

SECTION 9. UNUSUAL NATURAL AREAS:

The Maine Department of Agriculture, Conservation and Forestry – Maine Natural Areas Program (MNAP) to determine specific locations of any unusual natural areas within or adjacent to the proposed Project. The locations of botanical resources including rare, threatened, and endangered (RTE) plants and rare and exemplary natural communities in Maine are mapped by the MNAP. This information is used for status assessment, species management, and habitat conservation of rare plant species and rare and exemplary natural communities in Maine. According to the MNAP, “A natural community is an assemblage of interacting plants and animals and their common environment, recurring across the landscape, in which the effects of human intervention are minimal. A natural community includes all of the organisms (plant, animal, etc.) in a particular physical setting, as well as the physical setting itself” (MNAP 2004)

9.A Methods

9.A.1 Agency Correspondence

In a letter dated July 10, 2020, MNAP provided a list of rare or unique botanical features documented from the vicinity of the project. The list included information on features that have been known to occur historically in the area as well as recently field-verified information. MNAP specifically noted that the higher elevation areas in the southwestern corner of the Project include portions of a mapped Subalpine Fir Forest, a rare (state rank S3) forest type in Maine which includes balsam fir, or a mixtures of fir and heart-leaved paper birch, which form a dense canopy of somewhat stunted trees. Patches of heart-leaved paper birch and mountain ash are common where wind, fire, or landslides have created openings, along with a dense shrub layer of mountain ash, hobblebush, and regenerating fir.

Agency correspondence is provided in Appendix 9-1.

9.A.2 Landscape Analysis and Field Surveys

VHB’s investigation and analysis regarding rare, threatened, and endangered (“RTE”) plant and natural communities consisted of database review via a desktop survey as well as a two-staged field survey. In spring of 2020, VHB reviewed the publicly available “Beginning with Habitat” map database to determine if the MNAP had previously recorded known occurrences of RTE plants at the Project site. Additionally, VHB reviewed the RTE species known to associate with onsite or potentially occurring natural communities in order to determine the list of TE plants that would be targeted (habitats and survey windows) for onsite surveys. From initial review as informed by a 2019 walkover, there are approximately 10 natural community types that could be present within the Study Area, in a subset of which there are approximately 14 state TE plants which may associate with one or more types (MNAP 2004), and therefore suitable habitat for these species was a focus during onsite surveys.

Following this database review, VHB ecologists conducted an in-field general habitat assessment and floristic survey of the entire Study Area between June 8 and June 12 and June 22 through June 26, 2020.

In its July 10, 2020 letter, MNAP provided a listing of potential threatened or endangered plant species in the vicinity. After reviewing this list, VHB conducted targeted surveys within all portions of Subalpine Fir Forest (as provided by MNAP) that occur in our Study Area from August 8-10, 2020. The five targeted species are provided in the table below.

Scientific Name	Common Name(s)	Maine Threatened or Endangered (T, E)	Flowering/ Sporation Time
<i>Neottia auriculata (Wiegand) Szlach.</i>	Auricled Twayblade	T	July-August
<i>Pinguicula vulgaris L.</i>	common butterwort	E	June-July
<i>Arnica lanceolata Nutt.</i>	lanceleaf arnica	T	July-September
<i>Huperzia selago (L.) Bernh. ex Schrank & Mart.</i>	fir clubmoss	T	July-September
<i>Calamagrostis stricta (Timm) Koeler</i>	slimstem reedgrass	T	June-August

During this survey, VHB also assessed the suitability of onsite habitats for known occurrences of RTE within 4 miles of the project based on the listing provided by MNAP.

9.B Findings

Vegetative conditions within the Study Area generally consist of hardwood forest with smaller inclusions of mixed-wood forest at low and middle elevations, which grade into a softwood dominated forest cover (Subalpine Fir Forest community) at the highest elevations. Extensive logging has occurred recently on most of the forestland in the Study Area, which is the most evident and most significant observed disturbance. The residual stand conditions consist of pole- and small sawtimber sized trees, with dominant species including red maple, beech, paper and gray birch, with yellow birch and aspen. Logging activity removed a significant portion of the canopy, resulting in a thick, robust shrub and sapling layer of regenerating trees and early successional/disturbance-response shrubs and herbaceous plants. Vegetative conditions across the Study Area outside of the Subalpine Fir Forest are generally homogenous, with shifts in dominant species between upland forest and the scattered wetlands and riparian corridors as shown in VHB's natural resource map set. Because portions of the Study Area abut existing ski resort development such as condominium developments, roads, ski trails and other infrastructure, there are weedy plant species typical of human disturbances but these are limited to the immediate proximity of developed areas. Overall, the forest conditions in the context of previous forest management activity, outside of the Subalpine Fir Forest, are common across the surrounding landscape and do not represent any special, unique, or exemplary natural community occurrences.

