Section 5
Scenic Resource Impact Assessment

Scenic Resource Impact Assessment

5.1 State Standards

According to the Small Wind Certification, a Small Scale Wind Energy Development:

> *Will not significantly compromise views from a scenic resource of state or national significance, as considered under the criteria and methodologies set forth in Title 35-A, section 3452.*

5.2 Local Standards

The Town of Roxbury has not enacted a separate review of scenic resources.

5.3 Scenic Resource Impact Assessment Approach

RoxWind commissioned a Visual Impact Assessment (VIA) from Terrance J. DeWan & Associates (TJD&A), a Maine-based landscape architecture firm with significant experience reviewing impacts of wind projects on scenic resources in Maine, having completed over 20 such assessments. In 2016, TJD&A completed a preliminary review of the Project and identified locations of potential significance where the Project might be viewable. These results were shared with the Department for review and guidance. Following consultation with the Department, the scope of the full VIA was defined. See Exhibit 5-A for more details.

5.4 Scenic Resource Impact Assessment Summary

The VIA concludes that:

> *Based on the proposed visual impact, the RoxWind Project will not significantly compromise views from Scenic Resources of State or National Significance, as considered under the criteria and methodologies set forth in Title 35-A, Section 3452.*

See Exhibit 5-A for the full report.

5-A
Visual Impact Assessment

Visual Impact Assessment

ROXWIND PROJECT
Roxbury, Maine

March 20, 2018

1.0 EXECUTIVE SUMMARY

1.1 Overview

RoxWind LLC (Applicant), managed by Palmer Management Corporation[1] and developed in partnership with Horseshoe Valley Wind LLC[2], is proposing a 4-turbine wind energy facility in Roxbury, Maine on North Twin Mountain (the "Project") in Oxford County. The project will be developed in conformance with the Small-Wind Certification process which requires a Visual Impact Assessment (VIA)be completed as considered under the criteria and methodologies set forth in Title 35-A, Section 3452.

The four turbines will be located in Rumford, 0.77 miles south of the operational Record Hill Wind Project, and within the area designated as expedited for permitting under the Maine Wind Energy Act (WEA). Project components include four wind turbine generators (GE-3.8-130 or similar machines) with a nameplate capacity of approximately 3.8 megawatts (MW) each, access roads, and overhead and underground collection lines. The project site will be accessed off Horseshoe Valley Road. The interconnection route follows the existing transmission line (located south of the northernmost turbine) to a collector substation off Route 120 in Roxbury.

The VIA applied the criteria in Section 20.5.3 of the Wind Energy Ordinance to determine whether the proposed Project would significantly compromise views from Scenic Resources of State or National Significance (SRSNS) such that the proposed facility would have an unreasonable adverse effect on the scenic character or existing uses related to the scenic character of those scenic resources. The Section 20.5.3 criteria include:

- Significance of the potentially affected Scenic Resource
- Existing character of the surrounding area
- Expectation of the typical viewer
- Purpose and context of the proposed facility
- Extent, nature and duration of potentially affected public uses
- Potential effect on the public's continued use and enjoyment
- Scale and scope of the potential effect of views of the facility from the scenic resources.

1.2 Project Visibility

Generating Facilities. There are 19 SRSNS as defined by the WEA within eight miles of the RoxWind Project. Two SRSNS will have turbine visibility: Joes Pond in Rumford and the summit of Whitecap Mountain Preserve in Rumford. Eleven of the 19 SRSNS are structures on the National Register of Historic Places (NRHP) and four of those structures are located within the Rumford Commercial Historic District. One of those NRHP structures is the Municipal Building in Rumford which may have very filtered project visibility from upper floors during leaf off seasons. Overall, there should be minimal to no project visibility from any other structures on the NRHP. See Table 1.

Associated Facilities. The associated facilities for the Project include access roads, collector electrical lines, crane roads and assembly areas, and a temporary meteorological tower. There is no Operations

[1] For more on Palmer Management Corporation and its affiliates, please visit www.palmcap.com
[2] Horseshoe Valley Wind LLC is a collaboration of Maine residents who are actively developing wind energy opportunities in their home state.

and Maintenance facility, or substation. The associated facilities will not be visible from any SRSNS. See Photosimulation 2 in Appendix B.

1.3 Overview of Conclusions

Joes Pond in Rumford is a great pond rated as 'Significant' for scenic resources in *Maine's Finest Lakes Study.* The pond is surrounded by private property, the trail leading to the pond is gated and signed as private property, and there are no public boat access sites. Vegetation will screen the project from the majority of the pond except for a small area on the southern end of the pond where portions of three turbines will be visible over 6 miles away. The Project will have low visual impact to Joes Pond.

The summit of Whitecap Mountain is privately owned. The southeastern portion of the summit is owned and managed by the Mahoosuc Land Trust (MLT) as the Rumford Whitecap Mountain Preserve, a 751 acre undeveloped parcel. The Maine Bureau of Parks and Lands holds an easement on the Preserve which provides public access via two hiking trails within the recently acquired Ellis River Conservation Area off East Andover Road in Rumford. The Preserve is not a publically owned state park or designated as a scenic viewpoint, however, we have included an assessment based on its consideration as a SRSNS within a conservation easement under the 'other comparable outstanding natural and cultural feature' criteria (See Section 3.2).

When the parcel was purchased by the MLT in 2007, using matching funds from the Land for Maine's Future program, the 360 degree scenic views from the open summit were considered important to its value (in addition to the rare and exemplary plant communities).[3] All four RoxWind turbines will be visible from the summit at distances of 3.5 to 4.2 miles. The RoxWind turbines will be seen as adjacent to and in context of the 22 existing Record Hill Wind turbines, operational in 2011, which are visible from the summit at distances of 4.6 to 7.8 miles. There is also a 91 meter communication tower with FAA lighting, visible on Black Mountain within the viewshed of the summit to the northeast. Due to the existing visible infrastructure, the overall additional visual impact to the Whitecap Mountain Preserve from the RoxWind Project will be medium - low.

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

- National Natural Landmarks
- Federally designated wilderness areas
- National or state parks
- Scenic viewpoints on public reserve lands, or trails used exclusively for pedestrian use, that have been designated by the Maine Department of Conservation. (Note: While there is a portion of the Tumbledown Unit within the 8-mile Study Area, there are no viewpoints within that portion of the Unit).
- Maine DOT scenic turnouts on a designated scenic byway
- Scenic viewpoints within the coastal area.

Associated Facilities. Preserved vegetation surrounding the crane assembly area and access roads will screen the cleared areas from view. The assembly areas and roads have been designed to minimize both environmental and visual impacts to the extent possible. The associated facilities will not be visible from any SRSNS.

[3] http://www.maine.gov/dacf/mnap/focusarea/whitecap_mountain_rumford_focus_area.pdf

Cumulative Impact. There are three existing wind power projects with overlapping 8-mile study areas with the RoxWind Project. The Record Hill Project in Roxbury (22 turbines operational in 2011) is located 0.77 miles to the north, Saddleback Wind Project (12 turbines operational in 2014) in Carthage is located 11.9 miles to the east, and the Spruce Mountain Wind Project (10 turbines operational in 2011) in Woodstock is 13.5 miles to the south of RoxWind.

- All of the SRSNS identified for the RoxWind project are within the study area for Record Hill Wind Project, however, the only SRSNS with views of both projects would be from Whitecap Mountain Preserve. The cumulative impact from Whitecap Mountain would be considered a 'Combined' cumulative visual impact because both projects would be visible within a typical cone of vision (45+/- degrees). From the summit of Whitecap, the horizontal angle of view for the existing Record Hill Wind Project is 11˚ and the proposed RoxWind project would be 6˚. Portions of the Spruce Mountain Wind, Saddleback Wind, and Canton Wind Projects are visible (at distances of 11.5, 14 and 18 miles respectively) from the summit but are not included in the cumulative impact assessment because they are beyond 8 miles of the viewpoint. (See Study Area Photographs in Appendix C.)
- Joes Pond in Rumford is a SRSNS within the Record Hill, Spruce Mountain and RoxWind Project areas but RoxWind is the only project that would be minimally visible from the pond.
- Halfmoon Pond, a great pond rated as 'Outstanding' for scenic resources in the *Maine's Finest Lake Study* in Carthage/Mexico is within the Record Hill, Saddleback Ridge and RoxWind Project study areas, but RoxWind is not visible from Halfmoon Pond.

1.4 Conclusions

Based on the proposed visual impact, the RoxWind Project will not significantly compromise views from Scenic Resources of State or National Significance, as considered under the criteria and methodologies set forth in Title 35-A, Section 3452.

2.0 INTRODUCTION

2.1 Background

Terrence J. DeWan and Associates (TJD&A), landscape architects in Yarmouth, Maine, prepared this VIA for the RoxWind Project. 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 Town of Roxbury where the turbines will be located, plus an eight-mile radius of the project which includes the towns of Rumford, Mexico, Weld, Byron, Andover, and small portions of Newry, Bethel, and the Township of Andover North Surplus. All of the towns/townships within the study area are within the area designated as expedited for permitting under the Maine Wind Energy Act (WEA). 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 mapping and design plans for the proposed Project provided by RoxWind, with input from other professional members of the design team. TJD&A created a series of viewshed maps with Esri Arc GIS software to help determine the limits of potential project visibility. See Appendix A:

- Map 1: Study Area Context
- Map 2: Project Study Area
- Map 3: Topographic Viewshed for Blades
- Map 4: Landcover Viewshed for Blades
- Map 5: Landcover Viewshed for Nacelles
- Maps 6A and 6B: Landcover Viewshed for Blades and Nacelles for Joes Pond
- Maps 7A and 7B: Landcover Viewshed for Blades and Nacelles for Halfmoon Pond
- Map 8: Cumulative Impact, Landcover Viewshed for Blades, 8-Mile Study Areas for RoxWind, Record Hill Wind, Spruce Mountain Wind, and Saddleback Ridge Wind Projects.
- Map 9: Cumulative Impact, Landcover Viewshed for Blades (8-Mile Study Areas for RoxWind)

In addition to field investigations, TJD&A used Google Earth and 3D Studio Max to further assess 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 October 19 and 26, 2016. Fieldwork concentrated on evaluating and photographing SRSNSs and other components of the visible landscape within eight miles of the turbine area. TJD&A personnel visited the study area by automobile, boat, and on foot. Fieldwork was limited to lands and waterbodies that are open to the public, and the hiking trails crossing private property to the summit of Whitecap Mountain Preserve.

Photographs of the project area were taken with a Nikon digital camera (D5500), recording at the highest resolution (fine), and set to 35mm focal length (equivalent to a 50mm 'normal' lens in a film camera). 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 C: Study Area Photographs. Photographs were also used in the preparation of the photosimulations in Appendix B for Joes Pond and Whitecap Mountain.

2.3 Viewshed Mapping and Photosimulations

Computer-generated images (i.e., viewshed analysis maps and photosimulations) have been prepared to illustrate the relationship between the scenic resources within the study area and the RoxWind Project. The analysis was used to guide fieldwork to areas of potential visibility of the Project from SRSNS and other visually sensitive areas within the viewshed. The following section describes the methodology used to develop these images:

2.3.1 Viewshed Mapping

- TJD&A prepared a topographic viewshed analysis of the eight-mile generating facility study area to determine maximum potential turbine visibility (Map 3: Topographic Viewshed for Blades). A topographic viewshed analysis was prepared using National Elevation Data from the USGS National Mapper website. This data was used to develop a DTM (Digital Terrain Model) ground surface model for the entire Study Area. The turbine specifications were provided by Palmer Management. The Visibility command found in ArcMAP was then used to determine areas where the structures could be visible from within the Study Area if the area was completely denuded. The topographic viewshed analysis is of limited value in a forested area since it does not account for the screening effects of vegetation or structures. However, it does provide a baseline understanding of where there is no possible Project visibility due to the screening effects of topography alone.

- To gain a more realistic understanding of project visibility, two additional sets of viewshed maps were prepared, using landcover cover data from the Maine Office of GIS Data Catalog, to show the effect of tree cover on Project visibility for both nacelles and blade tips. To create the maps, the DTM surface was converted to a DSM (Digital Surface Model) using Maine Land Cover Data Classifications from the Maine Office of GIS. A landcover height raster file was developed using conservative estimated heights of vegetation for land covers in the Study Area.[4]
  This raster file was overlaid on the base map to indicate where it is not likely to have Project visibility due to the screening effects of vegetation. All work was performed using ESRI ArcMap Software, Version 10.5, Basic Edition with 3D and Spatial Analyst extensions. See Appendix C: Viewshed Maps.

  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 shorelines. Map 4, 6A, 7A: Landcover Viewshed for Blades Maps shows where a viewer would see at least the blade tip of turbines within 8 miles. This map may

[4] The land cover data for Viewshed Maps 4- 9 assume that the maximum 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. 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.

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. Maps 5, 6B, and 7B: Landcover Viewshed for Nacelles Maps are more realistic in that it shows where the viewer would see nacelles plus the blades within 8 miles.

- Maps 6A and 6B Landcover Viewshed for Blades and Nacelles focus on the area around Halfmoon Pond and Rumford, and Maps 7A and 7B Landcover Viewshed for Blades and Nacelles focuses on the area around Joes Pond.

- Composite study area maps (Maps 8 and 9: Cumulative Impact, Landcover Viewshed for Blades) were prepared to evaluate potential cumulative visual impact from the combination of the existing 8-Mile Study Areas for RoxWind, Record Hill Wind, Spruce Mountain Wind, and Saddleback Ridge Wind Projects. All of the SRSNS identified for the RoxWind Project are within the study area for Record Hill Wind Project. However, the only SRSNS with views of both projects would be Whitecap Mountain Preserve. Joes Pond, a great pond rated as 'Significant' for scenic resources in the Maine's Finest Lake Study in Rumford, is the only SRSNS within the Record Hill, Spruce Mountain and RoxWind Project areas but RoxWind is the only project that would be minimally visible from the pond. Halfmoon Pond, a great pond rated as 'Outstanding' for scenic resources in the Maine's Finest Lake Study in Carthage/Mexico is within the Record Hill, Saddleback Ridge and RoxWind Project areas the RoxWind Project is not visible from the pond.

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 photosimulations were selected after evaluating relative Project visibility on the viewshed maps.

- The photosimulations (computer altered photographs) were prepared to illustrate the anticipated changes in views from the SRSNSs due to the Project. The photosimulations of the proposed Project were prepared by 1) creating a three dimensional DTM model base of the study area landscape using National Elevation Data from USGS; 2) based on turbine information provided by RoxWind and GE, inserting three dimensional models of the turbines generated in 3D Studio Max into the base model; 3) inserting associated facilities data as an AutoCAD file from Stantec into the model, 4) aligning the computer model of the Project with GPS located photographs (elevation, latitude, and longitude data) in 3D Studio Max matching the lens focal length, date and time of photograph, digital resolution, and lighting; 5) rendering a simulated perspective of the Project using 3D Studio Max. Existing visible elements in the landscape (e.g., ridgelines, roads, 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. If necessary, the images were modified in Photoshop to account for time of day, weather conditions, haze, and other environmental factors.

- 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.

- The legend in the panoramic views provides view location coordinates in latitude and longitude; view direction; date/time when the photograph was taken; camera make and model and focal length; photo source, number of visible turbines, closest visible turbine, turbine specifications and

dimensions, project map, and a photosimulation location map. The normal view also describes the distance that the viewer should hold the photosimulation from the eye to accurately replicate real-world conditions. See Appendix B.

2.3.3 Study Area Photographs

Representative photographs of the Study Area are provided in Appendix C. The location of the photographs are indicated on the Study Area Map. The photographs are provided to document the field study, supplement the narrative, and provide additional context images for the photosimulation locations.

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. In September 9, 2013, Maine DEP made changes to the guidance for Section 30 of the Site Location of Development Act Permit Application (Generating facility – Visual Quality and Scenic Character) which outlined more detailed expectations for assessments.

3.1 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. The Project will be located in an organized area, Roxbury, and thus within the Expedited Windpower Permitting Area.

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 three SRSNSs with potential PProject views are described in Section 6. Consultation with the Department of Environmental Protection in January 3,2017 confirmed the need for assessment of only publically accessible portions of SRSNS.

