

# **MINIMUM STANDARDS FOR FOREST MANAGEMENT PLANS**

Effective 4/1/2010

## **Forest Management Plan Procedure**

A forest management plan must be filed with the County Forester by October 1 of the year preceding enrollment. Updated forest management plans are due by April 1 – 10 years from the first year of enrollment. (Example 1: Application and plan date = fall of 1999. First year of enrollment is 2000. Updated plan due April 1, 2010.) (Example 2: Updated plan submitted for 4/1/2000. Next update is due 4/1/2010.)

The Department has prepared a sample management plan format containing the minimum requirements (See Appendix E – Sample Forest Management Plan) for filing under UVA. It prompts and provides space for all required information. Alternative formats containing at least the following information may be accepted by the Department.

The forest management plan shall include the following:

- I. Parcel Information and Stand Data:** The *Use Value Appraisal Forest Management Plan* form completed according to the following instructions or an alternative format containing at least the following information:

For the entire parcel:

- 1) Original signatures and signature dates of owner(s).
- 2) Name and address of owner(s) shall be included as it appears on the application form.
- 3) Town where parcel is located.
- 4) Orthophoto Number shall be listed along with the series (NAD 83 preferred).
- 5) Grand List Description shall be included as it appears on the application form.
- 6) SPAN shall be included in the plan and on the map.
- 7) Resource Information: The management plan will address the conditions on the ground for the entire parcel. Specific management recommendations to protect, maintain or enhance these characteristics, where they exist and where they are compatible with forest management, should be addressed for the enrolled parcel.
  1. *Soil and Water Resources:* This refers to soil erosion prevention and water quality protection related to forest management. At a minimum, a statement that the AMPs will be followed is necessary in the forest management plan.

Information in categories 2-4 is **OPTIONAL for Use Value Appraisal eligibility**.

2. *Recreation and Aesthetics:* This refers to uses of the property for recreational purposes such as hunting, fishing, hiking, skiing, biking, horseback riding, wildlife viewing, snowmobile, all-terrain vehicle or other use. These locations shall be noted on the forest management plan map. If there are no recreational uses on the

property, state “none” in this section. Aesthetics is also part of this category and includes such things as waterfalls, cliffs, special views, and individual trees as well as other things of note for individual landowners. These locations shall be noted on the forest management plan map. If there are no other resource values, please state “none” in this section.

3. *Cultural Resources*: This refers to any cultural, historic, or archeological occurrence on the property. Examples may be stone walls, cellar holes, cemeteries, and others. These locations shall be noted on the forest management plan map. If there are no cultural resources, please state “none” in this section.
4. *Wildlife Habitat*: This refers to wildlife habitat and habitat characteristics. Descriptions may include deer yards, bat hibernacula and roosts, heron rookeries, specific songbird or game bird habitat, snag or den trees or potential snag or den trees, coarse woody debris, vernal pools, beech groves, apple orchards, evidence of animal browse, or direct observation of species. These locations shall be noted on the forest management plan map. If none are present, please state “none.”

For each forest stand:

- 8) Sampling Data must be stand specific and accurately represent field conditions. Forest stand is defined as “*A group or groups of trees sufficiently uniform in age class distribution, composition, and structure, and growing on a site of sufficiently uniform quality, to be a distinguishable unit.*” For sampling intensity and procedure guidelines, please refer to the appropriate silvicultural guide or to a mensuration guide (See Appendix A – Partial List of Acceptable Forest Management Publications). Include the sampling procedures used and date(s) sampling took place. For fixed radius plots, include size and number of plots per stand. For variable radius plots, include basal area factor and the number of points taken per stand. For regeneration data, include plot size and number of plots sampled.
- 9) Forest Stand Number as assigned on the map.
- 10) Acres: An estimate of the number of acres of the specified stand.
- 11) Site Class: The site productivity class or classes of the stand (See Appendix E – Use Value Appraisal Productivity Classes of Forest Land). Specify soil series or site index.
- 12) Stand History includes such information as date and type of last treatment or harvest, planting records, natural disturbances, etc., if known.
- 13) Stand Description shall include the following information:
  - a. *Age Class Structure* – whether stand is currently even- or uneven-aged.
  - b. *Quadratic Mean Stand Diameter* – diameter of the tree of average basal area, not the average diameter of the trees in the plot.

