Washington Forest Stewardship Plan

I. Cover Page

Landowner Information

Name: Ima Landowner

Address: 400 Happy Tree Pl SE, Sampletown, WA 98000

Phone: (555) 555-5555

Email: i_landowner@somewhere.com

Property Information

Acreage: 5.63 acres southeast of the X Interchange (4.49 in plan, 1.14 excluded)

County:

Legal Description: S 1/2 SW 1/4 SW 1/4 SE 1/4, Sec., T#N, R#E, WM, Westside County, WA

Parcel Number: # 0000000000

Street Address or Location Description:

GPS Coordinates (optional):

Plan Preparer

Name: Ima Landowner

Title: Landowner

Affiliation: N/A

Address: 400 Happy Tree PL SE, Sampletown, WA 98000

Phone: (555) 555-5555

Email: i_landowner@somewhere.com

Assisted By

Name: Forest Err

Title: Stewardship Forester

Affiliation: WA Dept. of Natural Resources

Address: Local Regional Office

Phone: (555)-000-0000

Plan Preparation Date: November 2017

II. Landowner Objectives

Short and Long term objectives

- Maintain and improve wildlife habitat across our property.
- Protect sensitive areas including streams and wetlands.
- Accelerate the development of forest structure and biodiversity.
- Develop a road maintenance plan and upgrade existing road to current forest practice standards.
- Foster cooperative stewardship with adjacent landowners.
- Harvest timber for periodic income.
- Provide forest ecology educational opportunities to non-profit sponsored tours, school groups and WSU Forest Stewardship Program field sessions.

Stewardship Vision Statement:

The following forest management recommendations balance enhancement of water quality, wildlife and biological habitat values, forest management activities, education and passive recreational activities. Forest management of the property is consistent with the larger landscape vision of forestry and rural forest districts. Forest stewardship planning is a long-term flexible and dynamic process. As conditions of the resource and our understanding change the plan may be amended.

III. General Property Description and Overview

Acreage, location, accessibility, topography, land use history, current conditions, surrounding land use, general features, etc.

Most of the land in the Timber Mountain vicinity was logged from the late 1890's until the early 1930's. The timber was processed at the local mills. Horse logging was used in the beginning, slowly moving into steam donkey operations as railroad grades were constructed. During this era of logging, trees were left standing if they didn't meet current market needs. Harvested land was left to reforest naturally. A mix of species seeded in under the residual trees.

Our property is on the northeast flanks of Timber Mountain and is bisected by the original road grade built to the fire tower once presiding over the area. The road was always referred to as Local Settler Road, named after a local settler. Prior to 1980, ownership of Timber Mountain was a checkerboard of State Department of Natural Resource (WA DNR) ownership mixed with private timber holdings. Big Timber Mill was the original landowner where we now live.

In about 1975 property just to the east of ours was clearcut harvested. Trespass harvest occurred on our site removing most of the conifer. The private timber company controlling this road turned out to never have acquired legal easement across the 40 acres our parcel occupies. Shortly after WA DNR became landowner of the private timberland through property exchange, a log puncheon and fill over Forest Creek failed. Lack of road easement led to the road being abandoned. In mid-1980s, a gentleman who had purchased 40 acres from Big Timber Mill, which was now surrounded on 3 sides by subdivisions, subdivided and sold 5+ acre tracts. We bought the very last lot at what is now the end of "Happy Tree Road" (Happy Tree PL SE).

The property has the remains of an original logging railroad grade, old growth stumps with springboard notches, remains of the first vehicle road up to the summit and a long history representing the resource uses and changes in landscape characterizing forestry in Western Washington. We feel strongly that this land should have remained as forestland.

We met for the first time in 1989 on the landing of a timber sale on the south border of our lot. We have been working "in the trenches" for sustainable forestry and sensible growth ever since. My grandmother first settled in the area with her parents in 1905 as a child having immigrated from Sweden. While residential uses tucked into the working forest landscape is poor planning; we couldn't resist the opportunity to "return to our roots." We hope that this plan will live with the property and help us, and our successors, steward the resources inherent on the land to the best of our ability.

The topography of the property is quite compatible with the objectives of this plan. The property has a northeast aspect and ranges in elevation from 900 feet in the northeast to 1040 feet in the southwest. Slope of the land is a very moderate 7 to 10%. A type 5 headwater tributary to Swiftwater River forms on the property and flows northeast.

