEWPOINT LOCATION MAP	TECHNICAL INFORMATION																														
<ul style="list-style-type: none"> ● Number Nine Wind Farm Turbines (Proposed) ● Number Nine Wind Turbines (Proposed) in view from Photosimulation Locations — Proposed Access Roads — Municipal Boundaries — Interconnected Trail System (ITS) — Conservation Lands from ME OGIS — State Park ➤ Photosimulation Location 		<table border="0"> <tr> <td>Turbine Model:</td> <td>Gamesa G114</td> </tr> <tr> <td>Hub Height:</td> <td>93m (305 ft)</td> </tr> <tr> <td>Rotor Diameter:</td> <td>114m (374 ft)</td> </tr> <tr> <td>Viewpoint Coordinates:</td> <td>Latitude: 46.603225°, Longitude: -68.007165°</td> </tr> <tr> <td>Viewer Elevation:</td> <td>364m (1194 ft)</td> </tr> <tr> <td>Direction of View:</td> <td>Southwest</td> </tr> <tr> <td>Total Degree of View:</td> <td>140°±</td> </tr> <tr> <td>Degree of Project View:</td> <td>3°±</td> </tr> <tr> <td>Focal Length:</td> <td>Digital equivalent to 50mm normal lens</td> </tr> <tr> <td>Closest Turbine in View:</td> <td>8.7 miles</td> </tr> <tr> <td>Furthest Turbine in View:</td> <td>10.4 miles</td> </tr> <tr> <td>Turbines Visible:</td> <td>7±</td> </tr> <tr> <td>Date of Photo:</td> <td>11.20.14</td> </tr> <tr> <td>Time of Photo:</td> <td>2:00 pm</td> </tr> </table>	Turbine Model:	Gamesa G114	Hub Height:	93m (305 ft)	Rotor Diameter:	114m (374 ft)	Viewpoint Coordinates:	Latitude: 46.603225°, Longitude: -68.007165°	Viewer Elevation:	364m (1194 ft)	Direction of View:	Southwest	Total Degree of View:	140°±	Degree of Project View:	3°±	Focal Length:	Digital equivalent to 50mm normal lens	Closest Turbine in View:	8.7 miles	Furthest Turbine in View:	10.4 miles	Turbines Visible:	7±	Date of Photo:	11.20.14	Time of Photo:	2:00 pm	<h2 style="margin: 0;">Photosimulation</h2> <h3 style="margin: 0;">Aroostook State Park South Peak</h3>	
Turbine Model:	Gamesa G114																															
Hub Height:	93m (305 ft)																															
Rotor Diameter:	114m (374 ft)																															
Viewpoint Coordinates:	Latitude: 46.603225°, Longitude: -68.007165°																															
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Direction of View:	Southwest																															
Total Degree of View:	140°±																															
Degree of Project View:	3°±																															
Focal Length:	Digital equivalent to 50mm normal lens																															
Closest Turbine in View:	8.7 miles																															
Furthest Turbine in View:	10.4 miles																															
Turbines Visible:	7±																															
Date of Photo:	11.20.14																															
Time of Photo:	2:00 pm																															
			<h2 style="margin: 0;">Number Nine Wind Farm</h2> <h3 style="margin: 0;"><i>Visual Impact Assessment</i></h3>																													
					03.11.15 Page 5 of 7																											



Photosimulation A: Normal view looking southwest from the South Peak of Quaggy Jo Mountain in Aroostook State Park toward the proposed Number Nine Wind Farm. The seven turbines in view are beyond eight miles from this viewpoint.

