|  |
| --- |
| **Idaho One Plan Guide** |
| **For Multiple-Use Forest Management on Private Lands** |

|  |
| --- |
| November 2016 |

## Table of Contents

Plan Contacts, Contents and Approval 2

Property Description, Landowner Goals and Objectives and Map Types 4

**Natural Resource Elements**

**Special Sites and Social Considerations** 5

Archological, Cultural and Historic Sites

Aesthetics

Recreation

Forest of Recognized Importance

Conservation-based Estate/Legacy Planning or Land Trusts

**Soil, Water and Air Protection**  7

Soils

Roads and Access

Water and Wetlands

Carbon Sequestration and Climate Resilience

**Fish, Wildlife, and Biodiversity** 9

Fish and Wildlife

Threatened and Endangered Species

Biodiversity

**Forest Health and Fire** 10

Forest Health

Invasive Species

Fire Resilient Forests

Home Firewise and Fire Adapted Communities

**Range and Agroforestry** 12

Rangelands

Agroforestry/Silvopasture

**Forest Management** 13

**Appendix**

A. Implementation Schedule 16

Signature Page 17

B. Glossary 18

C. Tax and Business Management 25

D. Timber Sale Checklist 26

**** 

The One Plan template provides a simple way to write forest management plans that will meet the standards of Idaho’s Forest Stewardship Program, the Idaho Tree Farm System and the Natural Resource Conservation Service.

This guide provides a framework to ensure that all planning elements and standards are addressed to meet requirements of each program.

**Contacts:**

For additional information on the use of this template and each program’s requirements contact:

**Forest Stewardship Program:** Idaho Department of Lands, Phone: 208-769-1525 <https://www.idl.idaho.gov/forestry/service/index.html>

**Idaho Tree Farm Program:** <http://idahotreefarm.org/> or [admin@idahotreefarm.org](mailto:admin@idahotreefarm.org)

**Natural Resource Conservation Service:** <http://www.nrcs.usda.gov/wps/portal/nrcs/site/id/home/>

**Plan Contents:**

The One Plan Template provides a format for landowner information, property descriptions, landowner goals and objectives, maps, current and desire future conditions of forest resources and implementation schedules along with a signature page.

The plan preparer should consider, describe, and evaluate all resource elements that are present and their importance to the ownership. The extent to which management plans addresses these elements will depend upon their prevalence on the property and their importance with respect to the landowners’ primary objectives.

The plan preparer can customize additional resource information based on the landowners needs. The template provides optional resource information that can be useful to the landowner such as the glossary, tax and business information, and a timber sale contract checklist.

**Maps:**

* An electronic copy of the plan, including maps is required for participation in each program.
* Include a directional arrow, legend, and delineate property boundaries, stands (management units), special sites, etc.
* To minimize file size, it is recommended that maps generated in ArcGIS be exported and saved as a JPEG, with a resolution of 96 dpi.

**Plan approval:**

* The landowner must sign the signature page to indicate approval of the plan and specify (by initials) which program(s) they wish to participate in. Plans must not be shared between entities unless the landowner has expressed the desire to co-participate in another program as indicated on the signature page and release forms.
* Based on the program the landowner wishes to participate in, the plan author will submit an electronic version of the plan to the Idaho Department of Lands (for Forest Stewardship Plans), Natural Resource Conservation Service or Idaho Tree Farm.

**Landownership and Property Description**

1. Include landowner’s name and contact information, plan author, signature and contact information, date the original plan was written and revision date if applicable. Indicate if the landowner is a resident of the land or absentee landowner. When plans are updated or amended include changes to plan author (if applicable) and date of amendment.
2. Indicate total plan acres and total forested acres; provide legal property descriptions (subdivision/section/township/range), and GPS coordinates (formatted to decimal degree).
3. Name the watershed in which the property is located
4. Name and phone number of the fire district in which the property is located and the estimated response time to the property.
5. Describe adjacent land use to provide context on neighboring ownerships or land use.
6. Describe access to the property and what type of traffic is suitable for roads on the property.
7. Provide average elevation or the elevational range, aspect, and general topography
8. Indicate the number of unique stands of trees or management units.

**Introduction**

This a general overview based on information that was provided by the landowner, personal knowledge, property history, length of ownership, or evidence of past management activities.

**Landowner Goals and Objectives**

Landowner goals and specific objectives must be clearly stated. Encourage landowners to make a list of their goals (broad vision of what they want to achieve on their land (e.g. improve forest health)) which reflect their expectations, values, and potential of their property. Then list the objectives (the means or actions they will take to achieve the goals (e.g. harvest dying trees, plant desirable trees)).

**Maps**

For all maps include a title, directional arrow, scale, and legend. The scale should be sufficient to easily identify all features included on the map.

* **Property map**: includes the overall property boundary, delineated management units/stands, major roads, water features, and structures. Use numbers or letters to identify management units, the location of any other special sites or resource elements. The property map may be overlaid on an aerial photo or no background. Choose the option that best displays the property details.
* **Soils map**: Project this over an aerial photo, delineate and label the location of major soil types on the property, and include the property boundary and delineated management units. The NRCS provides a web-based map-making tool <http://websoilsurvey.nrcs.usda.gov.>
* **Topographic map**: Display contour lines and include the property boundary, delineated management units, major roads, water features, and structures.

**Natural Resource Elements for Forest Management Plans**

**\*For all plan elements describe the current condition and provide recommendations that consider the landowner’s goals, objectives, current and the future desired condition.**

## Special Sites and Social Considerations

1. **Archeological, Cultural and Historic Sites**

The intent is to protect known landscapes, structures, archeological artifacts and vegetation that represent a cultural or society historic value. Sites may include features that have significant personal importance to the landowner. Federal and state laws protect archeological, cultural, and historic sites from disturbances, destruction, or removal. Landowners should be made aware of laws pertaining to archeological, cultural, and historic sites in their state. As the plan writer, make sure you are aware of any such sites as you begin to develop the plan. If you have specific questions about such sites, contact the historic preservation office, office of archeology, or agency in your state responsible for distributing cultural resource information. It is important to understand where such sites may be located prior to ground-disturbing forest management activities. The Natural Resource Conservation Service (NRCS) provides financial and technical assistance, including guidance related to cultural resources and implementation of conservation practices. Information concerning archeological, cultural and historic sites can be found on the following websites:

<http://www.treefarmsystem.org/your-special-sites-resource-guide>

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/technical/nra/cultural/>

1. **Aesthetics**

Describe the desired condition that would maintain or enhance aesthetic qualities. Consider how management may affect the visual structure of the forest and how actions impact your neighbors. Measures to enhance natural aesthetics can include: converting agricultural fields to forests, creating wooded buffer zones to protect riparian areas, enhancing wildlife suitability, reducing wildfire concerns, providing privacy and controlling noxious weeds. Visual impacts of various forest management practices can also increase or decrease aesthetics. There are numerous proven management techniques that may be employed to achieve the landowner’s desired level of aesthetic quality. For additional information: <http://www.ncrs.fs.fed.us/pubs/viewpub.asp?key=4866>

