

## **Summary of Land/Use Categories**

**Agricultural Land** (taxed at the Ag. rate) –

- Crop land
- Pasture land

**Forestry Program:**

**In all cases a parcel must have a minimum of 25 acres enrolled, and a minimum of 20 acres under active forest management.**

**Open Land** (taxed at Ag. rate) – not to exceed 20% of total enrolled open and site I, II and III forest land.

**Forest Land** (taxed at the Forestry rate) –

*Managed actively for timber by existing USFS silvicultural guides:*

- Forested areas on soils with site class I, II or III.

*Managed actively for timber but with latitude to be managed by guidelines other than USFS silvicultural guides:*

- Significant Wildlife Habitat
- Special Places and Sensitive Sites

*Not necessarily managed for timber (but requiring protective/conservation management) and totaling not more than 20% of enrolled site I, II and III forest lands:*

- Ecologically Significant Treatment Areas (ESTAs)
  - Natural Communities of Statewide Significance
  - Rare, Threatened, and Endangered Species
  - Riparian Areas
  - Vernal Pools with Amphibian Breeding Habitat
  - Forested Wetlands
  - Old Forests

*Not managed actively for timber, but requiring protective/conservation management plan:*

- Miscellaneous – bona fide protective purposes for areas up to one acre, by County Forester approval.

*Not managed actively for timber, needing only to be substantiated and mapped:*

- Non-Productive Forest Land – with no cap but limited to areas on soils of site class IV (not capable of producing at least 20 cubic feet of wood per acre per year).

## **Eligible Forest Land**

### **Definitions**

**Parcel** means all contiguous land in the same ownership regardless of the number of deeds. The parcel may be bisected by a highway, right-of-way, town line, river or power/pipeline. It may contain a building, dwelling, or building lot that is excluded from UVA, but it is held by the same owner(s) who have the rights to make decisions about and manage the vegetation on that property.

A **forest parcel** must be a minimum of 25 eligible acres (2 additional acres are necessary for each dwelling, camp, or mobile home), under an approved 10-year forest management plan in compliance with current UVA standards. **A forest parcel must have a minimum of 20 acres of productive forest (site I, II or III) land under active forest management plus 5 additional eligible acres to be eligible.**

A **natural community** is an interacting assemblage of plants, animals, and other organisms, along with the specific physical environment (bedrock, soils, slope, elevation, etc.) in which they occur and the natural processes that affect them. The Vermont Fish & Wildlife Department has classified over 80 natural community types in Vermont, ranging from Northern Hardwood Forest, to Northern White Cedar Swamp, to Alpine Meadow. Natural community types are categorized according to their rarity and the typical size at which they occur. Each example of a natural community type is evaluated based on its size relative to other examples of that type, the condition of the natural community, and the condition of the surrounding landscape.

The Vermont Fish & Wildlife Department's Nongame and Natural Heritage Program is responsible for classifying, mapping, and tracking significant natural communities and populations of rare, threatened, and endangered species. The Department currently has information on approximately 1,500 significant natural communities and 4,700 populations of rare species statewide.

**Site IV** is defined as land that is not capable of growing 20 cubic feet of wood per acre per year using soil maps, growth calculations, or site index curves.

### **Outline of Categories of Eligible Forest Land – (taxed at the Forestry rate)**

#### **I. Lands managed actively for timber using existing USDA Forest Service Silvicultural Guides:**

- A) Forested areas on soils of site class I, II or III (i.e., capable of growing 20 cubic feet of wood per acre per year or more).

#### **II. Lands managed actively for timber but with latitude to be managed using guidelines other than USDA Forest Service Silvicultural Guides:**

- A) Significant Wildlife Habitat
- B) Special Places and Sensitive Sites

*Note: These are not to be enrolled as ESTAs and are not included in the 20% enrollment cap.*

#### A) Significant Wildlife Habitat

Criteria for Wildlife Habitat: Wildlife habitat mapped as significant by the Vermont Fish & Wildlife Department (FWD) and recently documented as functional and significant or meeting FWD standards for significance, may be enrolled in UVA without a primary purpose of timber production. These include but are not limited to: deer wintering areas; concentrated areas of American beech, oak, and cherry; bat habitats; vernal pools; wildlife corridors; and heron rookeries. Forest management in significant wildlife habitat areas shall be based on FWD and FPR management or mitigation guidelines for these habitats, as well as the professional judgment of the County Foresters, FWD biologists, and other resource consultants. In general, active forest management that enhances the specific habitat attribute is recommended in these areas over the standard USDA Silvicultural Guides.