- c. *Stand Cover Type* – Society of American Foresters cover types or equivalent. Provide percent species composition by basal area of dominant overstory.
  - d. *Natural Community Type* – **only required for ESTAs** (refer to 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).
  - e. *Total Basal Area* – shall be provided for all stands of poletimber- and sawtimber-sized trees. For uneven-age management, the plan shall include all trees in the 6-inch diameter class and larger. For even-age management, the plan shall include all trees in or touching the main crown canopy (excluding suppressed trees).
  - f. *Acceptable Growing Stock Basal Area* – consists of that portion of trees tallied as total basal area that are of commercial species and have the potential to produce sawlog-quality or better material now or in the future. Commercial species are those tree species that are commonly accepted as being commercially valuable.
  - g. *Unacceptable Growing Stock Basal Area* – consists of that portion of trees tallied as total basal area that are NOT of commercial species, or do not have the potential to produce sawlog or better quality material now or in the future. Non-commercial species typically include such species as alder spp., American hornbeam (muscle wood), apple, boxelder, common chokecherry, Eastern hophornbeam, gray birch, hawthorn, mountain ash, mountain maple, pin cherry, striped maple, and willow spp.
  - h. *Regeneration Data* – provide qualitative data description of density and species in the seedling/sapling class. Where regeneration treatments are prescribed, quantitative regeneration data may be required.
  - i. *Forest Health Conditions* – include insect, tree disease, browsing, abiotic or invasive exotic plant problems within the stand which may affect the silvicultural treatment recommended within the 10-year management period. Invasive plants should be listed by species and categorized as light, moderate, or heavy infestations.
- 14) Long-Range Silvicultural Objectives must include at least the following:
- 1. Even-age Management
    - a. Present stand age
    - b. Rotation age
  - 2. Uneven-age Management
    - a. Diameter objectives for principal species
    - b. Cutting cycle
- 15) Scheduled and Prescribed Silvicultural Treatment: **It is the responsibility of the landowner to supply enough detail about the proposed stand prescription that it**

**can be effectively evaluated by the Department of Forests, Parks and Recreation.**

A silvicultural treatment, if needed, shall be prescribed for each stand within the 10-year plan period and shall be consistent with stated objectives. A specific year shall be given for each prescribed treatment. If the prescribed treatment is not implemented within the three-year window before or after the year specified, an amendment is required.

For all treatments, provide species favored for retention and regeneration, and residual basal area objectives. For progressive clearcutting, provide sufficient description of harvest area sizes and timing between first and last treatment. For single tree selection, provide a diameter distribution chart or Q factor describing current and target condition. For group selection treatments, provide size of groups and percent of stand area to be regenerated by group selection and residual basal area outside the groups. When work is planned outside of groups, additional treatment descriptions must be provided.

Prescription of a cutting system will be based on the information used in stand analysis in connection with the most current silvicultural guide or other appropriate publication (See Appendix A – Partial List of Acceptable Forest Management Publications). Reference the guide/publication in the plan. Where no guide is appropriate, the plan shall contain adequate data and information to support the prescribed silvicultural treatment.

It is recognized that the practice of silviculture is both art and science, and that specific silvicultural treatments often differ from place to place within a stand due to normal stand variability.

For crop tree release, provide a description of the crop trees to be released and the approximate number of crop trees to be released per acre.

**II. Management Schedule:** A 10-year work schedule (See Appendix E – Sample Forest Management Plan) will be submitted with the management plan and will be updated every 10 years. The work schedule shall include all prescribed commercial harvest cuttings, non-commercial treatments, and any other treatments necessary to comply with the management plan. All prescribed treatments shall be narrowly focused and stand specific. Supportive data derived from inventory such as stand diagnosis and prescription forms and basal area computation sheets may be attached to the summary sheet for further documentation, if desired. Give a single year date for each treatment. Policy allows  $\pm$  three years on single year dates to allow for issues such as changing markets, weather conditions, or insect defoliations.

**III. Management Map:** The following standards apply to all parcels (See Appendix E1 – Sample Use Value Appraisal Forest Management Plan Map and Chart of Acreage Adjustments):

- 1) The map (for example, see Appendix E1 – Sample Use Value Appraisal Forest Management Plan and Chart of Acreage Adjustments) must be orthophoto based.

Four Vermont coordinate system coordinates must be indicated on the map. Digital data for creating your own maps are available through Vermont Center for Geographic Information (VCGI) ([www.vcgi.org](http://www.vcgi.org)). For a list of UVA map preparers, contact your County Forester. Maps of parcels larger than 1,000 acres or appearing on more than four orthophotos are exempt from the 1:5,000 map scale providing that the alternate scale used is not less than 1:20,000, is consistent with available aerial photography scales, and that excluded areas (with the exception of power lines) in parcels mapped at alternate scales are mapped at 1:5,000 as an additional inset.