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. Based upon discussions with DEP staff and due to the limited amount, the associated facilities for RoxWind (access roads, collector lines, and met tower) would be reviewed under the Wind Energy Act.

4.0 PROJECT DESCRIPTION

The following section describes the visible components of the generating components of the RoxWind Project and its associated facilities.[5]

The RoxWind Project will consist of four turbines to be located in Roxbury, 0.77 miles south of the operational Record Hill Wind Project, and within the area designated as expedited for permitting under the Maine Wind Energy Act (WEA). Project components include four wind turbine generators (GE-3.8-130 or similar machines) with a nameplate capacity of approximately 3.8 megawatts (MW) each, access roads, overhead and underground collection lines, and laydown areas. The Project site will be accessed off Horseshoe Valley Road. The interconnection route follows the existing transmission line (located south of the northernmost turbine) to a collector substation off Route 120 in Roxbury.

4.1 Wind Turbines

A total of four turbines, along with associated electrical interconnection infrastructure, will be installed on North Twin Mountain in Roxbury. The elevations on North Twin Mountain range from elevation 1770 to 2135 in height above the surrounding landscape.

This assessment assumes the turbines will be GE-3.8-130 with an 85m (278.9') hub height, a rotor diameter of 130m (426.6'), and a maximum tip of blade height of 150m (492.2 feet). The turbines are controlled electronically so they will always face into the wind when operating.

[5] 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'.

The siting of individual turbines has taken into account the wind resource, site-specific topography, access road locations, and 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 be seen from SRSNS, the turbines will typically appear as light gray due to the effects of atmospheric perspective, especially on hazy or overcast days. In lower morning times, the turbines may appear a brighter white due to the more horizontal lighting.

4.2 Project Lighting

Project lighting will follow the Federal Aviation Administration (FAA) recommendations for aviation safety. Typical lighting involves the use of red lights mounted on the top of the nacelles in accordance with an FAA approved lighting design. It is anticipated that each of the four turbines will have FAA lighting. Under normal operations, the lights will be synchronous, red, flashing, with a slow-on, slow-off profile. The lights will appear similar to the FAA warning lights on the Record Hill wind project approximately 0.77 miles to the north. FAA warning lights are also present on the 91 meter communication tower located on Black Mountain, approximately 2.25 miles to the south of the Project. No SRSNSs with Project visibility within Study Area would be expected to have viewers after dark.

4.3 Access Roads

An existing access road originating from the town road (Horseshoe Valley Road) will be used to provide access to the Project. The road will be improved and widened during construction for delivery of major components. After the Project is fully commissioned, portions of the road will be allowed to revegetate to decrease the overall footprint of the Project. A ridgeline road connecting each of the turbines has been designed to avoid wetlands and habitats and minimize cut and fill slopes. Similar to the access road, the Applicant intends to revegetate portions of the cleared area after the Project is fully commissioned. In most locations the access road and ridge line road are screened by existing vegetation and will not be highly visible from outside the immediate area.

4.4 Electrical Collection System and Collector Substation

Power from the turbines will be collected in a series of 34.5 kilovolt (kV) collection lines, and connect to an existing collector substation in off Route 120 in Roxbury. An existing transmission line is located between the two northernmost turbines. The collector system that connects individual turbines will be located underground. The collection line to the substation in the valley below the turbines will be located above ground and within existing utility corridors or adjacent to roads, thereby minimizing potential visual impacts.

4.5 Meteorological Towers

One temporary meteorological (met) towers was previously installed at turbine location. No permanent full-scale met towers are planned for the site.

4.6 Crane Pads and Crane Assembly Area

A cleared and level pad area averaging 0.71 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. The average size of the clearing will be 0.97 acres. Following construction the majority of crane assembly and turbine pad areas will be allowed to naturally revegetate.

5.0 PROJECT STUDY AREA

5.1 Site Context

The visual resource study area is defined as the potential viewshed within eight miles of the Project, which is illustrated on Figure 3. It includes all of Roxbury, most of Byron, Weld, Carthage, Mexico, Rumford, Andover and portions of Newry, Bethel, Andover North Surplus and Township 6 North of Weld. The regional character is described by the existing landforms, water resources, vegetative patterns, and cultural character.

- L*andforms*. Most of the study area falls within the Mahoosuc Rangeley Lakes biophysical region of Maine.[6] The characteristic landforms within eight miles of the proposed Project are well-defined mountains and ridges rising 900 to 2,200± feet above broad valleys. The tallest peak in the Study Area is West Mountain (el. 2,783'). The tallest peak closest to the study area is Whitecap Mountain (el. 2,210). The taller peaks of Tumbledown Mountain (el. 3,068) and the adjacent Little Jackson Mountain (el. 3,434) are outside of the Project area.

  The Project will be built on North Twin Mountain (el. 2,150). A series of mountains on the east side of the Project area – Bunker Mountain (el. 1,631), Walker Mountain (el. 2,681), West Mountain (el. 2,783), Spruce Mountain (el. 2,531) and Carr Mountain (el. 1,542) define the opposite side of the Swift River valley. Record Hill (el. 2,422) and Old Turk Mountain (el. 2,425) block views to the north in Byron.

- *Water Resources*. The land on the east side of the Project site drains to the Swift River, located 1.6 miles east of the Project and parallel to Route 17 throughout its length within the study area. The river is identified by the Maine Rivers Study as having unique/significant scenic resource values. Notable scenic features on the river in the study include Coos Canyon and Swift River Falls in Byron. Topography and riparian vegetation along its banks should screen the Project from view.

  The largest water body on the west side of the Project is Ellis Pond which is part of the headwaters of the Ellis River. Little Ellis Pond is also located on the north end of the Study Area. Both of these ponds will have views of the Project, seen in context with the Record Hill Wind Project. There are a few small ponds in the vicinity – Swain Pond, and Horseshoe Pond, neither of which will have a view of the Project. There are also two small ponds within the Study Area designated as scenic in Maine's

[6] Bailey, R.G. *Description of the Ecoregions of the United States*. Miscellaneous Publication No. 1391, U.S. Department of Agriculture, Forest Service, Washington, DC. 1995.

Finest Lakes Study; Joes Pond in Rumford rated as 'Significant' and Halfmoon Pond in Carthage/Mexico rated as 'Outstanding' for scenic resources. There will be partial views of the Project from Joes Pond at a distance of 6.0+ miles. There are no Project views from Halfmoon Pond.

The Ellis River is a meandering stream located in a river valley on the west side of the Project area between Route 5 and East Andover Road. The river is noted for Canoe Touring and Historic river resource values by the Maine Rivers Study, but not for its Scenic value. The West Branch of the Ellis River, which flows into the Ellis River in Andover, is noted for its scenic river resource values by the Maine Rivers Study. Riparian vegetation will screen the Project from the Ellis River and the West Branch of the Ellis River.

- *Vegetative patterns*. The predominant forest cover in the study area is mixed second growth softwood/hardwoods. Areas north of the Project area are used for wind power and commercial timber harvesting. Areas of open agricultural land are found along both sides of Route 17 in Roxbury and Byron and along Route 5 in Andover.

- *Cultural character.* Cultural features within eight miles of the Project include the towns of Rumford (pop. 5,841)[7], Roxbury (pop. 369), Byron (pop. 145), and Andover (pop. 821); lakeside cottages on Ellis Pond in Roxbury and on Little Ellis Pond in Byron; scattered rural residential development; and intervale farms along Route 17 in Roxbury and Byron and along Route 5 in Andover. The closest residence that may have views of the turbines is approximately 0.4 miles to northwest on Route 120 as identified by Kleinschmidt Associates.

- *Recreation.* Recreational areas include gold panning and swimming at Coos Canyon in Byron; designated snowmobile and all-terrain vehicle trails throughout the study area (including ITS 117 and 82); skiing at Black Mountain Ski Resort in Rumford and a sand beach, fishing, and boating on Ellis and Little Ellis Ponds. The largest publically accessible conservation area within the Study Area is the Rumford Whitecap Mountain Preserve, owned and managed by the Mahoosuc Land Trust for passive recreation including hiking, snowshoeing, and cross country skiing. A portion (1,000+/- acres) of the Tumbledown Mount Blue Unit owned/managed by the Bureau of Parks and Lands is within the Study Area but there will be no Project views due to intervening topography.

- *Infrastructure*. There are no existing structures on the Project site other than an existing electrical distribution line owned and operated by Central Maine Power Company. The 22 Record Hill wind turbines (operational in 2011) are located 0.77 miles to the north of the Project. There are four communication towers located on Black Mountain in Rumford, approximately 2.25 miles to the south of the Project. Three of the communication towers are 60.6 meters in height, and one is 91 meters and has FAA lighting.[8]

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

[7] https://factfinder.census.gov/

[8] http://www.city-data.com/towers/cell-Rumford-Maine.html#mapFCC_Antenna_towers, http://www.cellreception.com/towers/details.php?id=1022157

of detail that an observer can differentiate at varying distances.[9] 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 RoxWind Project 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.

- **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. The summit of Whitecap Mountain Preserve is 3.5 miles from the Project, within the midground viewing zone but beyond the three-mile required review in the WEA

- **Background**: greater than 3–5 miles.[10] 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. Portions of three turbines will be minimally visible from Joes Pond at distances of 6.0 miles.

6.0 VISUAL IMPACTS ON SCENIC RESOURCES OF STATE OR NATIONAL SIGNIFICANCE

6.1 Evaluation Criteria in the Maine Wind Energy Act

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

[10] 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.)

As noted above, there are 19 SRSNSs within eight miles of the turbines and associated facilities. Section 8.2 evaluates the three resources with potential Project visibility, 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 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 or federally designated wilderness areas.

The Whitecap Mountain Preserve is included as an 'other comparable outstanding natural and cultural features in the study area', even though it is privately owned and managed by the Mahoosuc Land Trust (MLT). The Preserve was purchased using Land for Maine's Future Funds and public access is guaranteed through the Project Agreement with the Maine Bureau of Parks and Lands (MBPL). The Preserve is not a publically owned state park or designated as a scenic viewpoint.

The entire summit of Whitecap Mountain is privately owned. The northern portion is held by individuals and the southeastern portion of the summit is owned and managed by MLT as the Rumford Whitecap Mountain Preserve, a 751 acre undeveloped parcel. The Maine BPL holds an easement on the Preserve which provides for public access via two hiking trails within the recently acquired Ellis River Conservation Area off East Andover Road in Rumford.

When the parcel was purchased by the MLT in 2007, using matching funds from the Land for Maine's Future program, the 360 degree scenic views from the open summit were considered important to its value (in addition to the rare and exemplary plant communities).[11] All four RoxWind turbines will be visible from the summit at distances of 3.5 to 4.2 miles. The RoxWind turbines will be seen in context of the 22 existing Record Hill Wind turbines, operational in 2011, which are visible from the summit at distances of 4.6 to 7.8 miles. There is also a 91 meter communication tower with FAA lighting visible on

[11] http://www.maine.gov/dacf/mnap/focusarea/whitecap_mountain_rumford_focus_area.pdf

Black Mountain within the viewshed of the summit, 1.4 miles to the northeast. Due to the existing visible infrastructure, the overall additional visual impact from the summit of Whitecap Mountain from RoxWind will be low-medium.

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 are eleven structures and two Historic Districts on the National Register of Historic Places within 8 miles of the wind turbine generators. Out of the eleven structures, three are private homes with no public access (Deacon Hutchins House, John G. Coburn House and the Merrill- Poor House). None of these homes will have views of the Project due to intervening topography and vegetation.

Four of the NRHP structures are located within the designated Rumford Commercial Historic District. The NPS Nomination form designation for the Rumford Commercial Historic District notes it's significance as one of the *'few planned company towns in Maine*' and as a '*mostly intact historically dense commercial downtown with 33 buildings creating a visually cohesive grouping of commercial, governmental, and institutional buildings which generally retain a higher degree of historic integrity'.* Maps 4 and 5 Landcover Viewshed for Blades ad Nacelles indicate there is potential for full Project visibility from the District but field work has determined that of the four NRHP structures, the Municipal Building will be the only structure that may have very filtered Project views from the upper floors during leaf off seasons.[12]

None of the other 29 NRHP structures within the Rumford Commercial Historic District will have Project views due to intervening buildings and vegetation. The Strathglass Historic District in Rumford includes 50 structures, none of which will have views of the Project due to intervening vegetation. There are three 'publically' owned structures in Andover on the NRHP, two buildings (Andover Public Library and the Andover Hook & Ladder Company) and the Lovejoy Bridge crossing the Ellis River. None of the Andover NRHP structures will have views of the Project due to intervening topography and vegetation.

In reviewing the National Register nomination forms, only two structures note scenic views or landscape setting as a consideration in assessing its significance (in either Section 7 or 8). The form for the John G. Coburn house notes, "*The property consists mainly of cleared fields and pastures which provide dramatic views across the valley bottom to a broad range of mountains to the north and wes*t." The Project is located on mountains to the east of the house, and will not be visible due to intervening topography. The nomination form for the Merrill-Poor House contains a substantial description of the Merrill and Poor families, specifically Henry Poor who refurbished the home, which was used as a summer retreat, and the grounds with assistance from the noted Landscape Architect, Frederick Law Olmsted. Again, topography will screen Project views from the house. Both of these structures are privately owned and not accessible to the public.

C. National or State Parks

There are no national or state parks within the study area. The closest unit of Mount Blue State Park (on the southwestern corner of Webb Lake) is over eight miles from the closest turbine.

[12] Maps 4 and 5 Landcover Viewshed for Blades ad Nacelles overstate Project visibility from the Rumford Commercial Historic District because they do not reflect the screening effects of buildings and vegetation in between the Androscoggin River and River Street on the west side of the District.

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 two ponds in the study area that are rated as significant or outstanding for scenic quality, as determined by the Maine's Finest Lakes Study; Joes Pond in Rumford is rated as 'Significant' and Halfmoon Pond in Carthage/Mexico is rated as 'Outstanding' for scenic resources. There will be partial views of the Project from Joes Pond at a distance of 6.0+ miles. There are no Project views from Halfmoon Pond.

Joes Pond in Rumford is a shallow 20 acre pond rated as 'Significant' for scenic resources in the Maine's Finest Lakes Study. The pond is not rated for any other resources. The pond is surrounded by private property, the trail leading to the pond is gated and signed as private property, and there are no public boat access sites. There is a narrow trail around the pond. The Maine Inland Fisheries and Wildlife inventory of Joes Pond (last updated in 2001) notes the "*water quality as poor for coldwater gamefish but well suited for pickerel and hornpout*". Vegetation will screen the Project from the majority of the pond except for a small area on the southern end of the pond where portions of three turbines will be visible over 6 miles away. See Photosimulation 2 in Appendix B.

As shown on the Viewshed Maps, there are a few waterbodies in the study area that will have views of the project, (i.e., Ellis Pond, Little Ellis Pond) however, neither of these were rated for their scenic quality in the Maine's Finest Lake Study and therefore not evaluated in this 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."

The Swift River, located 1.7 miles at its closest to the east of the Project area, is identified by the Maine Rivers Study as having unique/significant scenic resource values. The Swift is rated as a "C" River in the Maine Rivers Study, which means that it has a composite of natural and recreational resource values of statewide significance. One of the most notable portions of the Swift River is the segment that flows through and carves into Coos Canyon (6.6 miles north of the Project in the Town of Byron). The wind turbines would not be visible from Coos Canyon or the immediate area surrounding the canyon.

The Gazetteer and the AMC River Guide describe the Swift River Canoe Trip (for expert canoeists, with Class I – III rapids) starting at the Route 17 bridge in Byron (below Coos Canyon) extending 13 miles south to Mexico. While Map 4: Landcover Viewshed for Blades indicates that there may be views from portions of the route in Byron, Roxbury and Rumford, it is unlikely that there would be much visual contact due to the dense streamside vegetation and intervening topography.

The Ellis River, which is five to six miles southwest of the Project area at its closest point, is rated by the Maine Rivers Study as a 'C' River (having a composite of natural and recreational resource values of statewide significance). The Ellis River is noted for Canoe Touring and Historic river resource values, but not for its Scenic value.