1. **Recreation**

Describe the type of forest-oriented recreation activities valued by the landowner (e.g. birding, hiking trails, hunting, fishing, gathering and camping.) Management practices to enhance recreation opportunities may be easy to implement depending on the type of forest-oriented recreational activities valued by the landowner. For tips on recreational management, please visit the following websites: <http://www.treefarmsystem.org/outdoorrecreation>

1. **Forest of Recognized Importance (FORI)**

These forests are recognized at the landscape level, rather than the stand level and are recognized for the combination of unique values. FORI are considered important because of their unique combination of social, cultural, biodiversity and environmental values. Social or cultural values include aspects of a forest that are important to the surrounding community’s identity, like historical features or sacred sites or forest products that local residents depend on. Biodiversity values are critical to protecting rare ecosystems or habitats, or unusual plant or animal species. Environmental values include aspects of the forest that benefit the whole community, like protecting local watersheds or preventing erosion.

A recognized FORI landscape generally has a combination of several exceptional attributes in high concentration, for example, critical habitats for multiple **threatened or endangered** species, or high densities of unusual cultural or geologic features. Many of these areas already are protected by federal or state governments or private land- conservation organizations. In the United States, the concept of FORIs is relatively new, and no single organization or agency is responsible for their designation and conservation.

Not sure whether you are part of such a landscape? Your state’s natural-heritage database may be a good place to start to learn more about the special landscapes in your state, and which agencies and organizations are working to protect them. For more information about identifying a Forest of Recognized Importance, visit: <https://www.treefarmsystem.org/fori>

<https://idfg.idaho.gov/conservation/natural-heritage-program>

1. **Conservation-based Estate/Legacy Planning or Land Transfer**

The average age of a family forest owner in the United States is 62 years old. The decisions that these aging landowners make about the future use and ownership of their land are the biggest driver of landscape change that we face. Ensuring that enough forests, in large enough property sizes continue in the future will not only help ensure working forests, but also the continuation of the many critical public benefits that these forests provide. In addition, many forest stewardship practices, particularly silvicultural recommendations, require multi-year or even multi-decade timeframes to reach their goal. It is, therefore, critical to pair silvicultural recommendations with estate planning.

Foresters are a trusted source of information about land and can play a critical role in helping landowners make an informed decision about the future use and ownership of their land.

Help landowners by providing: Educational materials (see links below); Language in the FSP management plan about the current ownership of the land and the implications for passing land through that type of ownership; Names of competent estate planning professionals; Opportunity for peers to share their experience.

**Links**:

Estate Planning Options <http://www.na.fs.fed.us/stewardship/estate/estate.shtml>

Idaho Forest Legacy Program <https://www.idl.idaho.gov/forestry/forest-legacy/>

Ties to the Land resources: <http://tiestotheland.org/> Occasionally, Ties to the Land Workshops are offered in Idaho.

## Soil, Water and Air Protection

## Soils

## Plans should include a discussion of soil features in a manner compatible with the landowner’s objectives. Diverse conditions and cover type may necessitate several different descriptions for the property. Identify soil types and refer to soils map. Include slopes, aspects, and Idaho Forest Practices Act (FPA) limitations, such as steep slopes and unstable conditions, and erosion control plans. Examples of recommendations include wood debris retention, nutrient cycling, road drainage features, and mitigation of soil compaction and livestock issues. Information on local soils and accompanying data can be found on the Natural Resources Conservation Idaho Soil NRCS website <http://www.nrcs.usda.gov/wps/portal/nrcs/surveylist/soils/survey/state/?stateId=ID>

## All forestry activities must protect water quality and comply with Idaho’s Forest Practices Act. See: Idaho Forest Practices Act <https://www.idl.idaho.gov/forestry/fpa/index.html>

## Idaho Best Management Practices <http://www.uidaho.edu/extension/idahoforestrybmps/>

## Conservation districts provide assistance and help conserve water and other resources at the county level. For a listing of contact information for conservation districts, please visit <http://www.nacdnet.org/state/idaho/>

## Roads and Access

## Describe the condition of roads and trails and based on the landowner objective, identify areas for improvement, maintenance or restrictions. Include the type of access allowable on the road, such as if a bridge is passable by an ATV, car, or logging truck. Reference to a map may be helpful as part of the description. Recommendations should address timing for general maintenance, strategies to reduce erosion, road surface condition, road runoff and locations for drain-dips, culverts, and stream crossings. Examples of recommendations include limiting road use during certain times of the year and methods to mitigate invasive weed movement.

## Idaho Best Management Practices <http://www.uidaho.edu/extension/idahoforestrybmps/>

## Water and Wetlands

## Describe the existing water features on the property, both natural and man-made. Include streams, ponds, wetlands, riparian areas or riparian and wildlife habitat. Identify stream classifications. <https://www.idl.idaho.gov/forestry/forester-forums/>index.html Click on FPA 14

## 

## Plans should draw attention to bodies of water located on the landowner’s property that should be protected during all management activities. This may include the establishment of streamside protection zones (SPZs), which are meant to prevent sedimentation and maintain healthy water temperatures for aquatic life. All forestry activities must protect water quality and comply with Idaho’s Best Management Practices (BMPs) for forestry activities. Proper pre-harvest planning prior to cutting timber can help ensure protection of both soil and water resources. Examples of recommendations include strategies to remain in compliance with FPA rules during all forest activities, SPZ’s, road crossings, and tree-retention requirements.

Wetlands include areas where water covers the soil or is present either at or near the surface of the soil all year or for varying periods of time during the year (including during the growing season). Wetlands generally include swamps, marshes, bogs, and fens. Wetlands are also highly diverse and productive ecosystems with emphasis on supporting timber production, water quality protection, wildlife habitat, and more.

The landowner is responsible for understanding laws and regulations related to forestry practices before engaging in wetland management activities on their land. Examples of recommendations include working with Idaho Fish and Game to facilitate protection and enhancement of the wetlands. More information on wetlands, including forestry activities that may be carried out in them, can be found on the following websites:

## NRCS <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/water/wetlands/>

## EPA <http://water.epa.gov/type/wetlands/>

US Fish and Wildlife Service Wetland Mapper <http://www.fws.gov/wetlands/index.html>

## Idaho Fish and Game <https://www.epa.gov/sites/production/files/2015-10/documents/idfg-wetland-program-plan-2015.pdf>

## Carbon Sequestration and Climate Resilience

Climate change impacts to forests will be increasingly direct, through changing temperature, precipitation, and severe weather conditions, as well as indirect, through more intense stress and shifting disturbance patterns. Maintaining healthy, resilient forests over time will require a clear appraisal of the risks and opportunities presented by climate change, including consideration of how local site conditions and management history might make a particular property more or less vulnerable to climate change impacts.