Process for Identifying Significant Wildlife Habitat: Significant wildlife habitat shall be identified and mapped by a resource consultant or FWD biologist and presented in the forest management plan. FWD biologists may provide guidance to landowners and consultants on identification of significant wildlife habitat and recommendations for management activities to promote the habitat prior to submission of a management plan to the County Forester. A reasonable justification for the proposed habitat management prescription shall be provided to the County Forester. Treatments for these habitats can be designed for the primary purposes of maintaining and enhancing the value of the habitat, as well as for production of repeated forest crops. UVA enrollment of lands with such habitats and purposes is based on County Forester approval.

#### B) Special Places and Sensitive Sites

Criteria for Special Places and Sensitive Sites: Unique geologic, cultural, historic, and archeological sites. Examples include waterfalls, gorges, eskers, cemeteries, evidence of historic quarries, homes or mills, and Native American sites.

Process for Identifying Special Places and Sensitive Sites: Special places and sensitive sites shall be identified and mapped by a plan preparer and presented in the forest management plan. A reasonable justification shall be provided for the proposed sensitive site management prescription. UVA enrollment of special places and sensitive sites, with typically small acreage involved, is based on County Forester approval and may include minor buffering and adaptation of the USDA Silvicultural Guides.

### **III. Lands not necessarily managed for timber (but requiring protective/conservation management) and totaling not more than 20% of enrolled site I, II and III forest lands:**

- A) Ecologically Significant Treatment Areas (ESTAs)
  - 1) Natural Communities of Statewide Significance
  - 2) Rare, Threatened, and Endangered Species

- 3) Riparian Areas
- 4) Vernal Pools with Amphibian Breeding Habitat
- 5) Forested Wetlands
- 6) Old Forests

## 1. Natural Communities of Statewide Significance

Criteria for Natural Communities: A forested natural community that meets the FWD standards for statewide significance or is previously mapped by FWD using these standards is eligible for enrollment as an ESTA. State-significant natural communities are as follows:

- S1 or S2 natural community types, with an occurrence rank of A, B or C (see definitions below<sup>1</sup>).
- S3 natural community types with an occurrence rank of A or B.

Process for Identifying Natural Communities: All state-significant forested natural communities must be identified and mapped by a plan preparer, with documentation (using FWD standards) (See Appendix S – FWD Standards for Identifying, Mapping, and Documenting Significant Natural Communities, Vernal Pools, and Rare Plant and Animal Species for UVA Enrollment as ESTAs) provided to FWD for FWD confirmation and review prior to submission to the County Forester. For state-significant natural communities that are already identified and are tracked in the FWD database, a property location map, an accurate map of the natural community boundary, natural community forms (See Appendix S1 – Vermont Natural Community Survey Form), and the proposed management of the natural community must be provided to FWD for review and comment. For state-significant natural communities that have not currently been mapped by FWD or tracked in the FWD database, in addition to the above information, a vegetation plot (See Appendix S5 – Vermont Quantitative Community Characterization Form) must also be provided to FWD. Once confirmed by FWD, these state-significant forested natural communities may be enrolled in UVA as ESTAs based on County Forester approval. Any Site IV non-forested natural communities, whether they are state-significant or not, may be enrolled in UVA based on County Forester approval.

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<sup>1</sup> Vermont Fish & Wildlife Department Nongame and Natural Heritage Program definitions of conservation ranks and occurrence ranks:

Conservation ranks incorporate the rarity of and threats to a species or natural community in Vermont:

- S1: very rare (generally 1-5 occurrences statewide for plants and animals)
- S2: rare (generally 6-20 occurrences statewide for plants and animals)
- S3: uncommon (generally more than 20 occurrences statewide for plants and animals)
- S4: apparently secure
- S5: demonstrably secure

Occurrence ranks describe the overall quality of a plant or animal population or natural community example:

- A: excellent viability and integrity
- B: good viability and integrity
- C: fair viability and integrity
- D: poor viability and integrity

## 2. Rare, Threatened, and Endangered Species

Criteria for Species: A rare (S1 or S2), state threatened, or state endangered species that has been mapped by FWD or that is identified on a property and meets the mapping standards of FWD is eligible for enrollment as an ESTA. Threatened and endangered species are protected by Vermont's Endangered Species Law (Title 10 V.S.A. Chapter 123).