The West Branch of the Ellis River is also rated as a 'C' River, based upon its Geologic/ Hydrologic and Scenic river resource values. The Gazetteer describes the Cataracts on Frye Brook (a tributary of the West Branch) as a series of 'three scenic drops'. These features are beyond 11.0 miles from the closest

turbine and would not be affected by the Project. At its confluence with the main stem, the West Branch is 5.6 miles west of the Project area. The topographic viewshed map indicates there may be views from near the village of Andover but it is unlikely that there would be views due to its meandering nature and the streamside vegetation and intervening topography. Views of the turbines will be blocked by riparian vegetation and topography throughout the majority of its length.

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 designated viewpoints on trails used exclusively for pedestrian use that qualify under this section. The portion of the Tumbledown Unit within the Study Area does not include trails or viewpoints.

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.

The picnic area and parking lot at Coos Canyon are owned by the Town of Byron and were acquired with assistance of the Land for Maine's Future fund. There are no views of the Project area from the Coos Canyon picnic or parking areas. Route 17 in Roxbury (and Byron) is part of the State-designated segment of the Rangeley Lakes Scenic Byway. Byron and Roxbury chose not to be included in the National Scenic Byway Program when the corridor management plan was being developed for the Byway. The State Scenic Byway becomes a National Scenic Byway at the Byron/Township D line, 7.2 miles north of the Project as it heads to the Rangeley 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 in the coastal area.

RESOURCE	LOC	OWNERSHIP	DIST/ DIST(V)	SIZE	DEV	ACCESS	SCENIC or OTHER RATING	RC	PROJECT VISIBILITY

Table 1: Summary of Scenic Resources of State or National Significance Within the 8 Mile Study Area

RESOURCE	LOC	OWNERSHIP	DIST/ DIST(V)	SIZE	DEV	ACCESS	SCENIC or OTHER RATING	RC / MC	PROJECT VISIBILITY
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.									
1. Rumford Whitecap Mountain Preserve	Rumford	Mahoosuc Land Trust	2.4 mi 3.5 mi(V)	750 ac	UDV	Public	-	-	Yes. All 4 turbines visible. Record Hill Wind Visible.
B. A property listed on the National Register of Historic Places pursuant to the National Historic Preservation Act of 1966.									
2. Rumford Commercial Historic District	Rumford	Town of Rumford	~ 5.8 mi	Includes 33 bldgs	DV	Public	-	-	Potential from back side (west) of buildings west of Congress Street.
3. Mechanic Institute	Rumford	Town of Rumford	5.9 mi	-	DV	Public	-	-	No, due to height of buildings to the NW
4. Strathglass Building	Rumford	Private	5.8 mi	-	DV	Private	-	-	No, due to height of buildings to the NW
5. Municipal Building	Rumford	Town of Rumford	5.8 mi	-	DV	Public	-	-	Potential views from upper floors of buildings during leaf-off season
6. Rumford Falls Power Company Building	Rumford	Private	5. 9mi	-	DV	Private	-	-	No, due to height of buildings to the north.
7. Rumford Public Library	Rumford	Town of Rumford	5.7 mi	-	DV	Public	-	-	No, due to intervening structures and topography.
8. Strathglass Park District	Rumford	Private	5.4 mi	Includes 50 +/- bldgs	DV	Public	-	-	No, due to intervening topography and vegetation.
9. Deacon Hutchins House	Rumford	Private	5.9 mi	-	DV	Private	-	-	No, due to intervening topography.
10. Lovejoy Bridge	Andover	MaineDOT	5.8 mi	-	DV	Public	-	-	No, due to intervening topography and vegetation.
11. Andover Public Library	Andover	Andover	6.6 mi	-	DV	Public	-	-	No, due to intervening topography and vegetation.
12. Andover Hook & Ladder Company	Andover	Andover	6.5 mi	-	DV	Public	-	-	No, due to intervening topography and vegetation.
13. Merrill-Poor House	Andover	Private	6 mi	-	DV	Private	-	-	No, due to intervening topography
14. John G. Coburn House	Carthage	Private	7 mi	-	DV	Private	-	-	No, due to intervening topography.

C. National or State Parks ***NONE WITHIN PROJECT 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."***									
15. Joes Pond	Rumford	Public	5.7 mi 6 mi(V)	20 ac	UDV	No Public Access	"Significant" For Scenic Resources – *Maine's Finest Lakes*	1B	Yes. the nacelle of one turbine, and blades from two turbines.
16. Halfmoon Pond	Carthage/ Mexico	Public	5.7 mi	59 ac	UDV	No Public Access	"Outstanding" For Scenic Resources – *Maine's Finest Lakes*	1B	No, due to intervening vegetation.
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."									
17. Swift River	Rumford, Mexico, Roxbury, Byron	Public	1.7 mi	17.2mi Within 8 miles	DV	Public Access Boat Launch – (Mexico)	"C"- For Scenic, Hydrologic, Whitewater - *Maine Rivers Study*	-	Unlikely due to riparian vegetation.
18. West Branch of the Ellis River	Andover	Public	5.6 mi	4.3 mi Within 8 miles	DV	Public Access Boat Launch – Route 120 Andover	"C"- For Scenic, Hydrologic, Whitewater - *Maine Rivers Study*	-	Unlikely due to riparian vegetation.
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.									
19.Tumbledown Mount Blue Public Reserve Land[1]	T6 North of Weld	MBPL	6.6 mi	9,000ac (1,000ac within 8 mi)	UDV within 8 mi	Public	All viewpoints within are considered SRSNS	-	No views within 8 mi.
G. A scenic turnout on a scenic highway constructed by the Department of Transportation. ***NONE WITHIN PROJECT AREA***									
H. Scenic viewpoints located in the coastal area that are ranked as having statewide significance or national importance in terms of scenic quality. ***NONE WITHIN PROJECT AREA***									

KEY	
DIST/DIST(V)	DIST: Distance to the Project from the closest boundary of the resource. DIST (V): Distance to the Project from the closest area of Project visibility within the resource.
DEV: DV or UDV	DV: Development on or adjacent to the resource. UDV: Undeveloped.
ACCESS	Public Access, Private Access, or No Public Access/Inaccessible
SCENIC or OTHER RATING	<u>*Maine Wildlands Lake Assessment & Maine's Finest Lakes:*</u> "Significant i.e. met a predetermined minimum standard of significance, or Outstanding i.e. clearly of Statewide importance due to unique or otherwise noteworthy characteristics." <u>*Maine Rivers Study:*</u> "Rivers and river-related corridors or specific areas on the "C" list possess a composite natural and recreational resource value with state-wide significance."

RC	Resource Class from *Maine Wildlands Lakes Assessment* and *Maine Lakes Study* 1B: Lakes of Statewide significance with a single outstanding natural value. 2: Lakes of regional significance (no outstanding values but at least one significant resource value). Note that lakes and ponds smaller than 10 acres do not have a resource assessment. (-)
PROJECT VISIBILTY	Project visibility based on viewshed mapping, fieldwork and 3D modeling / cross sectional analysis.
NOTES	[1] The Tumbledown/Mount Blue Public Reserve Land is part of the Tumbledown Mountain Unit (aka. T6 North of Weld Unit). All scenic viewpoints of state or national significance with potential visibility are outside of 8 miles from the proposed Project.

7.0 ASSOCIATED FACILITIES IN THE TURBINE AREA

The associated facilities for the RoxWind Project reviewed under the Wind Energy Act include access and ridgeline roads, electrical collector lines, crane pads and assembly areas, and a meteorological tower.

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.

7.3 Visual Impacts from Associated Facilities in the Turbine Area

7.3.1 Access Roads

The Project will utilize an existing access road originating on Horseshoe Valley Road. A ridgeline access road will connect the four turbine sites. Portions of the access road will need to be widened and upgraded to accommodate equipment and turbine component delivery. See access road plans and profiles by Stantec. In most locations the access road will be screened by existing vegetation and will not be highly visible from outside the immediate area. The access roads will not be visible from any SRSNS.

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 off Route 120 in Roxbury. The majority of the collector system will be located underground, along the ridgeline and, when above ground, alongside an existing transmission line, thereby minimizing its potential visual impact. The structures used for the electrical collection will not be visible from any SRSNS.

7.3.3 Crane Pads and Crane Assembly Area

A cleared and level pad area averaging 0.71 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. The average size of the clearing will be 0.97 acres. Following construction the majority of crane assembly and turbine pad areas will be allowed to naturally revegetate. Preserved vegetation surrounding the crane assembly area will screen the cleared areas. The assembly areas and roads have been designed to minimize both environmental and visual impacts to the extent possible. The crane assembly and turbine pad areas will not be visible from any SRSNS.

7.4 Conclusion

The associated facilities reviewed under WEA for the RoxWind Project 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 EVALUATION

8.1 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 2 is based upon the information provided in the Visual Impact Assessment and the form of recent indicator-based evaluations of Maine wind projects performed by Dr. James F. Palmer[13].

8.2 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 2 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.

Rumford Whitecap Mountain Preserve. The Preserve is privately owned and managed by the Mahoosuc Land Trust and therefore does not have a state or federal designation. The land was purchased partially with Land for Maine's Future (LMF) funds and MBPL holds the easement to guarantee public access. The LMF Fund Project Agreement, dated March 15, 2007, describes the Project scope to include "*the premises include land leading up to and on a bald summit that will be managed by the Trust as a hiking, snowshoeing, and skiing destination of* ***regional*** *significance and to conserve the ecological significance of the premise*." [emphasis added]. The resource significance is assigned a rating of Medium due to its regional significance verses state or national significance.

Historic Resources: There is only one NRHP historic structure with possible Project views; the Municipal Building in Rumford. As described above, the views would be very limited due to intervening vegetation. While the Municipal Building is on the National Register and publically accessible, the NPS Nomination Form did not discuss how the landscape setting affected their designation or value. The resource significance rating for this site would be Low, based on its evaluation of local significance on the nomination form. However, we have elevated the rating to Medium acknowledging the structures inclusion in the recently designated Rumford Commercial Historic District which places more emphasis on the setting in which all the structures are in relation to each other.

[13] 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.

There are only two historic resources within the Study Area that mention the landscape setting in the project description on the NPS Nomination Form, the John G. Coburn House and the Merrill-Poor House. Because those two resources are privately owned with no public access, a low significance rating would be assigned. Neither of the homes has Project views so they are not included in Table 2.

Joes Pond resource significance is assigned a rating of Medium because of its 'Significant' rating. (An 'Outstanding' rating would be rated as High.)

B. Character of Surrounding Area: This criterion evaluates the setting of the resource and its surrounding area.

The setting for the summit of Whitecap Mountain Preserve is located within a mountainous region of Oxford County with numerous higher elevation mountains to the north and east. The Preserve protects and provides public access to the southern side of the summit while the northern portion is private property. The summit is accessed by two trails that originate on East Andover Road in Andover and pass through the recently protected Ellis River Conservation Area (by Mahoosuc Land Trust in 2017). The northern trail (The Starr Trail) includes a scenic view to the northwest about a mile before the summit. This viewpoint is on private property and does not include views of any windpower projects. (See Photos 61 and 62 in Appendix C.) The summit itself is mostly open ledge outcrops with scattered softwoods that range from 3' to 15'. The trees do not significantly block views in any direction. The Preserve contains several natural plant communities including part of the largest red pine woodland in the state. The summit is a popular local picnicking and berry picking location. From the summit there are views of the Record Hill wind project at distances of 4.6 to 7.8 miles, a communication tower with FAA lighting on Black Mountain at a distance of 1.4 miles, and views of Spruce Mountain, Saddleback, and Canton Wind projects in the background. Considering the views of the infrastructure, the character of the surrounding area of the Preserve is rated as Medium.

The Municipal building in Rumford is positioned prominently in between Congress Street and the River Road on the northern edge of the Rumford Commercial Historic District. The 2 1/2 story structure was built in 1916, has a clock tower, and is noted in its Historic Preservation Survey/ nomination form as having, *" Neo-classical elements including the denticulated façade portico in the modified Doric Order and a Palladian window with swags above."* The nomination form does not mention its landscape setting as significant in its architectural value. Rumford Commercial Historic District comprises 33 building on the Rumford Island and as noted previously is significant as an example of a one of the *'few planned company towns in Maine*'. Considering its location within the Historic District, the character of surrounding area of the Municipal Building is rated as Medium.

The setting of Joes Pond is characterized by the undeveloped shoreline and the mixed hardwood and softwood vegetation surrounding the shallow 20 acre pond. Small areas of exposed ledge are visible along the shoreline. The pond runs north/south and is 2,100' +/- long and 630'+/- at its widest. The topography immediately surrounding the pond is defined by Glass Face Mountain to the west (el. 1,910) and mountains to the north and east with elevations of 2,000' to 1,400' (approximately 200' to 700' above the pond elevation of 1,245') which create visual interest. There are no distant views from the pond. The trails leading to the pond are gated and signed as private property. There is evidence of limited boat use (canoe stored in the woods) and a narrow path around the pond. Due to the pond being rated as 'Significant' for scenic resources in the Maine's Finest Lake Study (verses 'Outstanding'), the character of the surrounding area of Joes Pond is rated as Medium.

C. Viewer Expectation: There are a limited number of viewer groups, primarily recreational users, who will see the Project from the three SRSNS with Project views and possibly be affected by the change in

visual character. These include the following.

The summit of the Whitecap Mountain Preserve is a popular hiking destination affording panoramic views of the surrounding mountains. While hikers are expected to have higher expectations for scenic views, the experience on Whitecap is modified by views of four existing wind power projects and the 91 meter- lattice communication tower with FAA lighting on Black Mountain (1.4 miles to the northeast) from the summit. While three of the projects are in the background, 22-turbine the Record Hill Wind project is within the midground viewing distance and highly visible. The proposed RoxWind Project would be one mile closer to the viewer than the closest Record Hill Wind turbine. Considering the existing visible infrastructure, viewer expectations for Whitecap Mountain Preserve are rated as Medium.

Visitors and workers within the Municipal Building in Rumford are anticipated to have low viewer expectations for views from the upper floor windows on the northwest side of the building. The Rumford Police Station is located on the back side of the building off River Street and faces the river. Views from the building focus towards the Androscoggin River on the west and Congress Street on the east.

Boaters on Joes Pond are expected to have a high expectation of visual quality for an undeveloped pond rated as 'Significant' for scenic resources. However, the number of boaters is anticipated to be relatively low due to the lack of public access. People who fish Joes Pond are also expected to have relatively high expectations of scenic quality. The presence of the proposed RoxWind Project in the background viewing distance will be minimally noticeable to both recreational boaters and anglers. The Project will only be visible from the southern end of the pond due to shoreline vegetation. The Project would occupy a 3˚ view out of the 360˚ foreground view from the middle of the pond. Viewer expectations for Joes Pond are rated as High.

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 contribution toward achieving the State's energy goals and it will be seen in the context of three (four including Canton) other constructed wind energy projects (i.e., Record Hill, Saddleback, Spruce Mountain projects).

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, and typical length of stay. The Whitecap Mountain Preserve was rated as Medium, based upon field observations, documented use on websites and blogs, and a review of the LMF Project Agreement. The Mahoosuc Land Trust recently acquired the Ellis River Conservation Area to further protect public access to the Whitecap Mountain Preserve.

The Municipal Building is rated as Low; the building is used by the public but views from the upper floor windows are not expected to be one of the reasons for public use.

There are no publically available records that quantify the number of people that typically use Joes Pond. Based upon lack of public access, low evidence of use observed during field observation, and research, Joes Pond was rated as Low. Those using the resource for boating and fishing have the ability to position themselves on the pond where there are no Project views.

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

E.2. Effect on continued use and enjoyment: A user intercept survey was not prepared for the RoxWind due to the limited scope and potential effect. The effect to the continued use and enjoyment for hikers at the summit of Whitecap Mountain Preserve should be Low based on the high level of continued use even after the installation of visible wind projects (Record Hill and Spruce Mountain Wind projects in 2011 and the Saddleback Project in 2014). LMF has continued to support efforts by the Mahoosuc Land Trust to secure public access to the summit with the recent purchase of the Ellis River Conservation Area in 2017, which includes trail access from East Andover Road to the Whitecap Mountain Preserve.

The effect to the continued use and enjoyment for anglers and boaters on Joes Pond should be Low. The Project turbines will be seen as relatively small objects on the horizon, just above the tree line. None of the turbines will block views of the surrounding low hills.