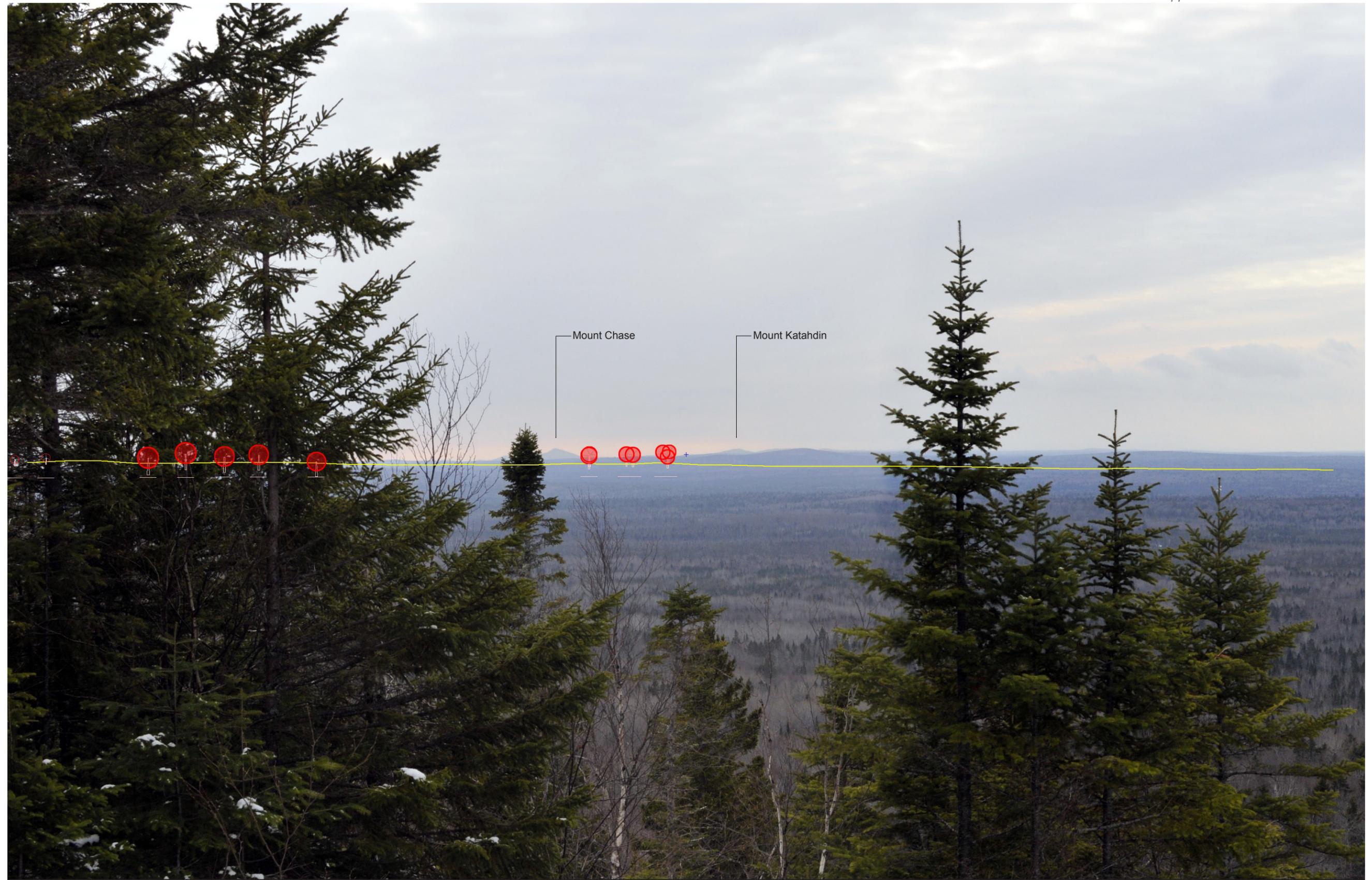
Viewer should hold this image, when printed at 11" x 17", approximately 21" from eye to replicate actual view.

**Proposed Conditions A
South Peak**

03.11.15

Aroostook State Park

Page 6 of 7



Computer Model Overlay: A 3-dimensional computer model generated with WindPRO software was overlaid on this photograph taken from the South Peak of Quaggy Jo Mountain in Aroostook State Park, looking southwest toward the proposed Number Nine Wind Farm. The red circles indicate the rotor sweep of the proposed turbines. The computer model was registered to the photograph using known locations such as Mount Chase and Mount Katahdin. The seven turbines shown in the center of the image are beyond eight miles from this viewpoint. Viewer should hold this image, when printed at 11" x 17", approximately 21" from eye to replicate actual view.

