

**NUBBLE VEGETATION MANAGEMENT PROJECT**  
**TOWN OF BETHLEHEM, GRAFTON CO., NH**

**APPENDICES F**

**PROBABILITY OF OCCURRENCE ANALYSIS OF  
WMNF MANAGEMENT INDICATOR SPECIES**

APPENDIX F1. PROBABILITY OF OCCURRENCE OF WMNF MIS FOR THE NUBBLE VEGETATION MANAGEMENT PROJECT AREA, BETHLEHEM, NH.

| WMNF MANAGEMENT INDICATOR SPECIES   | MAs                            | TEPS STATUS              | HABITAT or MA ASSOCIATIONS: (Age Class / Community Type or Special Habitat Feature)  | IS SUITABLE HABITAT PRESENT WITHIN THE PROJECT AREA ?   | SPECIES DOCUMENTED AND / OR SUSPECTED TO OCCUR WITHIN THE PROJECT AREA?  |
|---|--------------------------------|--------------------------|--|---|--|
| <b>SONGBIRDS &amp; GAME BIRDS &amp; WATERFOWL</b>   |                                |                          |  |   |  |
| <b>Rufous-sided Towhee</b><br>(name change to <b>Eastern</b> )<br><i>Pipilo erythrophthalmus</i>        | 3.1                            | None.                    | Regeneration and young age classes of oak or oak/pine community types.   | No oak occurs in the Project Area or entire HMUs 110 & 111.   | None suspected to occur in the Project Area due to no oak, or regen / young age class in the pine community type.  |
| <b>Northern Junco</b><br><i>Junco hyemalis</i>  | 3.1                            | None.                    | Regeneration and young age classes of the pine community type.   | Lack of regeneration / young age class of pine community type.                                      | Suspected could occur in other habitat types with scattered intermixed pine.                                       |
| <b>Pine Warbler</b><br><i>Dendroica pinus</i>   | 3.1                            | None.                    | Mature and over mature age classes of the pine community type.   | Yes, minor amounts of mature pine are intermixed in spruce/fir stands.                              | Suspected could occur in habitat types with scattered intermixed mature pine.                                      |
| <b>Cape May Warbler</b><br><i>Dendroica tigrina</i>   | 2.1<br>9.2                     | None.                    | Mature & over mature age classes of spruce, spruce/fir & fir community types.  | Mature and over-mature spruce/fir is present, but MA 9.2 is not.                                    | Suspected could occur in mature/ over mature spruce / fir within MA 2.1.   |
| <b>Gray-cheeked Thrush</b><br>(name change to)<br><b>Bicknell's Thrush</b><br><i>Catharus bicknelli</i> | 5.1<br>6.1-.2-.3.<br>9.1 & .3. | R9 Sensitive Species.    | Communities in MAs 5.1, 6.1-2-.3 & 9.1 & .3 will remain relatively stable, wildlife would be affected by recreational activity vs. vegetation changes. | No high elevation spruce / fir habitat or MAs 5 or 6 or 9 occur within the Project Area.            | None suspected to occur within the Project Area due to no high elevation spruce / fir habitats or MAs 5 or 6 or 9. |
| <b>Blackpoll Warbler</b><br><i>Dendroica striata</i>  | 5.1<br>6.1-.2-.3<br>9.1 & .3   | None.                    | Communities in MAs 5.1, 6.1-2-3 & 9.1 & .3 will remain relatively stable, wildlife would be affected by recreational activity vs. vegetation changes.  | No high elevation spruce / fir habitat and no MAs 5 or 6 or 9 occur within the Project Area.        | None suspected to occur in the Project Area due to no high elevation spruce / fir habitat or MAs 5, 6, or 9.       |
| <b>Eastern Kingbird</b><br><i>Tyrannus tyrannus</i>   | 3.1<br>7.1                     | None.                    | Upland openings community: grass, forb or apple ecotones. Developed ski areas (open forest trail ecotones) in MA 7.1                                   | Minor amount of opening habitat in HMU; no apple orchards / MAs 7.1 (ski trails) in Project Area.   | Suspected could occur in Project Area due to minor amount of opening habitat in larger HMUs 110 & 111.             |
| <b>Eastern Bluebird</b><br><i>Sialia sialis</i>   | 3.1                            | None.                    | Upland openings community: grass, forb or apple ecotones. Nests in apple tree cavities and feeds in grassy openings.                                   | Minor amount of opening habitat in HMUs but no apple orchards within the Project Area.              | Suspected could occur in Project Area due to minor amount of opening habitat in larger HMUs 110 & 111.             |
| <b>Mourning Warbler</b><br><i>Oporornis philadelphia</i>  | 3.1                            | None.                    | Upland openings community: shrub forest ecotone.   | Minor amount of opening habitat in HMUs but lack of upland shrub openings in Project Area.          | Suspected could occur in Project Area due to minor amount of opening habitat in larger HMUs 110 & 111.             |
| <b>Chestnut-sided Warbler</b><br><i>Dendroica pensylvanica</i>  | 3.1                            | None.                    | Regeneration age class of northern hardwood and spruce/swamp hardwoods.  | Lack of regeneration age class of hard and mixed wood habitat within the Project Area.              | Suspected could occur in Project Area due to minor amount of regeneration habitat in larger HMUs 110 & 111.        |
| <b>American Black Duck</b><br><i>Anas rubripes</i>  | NA                             | None.                    | Wetlands and water.  | Forested wet areas within the Project Area are too small.   | Suspect could occur in Haystack & N.B Gale and Little Rivers in Project Area.                                      |
| <b>Ruffed Grouse</b><br><i>Bonasa umbellus</i>  | 3.1                            | None.                    | All age classes of aspen type and regeneration and young age classes of paper birch type.  | Young & overmature age present. Lack of regeneration age habitat in aspen & paper birch types.      | Documented occurrence in overmature habitat during ID-Team reviews of the Project Area.                            |
| <b>Common Loon</b><br><i>Gavia immer</i>  | All MAs.                       | State-listed Threatened. | Large bodies of water greater than 10 acres supporting fish.   | Haystack Brook and N.B Gale and Little Rivers in Project Area are not large enough to support loon. | None documented during stream surveys or expected to occur in Project Area due to non-suitable habitat.            |