9.B.1 RTE Plants

VHB assessed on-site habitats within the Study Area for the potential presence of RTE plant species that have been observed within a 4-mile radius according to information provided by MNAP. Of the list of known occurrences, there were some which did not have suitable on-site habitat and some occurrences did have suitable on-site habitat but were not observed during surveys. During the field surveys described above, VHB ecologists identified 208 plant species

within the Study Area. A list of all species identified during VHB's on-site general and targeted surveys is included as Appendix 9-2.

9.B.2 Natural Communities

MNAP specifically noted that the higher elevation areas in the southwestern corner of the Project include portions of a mapped Subalpine Fir Forest, a rare (state rank S3) forest type in Maine which is characteristically dominated by balsam fir with red spruce and sometimes black spruce and can include components paper and heart-leaved paper birch, which form a dense canopy of somewhat stunted trees. The Subalpine Fir Forest map shapefile provided by MNAP overlaps the southernmost portion of the Project Study Area, at elevations higher than approximately 2,550 feet. The MNAP polygon for this occurrence of Subalpine Fir Forest extends south beyond the study area, totaling 1,342.4 acres.

During VHB's natural resource field assessments, the presence of a Subalpine Fir Forest as mapped by MNAP was confirmed. The woody species composition, canopy structure, and herbaceous plants observed in the Subalpine Fir Forest in the Study Area during VHB's 2020 fieldwork are characteristic of those described in the MNAP publication *Natural Landscapes of Maine* (MNAP, 2018). A dense overstory dominated by balsam fir is present, with scattered red spruce, paper birch and heart leaved paper birch throughout. Where windthrow has created individual tree tip-ups and created increased light conditions at the forest floor, herbaceous plants are generally dense. Where closed canopy conditions occur, there is little herbaceous vegetation present, consisting generally of shade-tolerant species such as bluebead lily and small areas of clubmoss. Some of the canopy trees were noted for stunted or partially stunted growth form, however no strong/significant stunting is present; this is not surprising, given that the Study Area occurs at the northernmost extent, at the lowest elevation of this mapped community and not within the central core of the forest community block, which is located further south outside of the Project area and at higher elevations generally above 3,000 feet elevation.

It is also notable that the existing condition of the Subalpine Fir Forest community in the Study Area has been impacted by previous and ongoing disturbances. The MNAP polygon is drawn up to the edge of existing ski resort infrastructure and trail clearing, and so the edge effect from cleared areas along the Subalpine Fir Forest has altered the vegetation structure near the mapped boundary of the community within the Study Area. There was also scattered litter, assumed to be from ski resort users, observed in portions of the Subalpine Fir Forest in proximity to cleared/developed portions of the resort.

In April of 2021, MNAP provided mapping of the current extent of the Subalpine Fir Forest that intersects with West Mountain, based on mapping completed by MNAP biologists in the Fall of 2020. The 2020 ground truthing was only done for the area around the proposed ski trails, not the entirety of the larger polygon. This application’s analysis and mapping utilizes this updated mapping.

9.C Potential Impacts and Mitigation

9.C.1 RTE Plants

Based on agency consultation and field surveys, no state-protected plants species have been documented in the vicinity of the proposed Project area. If an RTE plant species occurrence is observed during construction, the Project will consult with MNAP to identify the necessary impact avoidance, minimization, and mitigation measures.

9.C.2 Natural Communities

The Applicant has designed this Project so as to avoid and minimize impacts to the identified Subalpine Fir Forest habitat to the extent practical, given the Project’s goals and existing conditions. This design effort focused on avoidance of this natural community as the primary means to minimize impacts, including clustering the proposed impact areas within a smaller area thereby maintaining contiguous blocks of undisturbed Subalpine Fir Forest that extends beyond the parcel and Project boundary. The Applicant also removed a trail from the Project design that

would have impacted Subalpine Fir Forest habitat and had initially been under consideration when consultations began.

MNAP mapping shows that the polygon of Subalpine Fir Forest within the vicinity of the Project is 1,342 acres. MNAP has estimated that the clearing needed to accommodate the Project will impact approximately 6.3 acres of Subalpine Fir Forest habitat, which represents a small portion (0.5%) of the entire community in this area.

The Applicant is proposing to place a portion of their existing land, which is located at greater than 2,700 feet in elevation, into a permanent easement. The Applicant has proposed an area of approximately 36 acres in an area that has experienced timber management activities and ATV uses in the past that is adjacent to the Appalachian Trail corridor (see Figure 7-2). Agency consultations are on-going as to the utility of this site in terms of meeting any Subalpine Fir Forest mitigation requirements.