Our property is cradled in the northeast corner of Sampletown, WA and is just southeast of the highway interchange. We have five-acre lots to the west and north, and state forest to the south and east. The State Forest is managed by WA DNR to maintain a working forest in an urban environment. It provides forest products, education, interpretation, research and passive recreation while conserving all the ecological values and services forests provide. Zoning in our area ranges from RA-5 to RA-10. Six of the nine existing 5-acre lots adjacent to us are built out. Clearing on most of the developed lots is minimal. We hope to encourage development of a "community forest plan" with the adjacent landowners that will foster shared practices and cooperative management.

Our site and six other of the 5-acre lots are accessed from a private gravel road, Happy Tree PL SE. We have a very strong road use and maintenance agreement. The road is currently one year over-due for grading and rocking. Maintenance activities are scheduled for summer 2018. It is

also subject to Road Maintenance and Abandonment Planning (RMAP) under Forest Practice Rules and Regulations, which requires the road to meet current Forest Practices standards.

There are four forest stands on the property:

Stand 1 - 2.4 acres of mature hardwood/conifer. The mature hardwood/conifer mixed forest currently provides the greatest species and structure diversity. It is dominated by hardwoods: red alder, bigleaf maple, and black cottonwood. About 10% of the stand is composed of conifer distributed throughout: Western redcedar, western hemlock, and Douglas-fir. The understory of this stand supports salmonberry, vine maple, sword fern, salal, red-flowering current, red huckleberry, and devil's club. The stand was partial harvested in about 1980 with some areas more heavily harvested than others. Stocking levels are variable.

Stand 2 – 0.4 acre of conifer established in 1981 and 1982 composed primarily of Douglas-fir and western hemlock. This pocket of conifer had reached the stem exclusion stage and was thinned to 11 ft. X 11 ft. spacing in 2008. There are some small snags created from snow breakage. The understory consists of salal, some sword fern, huckleberry and flowering current. The understory has increased in vigor since the thinning.

Stand 3 – 1.3 acres of red alder saplings established in 2008. There are several seeps in the stand and some of the area is forested wetland with salamander use. This stand established following clearing of understocked cottonwood and dense brush. The red alder is a nitrogen fixer and will help build soils with added nutrients and increased micro and macro invertebrates. There is a good distribution of western redcedar coming up within the alder stand. The understory is comprised mainly of salmonberry and rye and fescue grasses. The alder was thinned and pruned in 2011 to increase growth and contribute to clear straight bole formation. Unfortunately in fall of 2011 our neighbor mowed down a patch of the alder near the road. He thought he was helping us maintain room to park. That area will be reestablished.

Stand 4 – 0.4 acre of cleared and understocked area to be reforested. This stand type is scattered in three locations and will be re-planted with predominantly western redcedar, with some grand fir and western hemlock for diversity.

Excluded 1.14 acres – 0.89 acres in horse sacrifice corral, house, yard and garden, 0.25 acres in gravel road and parking area. The horse corral is a sand base with wood chips and is sited to prevent impact on water quality. Manure will be composted and used to augment forest soils organic component. The gravel road is maintained to forest practice standards.

IV. Resource Description and Management Practices

Resource Category 1: Forest Health/Wildfire/Invasive Species

Considerations: *Insects, diseases, abiotic factors (e.g. weather), fire hazard, invasive species, etc.*

A. Current resource conditions, issues, needs, and opportunities

The property is located in the convergence zone entering into the pass hence receiving upwards of 80 inches of rainfall per year. We are also at 1000 feet in elevation and frequently get cool downdrafts off the slopes of Timber Mountain. This means snow line is often at or just above us. We also get prolonged periods of freezing conditions as we are on a north facing slope. The soils are Alderwood, a very good forest soil. Trees readily self-seed in, grow well but also have a vigorous understory with which they must compete. Overstocked small diameter trees are prone to snow break in this area.

Stand 1 - Generally in very good health.

Stand 2 - There are some small snags created from snow breakage. The understory has increased in vigor since the thinning.

Stand 3 – The stand is in good health and growing with vigor. There is concern to control noxious weeds in this stand as scot's broom and evergreen blackberries are present. Yellow tansy has been eradicated.

Stand 4 –There are some western white pine in one of the understocked sections of this stand type which had the beginnings of blister rust evident on lower branches. The infected branches were removed and disposed of and the trees pruned up to avoid further infection.

