



American Tree Farm System® Management Plan Template

SAMPLE PLAN

State Tree Farm # WA-9999_

Tree Farm Property Location

Tree Farm Name: Woodfolk Family Forest Acres: 42

Ownership¹: SW1/4 SW1/4; part of SE1/4 SE1/4 in Section 36, Township 40, Range 6 E, W.M.

County: Whatcom State: WA Location This property is located about 4 miles southeast of the town of Kline. From the west, it is accessed from the paved Larkin Ave. N.E. A side street off of Foster Ave. NE meets the east apex of the property line.

Tree Farmer Contact Information

Landowner Name(s): Joe and Sally Woodfolk

Mailing Address: 12345 Karsten Ave NE

City: Kline State: WA Zip: 98295

Ph: (360)856 - 3491 E-Mail: woodfolk@csinetspin.com

Forester Information

Forester Name: Kel Johner Inspector ID # 89117

Ph: (360)856 - 3500 E-Mail: kel.johner@wadnr.gov

Employer: WA Dept. Natural Resources

Landowner's signature confirms that management activities will be conducted in accordance with this proposed Tree Farm Management Plan.

Landowner's Signature: _____ Date: ____/____/____

Forester's signature confirms that this proposed Tree Farm Management Plan meets the needs of the landowner(s) and satisfies the American Tree Farm System management plan requirements.

Forester's Signature: _____ Date: ____/____/____

A copy of this management plan must remain with the Landowner. The American Tree Farm System will acknowledge that the management plan and recommendations are applicable and consistent with land owner's current objectives upon receipt of the relevant 004 Form with all appropriate signatures.

1. Ownership includes Non-Industrial Private, Municipal, Public, and Other landownership classifications.
2. Location includes legal and/or local descriptions to assist in locating property for future reinspection.

Sustainable Forest Management Plan – Sample Plan

Management plans are active, adaptive, and embody the owners' current objectives, remain appropriate for the land certified, and reflect the current state of knowledge about forestry and natural resources management.

Section 1 - Landowner Goals

Goal 1: Keeping the forest healthy and productive for growing trees for future harvest and subsequent periodic income, as well as providing habitat for wildlife, and maintaining the aesthetic appeal of the property.

Goal 2: Being able to pass along the property, in good shape, to our children.

Section 2 – Management Objectives

1) Wood and fiber production:

Harvest, regenerate, and improve timber stands sustainably for periodic revenues of income.

2) Wildlife habitat:

Maintain and produce diverse and rich habitats that benefit cavity nesters, small mammals and amphibians, song birds and birds of prey, big game, and predators.

3) Water quality:

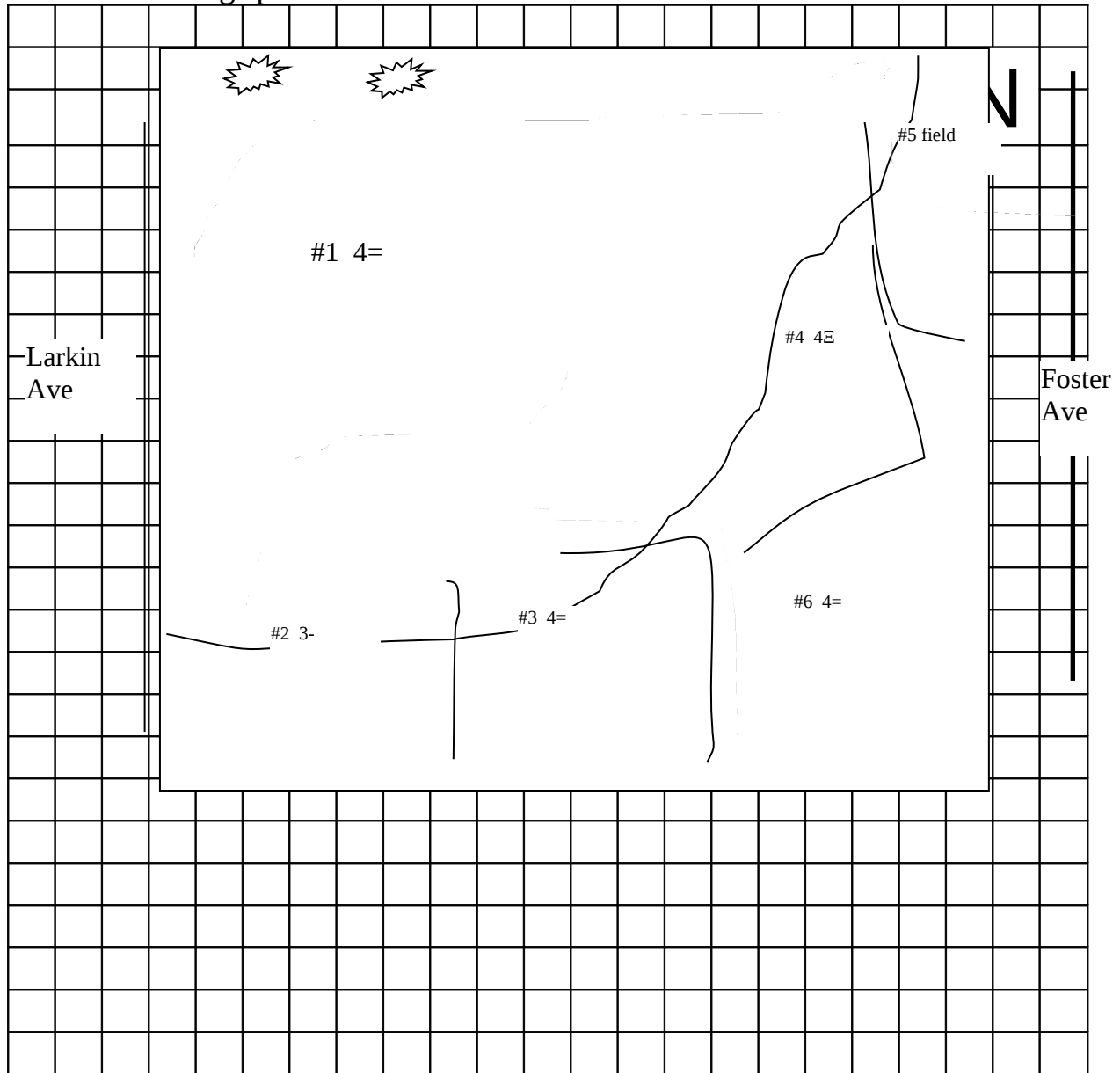
Manage timber and maintain roads to prevent pollution and erosion. However, no streams and only one small forested wetland exists on property.