Ensuring that forests can adapt to climate change will also help ensure that forests continue to remove greenhouse gases from our atmosphere. Forests play a vital role in the earth’s carbon cycle, as they remove carbon from the atmosphere and store it in biomass (trunks, branches, foliage, and roots) and soils. Sustainable forestry practices can increase the ability of forests to sequester atmospheric carbon while enhancing other ecosystem services, such as improved soil and water quality. Harvesting and regenerating forests can also result in net carbon sequestration in wood products and new forest growth. More information and tools on climate change adaptation and carbon management can be found on the following websites:

<http://www.fs.fed.us/ecosystemservices/carbon.shtml>

<http://www.forestactionplans.org/about-action-plans/forest-trends/climate-change-carbon-sequestration-and-biomass-energy>

http://[www.fs.usda.gov/ccrc/](http://www.fs.usda.gov/ccrc/)

<http://climatehubs.oce.usda.gov/>

## Fish, Wildlife, and Biodiversity

## Fish and Wildlife

## Describe the observed or known fish and wildlife species and the current habitat conditions. Indicate the percent of suitable habitat cover and plant species and abundance wildlife species. Description can be general and based on landowner observations or those made during a site visit. Examples of recommendations include snag retention, erect nest boxes, game and predator management, planting fallow fields as food plots, or other methods to create or improve habitat species.

## Fish and other aquatic species depend on healthy water quality and quantity. Following Idaho’s Best Management Practices, which include establishing stream protection zones, can increase and create fish habitats and wildlife diversity.

## Idaho’s Wildlife Action Plan outlines the steps that are needed to conserve wildlife and their habitat before they become rare and more costly to protect.

## <http://teaming.com/wildlife-action-plan/idaho>

## Idaho Fish and Game <https://idfg.idaho.gov/>

## Idaho Best Management Practices <http://www.uidaho.edu/extension/idahoforestrybmps/>

<http://www.fws.gov/partners/aboutus.html>

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/plantsanimals/fishwildlife/>

1. **Threatened and Endangered Species**

Describe the presence of threatened or endangered species (plant or animal) observed by the landowner or during a site visit. If a threatened or endangered species is present, provide species name, extent of plants or number of animals observed and conditions of the habitat. If no species are evident and landowner is interested in attracting species to property, recommendations may include asking for assistance from Idaho Fish and Game to identify potential habitat for restoration or modification for a particular species. Include the appropriate regulating agency for consultation. The U.S. Fish and Wildlife Service Endangered Species Program provides information on state and federal threatened and endangered (T&E) plant and wildlife species. All Forest Stewardship Plans should address rare, threatened, and endangered species. For more information:

<http://www.fws.gov/endangered/>

## Idaho Fish and Game <https://idfg.idaho.gov/>

<http://www.natureserve.org/explorer/>

<http://www.teaming.com/state-wildlife-action-plans-swaps>

<http://www.nwf.org/What-We-Do/Protect-Wildlife/State-Wildlife-Action-Plans.aspx>

## Biodiversity

Biodiversity is the variety of life (including diversity of species, genetic diversity, and diversity of ecosystems) and the processes that support it. Landowners can contribute to the conservationof biodiversity by providing diverse habitats.

Describe the current cover types (or habitat types) on the property, unique ecological areas, or the general biodiversity condition. When possible, include estimates on the abundance and diversity of the flora and fauna.

Areas of special interest should be identified on a map.

It is important to select management options that offer the greatest opportunities for promoting wildlife habitats and conserving biodiversity while fulfilling other land ownership objectives. Some of these options include, but are not limited to, the conservation of wildlife habitats and biodiversity by:

1. Managing stand-level habitat features.

2. Promoting aquaticand riparian areas.

3. Managing landscape features.

4. Conserving rare species and communities.

5. Protecting special features and sites.

6. Developing partnerships with natural resource agencies and conservation organizations.

For more information on managing for biological diversity:

<http://www.fs.fed.us/ecosystemservices/biodiversity.shtml>

http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/local/<http://www.forestfoundation.org/>

## 

## Forest Health and Fire

## Forest Health

## A healthy forest is a forest that possesses the ability to sustain the unique species composition and processes that exist within it. Active management of the forest helps to maintain and improve its productive capacity, taking into account all the factors that influence the resource elements addressed in the plan. Silvicultural harvest practices and the use of prescribed fire as a tool can reduce risk from wildfire, pests, and invasive species, and ensure long-term forest health and vigor. Forest health protection issues are often directly related to the active management of insects and diseases, invasive plants, and wildfire. Yearly inspections for signs of insects, diseases, or invasive plant infestations should be completed by the landowner.

Describe current forest condition related to forest health, include observed signs and symptoms of insects or diseases, overstocked stands, and other biotic or abiotic factors that are creating unhealthy forest conditions. A standard recommendation is to inspect the forest for damaging agents, annually, and additional inspections after natural disasters.

Recommendations to control forest pests (insects, disease, or weeds) should incorporate an integrated pest management approach. Provide landowners a general explanation of IPM and the tools involved with setting thresholds, monitoring, cultural practices, mechanical control, biological control, genetic engineering, and chemical control.

Recommendations may include planting and preference for tree species that are appropriate for the sites and matching seed source and seedling with the elevation to be planted (possibly as it relates to climate change). Examples of recommendations include specifications and timing for thinning and pruning and should include information on integrated pest management strategies, where applicable.

Describe forest damage agents in terms of their relative risk to the forest and provide a prioritization for implementing control or treatments and a timeline for recommended treatments.

## More forest health and pesticide management information can be found on the following websites:

<http://www.fs.fed.us/foresthealth/>

<http://www.forestpests.org>

<http://www.ipmcenters.org/>

<http://npic.orst.edu/mlr.html>

<http://www.treefarmsystem.org/pesticides5>

## Invasive Species

Indicate the presence of invasive species (noxious weeds) on the landowner property or neighboring property. A standard recommendation is to inspect the forest for damaging agents annually. Describe invasive agents in terms of their relative risk to the forest and provide a prioritization for implementing control or treatments and a timeline for recommended treatments. <http://invasivespecies.idaho.gov/>

Recommendations to control invasive species should incorporate an integrated pest management approach. Provide landowners a general explanation of IPM and the tools involved with setting thresholds, monitoring, cultural practices, mechanical control, biological control, genetic engineering, and chemical control.

If noxious weeds are present, or an eminent threat, help the landowner determine if there is a Cooperative Weed Management Area (CWMA) within their county. CWMA may be able to provide assistance <http://www.stateconservation.org/Idaho/local-resources/Idaho-Cooperative-Weed-Management-Area/35400>

## Fire Resilient Forests

## Describe current forest conditions (or fuel loads) that are at high risk for carrying intense fires or crown fires. Identify tree species by their dependence or adaptation to fires and any neighboring forests that are a high risk for wildfire. Recommendations will consider landowner’s objectives for reducing the risk of wildfire and creating a fire adapted forest. Examples of recommendations include creation and use of firebreaks and fuel breaks (identify on a map), and silvicultural treatments such as prescribed burns, thinning, and pruning to mitigate the intensity of wildfire.