There is no expected effect on the continued use of the Municipal Building in Rumford.

F. Scope and scale of Project views/ Visual Impact: A rating of Medium - Low was assigned to the Whitecap Mountain Preserve since all four turbines will be visible but at midground distances of 3.5 to 4.2 miles. The majority of the turbines will be viewed in front of wooded hillsides with the potential for a high degree of color contrast. The turbines will be sited along the ridgeline and will appear similar form and pattern with the existing Record Hill turbines on Partridge Peak. The change in vegetation and minimal views of associated facilities will have a minimal contrast in line. At midground viewing distances, the smooth texture of the turbines vs wooded texture would not be a significant factor. The overall scale contrast will range from minimal to moderate. The turbines will be subordinate to (will not dominate or co-dominate) the surrounding mountains, similar to the existing Record Hill turbines when viewed from the summit. See Photosimulation 1 in Appendix B.

For Joes Pond, the scope and scale of the view was rated as Low, since only portions of three turbines would be visible above the shoreline vegetation at a distance of 6.0+ miles. The turbines would be seen against the sky which will reduce the overall contrast in color. The turbines will be seen in context with large pines with similar line and form to the wind turbines. The associated facilities will not be visible from Joes Pond, further minimizing potential contrast in line. At background viewing distances, the smooth texture of the turbines vs wooded texture will not be a factor. The overall scale contrast will be minimal. The turbines will be insignificant in spatial dominance to the surrounding vegetation and pond. See Photosimulation 2 in Appendix B.

A rating of Low/None was assigned to the Municipal Building in Rumford because of its minimal Project views. There are no anticipated contrast in color, form, line or texture. The turbines would have no scale contrast and would be considered insignificant for spatial dominance if visible from 6.0 miles away. See Study Area Photographs in Appendix C.

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. Potential Project scenic impact from Whitecap Mountain Preserve will be Low to Medium. Potential Project scenic impact from Joes Pond will be Low. Potential Project scenic impact from the Municipal Building in Rumford will be Low to None. The overall scenic impact of the proposed RoxWind Project will be Low.

9.0 CUMULATIVE VISUAL IMPACTS

The Site Location of Development Application guidance 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.*

There are three existing wind power projects with overlapping 8-mile study areas with the RoxWind Project. The Record Hill Project in Roxbury (operational in 2011) is located 0.77 miles to the north, Saddleback Wind Project (operational in 2014) in Carthage is located 11.9 miles to the east, and the Spruce Mountain Wind Project (operational in 2011) in Woodstock is 13.5 miles to the south of RoxWind. The applicant is not considering any other projects within the Study Area. See Map 8 Cumulative Impact, Landcover Viewshed for Blades.

- All of the SRSNS identified for the RoxWind Project are within the study area for Record Hill Wind Project, however, the only SRSNS with views of both projects would be from Whitecap Mountain Preserve. Record Hill Wind Project is visible at distances of 4.6 to 7.8 miles from Whitecap and RoxWind would be visible at distances of 3.5 to 4.2 miles.
- The cumulative impact from Whitecap Mountain would be considered a 'Combined' cumulative visual impact because both projects would be visible within a typical cone of vision (45+/- degrees). From the summit of Whitecap, the horizontal angle of view for the existing Record Hill Wind Project is 11˚ and the proposed RoxWind Project would be 6˚, with approximately 8˚ between them (for a total of 25˚). The panoramic view from the summit of Whitecap Mountain Preserve is a 360 ˚ view and the Record Hill Wind Project currently occupies 3% of the view. The total proposed width including RoxWind would be 7% of the total view.
- Portions of the Spruce Mountain Wind, Saddleback Wind, and Canton Wind Projects are visible (at distances of 11.5, 14 and 18 miles respectively) from the Whitecap Mountain summit and viewpoints below the summit. All of those projects are beyond 8 miles from the summit and are not included in the cumulative assessment. For reference, Spruce Mountain occupies 6˚, Saddleback Wind occupies 5˚, and Canton occupies 3˚ of the total view. (See Study Area Photographs in Appendix C.)
- Joes Pond in Rumford is a SRSNS within the Record Hill, Spruce Mountain and RoxWind Project areas but RoxWind is the only project that would be minimally visible from the pond. Halfmoon Pond in Carthage/Mexico is within the Record Hill, Saddleback Ridge and RoxWind Project areas but Saddleback Ridge Project is the only project that would be minimally visible from the pond. RoxWind will not be visible from Halfmoon Pond.

10.0 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. In summary,

- Visibility from Joes Pond will be minimal due to the screening affects of shoreline vegetation and the viewing distance of more than 6.0 miles.
- There will be minor additional cumulative visual effect on Whitecap Mountain with the combined views of the RoxWind Project turbines and Record Hill Wind Project.
- The turbines and associated facilities will not be visible from most if not all of the structures on the National Register of Historic Places within eight miles of the Project.
- Project views will be screened from view along scenic rivers by riparian vegetation.
- The associated facilities will not be visible from any scenic resources of state or national significance.

Table 2.

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	
A. Conservation area/other comparable feature								
Whitecap Mtn Preserve, Rumford	Medium	Medium	Medium	Low	Medium	Low	Medium-Low	Low-Medium
B. Structure on NRHP								
Municipal Building, Rumford	Medium	Medium	Low	Low	Low	Low/ None	Low	Low to None
D.1. Great Pond in MFLS								
Joes Pond, Rumford	Medium	Medium	High	Low	Low	Low	Low	Low

This information was used to make a determination that the generating facilities and the associated facilities in the turbine area (i.e., the access roads and the above and underground electrical collection system) 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.

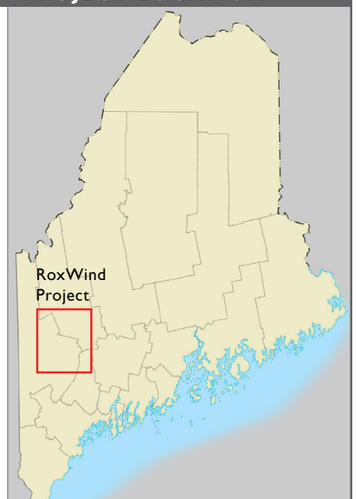
ROXWIND PROJECT

MAP 1
STUDY AREA CONTEXT

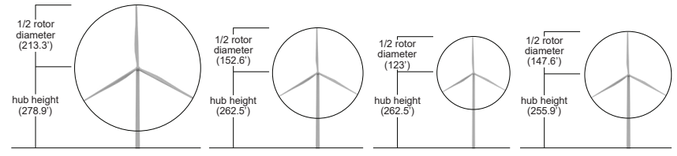
LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Saddleback Ridge Turbine (operating)
- Spruce Mountain Turbine (operating)
- Township
- County Boundary
- Conservation Land
  - WMA (Wildlife Management Area)
  - BPL (Bureau of Parks and Lands)
  - IF&W (Inland Fisheries and Wildlife)
  - MWO (Maine Woodland Owners)
  - ALT (Androscoggin Land Trust)
  - WFLT (Woodland Owners Association of Maine)
  - MLT (Mahoosuc Land Trust)
  - MFT (Maine Farmland Trust)
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding or Significant
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

PROJECT LOCATION



TURBINES



RoxWind
GE 3.8MW

Record Hill
Siemens 93 2.3MW

Saddleback Ridge
GE 2.8MW

Spruce Mountain
Gamesa G90 2.0MW

NOTES

- RoxWind Project turbine layout dated February 9, 2018
- World Street Map last updated January 2018
- Interconnected Trail System (ITS) from Northern Geomantics dated 2013
- Conservation Land, townships, county boundaries, boat launches, and roads from ME OGIS
- Structures on National Register of Historic Places from the National Park Service
- ATV trails from Department of Agriculture, Conservation and Forestry

NORTH

0 1 2 3 6

MILES

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Appendix A
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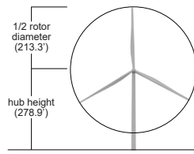
ROXWIND PROJECT

MAP 2
PROJECT STUDY AREA

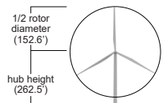
LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

TURBINES



RoxWind GE 3.8MW



Record Hill Siemens 93 2.3MW

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Appendix A
March 13, 2018

NORTH
0 1 2
MILES

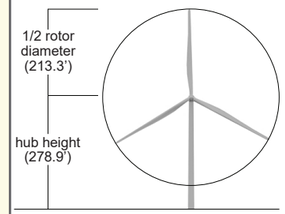
ROXWIND PROJECT

MAP 3
TOPOGRAPHY VIEWSHED FOR BLADES

LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

TURBINE



RoxWind
GE 3.8MW

TURBINE VISIBILITY

- 1 Turbine Visible
- 2 Turbines Visible
- 3 Turbines Visible
- 4 Turbines Visible

VIEWSHED NOTES

This viewshed map:

- Accounts for the screening effects of topography only.
- Shows where the viewer may see at least blade tips if no vegetation was present.
- Accounts for RoxWind Project visibility only.

Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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NORTH
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MILES

Appendix A
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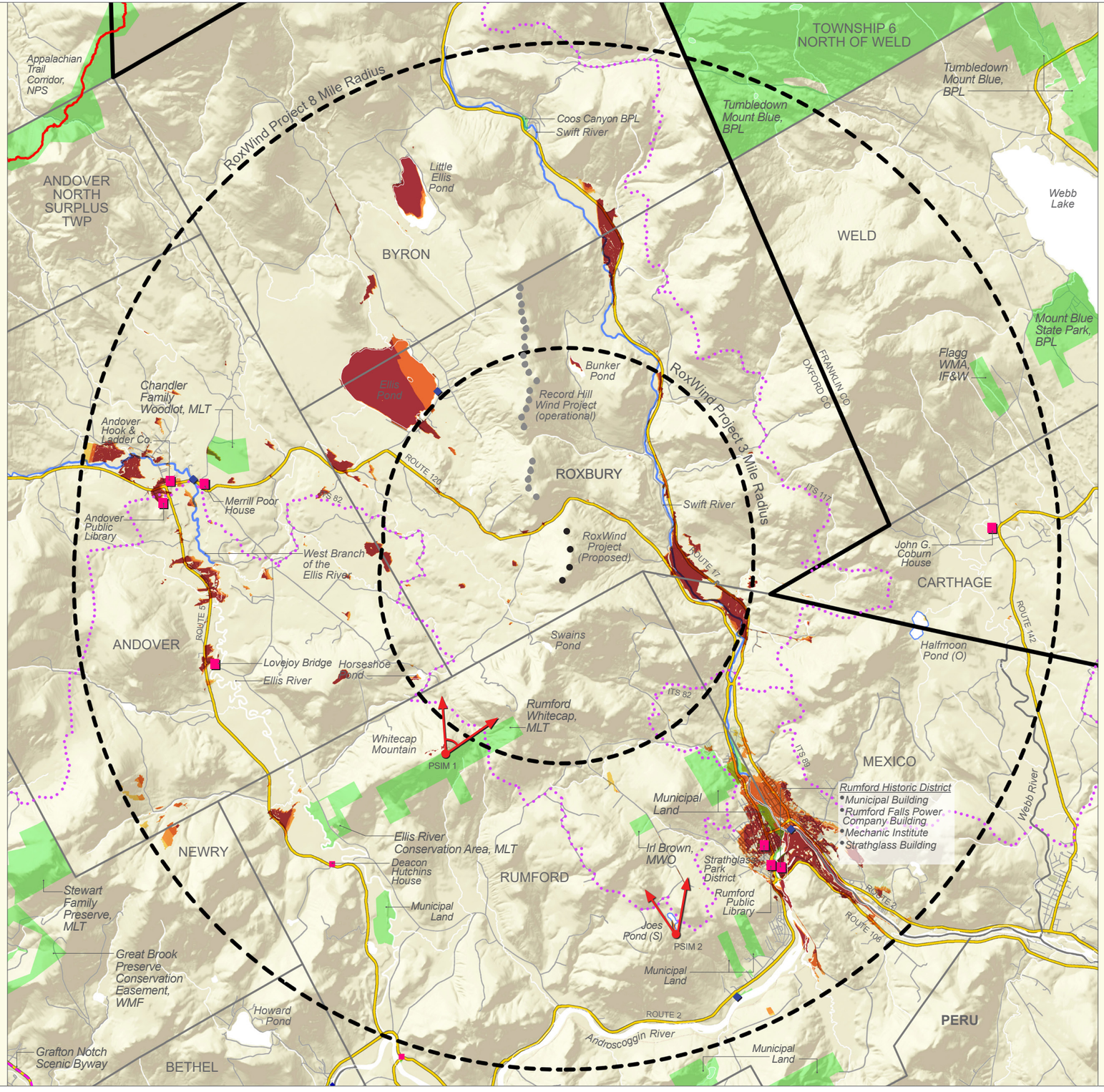
ROXWIND PROJECT

MAP 4
LANDCOVER VIEWSHED FOR BLADES



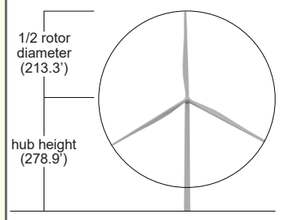
NORTH

0 1 2 MILES

LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

TURBINE



RoxWind
GE 3.8MW

TURBINE VISIBILITY

- 1 Turbine Visible
- 2 Turbines Visible
- 3 Turbines Visible
- 4 Turbines Visible

VIEWSHED NOTES

This viewshed map:

- Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data.
- Shows where the viewer may see at least blade tips if vegetation was present.
- Accounts for RoxWind Project visibility only.

Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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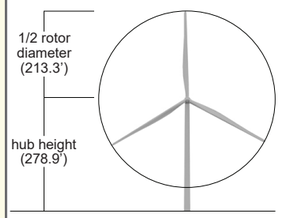
ROXWIND PROJECT

MAP 5
LANDCOVER VIEWSHED FOR NACELLES

LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

TURBINE



RoxWind
GE 3.8MW

TURBINE VISIBILITY

- 1 Turbine Visible
- 2 Turbines Visible
- 3 Turbines Visible
- 4 Turbines Visible

VIEWSHED NOTES

This viewshed map:

- Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data.
- Shows where the viewer may see nacelles if vegetation was present.
- Accounts for RoxWind Project visibility only.

Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

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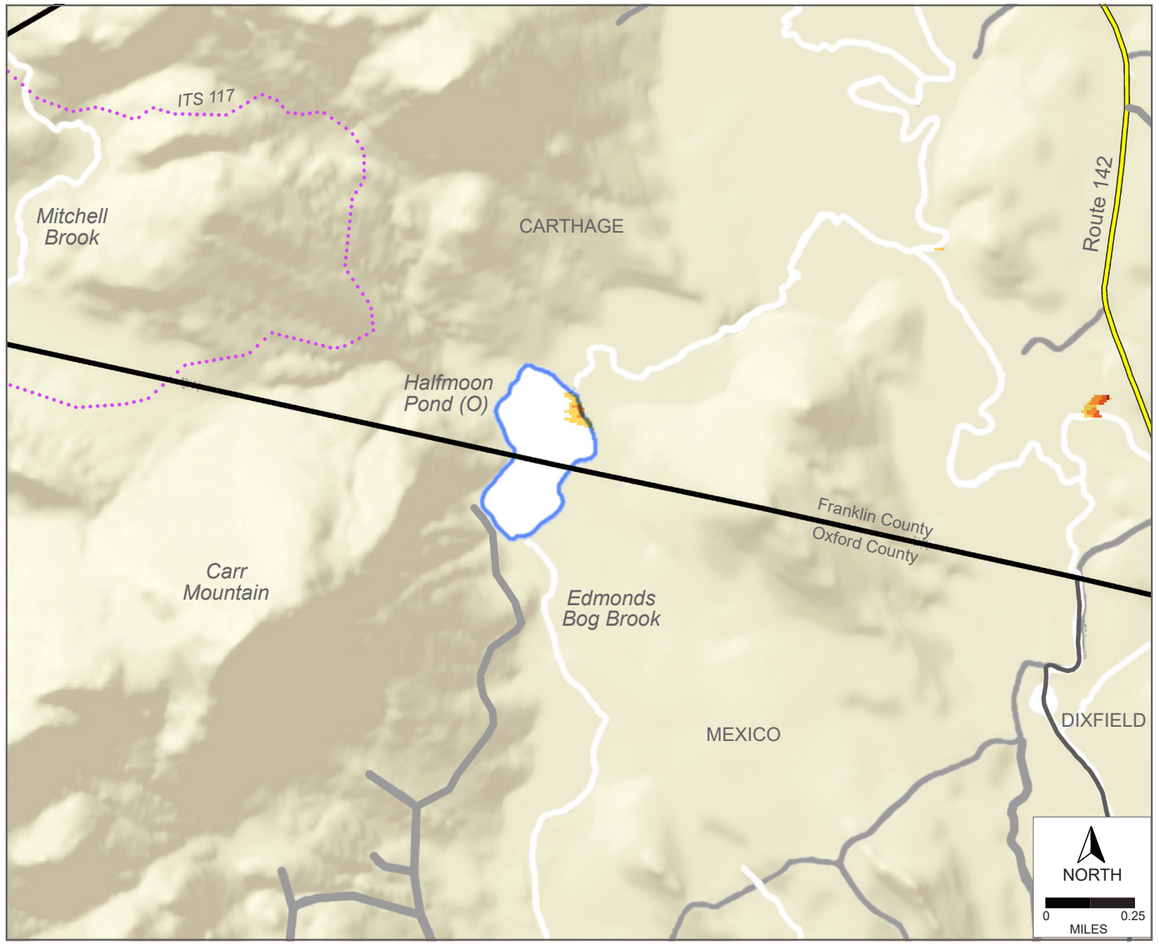
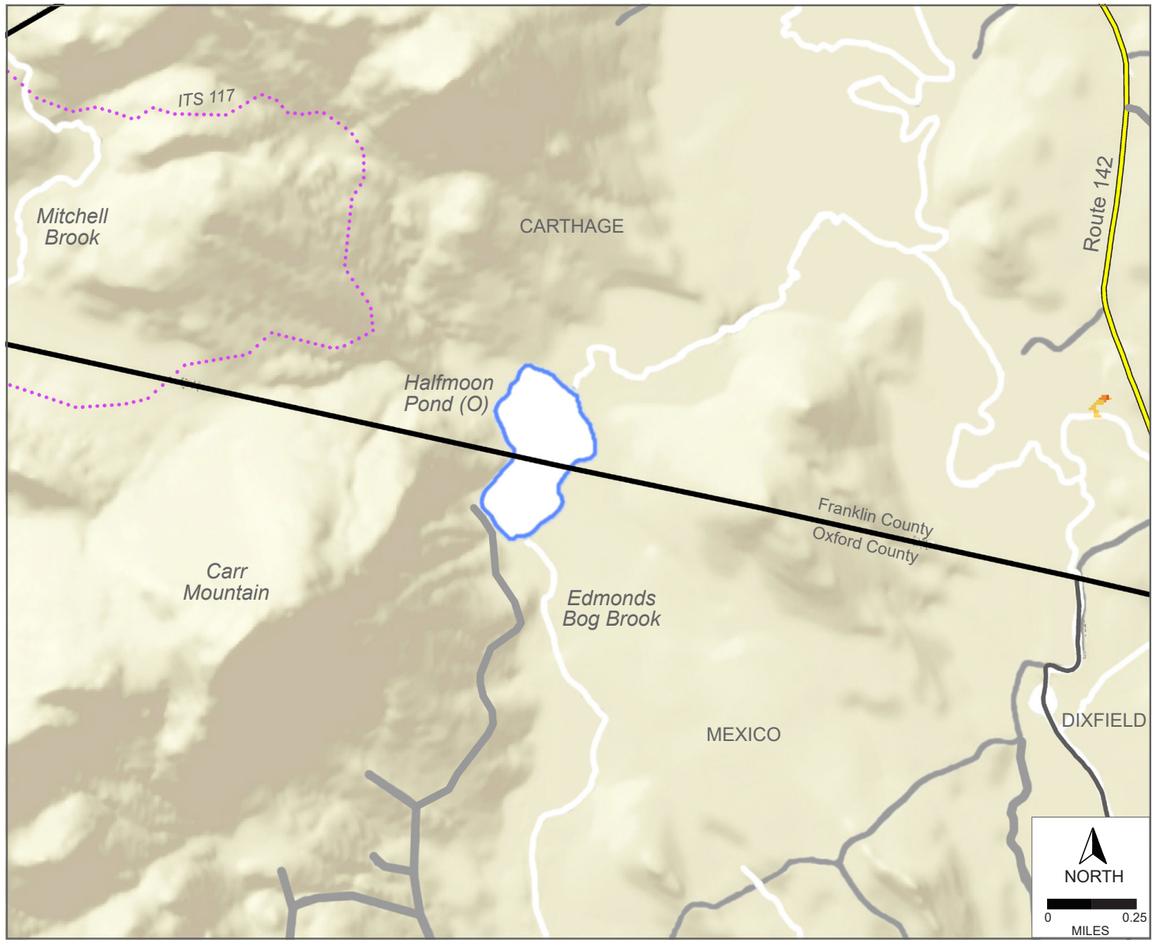
NORTH
0 1 2
MILES



MAP 6A • LANDCOVER VIEWSHED FOR BLADES



MAP 6B • LANDCOVER VIEWSHED FOR NACELLES

TURBINE VISIBILITY	VIEWSHED NOTES
1 Turbine Visible 2 Turbines Visible 3 Turbines Visible 4 Turbines Visible	**This viewshed map:** • Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data. • Shows where the viewer may see at least blade tips if vegetation was present. • Accounts for RoxWind Project visibility only. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

TURBINE VISIBILITY	VIEWSHED NOTES
1 Turbine Visible 2 Turbines Visible 3 Turbines Visible 4 Turbines Visible	**This viewshed map:** • Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data. • Shows where the viewer may see nacelles if vegetation was present. • Accounts for RoxWind Project visibility only. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

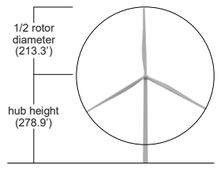
ROXWIND PROJECT

ENLARGEMENTS

LANDCOVER VIEWSHEDS FOR BLADES AND NACELLES

TURBINE SPECIFICATIONS

RoxWind
GE 3.8MW



LEGEND

- Township
- County Boundary
- Great Pond: rated as Outstanding (O) or Significant (S)
- ITS - Interconnected Trail System
- Major Roads

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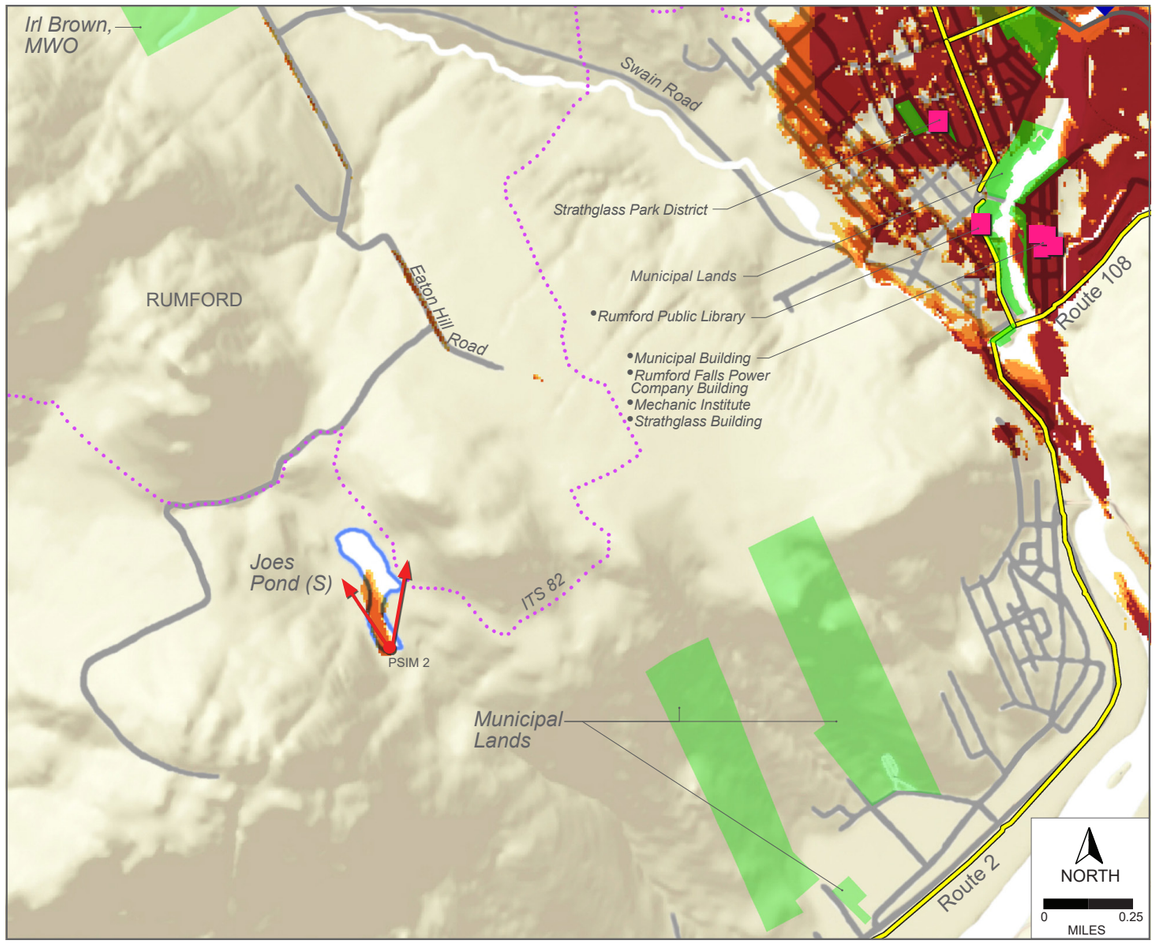
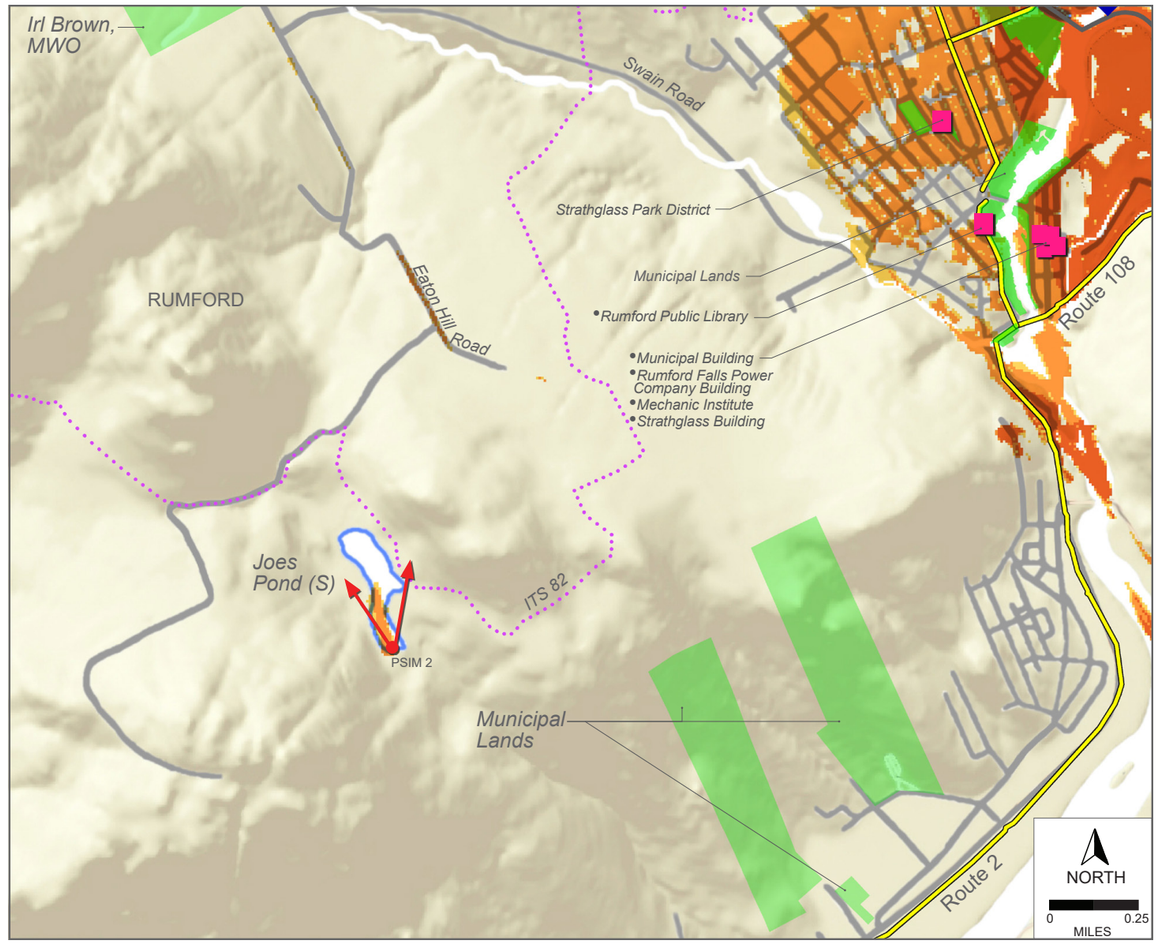


MAP 7A • LANDCOVER VIEWSHED FOR BLADES

TURBINE VISIBILITY	VIEWSHED NOTES
1 Turbine Visible 2 Turbines Visible 3 Turbines Visible 4 Turbines Visible	**This viewshed map:** • Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data. • Shows where the viewer may see at least blade tips if vegetation was present. • Accounts for RoxWind Project visibility only. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.



MAP 7B • LANDCOVER VIEWSHED FOR NACELLES

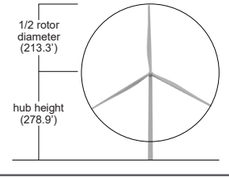
TURBINE VISIBILITY	VIEWSHED NOTES
1 Turbine Visible 2 Turbines Visible 3 Turbines Visible 4 Turbines Visible	**This viewshed map:** • Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data. • Shows where the viewer may see nacelles if vegetation was present. • Accounts for RoxWind Project visibility only. Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

ROXWIND PROJECT

ENLARGEMENTS
LANDCOVER VIEWSHEDS FOR BLADES AND NACELLES

TURBINE SPECIFICATIONS

RoxWind
GE 3.8MW



LEGEND

- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- ITS - Interconnected Trail System
- Major Roads
- Photosimulation Location

RoxWind LLC.

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ROXWIND PROJECT

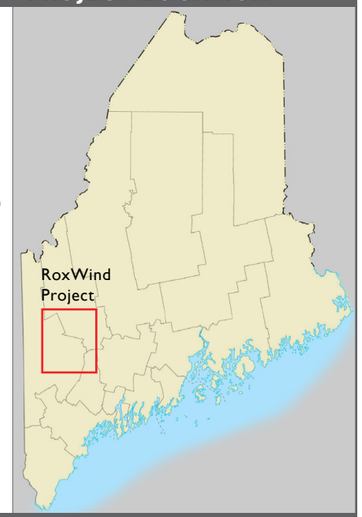
MAP 8

CUMULATIVE IMPACT • LANDCOVER VIEWSHED FOR BLADES

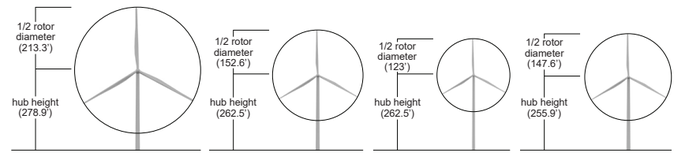
LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Saddleback Ridge Turbine (operating)
- Spruce Mountain Turbine (operating)
- Township
- County Boundary
- Conservation Land
  - WMA (Wildlife Management Area)
  - BPL (Bureau of Parks and Lands)
  - IF&W (Inland Fisheries and Wildlife)
  - MWO (Maine Woodland Owners)
  - ALT (Androscoggin Land Trust)
  - WFLT (Woodland Owners Association of Maine)
  - MLT (Mahoosuc Land Trust)
  - MFT (Maine Farmland Trust)
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding or Significant
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

PROJECT LOCATION



TURBINES



RoxWind
GE 3.8MW

Record Hill
Siemens 93 2.3MW

Saddleback Ridge
GE 2.8MW

Spruce Mountain
Gamesa G90 2.0MW

TURBINE VISIBILITY

- RoxWind Turbine(s) Visible
- Record Hill Turbine(s) Visible
- Saddleback Ridge Turbine(s) Visible
- Spruce Mountain Turbine(s) Visible
- RoxWind and Saddleback Ridge Turbine(s) Visible
- RoxWind and Record Hill Turbine(s) Visible

VIEWSHED NOTES

This viewshed map:

- Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data.
- Shows where the viewer may see at least blade tips if vegetation was present.
- Accounts for the visibility of RoxWind, Record Hill Wind, Saddleback Ridge and Spruce Mountain Wind Projects.

Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

NOTES

- RoxWind Project turbine layout dated February 9, 2018
- World Street Map last updated January 2018
- Interconnected Trail System (ITS) from Northern Geomantics dated 2013
- Conservation Land, townships, county boundaries, boat launches, and roads from ME OGIS
- Structures on National Register of Historic Places from the National Park Service
- ATV trails from Department of Agriculture, Conservation and Forestry

NORTH

0 1 2 3 6

MILES

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Appendix A
March 13, 2018

ROXWIND PROJECT

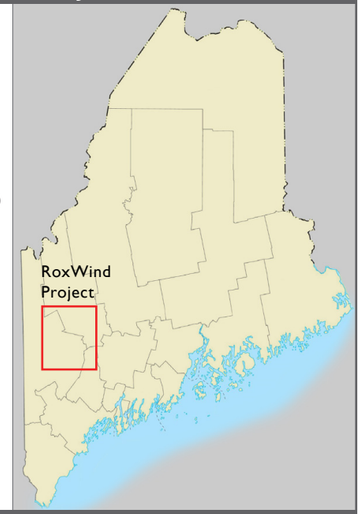
MAP 9

CUMULATIVE IMPACT • LANDCOVER VIEWSHED FOR BLADES

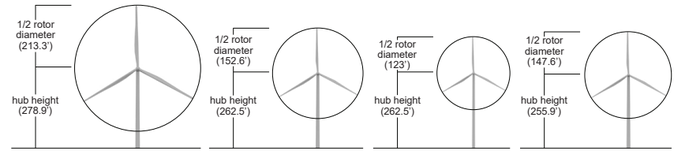
LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Saddleback Ridge Turbine (operating)
- Spruce Mountain Turbine (operating)
- Township
- County Boundary
- Conservation Land
  - WMA (Wildlife Management Area)
  - BPL (Bureau of Parks and Lands)
  - IF&W (Inland Fisheries and Wildlife)
  - MWO (Maine Woodland Owners)
  - ALT (Androscoggin Land Trust)
  - WFLT (Woodland Owners Association of Maine)
  - MLT (Mahoosuc Land Trust)
  - MFT (Maine Farmland Trust)
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding or Significant
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location

PROJECT LOCATION



TURBINES



RoxWind
GE 3.8MW

Record Hill
Siemens 93 2.3MW

Saddleback Ridge
GE 2.8MW

Spruce Mountain
Gamesa G90 2.0MW

TURBINE VISIBILITY

- RoxWind Turbine(s) Visible
- Record Hill Turbine(s) Visible
- Saddleback Ridge Turbine(s) Visible
- Spruce Mountain Turbine(s) Visible
- RoxWind and Saddleback Ridge Turbine(s) Visible
- RoxWind and Record Hill Turbine(s) Visible

VIEWSHED NOTES

This viewshed map:

- Accounts for the screening effects of topography as well as existing vegetation. Landcover data from Maine OGIS. The maximum heights for forest cover is 40'. See Narrative for details of landcover data.
- Shows where the viewer may see at least blade tips if vegetation was present.
- Accounts for the visibility of RoxWind, Record Hill Wind, Saddleback Ridge and Spruce Mountain Wind Projects.

Potential turbine visibility needs to be confirmed with field investigations and other visualization techniques.

NOTES

- RoxWind Project turbine layout dated February 9, 2018
- World Street Map last updated January 2018
- Interconnected Trail System (ITS) from Northern Geomantics dated 2013
- Conservation Land, townships, county boundaries, boat launches, and roads from ME OGIS
- Structures on National Register of Historic Places from the National Park Service
- ATV trails from Department of Agriculture, Conservation and Forestry

NORTH

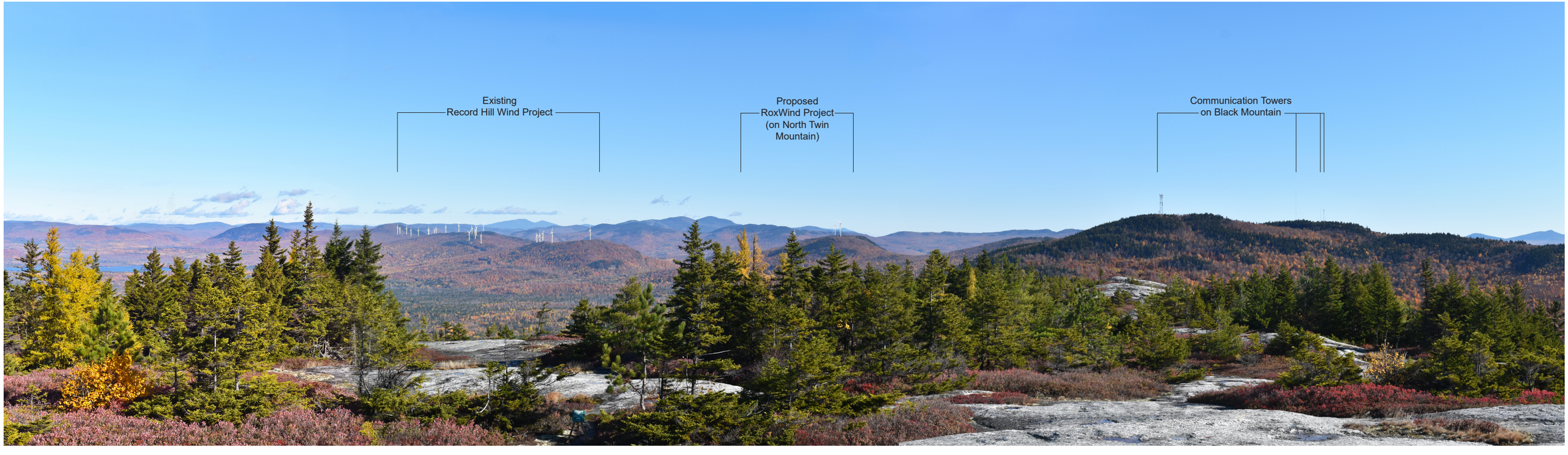
0 1 2

MILES

RoxWind LLC.

tjd&a

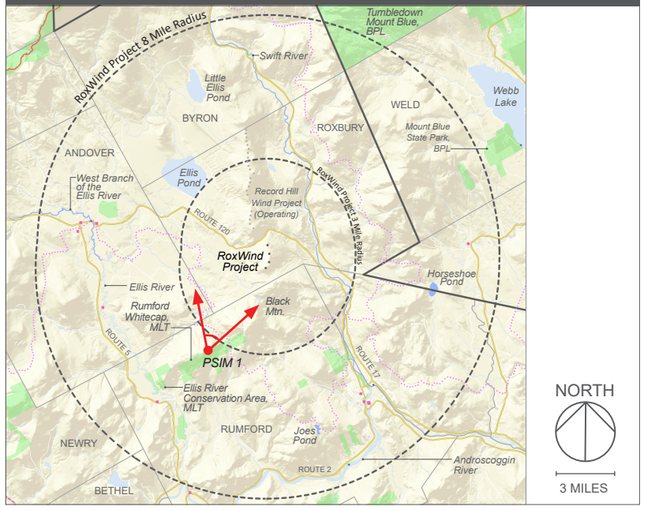
Appendix A
March 13, 2018



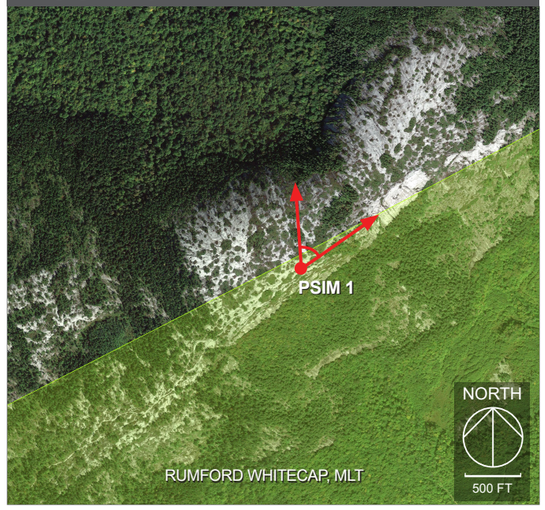
VIEW DESCRIPTION

Panoramic view looking northeast from the summit of Whitecap Mountain in Rumford. This viewpoint is located on the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust. All 22 Record Hill Wind turbines are visible from this viewpoint at distances of 4.6 to 7.8 miles. All four proposed RoxWind Project turbines will be visible from this viewpoint at distances of 3.5 to 4.2 miles. There are four communication towers on Black Mountain. The most visible tower with the widest base is 198' (60.6 meters) and 1.4 miles to the northeast of this viewpoint. The other three towers with thinner profiles include one at 298' (91 meters) and two at 198' (60.6 meters).

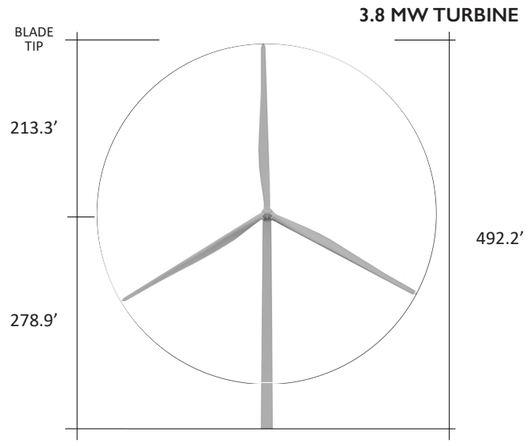
CONTEXT MAP



LOCATION MAP



TURBINES



PHOTOSIMULATION 1
Whitecap Mountain, Carthage

PHOTOGRAPH

LOCATION	44.571721°, -70.660462°
VIEWING DIRECTION	Northeast
DATE AND TIME	10/19/16 at 9:53 pm
CAMERA FOCAL LENGTH	35mm
CAMERA MAKE/MODEL	Nikon D5500
PHOTO SOURCE	Terrence J. DeWan & Associates
VISIBLE TURBINES	4
CLOSEST VISIBLE TURBINE	3.5 miles

RoxWind Project

RoxWind LLC

tjd&a

Whitecap Mountain, Carthage

NORMAL VIEW EXISTING CONDITIONS

DESCRIPTION

Normal view looking northeast from the publicly accessible portion of the summit of Whitecap Mountain (owned and managed by the Mahoosuc Land Trust) in Rumford. All 22 Record Hill Wind turbines are visible from this viewpoint at distances of 4.6 to 7.8 miles (see panoramic image).

VIEWER NOTE

When printed on an 11x17" paper, viewer should hold the images approximately 20" from eye to replicate actual view.

RoxWind Project

RoxWind LLC | tjd&a

Photosimulation 1A
Whitecap Mountain, Carthage

NORMAL VIEW
PROPOSED CONDITIONS

DESCRIPTION

Normal view looking northeast from the publicly accessible portion of the summit of Whitecap Mountain (owned and managed by the Mahoosuc Land Trust) in Rumford. All four proposed RoxWind Project turbines will be visible from this viewpoint at distances of 3.5 to 4.2 miles. A portion of the cleared area around the southern most turbine will be minimally visible from this viewpoint.

VIEWER NOTE

When printed on an 11x17" paper, viewer should hold the images approximately 20" from eye to replicate actual view.

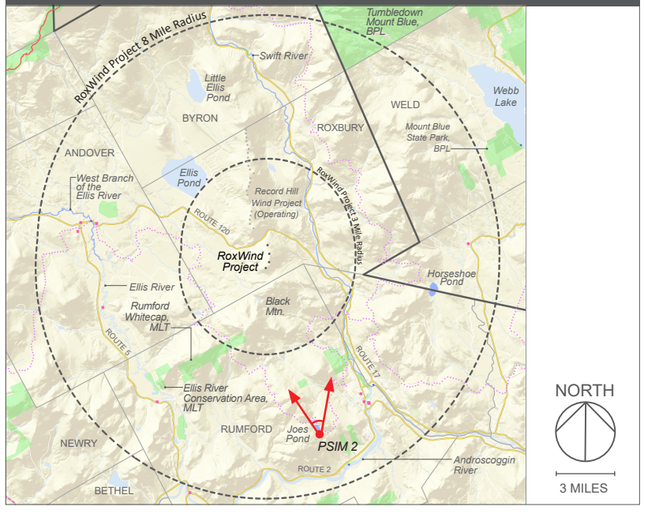
RoxWind Project

RoxWind LLC | tjd&a

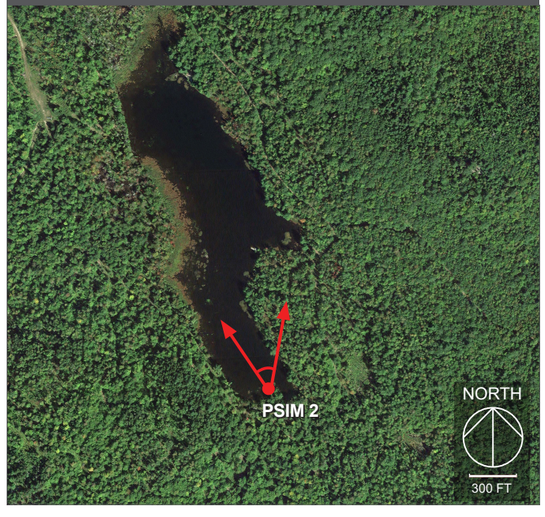
VIEW DESCRIPTION

Panoramic view looking north from Joes Pond in Rumford. Joes Pond is rated as 'Significant' for scenic resources in the Maine's Finest Lakes Study. The blades and nacelles from one turbine and the blade tips from another two turbines of the proposed RoxWind Project will be visible at distances of 6.1 to 6.5 miles. The Record Hill Wind Project is not visible from this viewpoint due to midground topography and vegetation.

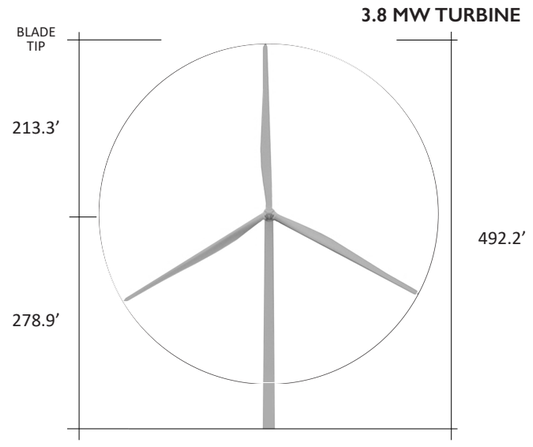
CONTEXT MAP



LOCATION MAP



TURBINES



Photosimulation 2
Joes Pond, Rumford

PHOTOGRAPH

LOCATION	44.530455°, -70.580508°
VIEWING DIRECTION	Northwest
DATE AND TIME	10/19/16 at 12:54 pm
CAMERA FOCAL LENGTH	35mm
CAMERA MAKE/MODEL	Nikon D5500
PHOTO SOURCE	Terrence J. DeWan & Associates
VISIBLE TURBINES	3 (2 tips of blades)
CLOSEST VISIBLE TURBINE	6.1 miles

RoxWind Project

RoxWind LLC

tjd&a

Joes Pond, Rumford

NORMAL VIEW
EXISTING CONDITIONS

DESCRIPTION

Normal view looking north from Joes Pond in Rumford. Joes Pond is rated as 'Significant' for scenic resources in the Maine's Finest Lakes Study. The Record Hill Wind Project is not visible from this viewpoint due to midground topography and vegetation.

VIEWER NOTE

When printed on an 11x17" paper, viewer should hold the images approximately 20" from eye to replicate actual view.