4) Recreation:

Use Woodfolk Family Forest for personal use, for engaging family in our legacy, for aesthetic enjoyment and hiking (with permission) for neighbors and friends, and share as an outdoor classroom for Washington State University Cooperative Extension's educational endeavors.

Section 3 - Tract Map

Management plans include a tract map noting stands, conditions, and important features including special sites.



Scale (circle one): 1-square = 1-acre or 10-acres

Please indicate roads, streams, stands, and property boundaries.

Notes: 1=seedling 2=sapling 3=small sawlog 4=large sawlog
- (one bar) = light stocked =(two bar) = well stocked E (three bar) =
overstocked

 = forested wetland = access
road

Section 4 - Stand Descriptions

Stand descriptions include acreage, condition, species composition, age distribution

Total # of Stands: 6

STAND 1 (The Middle NE Portion - 26 acres)

Stand 1 is a large saw log, mixed hardwood/conifer stand, 60 to 80 years old (second growth). Major commercial tree species include western hemlock, western red cedar, and big leaf maple with scattered red alder patches. Some small (1 acre or less) forested wetlands are present. Quality of the timber is generally good.

Understory species noted were sword fern, salmonberry, vine maple, Indian plum, red elderberry, salal, and red huckleberry. Forbs include trillium bleeding heart., along with other numerous unidentified forbs and some grasses.

It is generally well-stocked with approximately 150 trees per acre. Current tree growth and health of this stand is good. If well-managed, this stands will continue to stay healthy and grow.

Options for harvesting include using small patch cuts (up to five acres) with ample leave trees to protect aesthetics, or a light commercial thinning. Current spacing of trees does not appear to demand an immediate commercial thinning to maintain forest health.

A mix of tree species should be left where possible to encourage diversity of wildlife habitat

Operability for ground-based heavy equipment is possible in much of the stand during the dry season. Where slopes are greater than 25%, ground-based heavy equipment is not recommended.

If a commercial operation is contemplated in this stand, or any other areas of the forest, the DNR guy harped and harped about retaining a professional consulting forester to help us design and market the timber sale. He said a private consulting forester will almost always enable landowners to get a higher price for logs and administer the timber sale so that the end result is compatible with stewardship objectives.

Stand 2 STAND 2 (Lower Easterly - 6 acres)

Stand 2 contains poorly stocked hardwood/conifer sawlogs of fair to low quality. This second growth was high-grade logged around 1980. These remaining black cottonwood, big leaf maple, and red alder are 60 to 80 years old. Some hardwoods have since seeded in, as has a great deal of brush.

Understory plants include vine maple, salmonberry, bracken and sword fern, red elderberry, red huckleberry, trailing and Himalayan blackberry and western red cedar saplings.

There is a relatively wet area with Red Alder trees that need to be harvested in the next 10 to 15 years. It is recommended that these trees be harvested in the dry summer months and this area to be re-planted to prohibit underbrush from taking over.