Fire risk is moderate to low. We are on the east side of Timber Mountain and usually shaded early in the day which helps retain fuel moisture. We are surrounded by heavily stocked conifer forest, but are low on the slope with rolling topography. During droughty periods fire risk is moderate and at other times is low. We have assessed the Zone 1 defensible space area around our home, have a hammerhead turn-around for emergency vehicles, marked our address at our drive, and our road is clearly signed and fire truck accessible.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

Monitor all stands for signs of forest health issues. Inventory each spring for any invasive species - early eradication will prevent establishment.

Early spring 2012 stand 4 will be re-planted with 7-year-old grand fir and 2-2 western redcedar to 18X18-foot spacing. In the areas being planted we desire maximum height and diameter

growth of the trees while allowing the undergrowth to flourish. This spacing will allow the saplings to continue to grow without need of thinning.

Monitor all stands to assure there is adequate light to contribute to a healthy understory. Thin and prune as necessary.

We will follow Firewise guidelines as outlined in the attached brochure.

Resource Category 2: Soils

Considerations: *Soil types, site index, slope stability, erosion, compaction, structure, operability and use restrictions, etc.*

A. Current resource conditions, issues, needs, and opportunities

Our property is located on one of the glaciated foothills of the Cascade Range. It is at 1,000 feet in elevation with an annual average precipitation range of 80 inches. It has one soil type, Alderwood/Kitsap sandy loam, with parent material derived from glacial till and glacial drift. The slope averages 7 to 10 %. Alderwood soils consist of very dark grayish brown gravelly sandy loam 20 to 40 inches deep underlain by compacted till. They are moderately well drained with moderately rapid permeability down to the till layer and then very slow permeability. This can lead to the soils becoming saturated in the substratum during the rainy season. Available water capacity is low which creates draught potential in the dry months. Alderwood is relatively stable with low to moderate surface erosion potential. The main considerations for this soil type are its medium to high compaction and ponding potential and the tendency for severe plant competition. Wind throw of exposed trees has some potential due to the rooting depth restricted by the till layer. Alderwood soils are site class III (50-year site index of 108).

B. Any management practices which the owner plans to protect, enhance, or restore these resources

The soils are very compatible with the objectives of this plan. Alderwood is a productive forest soil that remains stable under appropriate forest management practices. Ground based equipment operations should avoid the rainy season to avoid causing compaction (which can then lead to surface erosion and ponding). Our property can all be operated on from the existing gravel road and yard area. A road maintenance plan and schedule addresses surface drainage. Competing vegetation can be severe so monitor for signs of stress to regeneration trees caused by other vegetation or invasive species.

Resource Category 3: Water Quality/Fish Habitat/Wetlands

Considerations: *Stream types, fish or aquatic species use, riparian areas, wetlands, buffers, fish blockages, sedimentation, stream bank stability, domestic water sources, contamination concerns, etc.*

A. Current resource conditions, issues, needs, and opportunities

Our property is in the headwater area of a small non-fish seasonal (Type Ns) creek which forms within the site. The stream is a tributary of the Swiftwater River. The stream primarily flows through stand 1. There are also some small seeps in stand 3 and 4 which create small pocket forested wetlands. There are no classic hydric soils on the site. The stream provides amphibian habitat and a water source for wildlife. The whole property aids in infiltration of water into the water table and helps contribute to water quality and quantity.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

The hydrologic function of the forested hillslopes, headwater stream and forested wetland are an integral part of water quality and quantity to Swiftwater River. The soils are permeable, rich and organic with vegetation and root growth capturing and infiltrating runoff from adjacent hillsides as well as direct precipitation, reducing excess runoff. Good canopy cover provides shade helping maintain cool water temperatures. The stream will be buffered according to best adaptive management practices available.

Resource Category 4: Forest Inventory/Timber/Wood Products

Considerations: *Species composition, age, size, quality, trees per acre, understory vegetation, operability, silvicultural alternatives, etc.*

A. Current resource conditions, issues, needs, and opportunities

Stand 1: This stand is under-stocked with naturally regenerated red alder, bigleaf maple, black cottonwood and vine maple. The site class is III (50-year site index 108), middle range for productivity. There are, on average, 130 to 180 trees per acre with between 7,000 to 10,000 board feet per acre. The stand is not producing to full site capability due to some areas of small diameter alder; however its value to wildlife is high. This stand includes sloped uplands, headwater and riparian areas. There is a strong component of western redcedar and western hemlock seeding into the understory which will contribute to diversity of structure and improved productivity over time.