Computer Model Overlay South Peak	03.11.15
Aroostook State Park	Page 7 of 7

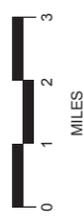
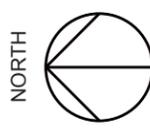


LEGEND

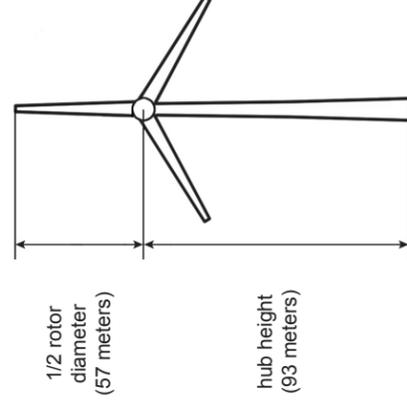
- Number Nine Wind Farm Turbines (Proposed)
- Number Nine Wind Farm Permanent Met Towers (Proposed)
- Access Roads (Proposed)
- Northern Generator Lead Line (Proposed)
- Municipal Boundaries
- International Appalachian Trail (IAT)
- Interconnected Trail System (ITS)
- Conservation Lands from ME OGIS
- State Park
- ◆ Boat Launch
- Structure on National Register
- Photosimulation Location
- Photo Location
- △ Campsites/Campground

