



SAMPLE LANDOWNER FOREST PLAN

Property Location

5.63 acres southeast of the Preston Interchange
(4.49 included in plan, 1.14 excluded)

Abbreviated Legal Description

S 1/2 SW 1/4 SW 1/4 SE 1/4, Sec. 32, T24N, R07E, WM, King County, WA
PIN # 0000000000

Plan Prepared By

Landowner (or name and profession of plan author)

Landowner

Name

Address: ???

Phone: xxx-xxx-xxxx

For

King County PBRS and Long-term Forest Stewardship

Prepared

February, 2002

Stewardship Vision: 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.

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FOREST STEWARDSHIP GOALS

- ◆ Provide a forested environment ensuring that water quantity and quality are protected with emphasis on forested wetland protection and enhancement and down-stream fish habitat improvement and maintenance.
- ◆ Maintain and improve wildlife habitat across our property.
- ◆ Protect sensitive areas including streams and wetlands.
- ◆ Assure that management practices will 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.
- ◆ Selectively harvest both timber and non-timber forest products for personal use and sale.
- ◆ Provide forest ecology educational opportunities to Mountains to Sound sponsored tours, school groups and WSU Forest Stewardship Program field sessions.

HISTORY OF THE PROPERTY

Most of the land in the Preston/Tiger Mountain vicinity was logged from the late 1890's until the early 1930's. The timber was processed at the Highpoint and Preston 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 Tiger Mountain and is bisected by the original road grade built to the fire tower once presiding over Tiger. The road was always referred to as Carpenter Road, named after a local settler. Prior to 1980 ownership of Tiger Mountain was a checkerboard of State Department of Natural Resource (WA DNR) ownership mixed with private timber holdings. Preston 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 Soderman Creek failed. Lack of road easement led to the road being abandoned. In mid-1980s Mr. Nelson, who had purchased 40 acres from Frederick Lind (Preston Mill), which was now surrounded on 3 sides by Tiger Mountain State Forest, subdivided and sold 5+ acre tracts. We bought the very last lot at what is now the end of "Carpenter Road" (300th 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 of Tiger 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 1979 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 Preston 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.

TOPOGRAPHY

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 Raging River forms on the property and flows northeast.

SURROUNDING LAND USE / ADJACENT OWNERSHIP

Our property is cradled in the northeast corner of Tiger Mountain State Forest and is just southeast of the Preston interchange on I-90. We have five-acre lots to the west and north, and state forest to the south and east. Tiger Mountain 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, 300th 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 2002. It is also subject to Road Maintenance and Abandonment Planning under Forest Practice Rules and Regulations, which requires the road to meet current FP standards.

RESOURCE DESCRIPTIONS

Forest Health

The property is located in the convergence zone entering into Snoqualmie 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 Tiger 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.

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 (*A. rubra*), bigleaf maple (*Acer Macrophyllum*), and black cottonwood (*Populus balsamifera* ssp. *trichocarpa*). About 10% of the stand is comprised of conifer distributed throughout: Western redcedar (*Thuja plicata*), Western hemlock (*Tsuga heterophylla*), and Douglas- fir (*Pseudotsuga menziesii*). The understory of this stand supports salmonberry (*Rubus spectabilis*), vine maple (*Acer circinatum*), sword fern (*Polystichum munitum*), salal (*Gaultheria shallon*), red-flowering current (*Ribes sanguineum*), red huckleberry (*Vaccinium parvifolium*) and devil's club (*Oplopanax horridus*). The stand was partial harvested in about 1970 with some areas more heavily

harvested than others. Stocking levels are variable. The stand is generally in very good health.

Stand 2 - 4/10 acre of conifer established in 1971 and 1972 comprised 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 1998. 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 1995. 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 red cedar 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 2001 to increase growth and contribute to clear straight bole formation. Unfortunately in fall of 2001 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. 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 – 4/10 acre of cleared and understocked area to be reforested. This stand type is scattered in three locations and will be re-planted with predominantly red cedar, with some grand fir and western hemlock for diversity. 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.

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.

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

Early spring 2002 stand 4 will be re-planted with 7-year-old grand fir and 2-2 western red cedar 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.

Timber and Wood Products

Stand 1: This stand is under-stocked with naturally regenerated red alder, bigleaf maple, black cottonwood and vine maple. The site class is III (100-year site index 151 and 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 red cedar 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 comprising 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 red cedar coming into the understory.

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

Recommendations: 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 red cedar, hemlock and spruce to contribute to structural diversity and improve hydrologic function.

Soils and Slope Stability

Our property is located on one of the glaciated foothills of the Cascade Range. It is at 1000 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 puddling potential and the tendency for severe plant competition. Windthrow of exposed trees has some potential

due to the rooting depth restricted by the till layer. Alderwood soils are site class III (site index 108 for 50-year site index and 151 for 100-year site index).