For timber harvesting, the current value of much of this stand would be at best marginally profitable, particularly considering current markets and the need for heavy site preparation to allow for regeneration.

Any selective harvest of Stand 2 for personal firewood use or commercial marketing should concentrate on removing smaller, or poorly formed trees, or larger trees that are near or a part of groups of larger trees. Selection of trees for removal without considering how it will affect the spacing and vigor of remaining trees can lead to additional unproductive and/or undesirable brushy areas.

Stand 2 is providing good wildlife habitat, but is not approaching its timber productivity capabilities.

STAND 3 (Strip along northern edge- 4 acres)

Stand 3 consists of large conifer saw logs, dominated by western hemlock and western red cedar, 60 to 80 years old.

There are approx. 100 to 200 trees per acre. No harvesting is necessary at this time as the trees are well spaced out and appear to be in good condition. Slopes of 30 percent or more would require cable logging harvest systems.

Understory plants include sword fern and Oregon grape. The penetration of sunlight is greatly limited due to the closing canopy, so the presence of understory plants continues to diminish with time.

STAND 4 (upper middle south bordering pasture – 2 acres)

This stand consists of red alder pole and small sawlog stand, 40 to 50 years old. The quality and health of these trees is failing, as the tops are beginning to fall apart. It was overstocked in the past.

A clearcut harvest in 5 to 15 years, followed by reforestation, is recommended. Operability for ground-based equipment is possible in this stand during the dry season.

Understory plants include vine maple, sword fern, trailing blackberry, transplanted from birds, English holly and English ivy.

STAND 5 (southwestern corner - 4 acres)

Currently this is pasture converting from forest many years ago. A few scattered large open-grown western red cedars and Sitka spruce remain. A large power line runs through the upper corner of this property.

We may possibly fence off a 50 ft. area along the south side of this property and plant conifers. This would require an application of herbicides to kill the grass, followed up by plowing or disking to bust up the sod layer for site preparation. This is necessary not only to reduce competition from the grass to the seedlings, but also to destroy the habitat of field mice which might otherwise nibble on the stems and roots of the little trees.

STAND 6 (lower and middle southeast portion - 6 acres)

Stand 6 consists of large saw log western hemlock, western red cedar, 60 to 80 years old, with some Douglas-fir also present. There are approximately 150 trees per acre. No timber harvesting is necessary at this time, although there are some very valuable trees in this stand. Slopes are typically 30 percent or greater, requiring cable logging systems for harvesting.

Understory plants include fern, salal, maidenhair fern, foxglove and numerous other forbs.

Section 5 - Management Recommendations

Management recommendations address wood and fiber production, wildlife habitat, owner designated fish, wildlife and plant species if desired, environmental quality and, if present and desired by the landowner, recreational opportunities. Management recommendations address Best Management Practices for forestry to ensure sustainable forests.

- 1) **Harvest Method:** Included in stand descriptions
- 2) **Stand Improvement:** Included in stand descriptions
- 3) **Reforestation:** Included in stand descriptions
- 4) **Air, Water and Soil Protection:**

No streams and accompanying riparian areas are found on the property, though several draws may have water running under the surface.

A few limited scattered forested wetlands are present on the property. In the northeast corner of Stand 1, some limited standing water was found. We will try to avoid operating ground-based equipment across them.

In Stand 2, limiting the use of equipment or recreational vehicles in or near the edges of wet areas will help preserve their integrity and function.

Two soil types have been mapped on the property. The table below indicates their name, slope, and estimated acres present on the property.

Soils #	Soil Name	Slope	Acres
8103	Tokul gravelly loam	0 to 8 percent	20
8105	Tokul gravelly loam	8 to 15 percent	26

These Tokul gravelly loam soils of the property are moderately deep, moderately well drained soil formed in glacial till and volcanic ash. Soil depths range from 20 to 40 inches, with rock fragment components of hard gravels making up about 20% of the medium. Below this soil depth, a hardpan is found which typically causes a perched water table, effectively limiting rooting depth.

When disturbed, Tokul gravelly loams are stable on slopes under 25%. They have a high potential to compact when wet, which can reduce the productivity and alter drainage patterns. Use of wheeled and tracked equipment when the soil is wet produces ruts, compacts the soil, and damages the roots of trees.

Tokul gravelly loam soils can grow Douglas-fir up to 135 feet tall in fifty year. At age 60, Douglas-fir may annual produce 364 cubic feet per acre. Western hemlock averages 117 feet tall in a similar time frame. At age 50, western hemlock may annual produce 266 cubic feet per acre. The map unit is in capability subclasses IIIe and IVe.