**STUDY AREA
MAP**

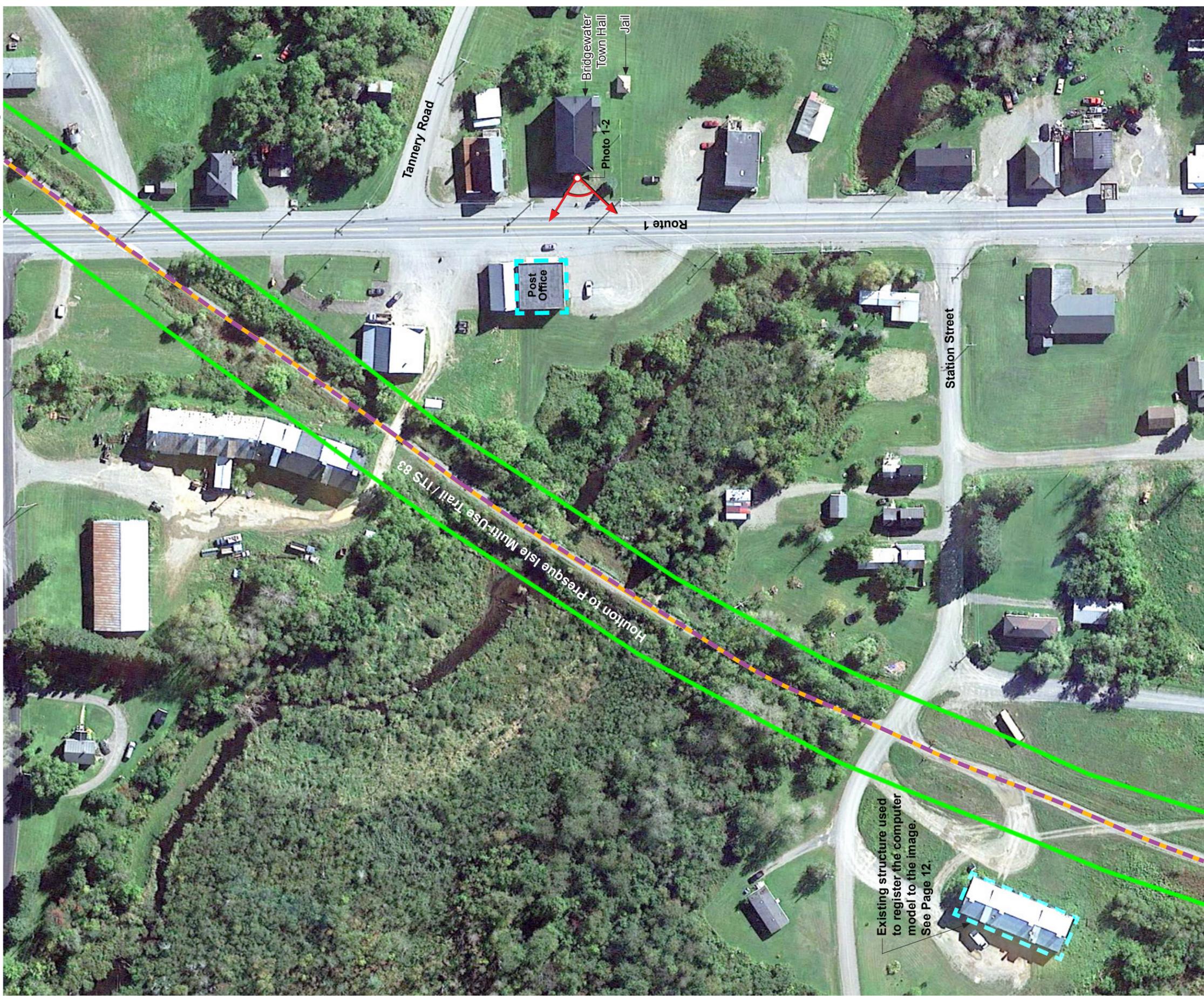
**NUMBER NINE
WIND FARM**



Number Nine Wind Turbine Specifications:



Gamesa G114



Existing structure used to register the computer model to the image. See Page 12.

LEGEND

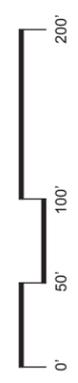
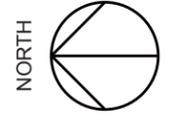
-  Interconnected Trail System (ITS)
-  International Appalachian Trail (IAT)
-  Conservation Lands from ME OGIS
-  Photo Location
-  Existing structure used to register the computer model to the image. See Page 3.
-  Computer Model Overlay Location

BRIDGEWATER TOWN HALL AND JAIL STUDY AREA AERIAL

NUMBER NINE WIND FARM



tjd&a





Computer Model Overlay: A 3-dimensional computer model generated with WindPRO software was overlaid on this photograph taken from the front steps of the Bridgewater Town Hall, looking southwest to northwest toward the proposed Number Nine Wind Farm. The Bridgewater Town Hall is on the National Register of Historic Places (See photographs on Page 4). The red circles indicate the rotor sweep of the proposed turbines, all of which would be located below the treeline and therefore not visible. The computer model was registered to the photograph using known locations of existing structures (shown in blue). No Project turbines will be visible from this viewpoint.

LEGEND	VIEWPOINT LOCATION MAP	TECHNICAL INFORMATION	<p style="text-align: center;">Computer Model Overlay Bridgewater Town Hall</p>		
<ul style="list-style-type: none"> ● Number Nine Wind Farm Turbines (Proposed) — Proposed Access Roads — Municipal Boundaries — Interconnected Trail System (ITS) — Conservation Lands from ME OGIS — State Park ↔ Computer Model Overlay Location — International Appalachian Trail (IAT) — Proposed Northern Generator Lead Line ○ Structure on National Register 		<p>Turbine Model: Gamesa G114 Hub Height: 93m (305 ft) Rotor Diameter: 128m (420 ft) Viewpoint Coordinates: Latitude: 46.425933°, Longitude: -68.843381° Viewer Elevation: 365m (1198 ft) Direction of View: Southwest to Northwest Focal Length: Digital equivalent to 50mm normal lens Date of Photo: 05.14.14 Time of Photo: 9:20 am</p>			<p style="text-align: center;">Number Nine Wind Farm <i>Visual Impact Assessment</i></p>
				<p style="text-align: center;">tjd&a</p>	<p style="text-align: center;">03.10.15 Page 3 of 4</p>