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|---|----------------------|---------------------------------|---|--|---|
| <b>HAWKS / FALCONS</b>                                      |                      |                                 |   |  |   |
| <b>Northern Goshawk</b><br><i>Accipiter gentilis</i>        | 2.1<br>9.2           | None.                           | Mature and over mature northern hardwood and northern hardwood/spruce and swamp hardwoods.            | Mature northern hardwood forest is present in Project Area, but not MA 9.2.  | None documented during field reviews. Suspect could occur based on suitable mature & over mature habitat present.   |
| <b>Broad-winged Hawk</b><br><i>Buteo platyterus</i>         | 2.1<br>9.1           | None.                           | Mature and over mature paper birch / aspen.   | Minor amount of overmature paper birch and aspen type present.   | None documented during field reviews. Suspect could occur due to minor amounts of overmature suitable habitat.  |
| <b>Peregrine Falcon</b><br><i>Falco peregrinus anatum</i>   | NA                   | None.                           | Cliffs and talus community.   | No cliff ledges for nesting or open areas for foraging.  | None documented, flyover suspected could occur from Franconia Notch nest site.  |
| <b>Osprey</b><br><i>Pandion haliaetus</i>                   | All MAs.             | State-listed Threatened.        | Large water bodies with fish.   | Streams in project area are not large enough.  | None documented or suspected due to non-suitable habitat in Project Area.   |
| <b>MAMMALS</b>  |                      |                                 |   |  |   |
| <b>White-tailed Deer</b><br><i>Odocoileus virginianus</i>   | 3.1                  | None.                           | All ages hemlock community. Softwood for cover in deep-snow & regen age class hardwood for browse.    | No hemlock stands, few scattered hemlock exist & lack of regen age class hardwood in the Project Area.   | Documented present during site-specific field reviews: Tracks, scat, and bark scarring seen.  |
| <b>Snowshoe Hare</b><br><i>Lepus americanus</i>             | 3.1                  | None.                           | Regenerating and young age classes of spruce, spruce/fir, fir.  | Lack of regenerating and young age classes of spruce/fir type.   | Documented present in mature spruce / fir during site-specific field reviews.   |
| <b>Gray Squirrel</b><br><i>Sciurus carolinensis</i>         | 7.1                  | None.                           | Mature & over mature oak or oak / pine community. Developed ski trails.                               | There is no oak or MA 7.1 (ski trails) within the Project Area.  | None documented or suspected to occur due to no oak or MA 7.1.  |
| <b>American Marten</b><br><i>Martes americana</i>           | 2.1 and all MAs.     | State-listed Threatened.        | All ages mixed forest types.  | Mixed forest present. There is moderate to high levels of human activity in portions of Project Area.  | None documented, but suspect could occur during times of travel and foraging in portions of Project Area.   |
| <b>Canada Lynx</b><br><i>Lynx canadensis</i>                | 5.1<br>6.1-.2<br>9.1 | Federally Threatened.           | Dense softwoods. May occur in other habitat types. Trail density of less than ¾ mile per square mile. | LAU 10 analysis shows majority of Project Area non-suitable habitat. Moderate to high levels of human activity renders non-suitable denning / rearing habitat. | Considered extirpated (USDI 1998, BO 2000). None documented during forest-wide track and hair snare surveys. See BE/BA for analysis of probability of occurrence. |
| <b>FISH</b>   |                      |                                 |   |  |   |
| <b>Brook Trout</b><br><i>Salvelinus fontinalis</i>          | 2.1<br>3.1           | None.                           | Permanent lakes, ponds, and streams.  | Suitable habitat in Haystack Brook and N.B Gale and Little Rivers.   | Documented in Haystack Brook, N.B. Gale and Little rivers within the Project Area.  |
| <b>Sunapee Trout</b><br><i>Salvelinus alpinus</i>           | All MAs.             | State-listed Endangered         | Deep coldwater bodies with shallow gravel bars.   | No deep coldwater bodies with shallow gravel bars.   | None documented during surveys or suspected to occur in the Project Area.   |
| <b>PLANTS</b>   |                      |                                 |   |  |   |
| <b>Robbins' Cinquefoil</b><br><i>Potentilla robbinsiana</i> | 6.2-.3<br>9.1-.2-.3. | De-listed Federally Threatened. | Restricted to the alpine zone.  | No alpine zone in the Project Area.  | None documented during surveys or suspected to occur within the Project Area due to non-suitable habitat.   |

Suitable Habitat = Meets species' life history requirements such as food, cover / shelter, water, breeding, and young rearing. Range and suitable habitat definitions were taken largely from DeGraaf et al. 1992; DeGraaf and Yamasaki 2001. Also see EA Literature Cited and/or Reviewed for further consideration of MIS habitat needs. The determination of non-occurrence of MIS within the Project Area considers the potential for occasional incidental and infrequent presence of a species within the Project Area

