

Black Nubble Wind Farm

Section 9: Unusual Natural Areas - Natural Features

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Section 9 – Unusual Natural Areas - Natural Features

1.0 Introduction

Unusual Natural Areas – regulated under Natural Features by the LURC - include critically imperiled (S1) or imperiled (S2) natural communities or plant species (LURC Chapter 10.25,E,2,a). Rare plant and natural community surveys were conducted by Woodlot within the project area in 1994, 2000, and 2003, and classified according to Maine Natural Areas Program’s most recent classification system (Gawler and Cutko 2004). Surveys included investigations of terrestrial and wetland habitats were conducted on Black Nubble (2001), and the proposed 115 kV transmission line corridor (2000). Other field surveys conducted in 1993, 1995, and 2003 included the collection of additional information on the natural communities in the project area (Section 7-3.0).

2.0 Methods

Natural community and rare species surveys involved initial and repeated consultations with state and federal regulatory and review agencies—principally the Maine Department of Inland Fisheries and Wildlife (MDIFW) and Maine Natural Areas Program (MNAP)—map and aerial photo assessments, and over 120-person field days within the project area from 1993 through 2006 (Section 7-3.1). Reported field time does not include days used in support of ceilometer, raptor, or radar survey efforts. State and federal agencies were contacted to request information regarding threatened, endangered, or rare species; unusual natural communities; Significant Wildlife Habitat; historic preservation sites; and regulated areas of special concern. MDIFW and MNAP reported the potential for Significant Wildlife Habitat and rare, threatened, or endangered species exists within the Black Nubble study area and along the proposed access routes (Section 7 Appendix C). However, no specific resources, such as Deer Wintering Areas or Waterfowl and Wading Bird Habitats, were identified by MDIFW.

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3.0 Findings

Natural community types and associated plant species are common to this region of the state. No S1 or S2-listed plant species or natural communities were observed to occur within the project area. In summary, six primary natural communities and habitats were mapped: Beech-Birch-Maple Forest, Fir-Heartleaved Birch Subalpine Forest, Spruce-Northern Hardwood Forest, Montane Spruce-Fir Forests, regenerating conifers, and small forested wetlands. Only one of these communities, Fir-Heartleaved Birch Subalpine Forest, is ranked as a rare community by the MNAP. This community type is ranked S3, indicating that it occurs in 20 – 100 locations throughout the state. While this community is relatively uncommon across Maine, it is a common, if not dominant, community in the more mountainous areas of western and northern Maine. It was the only community documented along the summit and upper ridgeline of Black Nubble. As an S-3 community type, it is not regulated as a Natural Feature.

Two events in the recent decades, i.e., the outbreak of spruce budworm (*Choristoneura fumiferana*) in the 1970s and subsequent industrial timber harvesting activities have greatly influenced regional forest characteristics. All but the upper mountain regions have been influenced by past and current timber harvesting activities, while even higher elevations were affected by the spruce budworm (Photos 1 and 2). Both measures have ultimately affected the composition of the forest, particularly by

reducing the amount of spruce in lower elevation stands and converting large areas of mixed forest to younger and more uniform fir stands. The result of the budworm outbreak was widespread mortality of mature trees that today has created an abundance of hard and soft snags, downed woody debris, and an extremely thick development of



Photo 1. Clearcut areas east of Redington Mountain. Note fir waves on Crocker Mountain on left. Photo by S. Pelletier 04-05-94.

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balsam fir regeneration. Much of the regeneration is currently 6 to 15 feet in height, depending on site exposure, elevation, and original degree of mortality.



Photo 2. Clearcut areas on Black Nubble. Photo by S. Pelletier 04-05-94.

The presence of mature fir within the region also contributes to “fir waves”, which can be observed in the project area and are an unusual

expression of the Fir-Birch Subalpine Community. On Black Nubble, only small areas of canopy loss occurring immediately northwest of the summit have created fir waves.

However, fir waves on nearby Crocker Mountain are much more pronounced and typical than any of those observed along the project area ridgelines (Photo 3). On the ground, fir



Photo 3. Fir waves on south side of Crocker Mountain. Photo by S. Pelletier 04-05-94.

waves often resemble blowdown areas in that a large number of wind-thrown and standing dead trees occur, which then allows for the development of dense herbaceous and shrub layers (Section 7-3.2.5). Though an interesting feature, these areas of disturbance are a natural phenomena and do not represent a rare or unique community type.

4.0 Literature Cited

Gawler, S.C. and A.R. Cutko, 2004. Natural Landscapes of Maine: A Classification of Vegetated Natural Communities and Ecosystems, Maine Natural Areas Program, Maine Department Of Conservation, Augusta, Maine.