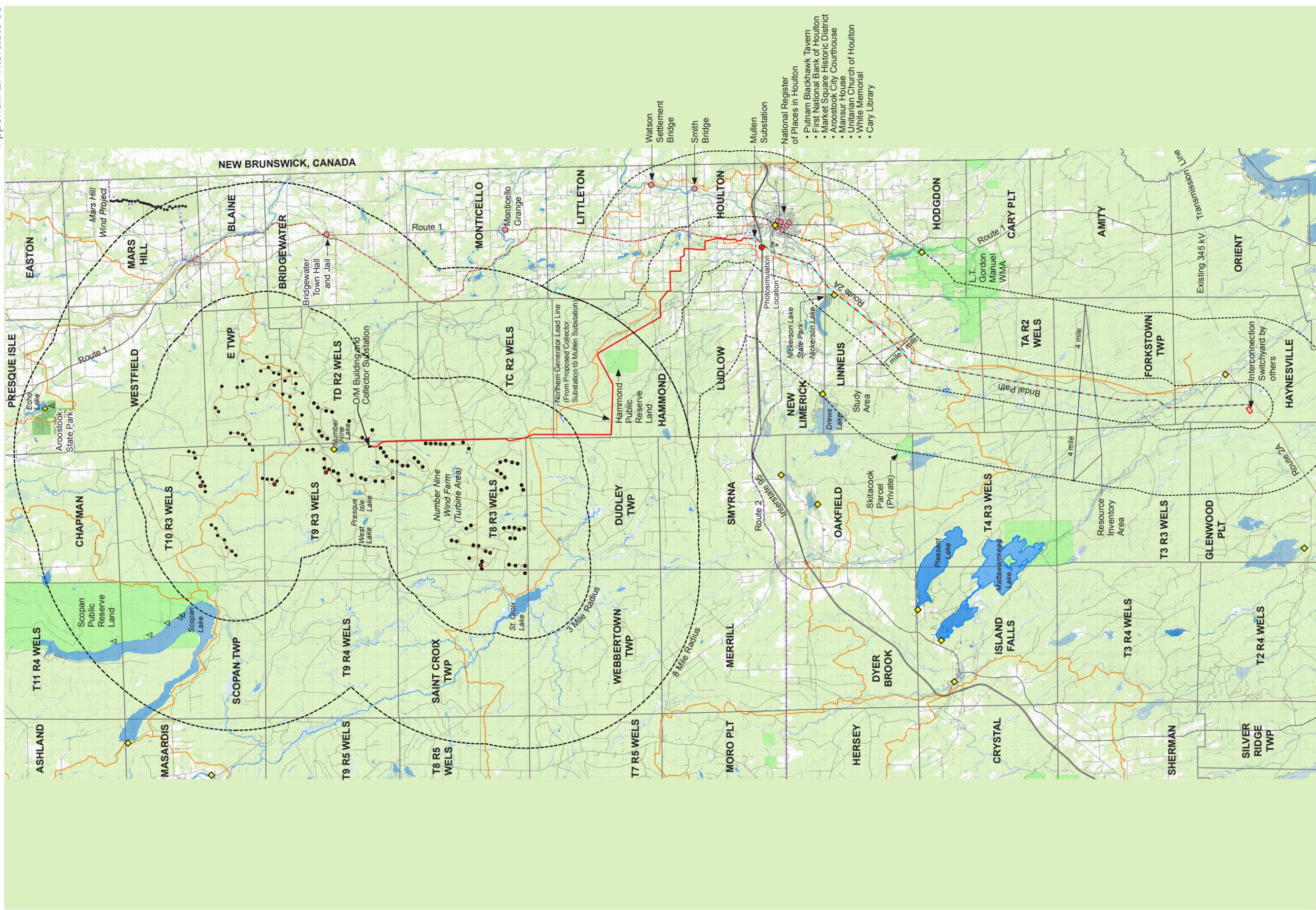


Photo 1: View of the Bridgewater Town Hall and Jail which is on the National Register of Historic Places. The jail structure is the small square building on the right.



Photo 2: View of the Bridgewater Town Hall. The structure is used by the public but the administrative functions of the town are located in the Town office on Bootfoot Road.