Process for Identifying Rare, Threatened, and Endangered Species: All occurrences of rare, threatened, and endangered species must be identified and mapped by a plan preparer, with documentation (using FWD standards) (See Appendix S – FWD Standards for Identifying, Mapping, and Documenting Significant Natural Communities, Vernal Pools, and Rare Plant and Animal Species for UVA Enrollment as ESTAs) provided to FWD for FWD confirmation and review prior to submission to the County Forester. For occurrences of rare, threatened, and endangered species that are already identified and are tracked in the FWD database, a property location map, an accurate map of the area occupied by the rare species, a rare plant (See Appendix S3 – Vermont Rare Plant Form) or rare animal form (See Appendix S4 – Vermont Rare Animal Form), and the proposed management for the rare species must be provided to FWD for review and comment. For occurrences of rare, threatened, and endangered species that have not currently been mapped by FWD or tracked in the FWD database, in addition to the above information, a photo of the rare plant (and animal if possible) must also be provided to FWD. Once confirmed by FWD, these occurrences of rare, threatened, and endangered species may be enrolled in UVA as ESTAs based on County Forester approval. The size of areas to be enrolled to protect rare, threatened, and endangered species habitat shall be based on FWD consultation and shall be the minimum size necessary to protect the subject species. Management recommendations shall be developed on a case-by-case basis.

## 3. Riparian Areas

Criteria for ESTA Riparian Areas: Most riparian areas are well suited for active forest management, and a clear justification will be needed for them to be approved as ESTAs. Riparian areas that have characteristics making them ecologically inappropriate for timber harvesting may be enrolled as ESTAs. The lands adjacent to streams, rivers, lakes, and ponds are specialized ecological areas that provide numerous functions, including protecting water quality and aquatic habitat, providing terrestrial wildlife travel corridors, supporting significant natural communities and adjacent wetlands, and protecting channel-forming processes and channel stability. Riparian areas are generally managed according to Acceptable Management Practices (AMPs) to protect surface waters from harmful discharges, but some riparian zones may deserve special treatment to protect riparian functions. Factors to consider in evaluating the need for and width of riparian ESTAs include existing condition of the riparian area, stream channel size and character, steepness of slope, characteristics of soil, nature of special aquatic habitats, presence of concentrated terrestrial wildlife use, presence of seeps or other wetlands, presence of floodplains or other rare to uncommon shoreline natural communities, and presence of streams requiring special protection for maintaining channel stability.

Process for Identifying Riparian Areas: Plan preparers shall identify and map riparian areas to receive special treatment in forest management plans. A reasonable justification of the ecological need and recommended width of riparian ESTAs shall be provided to the County Forester. Appropriate riparian ESTAs are eligible for enrollment in UVA based on County Forester approval.

#### 4. Vernal Pools with Amphibian Breeding Habitat

Criteria for Vernal Pools: Vernal pools are considered an uncommon (S3) natural community type and those with an occurrence rank of A, B, or C are considered state-significant by FWD. These state-significant vernal pools provide important amphibian breeding habitat. A state-significant vernal pool, along with a 100-foot protective buffer from the pool edge, is eligible for enrollment as an ESTA in UVA. Vernal pools are small (generally less than one acre), ephemeral pools that occur in natural basins within upland forests. Vernal pools typically have no permanent inlet or outlet streams and have very small watersheds. These temporary pools generally last only a few months (at least 2½ months) and then disappear by the end of summer, although some pools may persist even longer in wet years. During their dry period, vernal pool depressions may be recognized by sparse vegetation, by stained leaves marked by seasonal high water, and by soils that have more wetland characteristics than do the surrounding upland soils. The periodic drying means that there are no fish in vernal pools, but there is a unique assemblage of species that typically includes specialized insects (caddis flies), mollusks (fingernail clams), and other invertebrates (fairy shrimp) as well as amphibians (spotted salamanders) and sparse vegetation. Vernal pools typically lack trees but are shaded by trees growing in the surrounding upland forest. The vegetation that grows in vernal pools is highly variable in composition and abundance, although most pools have low abundance of herbs and shrubs.

Process for Identifying Vernal Pools with Amphibian Breeding Habitat: All state-significant vernal pools must be identified and mapped by a plan preparer, with documentation (using FWD standards) (See Appendix S – FWD Standards for Identifying, Mapping, and Documenting Significant Natural Communities, Vernal Pools, and Rare Plant and Animal Species for UVA Enrollment as ESTAs) provided to FWD for FWD confirmation and review prior to submission to the County Forester. This documentation will include a property location map, an accurate map of the vernal pool on the property, a vernal pool form (See Appendix S2 – Vernal Pool Survey Form), photos of the vernal pool and amphibian egg masses with calendar date indicated on the photo, and the proposed management of the vernal pool and 100-foot buffer. Once confirmed by FWD, these new state-significant vernal pools may be enrolled in UVA along with a 100-foot protective buffer based on County Forester approval.