Because the site is already very high in productivity, nitrogen fertilization is usually not recommended. However, some field tests have indicated an increase of 45 cubic feet per year for eight years following a single application of 200 lbs per acre of nitrogen urea.

Depending on markets, harvest activities could be anticipated within the next fifteen years. Therefore, we need to consider the impacts of inappropriate heavy machinery on forest soils. Caution needs to be taken when considering the kinds of equipment and seasons of operations. Exceedingly complex interactions and processes are involved in sustaining long-term site productivity. The potential for impact as to how these soils will support trees, understory plants, and maintain natural water movements should be a major consideration when selecting harvest equipment.

We can avoid soil compaction and tree growth loss by limiting logging on steep slopes to cable systems, and using low pressure ground equipment, like tracked bulldozers or processors during harvest. Keeping ample coarse woody debris, duff, and organic soil matter scattered over the surface instead of windrow or piling it will also help. We also will avoid ground-based timber harvesting when the soils are wet.

5) Wildlife: There are over 400 species of forest-related wildlife in western Washington. These species utilize all different layers of forest, all tree and plant types, healthy as well as dead and dying vegetation, and mixtures of habitat types. Therefore, the more diversity within and between forest stands, the more species of wildlife the area can support.

Diversity includes different mixes of tree species, age and size classes, understory mixes and densities, different tree and canopy densities, relationship to aquatic areas, and different groupings of forest stands.

Our property can be broadly characterized as containing three types of wildlife habitat, based on the various successional stages of Douglas-fir type forests: sawlog stands (1, 3, &6); a modified grass-forb/shrub stand (5 & other pasture) and a red alder/hardwood stand (2 & 4). Some riparian habitat also exists in limited portions of both stands 1 & 2. Wildlife habitats on adjacent properties are similar.

Using the Coastal Douglas-Fir Forests and Wildlife publication (<http://www.woodlandfishandwildlife.org/pubs/coastal-df.pdf>) and cross referencing these habitat types with the wildlife species lists presented on pages 4 and 5, it is possible to get some indication of what amphibians, reptiles, birds, and mammals that may be found on the property.

No fish bearing streams exist on the property nor would any activity on the property likely effect fish habitat.

Inventory of Wildlife Habitat Components

Snags

We have scattered snags and defective trees throughout all stands on our property, although additional snags would be beneficial for wildlife.

When it comes time to harvest timber, we will try to save as many of the snags and defective trees as operationally possible.

Coarse Woody Debris

There is an ample supply of coarse woody debris present on the property, including a good distribution of both hard and soft logs in the larger sizes. Leaving occasional blowdown trees will help to maintain this important wildlife habitat component of your forest.

Understory Vegetation

A very important wildlife habitat component includes hardwood trees and shrubs that produce mast (berries and nuts), as well as grasses and forbs. These vegetative components often require increased amounts of sunlight to survive and produce fruits and seeds (such as alder and red elderberry). However, several understory species such as Pacific dogwood and salal are quite tolerant of low sunlight levels common to closed-canopy forest stands.

Almost all native hardwoods and understory shrubs produce fruits, seeds, or nuts, and thus, are quite valuable. In addition, the branches, twigs, leaves, and bark of most of these species are eaten by some wildlife species and all supply cover, shelter, and nesting habitat.

All of the stands have some limited presence of these species. Any commercial thinning or patch cuts would help our forest experience a renaissance of many of them.

Stand 2 in particular has a great deal of understory vegetation as a result of the previous harvesting practices, which opened up the forest floor to more light, and also may stimulated previously dormant seed to germinate.

Openings

Small openings within the forest enhance most wildlife. As the young plantations mature, and the amount of brush becomes reduced, creating limited openings by removing overstory vegetation and allowing native grasses, forbs, and shrubs to reinvade. A number of bird species require grass-forb and shrub stands for feeding (see appendix).

6) Recreation/Access and Other Recommendations: No substantial negative aesthetic impacts to the property are anticipated as a result of any of the proposed practices. The practices proposed above will probably serve to enhance the long term aesthetics and recreational value.

Conifer pruning may be found desirable from an aesthetic and recreational point of view, and also provide some defense against wildfires.

Recommended plantings for wildlife and any efforts which can be made to remove and/or control invasive species such as Reed Canary Grass and Himalayan blackberries will also move the forest to a more natural state.

It should be recognized that some minor disturbances in the stand, such as scattered blowdown or a few dying trees are a part of the normal processes of disturbance in the forest which may not be immediately pleasing to the eye, but are important in keeping the forest ecosystem functioning naturally.

Proper construction and maintenance of trails (or old logging roads) throughout the property will allow easy access and better opportunity to monitor the forest. Family and neighbors may also be asked to assist with practices that enhance recreational opportunities.

Maintaining vistas from the house by removing select trees could also be considered when other harvesting operations are implemented.