Photosimulation 2A
Joes Pond, Rumford

NORMAL VIEW
PROPOSED CONDITIONS

DESCRIPTION

Normal view looking north from Joes Pond in Rumford. The blades and nacelles from one turbine and the blade tips from another two turbines in the proposed RoxWind Project will be visible at distances of 6.1 to 6.5 miles.

VIEWER NOTE

When printed on an 11x17" paper, viewer should hold the images approximately 20" from eye to replicate actual view.

RoxWind Project

RoxWind LLC | tjd&a

Photosimulation 2B
Joes Pond, Rumford

NORMAL VIEW
PROPOSED CONDITIONS

DESCRIPTION

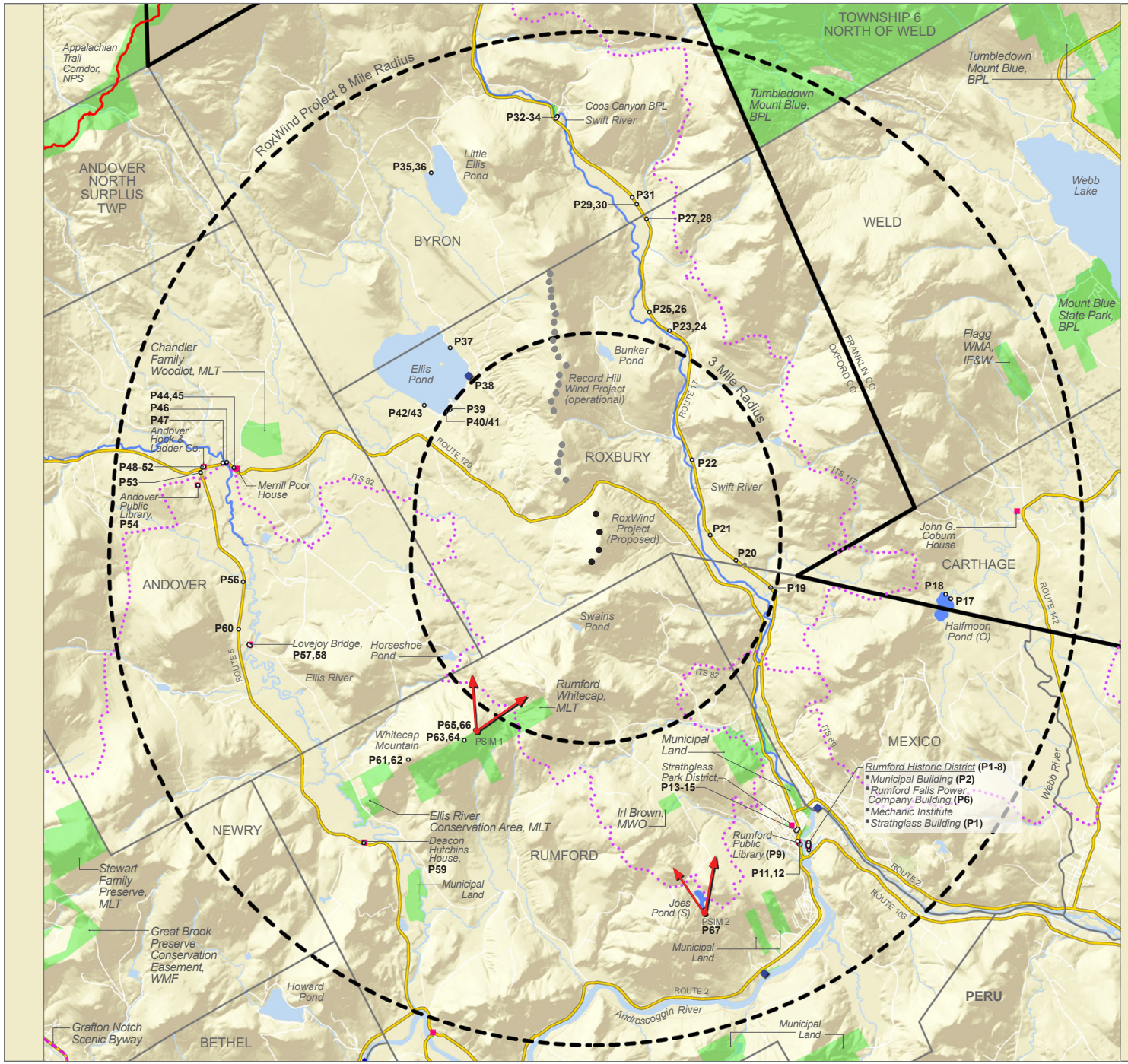
Normal view looking north from Joes Pond in Rumford. The blades and nacelles from one turbine and the blade tips from another two turbines in the proposed RoxWind Project will be visible at distances of 6.1 to 6.5 miles.

VIEWER NOTE

When printed on an 11x17" paper, viewer should hold the images approximately 20" from eye to replicate actual view.

RoxWind Project

RoxWind LLC | tjd&a



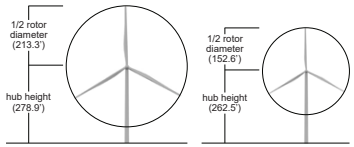
ROXWIND PROJECT

STUDY AREA PHOTO LOCATION MAP

LEGEND

- RoxWind Turbine (proposed)
- Record Hill Turbine (operating)
- Township
- County Boundary
- Conservation Land
- Structure on National Register of Historic Places
- Boat Launch
- Great Pond: rated as Outstanding (O) or Significant (S)
- Scenic Rivers
- ITS - Interconnected Trail System
- Major Roads
- Scenic Byway
- Photosimulation Location
- Study Area Photo Location

TURBINES



NORTH

0 1 2 3 MILES

RoxWind LLC.

tjd&a

Appendix C
March 13, 2018

Photo 1: Looking northeast on Congress Street in Rumford toward Harris Hotel (Strathglass Building), a structure on the National Register of Historic Places, located within Rumford Commercial Historic District. The Rumford Post Office and Municipal Offices buildings (across the street) block potential views of the proposed Project to the northwest.

Photo 2: Looking northwest on Congress Street in Rumford toward the Rumford Post Office and Municipal Offices, structures on the National Register of Historic Places, located within Rumford Commercial Historic District. There would be potential views of the proposed Project from the upper floors of buildings during leaf-off season.

Photo 3: Looking west on Congress Street in Rumford toward Rumford Central Fire Station, located within Rumford Commercial Historic District. There may be very filtered views of the proposed Project on the west (back) side of the building during leaf-off conditions.

Photo 4: Looking south on Congress Street toward Bangor Savings Bank in Rumford, located within Rumford Commercial Historic District, looking south. The Rumford Post Office and Municipal Offices buildings (across the street) block potential views of the proposed Project to the northwest.

Photo 5: Looking southwest on Congress Street in Rumford toward Key Bank, a structure located within Rumford Commercial Historic District. There may be very filtered views of the proposed Project on the west (back) side of the building during leaf-off conditions.

Photo 6: Looking southwest on Congress Street in Rumford toward Tri-County Medical Health Services building (Rumford Falls Power Company Building), a structure on the National Register of Historic Places, located within Rumford Commercial Historic District. The proposed Project would not be visible due to the height of buildings to the north.

Photo 7: Looking south on Congress Street in Rumford, located within Rumford Commercial Historic District. Buildings would block proposed Project views from pedestrian level on Congress Street.

Photo 8: Looking northeast on Congress Street in Rumford toward University College. There may be filtered views of the proposed Project during leaf-off conditions from the top floor.

Photo 9: Looking northeast from U.S. Route 2 in Rumford toward Rumford Public Library, a structure on the National Register of Historic Places. The proposed Project would not be visible from this structure due to intervening structures and topography.

Photo 10: Looking northwest from U.S. Route 2 in Rumford, in front of Rumford Public Library, a structure on the National Register of Historic Places. The proposed Project would not be visible from this viewpoint due to intervening structures and topography.

Photo 11: Looking north from U.S. Route 2 in Rumford toward the Chisholm Park entrance, located south of the Rumford Public Library. The proposed Project would not be visible from this park or associated trails due to intervening topography and vegetation.

Photo 12: Looking east within Chisholm Park toward a gathering space located a short walk away from the entrance. The proposed Project would not be visible from this park or associated trails due to intervening topography and vegetation.

Photo 13: Looking north from Maine Avenue in Rumford toward the entrance of Strathglass Park, a National Register of Historic Places District. The proposed Project would not be visible from this Historic District due to intervening topography and vegetation.

Photo 14: Looking north from Erchles Street in Rumford within Strathglass Park, a National Register of Historic Places District. The distant ridge is southeast of the proposed Project, and blocks visibility of the existing Record Hill Wind Project. RoxWind would not be visible from this Historic District.

Photo 15: Looking northeast to northwest from Lochness Road in Rumford within Strathglass Park, a National Register of Historic Places District, showing typical character. The proposed Project would not be visible from this Historic District due to intervening topography and vegetation.

Photo 16: View of the trail near the northern end of Halfmoon Pond in Rumford near viewpoint (photo 17).

Photo 17: Panoramic view looking northwest from the northern side of Halfmoon Pond in Carthage. The proposed RoxWind turbines would be located 5.8 to 5.9 miles from this viewpoint, but would not be visible due to intervening topography and vegetation.

Photo 18: Panoramic view looking northwest from the northeast side of Halfmoon Pond in Carthage. The proposed RoxWind turbines would be located 5.9 to 6.1 miles from this viewpoint, but would not be visible due to intervening topography and vegetation.

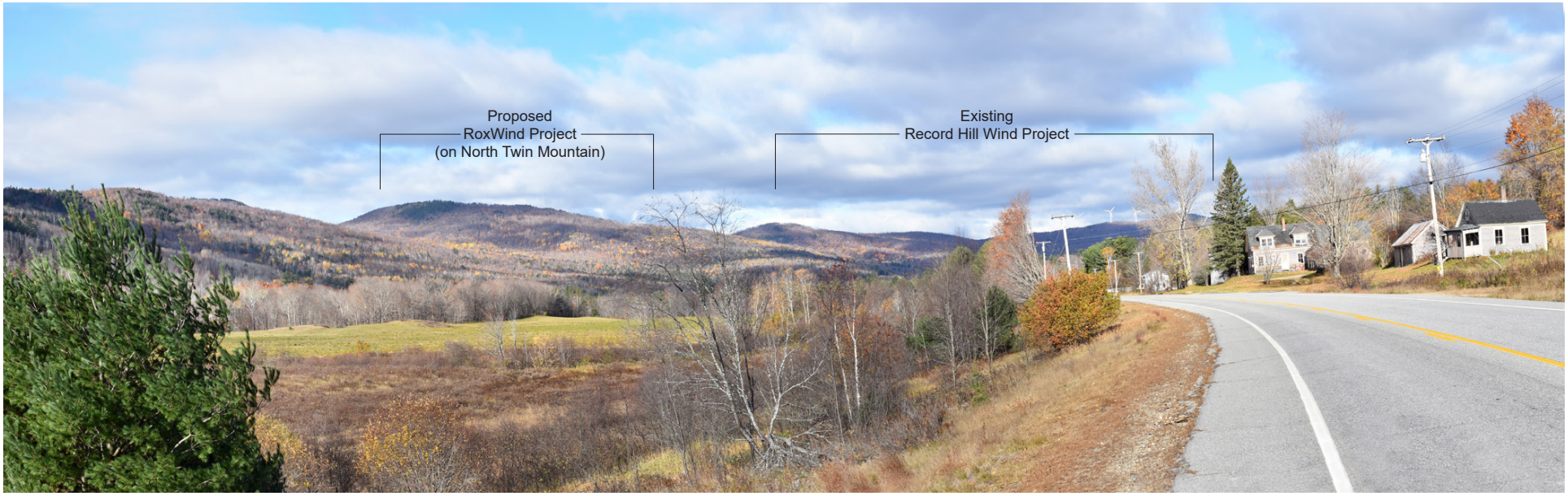


Photo 19: Looking west to north from Route 17 (Roxbury Road) in Mexico. All four proposed RoxWind turbines would be visible on North Twin Mountain at distances of 2.9 to 3.1 miles. Record Hill Wind Project is visible to the northwest.

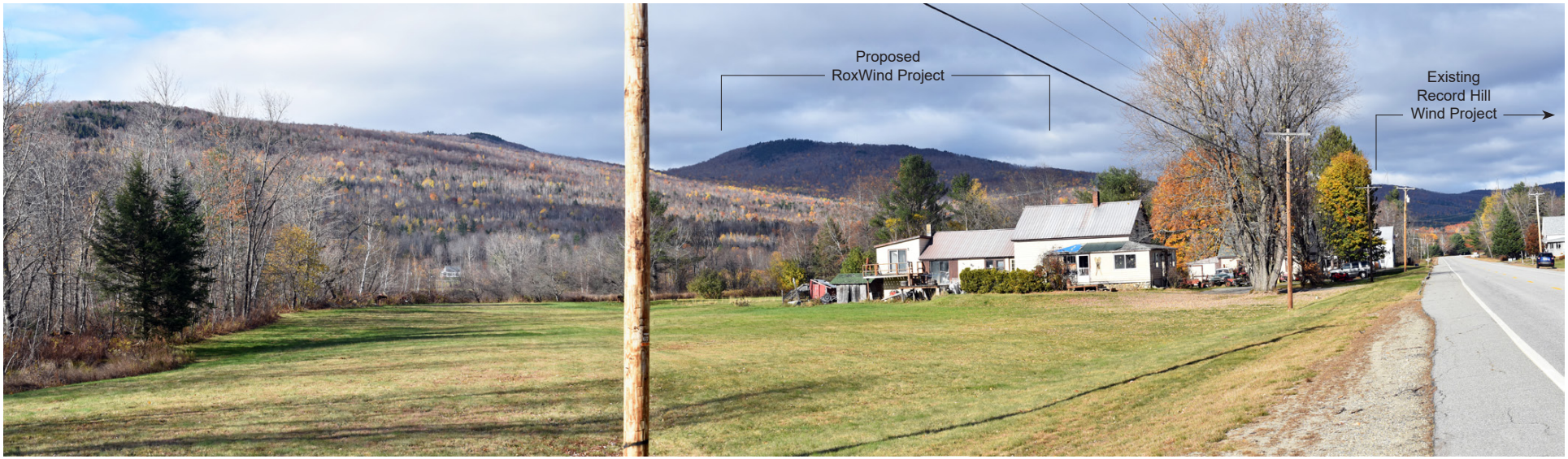


Photo 20: Looking west to northwest from Route 17 (Roxbury Road) in Roxbury. All four proposed RoxWind turbines would be visible from this viewpoint at distances of 2.3 to 2.5 miles. Record Hill Wind Project is visible to the northwest.

Photo 21: Looking west from Route 17 (Roxbury Road) in Roxbury. All four proposed RoxWind turbines would be visible from this viewpoint at distances of 1.8 to 2.0 miles.

Photo 22: Looking southwest to northwest from Route 17 (Roxbury Road) in Roxbury. The proposed RoxWind Project would not be visible from this viewpoint due to intervening topography and vegetation. Record Hill Wind is visible to the northwest.

Photo 23: Panoramic view looking east to southwest from Route 17 (Roxbury Road) within Roxbury Village. The proposed RoxWind Project would not be visible from this viewpoint due to intervening topography to the southwest.

Photo 24: Continued panoramic view looking southwest to northwest from Route 17 (Roxbury Road) within Roxbury Village. The proposed RoxWind Project would not be visible from this viewpoint due to intervening topography to the southwest. Record Hill Wind is visible along the ridge from west to northwest.

Photo 25: Looking south to west from Route 17 in Roxbury. Record Hill Wind is visible looking west to southwest. The proposed RoxWind Project would not be visible due to intervening topography to the southwest. The closest proposed RoxWind turbine would be 3.6 miles away.

Photo 26: Continued view looking west to north from Route 17 in Roxbury. Record Hill Wind is visible looking west to southwest.

Photo 27: Panoramic view looking southeast to west from Route 17 (Roxbury Road) in Roxbury. All four proposed RoxWind turbines would be visible to the south at distances of 5.2 to 5.7 miles. Record Hill Wind is visible looking southwest to west.

Photo 28: Continued panoramic view looking west to northwest from Route 17 in Roxbury. Record Hill is visible to the west.