Stand 2: This is the most well-stocked stand with the best canopy cover. The Douglas-fir and western hemlock average 10 inches in diameter with an average of 200 trees per acre and 15,000 board feet per acre. This is also site class III. The trees are growing vigorously after thinning. Prior to thinning they were in stem exclusion, gaining in diameter very slowly and were prone to snow break.

Stand 3: The red alder saplings composing the main component of this stand had reached stem exclusion. They have been thinned and pruned. The stand will provide larger diameter clear bole hardwood for harvest at approximately 45 to 50 years of age. Some on-going thinning may occur with removed stems used as firewood. Site class is III and is productive for red alder. The stand has some redcedar coming into the understory.

Stand 4: These areas are under stocked or devoid of trees or seedlings.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

Stand 1: Maintain the mixed hardwood/conifer stand until the young regeneration stand has reached a level of maturity providing structural diversity. Under planting shade tolerant conifer species (such as cedar, spruce and hemlock) in pockets of smaller alder and in larger openings of the stand will better position the site to respond to hardwood mortality. This will improve use of the site's productive capability.

Stand 2: Monitor stand for stem exclusion and thin as necessary.

Stand 3: Continue to monitor red alder and thin and prune as necessary to encourage maximum growth and clear bole development. Underplant with western redcedar, hemlock and spruce to contribute to structural diversity and improve hydrologic function.

Stand 4: Plant a mix of western redcedar, Sitka spruce, and grand fir.

Resource Category 5: Property Access/Roads/Skid Trails

Considerations: *Current and planned roads and trails, vehicle access, road and trail maintenance, access restriction and improvement needs, etc.*

A. Current resource conditions, issues, needs, and opportunities

Our site and six other of the 5-acre lots are accessed from a private gravel road, Happy Tree PL SE. We have a very strong road use and maintenance agreement. The road is currently one year overdue for grading and rocking. Maintenance activities are scheduled for summer 2018. It is

also subject to Road Maintenance and Abandonment Planning (RMAP) under Forest Practice Rules and Regulations, which requires the road to meet current FP standards.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

Ground based equipment operations should avoid the rainy season to avoid causing compaction (which can then lead to surface erosion and ponding). Our property can all be operated on from the existing gravel road and yard area. A road maintenance plan and schedule addresses surface drainage. Competing vegetation can be severe so monitor for signs of stress to regeneration trees caused by other vegetation or invasive species.

Resource Category 6: Wildlife

Considerations: *Common species in the area, specific species observed, key habitat elements (snags, coarse woody debris, understory vegetation, mast-producing vegetation), enhancement opportunities, animal damage control, etc.*

A. Current resource conditions, issues, needs, and opportunities

There are several integrated habitat features on the property. Stand 1 along with stand 2 are characteristic of a mature mixed age (aprox.32 to 70 years) naturally vegetated mid-elevation site. It is dominated by hardwoods with 10 % of the stand composed of conifer distributed throughout. The ground vegetation consists of salmonberry, huckleberry*),* vine maple*,* sword fern, Oregon grape*,* red-flowering current and devil's club. There is a moderate snag component within the stand. Some of the snags are alder, maple or cottonwood, which have fairly short functional lives. There are a couple second growth conifer snags. A tributary to Swiftwater River flows through the stand The aquatic and terrestrial resources of Stand 1 suggest it is highly used by a wide variety of wildlife ranging from several amphibian species, to numerous and abundant birds and mammals. Any ponded areas, whether left by receding spring floods or attributable to precipitation and surface ground water are likely breeding ponds for Pacific treefrogs (*Hyla regilla*), northern red-legged frogs (*Rana aurora*) and long-toed salamanders (*Ambystoma macrodactylum*). Northwestern salamanders (*Ambystoma gracile*) may also be present.