Computer Model Overlay Location Bridgewater Town Hall and Jail	03.10.15
Bridgewater, Maine	Page 4 of 4



- National Register of Places in Houlton
- Putnam Blackhawk Tavern
 - First National Bank of Houlton
 - Market Square Historic District
 - Aroostook City Courthouse
 - Mansur House
 - Unitarian Church of Houlton
 - White Memorial
 - Cary Library

LEGEND

- Number Nine Wind Farm Turbines (Proposed)
- Number Nine Wind Farm Permanent Met Towers (Proposed)
- Access Roads (Proposed)
- Municipal Boundaries
- Northern Generator Lead Line
- Bridal Path
- Structure on National Register

- International Appalachian Trail (IAT)
- Interconnected Trail System (ITS)
- ◆ Boat Launch
- Conservation Lands from ME OGIS
- State Park
- Scenic Lake, Pond or River
- Photosimulation Location
- △ Campsites/Campground

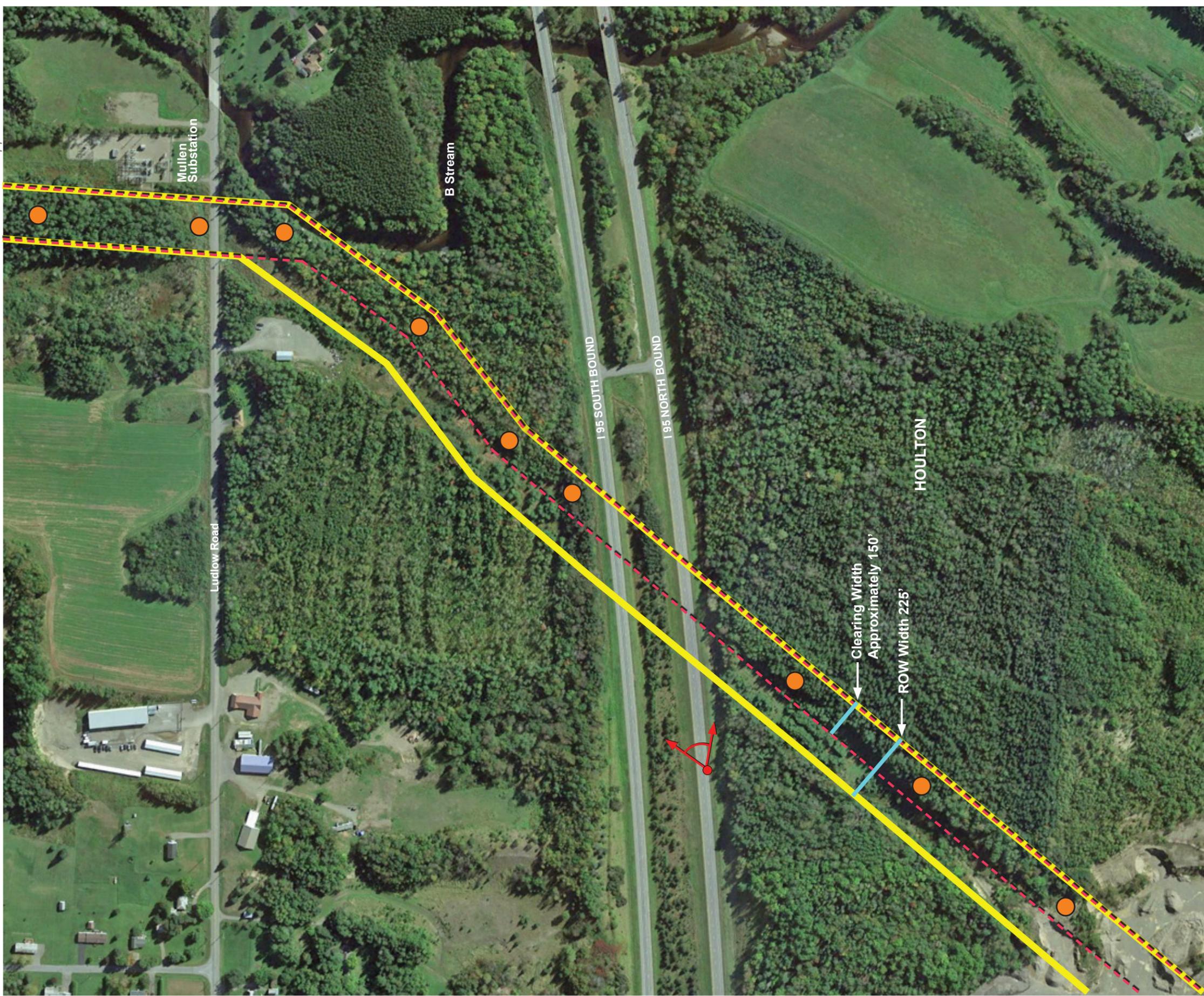
NUMBER NINE WIND FARM, NORTHERN GENERATOR LEAD LINE AND BRIDAL PATH

Study Area OVERALL

Number Nine Wind Farm Turbine layout as of 02.20.15

tjd&a
Landscape Architects
& Planners
Yamouth, Maine

03.11.15 PAGE 1 OF 5



LEGEND

-  Proposed 345 kV Generator Lead Line Structures