## <http://www.uidaho.edu/extension/forestry/topic/fire>

## <http://www.fs.fed.us/rm/pubs/rmrs_gtr252.pdf>

## <https://efotg.sc.egov.usda.gov/references/public/CO/CO383_Spec.pdf>

## Home Firewise and Fire Adapted Communities

Describe characteristics of the home and surrounding landscape that may increase or mitigate the risk of losing the home in the event of a wildfire. Include information about the fire district in which the property is located (or nearest fire department), response times, and phone numbers. Recommendations will consider landowner objectives for reducing the risk of wildfire to their home and surrounding property. Contact your county and reference the County Wildfire Protection Plan. Promote Firewise principles that include defensible space around homes and structures and adjacent fuel breaks.

[www.idahofirewise.org.](http://www.idahofirewise.org/)

<http://www.fireadapted.org/>

## Range and Agroforestry

## Rangelands

Rangelands are described as lands on which the indigenous vegetation is predominately grasses, grass-like plants, forbs, and possibly shrubs or dispersed trees. Existing plant communities can include both native and introduced plants. Disturbed lands that have been re-vegetated naturally or artificially are included. Rangelands provide a diverse and significant production of economic benefits and ecosystem goods and services. Recommendations should consider landowner’s objectives for maintaining or improving the rangeland. Recommend using NRCS assistance to develop a plan specifically addressing range management. Examples of recommendations include sustainable grazing guidelines, pastures and animal rotation, water sources, salt block placement, management of native and non-native weeds.

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/rangepasture/>

<http://www.fs.fed.us/t-d/programs/range/>

## Agroforestry/Silvopasture

Agroforestry intentionally combines agriculture and forestry to create integrated and sustainable land use systems. Agroforestry takes advantage of the interactive benefits from combining trees and shrubs with crops and/or livestock and is commonly divided into five main practices: Windbreaks, Alley Cropping, Silvopasture, Riparian Forest Buffers, and Forest Farming.

**Silvopasture** combines trees with forage and livestock production. The trees are managed for high-value saw logs while providing shade and shelter for livestock and forage, reducing stress and sometimes increasing forage production. To practice silvopasture effectively, landowners need specific information about tree species, spacing, stand density, site preparation, herbicides, pruning, and canopy management. They also need to know about the animals they want to graze, fencing and gates, and forage. There can be problems with combining the two management schemes if it is not done correctly. Before any new silvopasture system is established, landowners should thoroughly explore the associated economic and environmental considerations along with local land use, zoning, cost-share programs, and tax regulations.

More information on agroforestry and silvopasture may be found on the following websites:

<http://www.fs.fed.us/spf/coop/programs/loa/agro.shtml>

<http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/forestry/>

<http://nac.unl.edu/silvopasture.htm>

<http://www.silvopasture.org/>

<http://www.silvopasture.org/pdf_content/silvopasture_handbook.pdf>

<http://nac.unl.edu/>

## Forest Management

## 

## All forest management activities will comply with all relevant federal, state and local laws, regulations and ordinances. Inform the landowner about the need for relevant notifications and compliance related to Fire Hazard Management Notification of Forest Practices and the Supplemental Notification for a Stream Channel Alteration Permit.

## Plans authored by IDL staff should include information about the services of consulting forester for conducting a timber cruise (inventory) to establish a basis for tax purposes or in preparation for a timber sale.

## The type of management required by forest stands is based on your management recommendations, landowner objectives, and the current condition of the stand. The plan should identify and recommend sound silvicultural practices designed to help establish a new forest stand (regeneration), manage the existing trees (intermediate stand management), or implement a harvest activity to reach desired future stand condition based on management objectives.

## <https://www.idl.idaho.gov/forestry/fpa/index.html>

## <http://www.uidaho.edu/extension/idahoforestrybmps/>

## <https://www.idl.idaho.gov/forestry/forester-forums/index.html>

## <http://www.rngr.net/>

## <http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/contact/local/>

## Provide a general overview of forest condition. Then describe by units or stands.

## Delineate management unit areas on appropriate map or maps. Provide specific unit identifiers such as numbers or letters.

## When similar silvicultural recommendations are made for multiple management units it is not necessary to repeat the same details, instead refer the reader to where the activity was described in detail.

1. **Management Unit Descriptions**

Provide the identifying number (or letter) of the management unit and number of acres before describing each management unit.

**Include:** tree species composition, average and range of size class(seedling, sapling, pole, sawtimber) or DBH, average tree height in each size class, stocking (basal area, trees per acre, or a general description as understocked, adequate, overstocked), site-index (if site-index curves are available; otherwise, dominant height and age at breast height), average annual growth (rings/inch and/or leader height), and stand age (or age range for uneven aged stands).

Information may be provided in paragraph or table format. It may be easier for the landowner to evaluate the information for multiple management units if presented in a table. All information in this section should be detailed enough to make sound management decisions.

When a previously described resource element is also a major component of the management unit being described, provide specific information about the current condition and recommended practices within that management unit. On large ownerships, general information should be provided in each resource category and specific descriptions written for each unit. On smaller ownerships, enough detail should be provided in each resource category with reference to the maps.

1. **Information to provide silvicultural recommendations**
2. **Harvesting**

* Describe and recommend a type of harvest (Even- aged: clearcut, seed tree, shelterwood, commercial and pre-commercial thinning, etc. Uneven-aged: group select, single-tree select, overstory removal, understory removal, etc.) based on existing and the desired future stand conditions. Describe scenarios where and when sanitation/salvage removal should be considered.
* Recommend and describe the harvest method (ground, skyline) based on soil conditions, slope, time of year, type of harvest.
* Provide targets for stocking density, specify species to harvest (or retain and size class.

1. **Slash management:**

* Describe the method that best meets landowner objectives and complies with the Idaho Forest Practices Act (FPA)

1. **Stream Protection Zone (SPZ)**

* When a stream or other water feature is within a treated area delineate the SPZ on a map or describe the zone in relation to the water feature and forest practice. Provide information about marking the SPZ and the appropriate laws that must be followed.

1. **Post-harvest practices**

* Recommendations should consider the type of harvest or treatment completed, existing or new roads, and other soil and water issues. Examples of recommendations include burning landings, piles, or broadcast, seeding roads and landings, and weed treatments along roadsides.

1. **Reforestation or afforestation**

* Recommend artificial, natural, or a combination of both for regeneration. Describe regeneration methods and pros and cons of each method. Provide specific details of the preferred species (resistant or improved stock), site preparation, spacing, weed management, timing, etc.