Stand 1and 2 are significantly diverse to provide habitat for select guilds of birds. The mature forest canopy provides nesting and foraging habitat for many forest interior birds including Ruffed grouse (*Bonasa umbellus*), Band-tailed pigeon (*Columba fasciata*), raptors such as Red-tailed hawk (*Buteo jamaicensis*) and Accipiter hawks, and Northern pigmy (*Glaucidium gnoma*) and Great horned owls (*Bubo Virginianus*). Other species more commonly present include pileated (*Dryocopus pileatus*), hairy (*Picoides villosus*) and downy (*Picoides pubescens*) woodpeckers as well as the red-breasted sapsucker (*Sphyrapicus ruber*). Varied thrush (*Ixoreus naevius*), rufous-sided towhee (*Pipilo erythrophthalmus*) and winter wren (*Troglodytes troglodydes*) occupy the ground levels. Other passerines include dark-eyed junco (*Junco*

hyemalis), golden-crowned kinglet (*Regulus satrapa*) and black-capped chickadee (*Parus atricapillus*).

The sheltered characteristics of the site with available water resources suggest numerous mammals use it. Large mammals present include coyote (*Canis latrans*), bobcat (*Felis rufus*), mountain lion (*Felis concolor*), mule deer (*Odocoileus hemionus*) and black bear (*Ursus americanus*). Smaller mammals at the site most likely include porcupine (*Erethizon dorsatum*), mountain-beaver (*Aplodontia rufa*), ermine (*Mustela erminea*), long-tailed weasel (*Mustela frenata*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*) and Douglas squirrels (*Tamiasciurus douglasii*). Both the common deer mouse and forest deer mouse (*Peromyscus spp.*) are likely abundant as are Pacific jumping mouse (*Zapus trinatatus*), bushy-tailed woodrat (*Neotoma cinerea*), creeping, long-tailed and Townsend voles (*Microtus spp.*). Insectivores most likely include the dusky, montane and Trowbridge shrews (*Sorex spp.*), little brown and Yuma bats (*Myotis spp.*), big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cineneus*), shrew mole (*Neurotrichus gibbssii*) and moles (*Scarpanus spp.*).

The second habitat area is Stand 3, the alder sapling stand along with stand 4, the understocked areas. Currently this provides a more open brushy habitat with abundant grasses, forbes and mast suitable for foraging to a wide range of the wildlife occupying both the mature forest and this more open stand. Some species such as the American robin (*Turdus migratorius*) and rufus hummingbird (*Selasphorus rufus*) prefer this more open habitat. The abundant food draws squirrels, mice and others, which in turn are favored prey for raptors and carnivores. Wildlife trees scattered throughout the young stand provide roosts for foraging and feeding, habitat for insects, as well as nest sites for species preferring open areas. Where the habitat types join, referred to as edge, the most diverse association of wildlife is found. In total, the habitats form a complex and rich food web.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

The tributary forming and flowing within our property flows into the Swiftwater River and contributes to water quality and quantity. Contribution to water quantity and quality should be maintained and enhanced. Riparian areas should be managed according to most current science and best practices. Activities within our property will be conducted in a manner that creates minimal disturbance to brush, forbs and duff layers.

Given the young age of the reforestation stand in conjunction with recent harvest on nearby parcels, habitat provided by the mature mixed hardwood/conifer should be maintained. Underplanting with shade tolerant conifer seedlings in some of the more open hardwood areas would assure advanced reforestation as the hardwoods die or are harvested. This will help maintain canopy cover and eventually improve thermal cover. Keeping a mosaic of conifers and hardwoods provides a range of mast. The forested wetland habitat values would be improved over time by underplanting with shade tolerant conifer species. As the reforestation stand enters stem exclusion, productivity of grasses, forbs and shrubs will decline. Varied density thinnings will help maintain habitat benefits.

Resource Category 7: Protection of Special Resources and Biodiversity

Considerations: *State or federal threatened or endangered wildlife or plant species, priority habitats, cultural resources, historical sites, etc.*

A. Current resource conditions, issues, needs, and opportunities

An analysis completed by the Washington Department of Natural Resources (DNR) in 2017 has determined that no threatened or endangered species or cultural or historical resources are known to exist on the property. This property is not considered a forest of recognized importance (FORI).

Our property has several large diameter old-growth redcedar stumps with spring board notches, an artifact of the days felling was done with a “misery whip” and loggers burned 10,000 calories per day. These are a cultural resource not on any registers, but unlikely to ever be produced again. We will keep them intact to the best of our ability and provide opportunities for interpretive visits by various groups. The road on our property is also the original grade that accessed the summit of Timber Mountain and a fire lookout tower.