-  Bridal Path Corridor
-  Proposed Limit of Clearing
-  Photostimulation Location and View Angle

NOTES

The 345 kV generator lead line will be within the 'Bridal Path' south of B Stream. North of B Stream, the line will be located within the proposed 'Northern Generator Lead Line.

**Interstate 95
STUDY AREA
AERIAL**

**NUMBER NINE
WIND FARM**



NUMBER NINE
WIND FARM®

tjd&a





Existing Conditions: Panoramic view looking east from Interstate 95 north bound in Houlton, at a point 0.5 miles east of the Mooers Road overpass.

LEGEND		VIEWPOINT LOCATION MAP		<h2>Existing Conditions</h2> <h3>Interstate 95 Generator Lead Line</h3>					
<ul style="list-style-type: none"> Municipal Boundaries Conservation Lands from ME OGIS State Park Interstate 95 Northern Generator Lead Line (Proposed) Bridal Path Photosimulation Location 						<h2>Number Nine Wind Farm</h2> <h3>Visual Impact Assessment</h3>			
								03.11.15 Page 3 of 5	



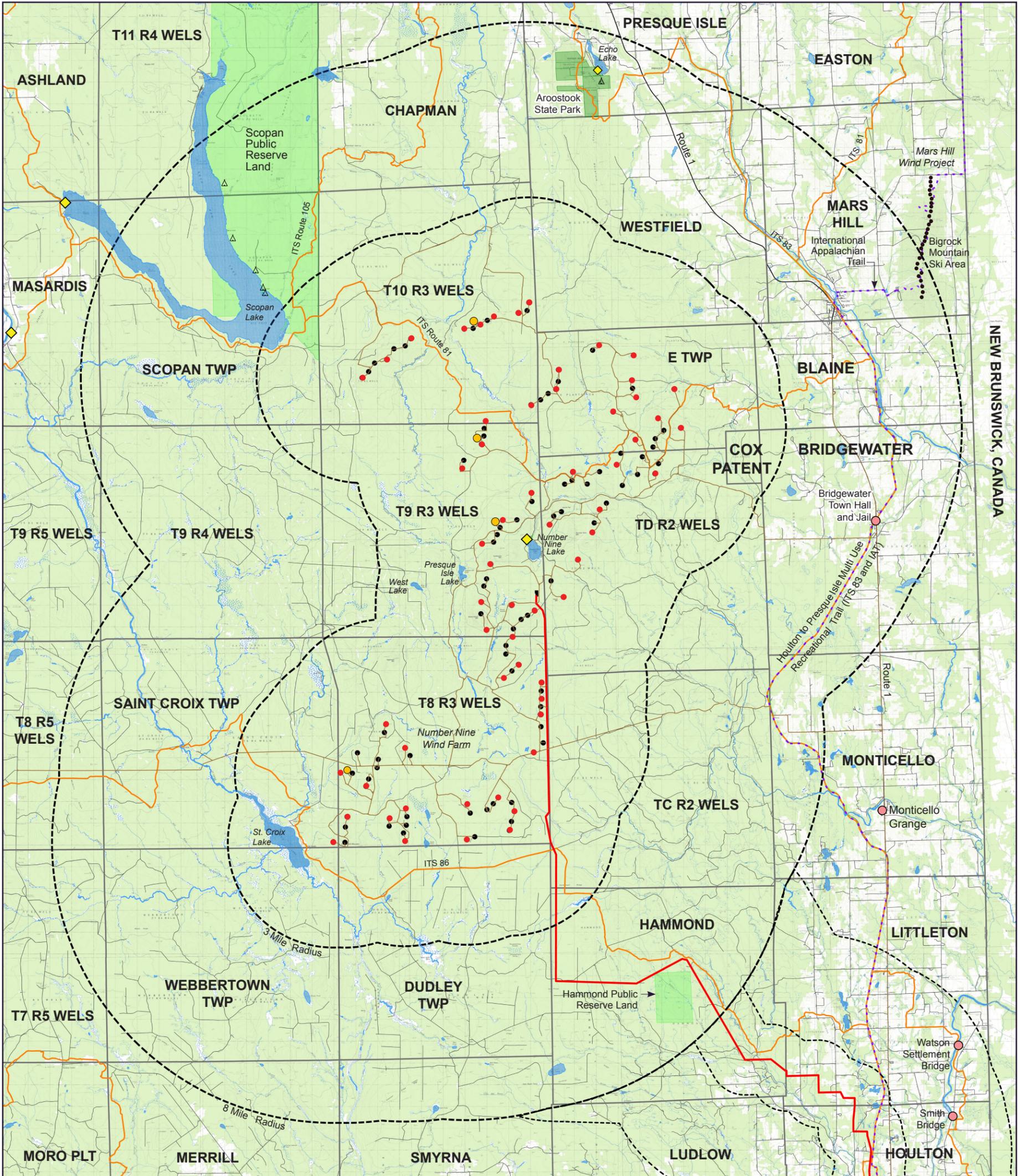
Photosimulation 1: Panoramic view looking east from Interstate 95 north bound in Houlton toward the proposed 345 kV generator lead line.