1. **Timber stand improvement and other silvicultural treatments**

* Examples of recommended practices included, pre-commercial thinning, commercial thinning, pruning, etc. Provide details, such as preferred species, size class, desired density, when to apply treatment, how to prune, etc.

1. **Monitoring**

* Recommend on-site evaluation of harvest operations and all forest practices before, during, and after the practice to ensure forest management goals are met. Suggest at least annual inspections for forest health related concerns.

1. **Other information**

* Delineate and describe any other significant resource elements not previously addressed such as weed control, riparian restoration, hazard fuel treatments or special sites.

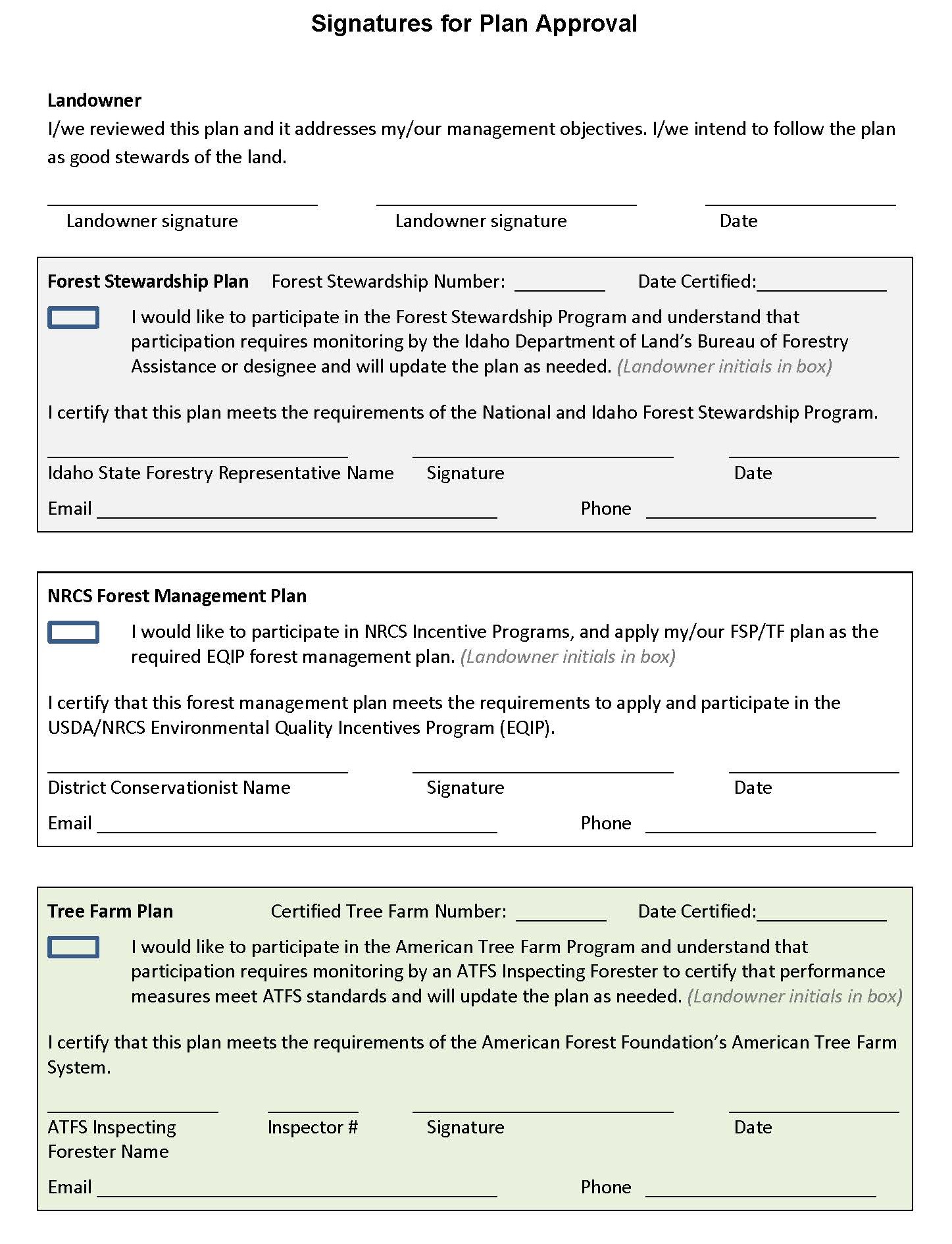
# Management Activity and Implementation Schedule

Provide a schedule or prioritized list of the activities planned by the landowner. Use the table provided in Appendix A, or create a table to include the following information:

1. Treatment date (Season/Year): provide a specific year or range of years
2. Treatment/Practice: provide a short description of activity to be accomplished
3. NRCS practice code: provide when an NRCS Practice Code is applicable and potential interest in financial assistance for the activity. For a list of NRCS practices and descriptions (including codes), visit: [http://efotg.nrcs.usda.gov](http://efotg.nrcs.usda.gov/) *.*
4. MU#: management unit (stand numbers described in the plan) number where recommended activity is located
5. Acres or feet to treat
6. Applied practice cost and date: for the landowner to record information

**Appendix A**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Management Plan Implementation Schedule** | | | | | | |
| **Unit #** | **Treatment Date**  **(Season & Year)** | **Short Description of Treatment/Practice** | **NRCS**  **Practice Code** | **Acres or Feet to Treat** | **Applied Practice** | |
| **Cost** | **Date** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | | | subtotal |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | | | subtotal |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | | | subtotal |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | | | subtotal |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  | | | subtotal |  |  |



# Appendix B:

# Glossary

**Acceptable Growing Stock:** Saleable trees that are of good form, species and quality and would be satisfactory as crop trees.

**Adaptive management:** A dynamic approach to forest management in which the effects of treatments and decisions are continually monitored and used to modify management on a continuing basis to ensure that objectives are being met. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Adverse regulatory actions:** Written warning, citations or fines issued by law enforcement or regulatory bodies.

**Aerial Photo:** Photo taken from an elevated position like on an aircraft.

**Afforestation**: the establishment of a forest or a stand in an area where the preceding vegetation or land was not forest. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Age Class:** A distinct aggregation of tree that originated at the same time, from a single natural event or regeneration activity or a grouping of trees (e.g. ten year age class) as used in inventory or management. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Aspect:** The direction that a slope faces (north, south, etc.)

**Basal Area:** The cross-sectional area of a tree, in square feet, at 4.5 feet from the ground (at breast height). When the basal area of all the trees in a stand are added together, the result is expressed as square feet of basal area per acre, which is a measure of a stand’s density.

**Biomass:** A renewable energy source of biological materials derived from living, or recently living organisms, such as wood, waste, and crop residues.

**Biodiversity:** The variety and abundance of life forms, processes, functions and structures of plants, animals and other living organisms, including the relative complexity of species, communities, gene pools and ecosystems at spatial scales that range from local through regional to global. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Board Feet:** A unit for measuring wood volumes. It is commonly used to express the amount of wood in a tree, sawlog, or individual piece of lumber. A piece of wood 1 foot long, 1 foot wide, and 1 inch thick (144 cubic inches).