- 2) The map must include the following:
  - name of owner(s)
  - town in which the parcel is located
  - name of draftsman
  - acreage of parcel
  - orthophoto number and series year
  - four Vermont coordinate system coordinates (NAD83 preferred)
  - north arrow
  - scale of 1:5,000 (unless exempt)
  - locus map to indicate parcel's location
  - lands greater than 1 mile access distance (straight line distance from nearest class 1, 2 or 3 road)
  - SPAN
  - date of preparation or revision
- 3) The map must show the boundaries of the entire parcel, the boundaries of the portion of the parcel to be included in the program, and the boundaries of the portion of the parcel to be excluded from the program. These areas must be clearly labeled so the acreage of each area can be listed in a chart. The map must show the location of all buildings and must show all agricultural and open land to be enrolled.
- 4) The map shall include significant physical features such as roads, surface waters (these include permanent streams, rivers, lakes, and ponds), wetlands, and power lines.
- 5) Established rights-of-way and/or preferred access route should be shown sufficiently so that the forest stands and features can be located on the ground.
- 6) All forest stands (including significant wildlife habitats, special places and sensitive sites, ESTAs, miscellaneous treatment areas, open, and non-productive lands) that have special treatment in the written plan must be delineated by a number that corresponds to a description in the forest management plan.
- 7) A chart must be included on the map or attached to the map (See example, Appendix E1 – Sample Use Value Appraisal Forest Management Plan and Chart of Acreage Adjustments) to show the acreages of agricultural land, open land, productive forest land by stand, and non-productive forest land that is less than 20% of the enrolled productive forest land acres. In addition, the following areas must be shown on the map and chart, and must be approved by the County Forester: non-productive forest land greater than 20% of the enrolled productive forest land acres, significant wildlife

habitats, Special Places and Sensitive Sites, the six ESTAs, and miscellaneous treatment areas. The above 10 categories require the signature of the County Forester on the map. If the acreage calculated from the orthophoto does not match the acreage in the town records, the acreage must be prorated to match town records. Excluded areas must also be shown on the map and chart as actual acres and cannot be prorated.

- 8) If cultural resources are described in the plan, they should be shown on the map.

**Note:** Remote forest land will be appraised at 75 percent of the forest land use value if it is located greater than one mile from a class 1, 2, or 3 road. The total acreage must appear in the chart as a separate category of “Forest land greater than one mile from a class 1, 2, or 3 road” either as productive or non-productive. It must be calculated as located beyond one mile as measured in a straight line distance, regardless of ownership, from the nearest class 1, 2, or 3 road. The area must also be delineated on the required map.

**IV. Use Value Appraisal Parcel Data Entry Form** (See Appendix E2 – Use Value Appraisal Parcel Data Entry Form): A completed Data Entry Form must accompany the Forest Management Plan. It is used for administrative purposes and data entry. It shall not be used as the management plan itself. Round all numbers to whole numbers.

Instructions for Completing the Form:

The line with (new, update, etc.) indicates the type of plan. This sheet can also be used for amendments by indicating the revised information by stand and writing an explanation in section 14.

- 1) Landowner Name – If there is more than one owner, use the owner responsible for attending to UVA.
- 2) Landowner Contact Information – address, phone number, email.
- 3) Parcel Town – Record the town(s) in which the land is located. If the parcel is in two or more towns, separate UVA forms must be completed for each town. This is necessary because taxes are paid by town, not parcel, and the ID# is broken down by town.
- 4) School Property Account Number (SPAN) – Refer to corresponding tax bill or town clerk.
- 5) Total Acres Assessed at Forest Use Value – Forestry Acres in Parcel are grand list acres minus agricultural land, open land, and exclusions. This number should agree with the total of all the stand acreage listed below.
- 6) Plan Preparer is the name of the person and the company (if applicable) who prepared the management plan.

7) Previous Owner – This is only important if the land was in UVA under a previous owner, otherwise you may leave it blank.

8) Stand Information

*Stand #* – List stands using same numbers as in management plan and on map. Use additional sheets if necessary. If two activities are planned on the same stand over the next 10 years, list the stand twice and indicate each activity separately (i.e., shelterwood 2005, overstory removal cut 2015).

*Acres* – List acres in each stand to nearest acre.

*Even-aged/Uneven-aged*—1 for even-aged class structure or 2 for uneven-age class structure.

*Site Class* – Indicate the predominant site class as defined by UVA standards (Appendix E – Use Value Appraisal Productivity Classes of Forest Land).

*Stand Type* – Use the codes on the back side of the form, if they reasonably describe the stand type. If not, use “12” (other) and describe the stand type in section 11.

*Quadratic MSD* – Show quadratic mean stand diameter to the nearest inch.

*Total BA* – Enter total basal area in square feet per acre.

*AGS BA* – Enter acceptable growing stock basal area in square feet per acre.

*Management Activities* – Use one of the codes listed on the back side of the UVA form if they reasonably describe the management activity intended. If not, enter “13” (other) and describe the activity in section 10.

*Treatment Year* – Enter the year the activity is planned. There is a three-year window on either side of this date (i.e., 2010 allows you to complete the activity between 2007 and 2013). If you cannot complete the activity within that time period, an amendment is necessary.