LEGEND	VIEWPOINT LOCATION MAP	TECHNICAL INFORMATION		
<ul style="list-style-type: none">  Municipal Boundaries  Conservation Lands from ME OGIS  State Park  Interstate 95  Northern Generator Lead Line (Proposed)  Bridal Path  Photosimulation Location 		<p>View Coordinates: Latitude: 46.136540°, Longitude: -67.859817° Viewer Eye Elevation: 119m (389 ft) Direction of View: East Focal Length: Digital equivalent to 50mm normal lens Type of Structure Visible: H-Frame Dead End Distance of Visible Structure from Viewer: 1,040'± Structure Height: 88 ft Date of Photo: 08.27.14 Time of Photo: 11:11 am</p>	<h2>Photosimulation 1</h2> <h3>Interstate 95 Bridal Path</h3>	
			<h2>Number Nine Wind Farm</h2> <h3>Visual Impact Assessment</h3>	
				03.11.15 Page 4 of 5



Photosimulation 1A: Normal view looking east from Interstate 95 north bound in Houlton toward the proposed generator lead line crossing. The one visible H-Frame Dead End Structure is approximately 1,040' from the viewer, and set back approximately 200' from the south bound lanes of Interstate 95. The proposed 150' wide cleared corridor will be visible when crossing beneath for 1.5 seconds when traveling 75 mph. Viewer should hold this image, when printed at 11" x 17", approximately 21" from eye to replicate actual view.

Proposed Conditions 1A Houlton	03.11.15
Interstate 95	Page 5 of 5



LEGEND		NOTES	
PROJECT STUDY AREA MAP (FAA LIGHTS)	● Number Nine Wind Farm Turbines (Proposed)	Number Nine Wind Farm Turbine Specifications:	<p>1/2 rotor diameter (57 meters) FAA Lighting on nacelle hub height (93 meters) Gamesa G114</p>
	● Number Nine Wind Farm Turbines FAA Lights (Proposed)		
NUMBER NINE WIND FARM	● Number Nine Wind Farm Permanent Met Tower (Proposed)	<p>NUMBER NINE WIND FARM®</p> <p>tjd&a</p>	<p>NORTH</p> <p>0 1 2 3 MILES</p>
	— Access Roads (Proposed)		
	— Northern Generator Lead Line (Proposed)		
	— Municipal Boundaries		
	— International Appalachian Trail (IAT)		
	— Interconnected Trail System (ITS)		
	— Conservation Lands from ME OGIS		
	— State Park		
	◆ Boat Launch		
	○ Structure on National Register		
△ Campsites/Campground			