**Broadcast**: to spread or apply seed, fertilizer, or pesticides more or less evenly over an entire area. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Canopy:** The more or less continuous cover of branches and foliage formed collectively by the tops, or crowns of adjacent trees.

**Carbon sequestration**: The incorporation of carbon dioxide into permanent plant tissue. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Chip**: A small piece of wood used to make pulp or wood composite or fuel. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Clearcut**: 1. A stand in which essentially all trees have been removed in one operation – *note* depending on management objectives, a clearcut may or may not have reserve trees left to attain goals other than regeneration. 2. A regeneration or harvest method that removes essentially all trees in a stand. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Contour Map:** A map where each line represents a change in elevation.

**Crop Tree:** A tree identified to be grown to maturity for the final harvest cut, usually on the basis of its location with respect to other trees and its timber quality.

**Cull:** A tree, log, lumber or seedling that is rejected because it does not meet certain specifications for usability or grade. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Culvert**: A device used to channel water. It may be used to allow water to pass underneath a road, railway, or embankment for example. Culverts can be made of many different materials; steel, polyvinyl chloride (PVC) and concrete are the most common. Formerly, construction of stone culverts was common.

**Den Tree:** A living tree with a cavity large enough to shelter wildlife.

**Desired species:** Those species of flora and fauna designated in the landowner’s management plan and not known to cause negative impacts on the local environment.

**Diameter Breast Height (DBH):** The diameter of a tree at 4.5 feet above the ground.

**Endangered Species:** Any species of plant or animal defined through the Endangered Species Act of 1976 as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Even-Aged Management:** Forest management with periodic harvest of all trees on part of the forest at one time or over a short period to produce stands containing trees all the same or nearly the same age or size.

**Forest owner:** Landowner or designated representative such as, but not limited to, professional resource manager, family member, trustee, etc.

**Forest product:** [Forest Produce] Any raw material yielded by a forest. Generally defined in Forest Acts or Ordinances, and subdivided conventionally into major forest products, i.e. timber and fuelwood, and minor forest products, i.e. all other products including leaves, fruit, grass, fungi, resins, gums, animal parts, water, soil, gravel, stone and other minerals on forest land. (F. C. Ford –Robertson, Terminology of Forest Science Technology, Practice, and Products, Society of American Foresters, 1971)

**Forest Stand Improvement:** See timber stand improvement.

**Forest type:** A category of forest usually defined by it trees, particularly its dominant tree species as based on percentage cover of trees, e.g. spruce fir, pine, Douglas fir.

**Forest vitality:** The health and sustainability of a forest.

**Fuel management**: The act or practice of controlling flammability and reducing resistance to control of wildland fuels through mechanical, chemical, biological, or manual means, or by fire in support of land management objectives. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Group Select**: Trees are removed and new age classes are established in small groups – *note* – 1. the width of groups is commonly approximately twice the height of the mature trees with smaller openings providing microenvironments suitable for tolerant regeneration and larger openings providing conditions suitable for more intolerant regeneration – *note* 2. The management unit or stand in which regeneration, growth, and yield are regulated consists of an aggregation of groups. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Girdling:** Completely encircling the trunk of a tree with a cut that severs the bark and cambium of the tree. Herbicide is sometimes injected into the cut to ensure death of the tree.

**GPS (Global Positioning System) Coordinates: A** commonly hand held, satellite based navigational device that records x, y, z coordinators and other data allowing users to determine their location on the surface of the earth. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Hack-n-squirt:** A tree treatment method where an axe or hatchet is used to make "hacks" (injections) into the tree's cambium layer. A plastic "squirt" bottle is used to spray a specific amount of herbicide into the cuts placed around the tree.

**Harvesting**: The felling skidding, on-site processing, and loading of trees or logs onto trucks. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**High conservation value forests (HCVF):** Forests of outstanding and critical importance due to their environmental, social, biodiversity or landscape values. Due to the small scale and low-intensity of family forest operations, informal assessment of HCVF occurrence through consultation with experts or review of available and accessible information is appropriate.

**High-grading:** Cutting only the high-value trees from a forest property, leaving a stand of poor quality with decreased future timber productivity.

**Incentive Programs**: State and federal agencies will offer landowners the opportunity to apply for incentive programs that will provide support and financial assistance to implement forestry and agroforestry related practices through conservation programs. Assistance can also be provided for multi-year and permanent easements to conserve forest land to meet program goals.

**Integrated Pest Management:** The maintenance of destructive agents, including insects, at tolerable levels by planned use of a variety of preventative, suppressive, or regulatory tactics and strategies that are ecologically and economically efficient and socially acceptable (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998). A pest control strategy that uses a variety of complementary strategies including: mechanical devices, physical devices, genetic, biological or cultural management and chemical management. (US EPA)

**Intermediate Cut:** Removing immature trees from the forest sometime between establishment and stand harvest to improve the quality of the remaining forest stand. Contrast this technique with a harvest cut.

**Invasive species:** Non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. (Executive Order 13112 (Feb. 3, 1999))

**Invasive Species**: Is a species that is 1) non-native (or alien) to the ecosystem under consideration and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Invasive species can be plants, animals, and other organisms (e.g., insects, microbes, etc.). Human actions are the primary means of invasive species introductions. (Invasive Species Definition Clarification and Guidance White Paper Submitted by the Definitions Subcommittee of the Invasive Species Advisory Committee (ISAC), Approved by ISAC Apr 27, 2006.)

**Landings**: A cleared area in the forest to which logs are yarded or skidded for loading onto trucks for transport. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Landowner:** Entity that holds title to the property for which the management plan is being written.

**Large woody debris**: Any piece(s) of dead woody material, e.g. dead boles, limbs and large root masses, on the ground in the forest stands or in streams. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Log Rules:** A table showing estimated amount of lumber that can be sawed from logs of given lengths and diameters. Two log rules are commonly used:

***Doyle Rule*** is a simple formula rule used in the eastern United States. It underestimates the amount of lumber in small logs and overestimates large logs. ***International 1/4-inch Rule*** is a formula rule allowing 1/2 –inch taper for each 4 feet of length and 1/16-inch shrinkage for each one-inch board. This measure approximates the actual sawmill lumber tally.

**Management plan:** Documents that guide actions and that change in response to feedback and changed conditions, goals, objectives and policies. Management plans may incorporate several documents including, but not limited to, harvest plans, activity implementation schedules, permits, research, etc. For the purposes of the American Tree Farm System® eligible management plans, plan amendments may include letters, notes, and other forms of informal updates in addition to formal plan revisions.