#### 5. Forested Wetlands

Criteria for Forested Wetlands: Forested wetlands that have characteristics making them ecologically sensitive to timber harvesting may be enrolled in UVA as ESTAs. These characteristics include, but are not limited to, deep organic soils, presence of groundwater seepage that prevents freezing of organic soils, presence of spring flooding from an adjacent river or lake, and well-developed hummock and hollow microtopography. Logging in these situations may create significant soil rutting that alters the wetland

hydrology, changes flood flows, or alters microhabitats that change species composition and diversity.

**Note:** *Forested wetlands that are state-significant natural communities may qualify to be enrolled in UVA under the natural community criterion of the ESTA group. Non-forested wetlands and forested wetlands that do not produce 20 cubic feet of wood per acre per year may be enrolled in UVA under the Site IV soils category.*

Process for Identifying Forested Wetlands: Plan preparers shall identify and map forested wetlands to receive special treatment in forest management plans. A reasonable justification of the need for special treatment of sensitive forested wetlands shall be provided to the County Foresters. Sensitive forested wetlands may be enrolled in UVA based on County Forester approval.

## 6. Old Forests

Criteria for Old Forests: Old forests are biologically mature forests, typically in late-successional stages of development, having escaped stand-replacing disturbance for more than 100 years and exhibiting minimal evidence of human-caused disturbance. In addition, these forests also exhibit many of the following associated characteristics: 1) some trees exceeding 150 years old for most forest types (100 years old for balsam fir, 200 years old for Eastern hemlock); 2) native tree species characteristic of the forest type present in multiple ages; and 3) complex stand structures that include a broad distribution of tree diameters, multiple vertical vegetative layers, natural canopy gaps, abundant coarse woody debris (reflecting the diameters of the standing trees) in all stages of decay and numerous large standing dead trees. Although some old forests may be part of significant natural communities, other eligible old forest examples may be small or in fragmented landscapes and, therefore, might not otherwise qualify as significant natural communities.

Process for Identifying Old Forests: Old forests shall be identified and mapped by a plan preparer. These areas shall be included in the forest management plan for approval by the County Forester, along with a reasonable justification for the proposed management and appropriate documentation of the forest condition which may include species lists, plot data, age class distribution, and tree core data describing ages for the older trees in the forest.

**Note:** *Precise, diagnostic measures for any attribute are intentionally omitted; however, examples for some forest types and regions can be found in Tyrell and Crow, 1994, Ecology (75)2; Old Growth Forests: A Literature Review of the Characteristics of Eastern North American Forests, Lapin, 2005; Vermont Natural Resources Council and Hunter and White, 1997, Natural Areas Journal (17)4.*

## IV. **Lands not managed actively for timber but requiring a protective/conservation management plan:**

A) Miscellaneous – bona fide protective purposes for areas up to one acre, by County Forester approval. Limited to one occurrence per parcel.

County Foresters can use discretion in allowing timber management exclusions of any areas up to one acre for bona fide protective purposes such as vernal pools, seeps or hibernacula protection, and cultural/historic resources. There must be a description of the area designated as miscellaneous. County Foresters continue to have the latitude to accept creative silvicultural practices to manage for specific wildlife habitats.

**V. Lands not managed actively for timber, needing only to be substantiated and mapped:**

A) Non-Productive Land (Site Class IV) – with no cap but limited to areas consisting of soils classified as Site IV (See Appendix D – Use Value Appraisal Productivity Classes of Forest Land).

County Foresters may grant enrollment exceptions for Site IV lands greater than 20% of the total parcel, not ranked as an ESTA based upon site index or soils maps. (Site IV is defined as land that is not capable of growing 20 cubic feet of wood volume per acre per year using soil maps, growth calculations, or site index curves.)

**VI. Non-Forested Lands (“Open Land”)**

A) Open Land

Open land is land that is not eligible under the Agricultural category, will not be reforested, and does not meet the Site IV definition according to UVA program standards. Open land is limited to no more than 20% of the total of enrolled open land plus Site I, II and III forest land. Open land is taxed at the Agricultural current use value.

**General Notes – In all circumstances, areas qualifying for UVA under all categories will appear on an approved map, need a detailed description of site characteristics, values being protected, and a management strategy covering a 10-year period that also describes the status and condition of the resources.**