The diverse habitat features on our property provide for biodiversity. These features include multiple forest types; a variety of native trees, shrubs, and groundcovers; snags; and water features. These habitat features provide for a diversity of birds, mammals, and amphibians.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

Continue to maintain the old-growth stumps and provide forest ecology and forestry practices field trips. Continue to protect and maintain diverse habitat features to provide for biodiversity. This will include protecting and preserving snags during harvest operations (when safe to do so), controlling invasive species, buffering water resources, and encouraging a variety of native shrubs (planting when necessary).

Resource Category 8: Aesthetics and Recreation

Considerations: *Aesthetically important areas, public views, personal or public recreation, education/outreach opportunities, etc.*

A. Current resource conditions, issues, needs, and opportunities
Our property is at the end of a private road with several shareholders. As such access must be on a pre-arranged organized visit. A trail through our property has been used several times for organized event hikes. The property also provides for our own aesthetic enjoyment and recreation in the form of forest management. There is nothing like relaxing thinning and pruning after a long work week.

B. Any management practices which the owner plans to protect, enhance, or restore these resources
Continue to maintain forest cover. Involve adjacent landowners to encourage them to become effective partners in protecting the valuable assets inherent in the forest.

Resource Category 9: Carbon Sequestration & Resilience To Climate/Weather-Related Influences

Considerations: *Reforestation, land conversion, fire/burning, weather stress, stand vigor, etc.*

A. Current resource conditions, issues, needs, and opportunities
While the climate has always exhibited variability and major climatic shifts have occurred throughout geological history, warming this century is likely to occur 10 times faster than during any climatic shift in the past 65 million years. In the coming century, average annual temperatures in Washington are projected to rise at a rate of 0.2 and 1.0 °F per decade. Although there is more uncertainty in projected changes in precipitation, in general, winters are projected to be wetter and summers are projected to be drier2. These changes will most likely effect forest growth over time. It is expected there will be changes to the length of growing season, species (plant and animal) composition and distribution, water availability and duration and an increase in drought conditions during the summer/early fall months.

Forests mitigate climate change by reducing the concentration of carbon dioxide, a key "greenhouse gas," in the atmosphere. As trees grow, they take in carbon dioxide from the atmosphere and, through photosynthesis, release oxygen and create sugars to feed themselves. Through this process, the carbon that was in the atmosphere in the form of carbon dioxide becomes part of the tree's wood and other tissues. This conversion of carbon dioxide to wood and other solid materials is known as carbon sequestration. Trees will continue to sequester

carbon as they grow. When trees are harvested and milled for lumber, the carbon remains sequestered in long-lived wood products incorporated into buildings, furniture, etc. Snags, downed logs, and soil organic matter (the "duff" layer) also provide key long-term carbon storage.

Stands 2 and 3 are well-stocked and growing vigorously after thinning, providing the greatest level of carbon sequestration. Stand 1 is not fully stocked and thus not providing optimal carbon sequestration, but we are balancing this with the need for more open conditions to provide for wildlife biodiversity. Stand 4 is lacking trees and needs to be reforested.

B. Any management practices which the owner plans to protect, enhance, or restore these resources

We will continue to maintain proper spacing in Stands 2 and 3 to promote vigorous growth and carbon sequestration. Maintaining vigorous growth will help these stands be resilient to climate change stresses like increased heat and drought. We will plant trees in Stand 4 to build carbon sequestration capacity. We will ensure adequate spacing to maintain tree vigor, and we are planting a mix of species that are well-suited to the site conditions for long-term resilience. We will underplant shade tolerant species like western redcedar in Stand 1, increasing carbon sequestration while continuing to provide diverse structure for biodiversity. When planting in drier areas, we will favor more drought-tolerant species and/or seed sources. We will aggressively control invasive species to reduce stress on natural vegetation.

When harvesting trees, we will focus on producing long-lived wood products (i.e. lumber) to maintain sequestered carbon, and then we will replant a fully-stocked stand to sequester more carbon in the new trees. After harvest we will avoid slash burning as much as possible as this causes immediate carbon release. Rather, we will use "lop and scatter" techniques to spread the slash around for incorporation into soil organic matter where slow decomposition will lead to carbon release over a long period of time. If there is excess slash, we will look into chipping it and distributing across the site to build carbon-rich organic matter and reduce the risk of wildfire that would cause massive carbon release back into the atmosphere.