**Mast:** Nuts of trees, such as oak, walnut, and hickory, that serves as food for many species of wildlife.

**Mature Tree:** A tree that has reached the desired size or age for its intended use.

**MBF:** Abbreviation for 1,000 board feet.

**Noxious plant (weed): A** plant specified by law as being especially undesirable, troublesome and difficult to control. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Nutrient cycle**: The exchange or transformation of elements among the living and nonliving components of the ecosystem. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Overstocked:** A forest stand condition where too many trees are present for optimum tree growth.

**Overstory:** That portion of the trees in a stand forming the upper crown cover.

**Overstory removal**: The cutting of trees constituting an upper canopy layer to release trees or other vegetation in an understory. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Pesticide:** Pesticides include chemicals commonly known as herbicides and insecticides.

**Pole Timber:** Trees from 6 inches to 12 inches in diameter at breast height.

**Prescribed Burn/Fire:** To deliberately burn natural fuels under specific weather conditions, which allows the fire to be confined to a predetermined area and produces the fire intensity to meet predetermined objectives. A fire ignited by management to meet specific objectives. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Pruning:** Removing live or dead branches from standing trees to improve wood quality.

**Pulpwood:** Wood cut primarily for manufacture of paper, fiberboard, or other wood fiber products.

**Qualified contractor:** Forest contractors who have completed certification, licensing, recommended training and education programs offered in their respective states.

**Qualified natural resource professional:** A person who by training and experience can make forest management recommendations. Examples include foresters, soil scientists, hydrologists, forest engineers, forest ecologists, fishery and wildlife biologists or technically trained specialists in such fields.

**Qualified Tree Farm inspector:** A natural resource professional who has completed ATFS required training for certifying forested properties and is eligible to inspect properties on behalf of ATFS. ATFS requires all trained inspectors meet approved eligibility requirements.

**Rangeland:** Land on which the historic climax plant community is predominantly grasses, grasslike plants, forbs, or shrubs. Includes lands revegetated naturally or artificially when routine management of that vegetation is accomplished mainly through manipulation of grazing. Rangelands include natural grasslands, savannas, shrublands, most deserts, tundra, alpine communities, coastal marshes, and wet meadows.

**Rare species:** A plant or animal or community that is vulnerable to extinction or elimination.

**Reforestation**: The reestablishment of forest cover either naturally (by natural seeding, coppice, or root suckers) or artificially (by direct seeding or planting) – *note* reforestation usually maintains the same forest type and is done promptly after the previous stand or forest was removed. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Regeneration:** The number of seedlings or saplings existing in a stand. The process by which a forest is renewed by direct seeding, planting, or naturally by self-sown seeds and sprouts.

**Regeneration Cut:** Any removal of trees intended to assist regeneration already present or to make regeneration possible.

**Release:** To free trees from competition by cutting, removing, or killing nearby vegetation.

**Riparian**: Related to, living or located in conjunction with a wetland, on the bank of a river or stream but also at the edge of a lake or tidewater – *note* the riparian community significantly influences and is significantly influenced by, the neighboring body of water. (Helms et al, The

Dictionary of Forestry, Society of American Foresters, 1998)

**Riparian Zone:** The area adjacent to or on the bank of rivers and streams.

**Sapling:** Trees from 2 inches to 6 inches in diameter at breast height.

**Sawtimber:** Trees at least 12 inches in diameter at breast height from which a sawed product can be produced.

**Scale:** The extent of forest operations on the landscape/certified property.

**Seedling:** A young plant.

**Seed-tree Harvest:** A harvest and regeneration method where nearly all trees are removed at one time except for scattered trees to provide seed for a new forest.

**Selection Harvest:** Harvesting trees to regenerate and maintain a multi-aged structure by removing some trees in all size classes either singly or in small groups.

**Shelterwood Harvest:** A harvesting and regeneration method that entails a series of partial cuttings over a period of years in the mature stand. Early cuttings improve the vigor and seed production of the remaining trees. The trees that are retained produce seed and also shelter the young seedlings. Subsequent cuttings harvest shelterwood trees and allow the regeneration to develop as an even-aged stand.

**Single Tree Selection:** Individual trees of all size classes are removed more or less uniformly throughout the stand, to promote growth of remaining trees and to provide space for regeneration. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Site Index:** An expression of forest site quality based on the height of a free-growing dominant or co-dominant tree at age 50 (or age 100 in the western United States).

**Skid**: 1. To haul a log from the stump to a collection point (landing) by a skidder. 2. A load pulled by a skidder. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Skid Trail:** A road or trail over which equipment or horses drag logs from the stump to a landing.

**Skidding:** Pulling logs from where they are cut to a landing or mill.

**Skyline**: Harvesting a cableway stretched tautly between two points, such as yarding tower and stump anchor, and used as a track for a block or skyline carriage. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Slash**: The residue, e.g., treetops and branches, left on the ground after logging or accumulating as a result of storm, fire, girdling, or delimbing. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Snag**: A standing, generally un-merchantable dead tree from which the leaves and most of the branches have fallen – *note* for wildlife habitat purposes, a snag is sometimes regarded as being at least 10 inches in diameter at breast height and at least 6 feet tall; a hard snag is composed primarily of sound wood, generally merchantable, and a soft snag is composed primarily of wood in advanced stages of decay and deterioration. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Soil Compaction:** The process by which the soil grains are rearranged, resulting in a decrease in void space and increasing bulk density. Can occur from applied loads, vibration or pressure from harvesting or site preparation equipment. Compaction can cause decreased tree growth, increased water runoff and soil erosion. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Soil map:** A map showing the distribution of soils or other soil map units in relation to prominent physical and cultural features of the earth’s surface. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Special sites:** Those areas offering unique historical, archeological, cultural, geological, biological or ecological value. Special Sites include:

* 1. Historical, archaeological, cultural and ceremonial sites or features of importance to the forest owner;
  2. Sites of importance to wildlife such as rookeries, refuges, fish spawning grounds, vernal ponds and shelters of hibernating animals;
  3. Unique ecological communities like relic old-growth, springs, glades, savannas, fens and bogs; and
  4. Geological features such as terminal moraines, cliffs and caves.

**Stand:** A group of trees with similar characteristics, such as species, age, or condition that can be distinguished from adjacent groups. A stand is usually treated as a single unit in a management plan.

**Stand Density:** A measure of the stocking of a stand of trees based on the number of trees per area and diameter at breast height of the tree of average basal area.

**Stand Management Recommendations:** The recommended management activities that should be done in that stand, based on the landowner’s goals and objectives.

**Stand Structure:** The horizontal and vertical distribution of plants in the forest, including the height, diameter, crown layers, and stems of trees, shrubs, understory plants, snags and down woody debris. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**State forestry best management practice(s) (BMPs):** Forestry BMPs are generally accepted forest management guidelines that have been developed by state forestry agencies with broad public stakeholder input.

**Stocking:** An indication of the number of trees in a stand in relation to the desirable number of trees for best growth and management.