Recommendations: 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 puddling). 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.

Water Quality, Riparian and Wetland Areas

Our property is in the headwater area of a small type 5 creek which forms within the site. The stream is a tributary of the Raging 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.

Recommendations: The hydrologic function of the forested hillslopes, headwater stream and forested wetland are an integral part of water quality and quantity to Raging 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.

Fish and Wildlife Habitat Including Sensitive, Threatened and Endangered Species

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 comprised 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 Raging 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 1 and 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 troglodytes*) 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 trinotatus*), 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 cinereus*), shrew mole (*Neurotrichus gibbsii*) and moles (*Scapanus* 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.

Recommendations: The tributary forming and flowing within our property flows into the Raging 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, forbes 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, forbes and shrubs will decline. Varied density thinnings will help maintain habitat benefits

Cultural and Historic Resources

There currently are no identified cultural or historic resources on this site; however forested hillsides tributary to Raging River surely provided a variety of amenities for the earliest inhabitants. Logging was the first large-scale industry as the area became more densely settled by European immigrants in the early 1800's. Preston and Highpoint were established as mill towns. Eventually railroad grades connected the forested foothills with various mills in the area. Forestry is very much a part of the culture and history of the region.

Our property has several large diameter old-growth red cedar 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 Tiger Mountain and a fire lookout tower.

Recommendations: Continue to maintain the old-growth stumps and provide forest ecology and forestry practices field trips.

Aesthetics and Recreation

Our property is at the end of a private road with several share holders. 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.

Recommendations: Continue to maintain forest cover. Involve adjacent landowners to encourage them to become effective partners in protecting the valuable assets inherent in the forest.

Alternative Forest Products

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.

LANDOWNER MANAGEMENT TIMELINE

YEAR	MANAGEMENT PRACTICE	PRIORITY
2003: January April June	Plant Stand 4 w/red cedar, spruce, grand fir to 18X18 Noxious weed control Stand 3 and Stand 4 - pull and cut Thin alder in Stand 3 to 8X8 ft. spacing; prune up 6 feet	High High Medium
2004: January April June	Under-plant Stand 1 and Stand 3 where more open - cedar Noxious weed control Stand 3 and Stand 4 - pull and cut Prune alder in stand 3 to 8 feet	Medium High Medium
2005: April June July	Noxious weed survey whole property - control as needed Thin alder in Stand 3 to 10X10 ft. spacing Install bat boxes	High Medium Medium
2006: January April June	Under-plant in stand 3 with red cedar Noxious weed patrol and control Prune alder in Stand 3 to 12 feet	Low High Medium
2007: April	Noxious weed patrol and control	High
2008: April	Noxious weed patrol and control; seedling survival survey	Medium
2009: January April June	Under-plant Stand 1 and 3 with cedar, spruce, hemlock Noxious weed patrol and control Thin alder to 13X13 ft. spacing	Low Medium Medium
2010: January April	Under-plant Stand 2 and 3 with wildlife forb and mast veg. Tree health and noxious weed survey	Medium Medium
2011: April June	Health and Noxious weed patrol Commercially thin stand 2 to 15X15 ft. spacing	Medium Low
2012: April June	Health and noxious weed patrol Thin alder in Stand 3 to 16X16 ft. spacing, sell or firewood	Medium Medium
2013 through 2025	Monitor all stands for health and weed issues	Medium
2026 through 2030	Watch timber prices, selectively harvest Stand 2	Low
2030 through 2050	Monitor; selectively harvest; plant as needed	Medium
2052	Re-evaluate goals, stands' conditions - modify plan	For heirs

LEGAL DESCRIPTION - LANDOWNER PBRs APPLICATION

Lot 1 KC Short Plat No. 178091 Rec. No. 7903210597 SD Plat DAF

West 1/2 of West 1/2 of Southeast Quarter, Section 32, Township 24 North, Range 07 East, WM.

Excluding:

Approximately 15 Ft. wide gravel drive meandering 350 ft. southerly and 381 ft. westerly to homesite, totaling 0.25 acres, and less the homesite, from the South Quarter Corner of Section 32 (the southwest corner of this lot) north 04 degrees 14 minutes 29seconds west, 300 feet; south 87 degrees 44 minutes 59 seconds east, 129feet; south 04 degrees 09 minutes 10 seconds east, 300 feet; north 87 degrees 44 minutes 59 seconds west, 129 feet totaling 0.89 acres.

Appendix

Orthomap

Site Map

Topo Map

Sensitive Areas Map

Soils Map

Soil Description Sheets