Resource Category 10: Specialized Forest Products (Optional)

Considerations: *Christmas trees, edibles, floral greens, firewood, personal use, marketing, etc.*

A. Current resource conditions, issues, needs, and opportunities

We have no formal plans for managing for alternative forest products, however our forest is used regularly for forestry education including traditional plant uses and forest ecology. We will look for opportunities to develop fungi cultivation as alder and cottonwood trees fall out of the stand. We will continue to utilize the various berry resources for consumption as we walk the property.

V. CONSERVATION BASED ESTATE/LEGACY PLANNING

Our forest will outlive us. It is important to us that our property be maintained as forest long-term. Planning ahead is crucial to ensure that our property is the legacy that we want it to be. This includes succession planning, such as talking to our children about who is interested in taking on ownership and/or management of the property when we are gone. It also includes estate planning to make legal arrangements for a smooth property transfer and minimal tax liability when we die.

We plan to take the “Ties to the Land” succession planning workshop the next time it is offered by WSU Extension in our area. We will also contact the local land trust to find out about conservation easements that would ensure that our property can never be developed. We will also look for other landowners who have gone through some of these processes to ask them about their experiences.

VI. ADDITIONAL INFORMATION & RESOURCES (OPTIONAL)

VII. Management Plan Implementation Timetable

Below are the stewardship management activities that we hope to implement over the next ten years. Those in bold are the ones which we feel are the most important, and intend to make a priority of accomplishing them.

Year	**Management Practice or Activity**	**Location** (Stand #)
2017	Plant w/redcedar, spruce, grand fir to 18X18 Noxious weed control-pull and cut Thin alder 8X8 ft. spacing; prune up 6 feet	3, 4
2018	Plant cedar where more open. Noxious weed control- pull and cut Prune alder to 8 feet. Road maintenance activities	1, 3
2019	Noxious weed survey whole property - control as needed. Thin alder to 10X10 ft. spacing. Install bat boxes	3
2020	Under-plant with redcedar. Noxious weed patrol and control Prune alder to 12 feet	1, 2, 3, 4
2021	Noxious weed patrol and control	1, 2, 3, 4
2022	Noxious weed patrol and control; seedling survival survey	1, 2, 3, 4
2023	Under-plant cedar, spruce, hemlock. Noxious weed patrol and control. Thin alder to 13X13 ft. spacing	1, 2, 3, 4
2024	Under-plant wildlife forb and mast veg. Tree health and noxious weed survey	2, 3
2025	Health and Noxious weed patrol Commercially thin stand 2 to 15X15 ft. spacing	
2026	Health and noxious weed patrol Thin alder in Stand 3 to 16X16 ft. spacing, sell or firewood	
2027	Reevaluate goals and stand conditions and update plan	
2027-2037	Monitor all stands for health and weed issues	
2037	Reevaluate goals and stand conditions and update plan	
2038-2042	Watch timber prices, harvest in Stand 2	

VIII. Aerial Photo(s)/Property Map(s)

Attach copies of aerial photos or maps showing the following: Location of the property within the Section, Property boundaries, Forest stand types, Soil types, Location of water bodies and identification of stream types, Location of roads and trails, Topography (optional)

IX. Landowner Signature(s)

I/we approve of the contents of this plan and intend to implement the described management activities to best of my/our ability and to manage the property in a manner consistent with applicable regulatory requirements.

Landowner Signature	Date
Landowner Signature	Date

X. Plan Approval Signatures

DNR FOREST STEWARDSHIP PLAN APPROVAL (IF APPLICABLE)

This plan meets the requirements for a Forest Stewardship Plan.

WA State Department of Natural Resources Authorized Representative Date

Print Name

Title

Address

Phone

E-mail

USDA-NRCS CONSERVATION ACTIVITY PLAN APPROVAL (IF APPLICABLE)

This plan meets the requirements for a USDA-NRCS Conservation Activity Plan.

Signature of USDA-NRCS Authorized Representative Date

Print Name

Title

Address

Phone

E-mail

WASHINGTON TREE FARM MANAGEMENT PLAN APPROVAL (IF APPLICABLE)

This plan meets the requirements for a Tree Farm Management Plan.

_____

Signature of Washington Tree Farm Program Authorized Representative Date

_____

Print Name

_____

Title

_____

Address

_____

Phone

_____

E-mail

CURRENT USE TIMBER MANAGEMENT PLAN APPROVAL (IF APPLICABLE)

This plan meets the requirements for a Timber Management Plan for current use property tax programs.

Signature of Authorized County Government Representative Date

Print Name

Title

Address

Phone

E-mail