**Sustainability:** The capacity of forests, ranging from stands to ecoregions, to maintain their health, productivity, diversity and overall integrity, in the long run, in the context of human activity. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Sustainable forest management:** The practice of meeting the forest resource needs and values of the present without compromising the similar capability of future generations. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998) *Note* – AFF’s Standards of Sustainability reflect criteria of sustainability based on the Montreal Process, 1993, and the Pan-European Operational- Level Guidelines (PEOLGs).

**Thinning**: A cultural treatment made to reduce stand density of trees primarily to improve growth, enhance forest health, or recover potential mortality. Types of thinning include: chemical, crown, free, low, mechanical, selection. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Threatened Species:** A plant or animal species that is likely to become endangered throughout all or a significant portion of its range within the foreseeable future. A plant or animal identified and defined in the Federal Register in accordance with the Endangered Species Act of 1976. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Timber Stand Improvement (TSI):** A thinning made in immature stands to improve the composition, structure, condition, health, and growth of the remaining trees.

**Undesirable Growing Stock:** Trees of low quality or less valuable species that should be removed in a thinning.

**Understocked:** Insufficiently stocked with trees.

**Understory**: All forest vegetation growing under an overstory. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Uneven-Aged Management or Stand:** A stand of trees containing at least three age classes intermingled on the same area.

**Visual quality measures:** Modifications of forestry practices in consideration of public view, including timber sale layout, road and log landing locations, intersections with public roadways, distributing logging residue, tree retention, timing of operations and other factors relevant to the scale and location of the project.

**Volume:** The amount of wood in a tree, stand of trees, or log according to some unit of measurement, such as board foot, cubic foot, etc.

**Watershed**: The area of land where all of the water that is under it or drains off of it goes into the same place. For example the Mississippi River watershed includes all the land that drains into the Mississippi River. This watershed is the fourth largest in the world and includes water from 31 states.

**Wetland:** A transitional area between water and land that is inundated for periods long enough to produce wet soil and support plants adapted to that environment. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

**Wolf Tree:** A very large, over mature tree that is or was open grown. These trees tend to have large full crowns and numerous branches.

**Woody Debris:** Any piece(s) of dead woody material (e.g. dead tree trunk, limbs, large root ball) on the ground in the forest or in streams. (Helms et al, The Dictionary of Forestry, Society of American Foresters, 1998)

# Appendix C:

# Tax and Business Management

Woodland owners have to deal with property taxes, income tax for timber harvests and other revenue generating activities, and estate taxes when properties are passed on to future generations. This section was developed to help consider tax implication as part of the planning process.

Consider addressing the following in your plan:

1. Property tax: The forest management plan should document the current tax status of the property. Your state might have specific property tax programs that you may be eligible to participate in. Please be aware of the program rules and regulations.
2. Income tax: Include a statement that timber harvest and other revenue generating activities generally produce a federal and state income tax liability. Tax credits may be available for some management activities.
3. Federal and State Incentive Programs: There is tax implication for participating so be aware of those implications.
4. Estate tax: Good estate planning can help to lessen tax liability when passing land to heirs and landowners should seek good planning and tax advice.
5. Record keeping: Good record keeping can help landowners manage their assets, increase their revenues, and minimize their tax liability.
6. Land Use: Document the land use classifications of the property from the county land use plan.

It is recommended that you work with a professional tax advisor who can assist you in developing this section.

# Appendix D:

# Timber Sale Contract Checklist for Private Landowners and Loggers

The following is a checklist of issues private landowners and logging contractors may want to consider on a logging contract. Each of the items should be addressed in a contract to allow for a minimum probability of a dispute. Issues can be as detailed as both parties find acceptable and economically feasible.

### Property location and legal description are clearly defined

Include Tree Farm certification number if applicable.

### Property boundaries and harvest units are clearly and accurately marked

Logging trespass can result in a minimum cost of 3x value of trees.

### Property ownership is documented and type of ownership is specified

Either individual, partnerships, corporations, etc.

### Insurance is documented

Any contractor working for a landowner must have Commercial General Liability

$1 –million, Loggers Broad Form Property Damage Liability $1-million, Workers’ Compensation $100,000 or an Independent Contractor Exemption, and Automobile Liability $1-million. If they do not have these, the landowner will be held liable for any damage or personnel injury that may occur. Insurance can be written to include owner and consulting forester.

### Access to the property/harvest unit are specified and documented

To avoid trespass or the disturbance of sensitive area access routes should be clearly delineated. If access across other ownerships is required, written and notarized documentation of access permission should be obtained.

### Type of harvest is clearly specified for each stand

Typically trees are marked both at eye level and on the stump, or harvest tree characteristics are defined by species, diameter, crown characteristic, or residual tree spacing.

### Timing of harvest is specified

Dates when harvesting and/or other treatments need to be conducted or completed by.

### Residual property specifications should be defined

This is as detailed as the landowner and contractor can agree upon. Issues can be the completeness of residual logging debris disposal, burn pile rehabilitation, grass seeding, skid trail rehab, noxious weed control, tree planting, noncommercial thinning, access roads- does the logger need to do repairs and bring them up to a particular standard or are they required to put them to bed and pull up the culverts?

**Best Management Practices (BMP’s) responsibilities are designated** Compliance to state BMP’s is ultimately the landowner’s responsibility but should be specified in the contract.

### Performance bond or contract penalty

Create some provision for compensation to the landowner for harvesting activities that deviate from specifications. Having the contractor post a bond is the best protection for the landowner but imposes a risk on the contractor.

### Method of payment is clearly defined

Could include: **Lump sum** is one payment for the entire estimated log volume, this method may over or underestimate actual value but is simple and can be demanded in advance of the actual harvesting. **Payment by unit** is where payment for logs occurs based upon the actual scaled logs at the mill. Either the contractor pays an agreed upon percentage to the landowner or the mill pays agreed upon percentages separately to the contractor and landowner. Downfall is that in cases of salvaging dead and dying trees a delayed harvesting job can result in losses of standing tree value.

### Method of scaling is defined

Either direct scaling or weight scaling are used. Direct scaling tends to be more accurate though each mill may use different defect deductions. Weight scaling works for large volume sales that have trees of similar species and diameter. In general logs should be trucked to the mill quickly following harvest or they lose significant water weight or for most accurate conversions a continuous representative sample of logs should be check scaled and weighed.

### Notification

It is defined if and when the contractor or landowner needs to notify the other party about when activities are to start or end and the type of format – written, e-mail, telephone. This is to avoid issues with blocked access, noise, special sites, etc.

### Expiration date

Any contract should have a defined end date after which the contract is no longer valid.

### Notarization

Any legally binding document should have signatures notarized.

This is simply a recommended check list compiled from a variety of sources. Any contract can be challenged. It is always advised that a contract be reviewed by an attorney. You may also want an attorney’s fees recovery statement in the document that will allow for recovery of legal fees should a dispute require legal action.