Photo 29: Panoramic view looking south to southwest across from a farmstead from Route 17 (Roxbury Road) in Byron. Vegetation would block visibility of the proposed RoxWind Project to the south. The proposed RoxWind turbines would be located 5.2 to 6.0 miles south of this viewpoint, but would not be visible due to intervening vegetation. Record Hill Wind is visible to the southwest.

Photo 30: Continued panoramic view looking southwest to west across from a farmstead from Route 17 (Roxbury Road) in Byron. Record Hill Wind is visible to the southwest.

Photo 31: Looking southeast to west across from Hidden Paddle Farmstead from Route 17 (Roxbury Road) in Byron. The proposed RoxWind turbines would be located 5.3 to 6.1 miles south of this viewpoint, but would not be visible due to intervening vegetation. The closest proposed RoxWind turbine would be 5.4 miles away. Record Hill Wind is visible to the southwest.

Photo 32: Coos Canyon recognition plaque, in Byron.

Photo 33: Coos Canyon School, in Bryon, located across from the Coos Canyon Rest Area.

Photo 34: Looking north toward the Swift River from the Coos Canyon rest area on Route 17 in Byron. The proposed RoxWind Project would not be visible from this area.

Photo 35: Panoramic view looking east to south from the northwest shoreline of Little Ellis Pond in Byron. There would be two full proposed RoxWind turbines and blade tips from an additional turbine visible from this viewpoint at distances of 6.3 to 7.0 miles. The existing Record Hill Wind turbines are visible from southeast to south at distances of 2.5 to 5.5 miles, in front of the proposed RoxWind turbines.

Photo 36: Continued panoramic view looking south to west from the northwest shoreline of Little Ellis Pond in Byron.

Photo 37: Looking southeast to northwest from the eastern shoreline of Ellis Pond in Roxbury. There would be two full proposed RoxWind turbines and blade tips from one additional turbine visible from this viewpoint at distances of 3.9 to 4.3 miles. The existing Record Hill Wind turbines are visible to the left (east) of the proposed RoxWind Project.

Photo 38: Ellis Pond Public Boat Launch off South Shore Road on the southeast shoreline of Ellis Pond in Roxbury, looking southwest to northwest, in the opposite direction of the proposed RoxWind Project and the existing Record Hill Wind Project.

Photo 39: Looking east to north from South Shore Road and Marchand Road intersection by Ellis Pond in Roxbury, in the opposite direction of the proposed RoxWind Project.

Photo 40: Looking southeast from South Shore Road and Marchand Road intersection by Ellis Pond in Roxbury. There would be filtered views of two full proposed RoxWind turbines and blade tips from an additional two turbines visible from this viewpoint at distances of 3.2 to 4.0 miles.

Photo 41: Looking northeast to east from Ellis Pond in Roxbury, toward Record Hill Wind.

Photo 42: Looking northwest to northeast from the southwestern shoreline of Ellis Pond in Roxbury. The existing Record Hill Wind Project is visible at distances of 2.1 to 3.0 miles. The proposed RoxWind Project would not be visible from this viewpoint due to intervening topography and vegetation.

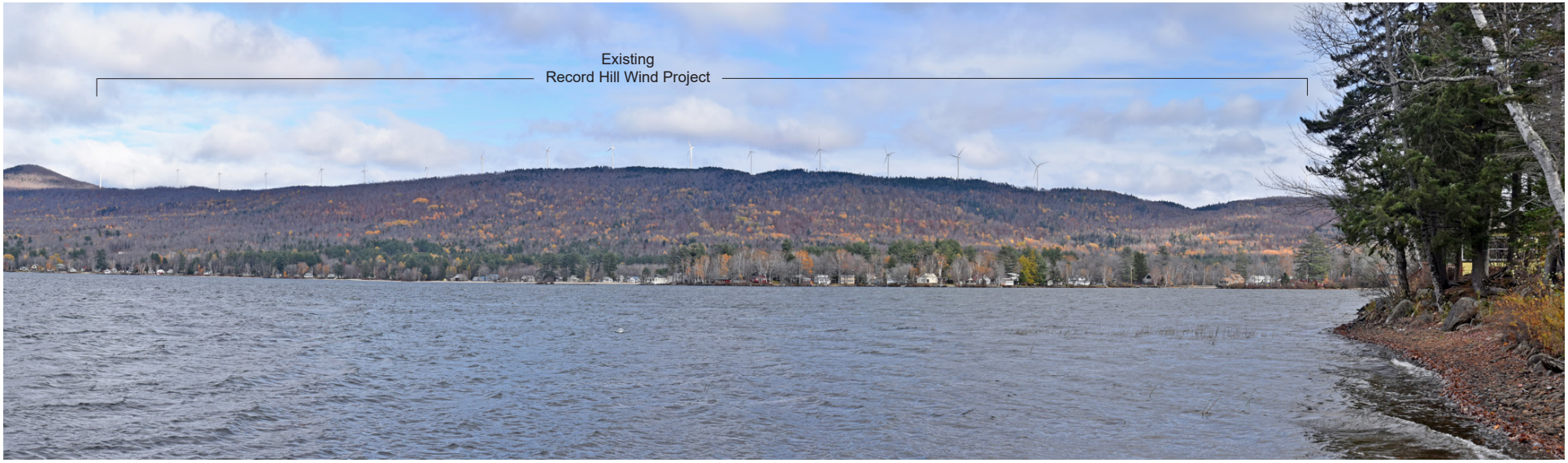


Photo 43: Continued view looking northeast to southwest from the southwestern shoreline of Ellis Pond in Roxbury. The existing Record Hill Wind Project is visible at distances of 2.1 to 3.0 miles. The proposed RoxWind Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 44: Panoramic view looking northeast to southeast from Route 120 in Andover near the Merrill-Poor House, a structure on the National Register of Historic Places. The proposed RoxWind Project would not be visible from this structure due to intervening topography and vegetation.

Photo 45: Continued panoramic view looking southeast to southwest from Route 120 in Andover near the Merrill-Poor House, a structure on the National Register of Historic Places. The proposed RoxWind Project would not be visible from this structure due to intervening topography and vegetation. There is a filtered view of Lone Mountain to the southwest.

Photo 46: Looking east to west from Route 120 in Andover toward Ellis River Trails Public Boat Access and the ITS 82 bridge crossing Andover Brook. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation to the southwest.

Photo 47: Looking east to south from Route 120 in Andover east of the ITS 82 bridge crossing Andover Brook. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation to the southwest.

Photo 48: Panoramic view looking southwest to west from Route 120 (Elm Street) in Andover toward Andover Town Green. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation to the east.

Photo 49: Continued panoramic view looking west to north from Route 120 (Elm Street) in Andover toward Andover Town Green. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation to the east.

Photo 50: Looking north from Route 120 (Elm Street) in Andover toward the Andover Hook & Ladder, a structure on the National Register of Historic Places. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 51: Looking northwest from Route 120 (Elm Street) in Andover toward the First Congregational Church of Andover. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 52: Looking southeast from Route 120 (Elm Street) in Andover toward the Andover Town Hall. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 53: Looking west from Route 5 (South Main Street) in Andover toward commercial buildings. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 54: Looking north from Church Street in Andover toward the Andover Public Library, a structure on the National Register of Historic Places. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 55: Looking east from Church Street in Andover toward the proposed RoxWind Project, in front of Andover Public Library. Vegetation blocks potential visibility of proposed RoxWind Project to the east. Three Record Hill Turbines are visible through the opening to the northeast.

Photo 56: Looking northeast to southeast from Route 5 in Andover. There would be heavily filtered views of all four proposed RoxWind turbines during leaf-off conditions. Vegetation would block potential views completely during leaf-on conditions. Record Hill Wind is visible to the northeast.

Photo 57: Looking west from Covered Bridge Road in Andover toward the Lovejoy Bridge, a structure on the National Register of Historic Places. The proposed Project would not be visible from this viewpoint due to intervening topography and vegetation.

Photo 58: Looking northwest from the shore below Lovejoy Bridge. The proposed Project would not be visible from this viewpoint on the Ellis River due to intervening topography and vegetation.

Photo 59: Looking north from Route 5 (Ellis River Road) in Rumford toward Deacon Hutchins House, a structure on the National Register of Historic Places. The proposed Project would not be visible due to intervening topography.

Photo 60: Looking east from Route 5 (South Main Street) in Rumford through an opening in a pine buffer. There would be approximately three full proposed RoxWind turbines and the blade tips of an additional turbine visible from this viewpoint at distances of 5.9 to 6.2 miles. Potential visibility from Route 5 would be blocked when pines reach mature height and width.

Photo 61: Panoramic view looking south to west from the Starr Scenic Viewpoint on Whitecap Mountain in Rumford. This viewpoint is from private property (not located within the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust). The proposed Project would be in the opposite direction from this viewpoint to the northeast, and screened by Whitecap Mountain.

Photo 62: Continued panoramic view looking west to northwest from Starr Scenic Viewpoint on Whitecap Mountain in Rumford. This viewpoint is from private property (not located within the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust). The proposed Project would be in the opposite direction from this viewpoint to the northeast and screened by Whitecap Mountain.

Photo 63: Panoramic view looking east to southeast from a viewpoint 390' southwest of the official summit on Whitecap Mountain in Rumford. This viewpoint is from private property (not located within the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust). Saddleback Wind is visible 14.0 miles to the east. Canton Wind is visible 18.0 miles to the east (photo taken in 2016 before completion). Topography (Whitecap Mountain) blocks visibility of the proposed RoxWind Project to the northeast.

Photo 64: Continued panoramic view looking southeast to southwest from a viewpoint 390' southwest of the official summit on Whitecap Mountain in Rumford. This viewpoint is from private property (not located within the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust). Spruce Mountain Wind is visible 11.5 miles to the south. Topography (Whitecap Mountain) blocks visibility of the proposed RoxWind Project to the northeast.

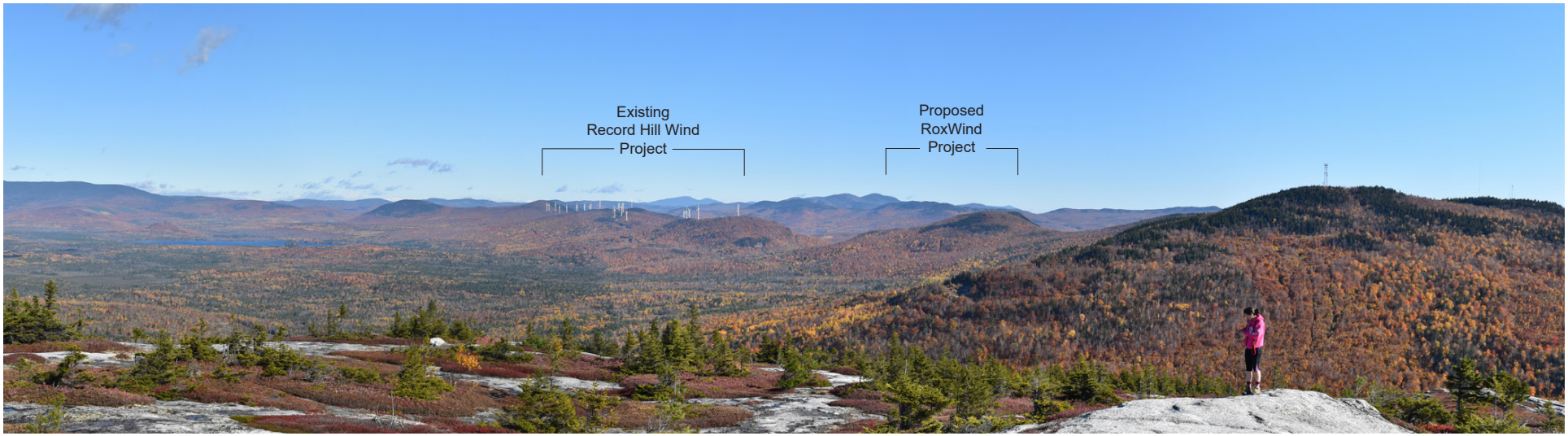


Photo 65: Looking northwest to northeast from overlook 960' northeast of the official summit on the northwest side of Whitecap Mountain in Rumford. This viewpoint is from private property (not located within the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust). All four proposed RoxWind turbines would be visible from this viewpoint at distances of 3.4 to 4.1 miles. All twenty-two Record Hill Wind turbines are visible from this viewpoint at distances of 4.4 to 6.6 miles.

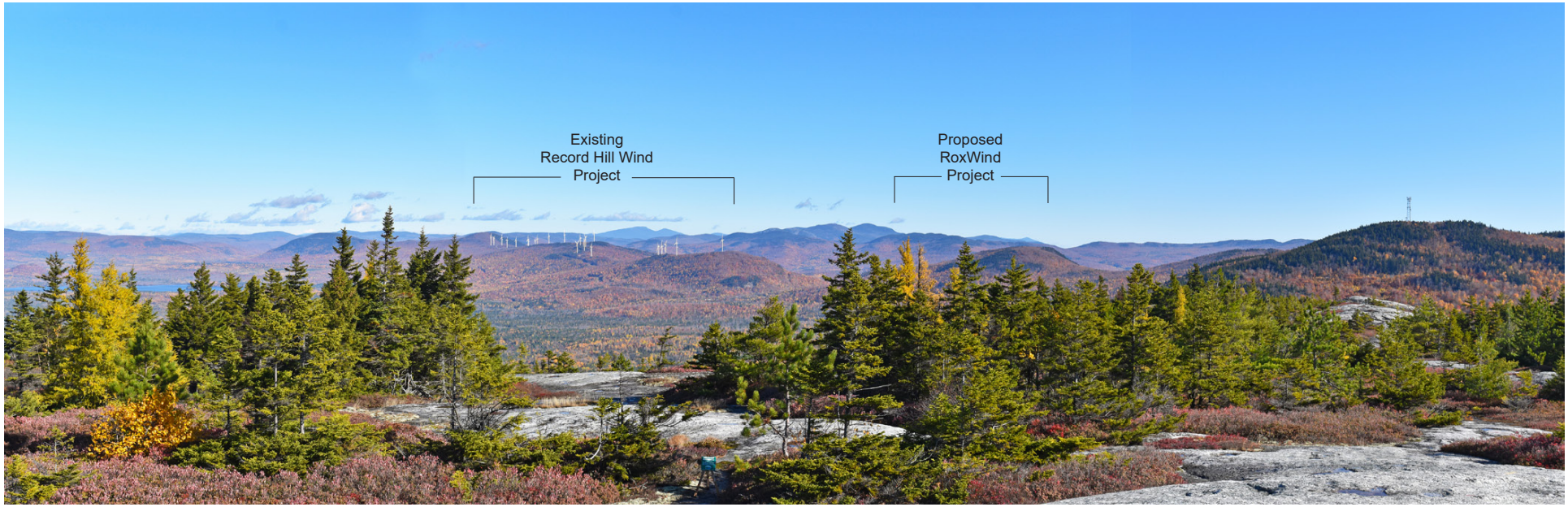


Photo 66: Looking northwest to northeast from the official summit of Whitecap Mountain in Rumford. This viewpoint is located on the publicly accessible portion of the summit owned and managed by the Mahoosuc Land Trust.. All four proposed RoxWind turbines would be visible from this viewpoint at distances of 3.5 to 4.2 miles. All twenty-two Record Hill Wind turbines are visible from this viewpoint at distances of 4.6 to 7.8 miles. See Photosimulation 1, Appendix B.

Photo 67: Looking northwest to northeast from the southern end of Joes Pond in Rumford. Joes Pond is rated 'Outstanding' for scenic resources in the Maine Wildlands Lake Assessment. Approximately one full RoxWind turbine and the blade tips from two turbines will be visible at a distance of 6.1 miles. Record Hill Wind Project is not visible from this viewpoint due to midground topography and vegetation. See Photosimulation 2, Appendix B.

Photo 68: Looking northwest to northeast from the southwestern end of Joes Pond in Rumford (approximately 160' west of photo 69). Joes Pond is rated 'Outstanding' for scenic resources in the Maine Wildlands Lake Assessment. There may be filtered visibility of three turbines from the proposed RoxWind Project at distances of 6.1 to 6.2 miles. Record Hill Wind Project is not visible from this viewpoint due to midground topography and vegetation.