

## Examples of the Descriptive Portions of the Forest Inventory/Timber/Wood Products Section (Resource Category 4)

### *Inventory/Timber Example 1*

Three distinct forest stands, as shown on the aerial photomap, exist on our property. The following are inventories, evaluations, and recommendations for timber management for each of these stand types. A partial inventory of understory vegetation is also included at the end of this section.

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

Stand 1: Stand 1 is a Douglas-fir plantation of approximately 52 acres. Other trees present (in very limited quantities) include red alder, wild cherry, big leaf maple, cascara, western hemlock, black cottonwood and western red cedar.

Stand 1 was planted in the Spring of 1996 at an estimated 11 x 11 foot spacing (360 trees per acre) with 2-1 Douglas-fir seedlings. According to a stocking survey, deer browsing was heavy on about one-fourth of the trees, and another fifteen percent exhibited poor vigor due to planting stress or drought.

It was treated by helicopter with herbicides in the Spring of 2001 to control heavy competing brush. This was very effective, except near the eastern one-third of the property, where the application was spotty and a wide variety of hardwoods still exist in the area.

Presently, diameters of dominant trees average 5 inches, with many trees about 20 feet tall. With naturally seeded hardwoods and additional conifers, about 500 trees per acre are now present, with heavier "pure" stocking of Douglas-fir in the northeast portion of the stand and the higher component of hardwoods in the west.

Typical Pacific Northwest understory vegetation exists under the Douglas-fir. Past brush control and the closing canopy continues to reduce the penetration of sunlight greatly diminishing the presence of understory plants in some areas, while patches of dying trees due to bear damage is allowing the survival and thriving of a diversity of shrubs and forbs in other areas.

Stand 2: Stand 2 contains about five acres of Douglas-fir, bigleaf maple, red alder, and cascara. Stocking is highly variable due to the steep, rocky terrain upon which this stand is established, but fewer than 25 trees per acre that are merchantable, varying from 12 to 60 inches, exist in the stand.

Stand 3: Stand 3 is about two acres of 55 year old mixed red alder, big leaf maple, and Douglas-fir. An estimated 125 trees per acre presently exist on the site, with average dbhs of all species

at about 16 inches. The alder, which is the dominant species in the stand, is showing signs of deterioration in the upper crowns.

The bigleaf maple is of marginal quality having sprouted from cut stumps years ago. Douglas-fir health and quality is good, but they represent less than 20 percent of the stand's components.

From an economic/timber production standpoint, Stand 3 should be harvested within the next ten years. Harvest with ground-based equipment is appropriate.

### Plant Species Present on the Property

A number of plant species have been identified on the property. Many of these species can be found in all three stands, although some species (marked with an asterisk) have a very limited presence on the property.

#### **Trees:**

Douglas-fir	Red alder
Western hemlock*	Big leaf maple
Western redcedar	Cascara
Western white pine (planted)	Pacific dogwood*
Pacific yew*	Black cottonwood

#### **Shrubs:**

California hazel	Thimbleberry	Evergreen blackberry
Dwarf Oregon grape	Salmonberry	Blackcap raspberry
Red flowering currant	Vine maple	Blue elderberry
Ocean spray	Devils club	Himalaya berry
Indian plum	Salal Snowberry	Red huckleberry
Little wood rose		

#### **Ferns, Herbs, Grasses:**

Miners lettuce	Sword fern	Vanilla leaf
Oregon oxalis	Bracken fern	Buttercup
False Solomon's seal	Foxglove	Skunk cabbage
Pearly everlasting	Canadian thistle	Stinging nettle
Bleeding heart	Western iris	Reed canary grass
Tansy ragwort	Indian tobacco	Sedges
Equisetum	Grass spp.	

## ***Inventory/Timber Example 2***

**Stand 1:** Stand 1 is a 17 acre red alder plantation mostly on the east half of the ownership. It seeded in about 1997 following an earlier clearcut harvest. Other trees present to a lesser extent in this plantation include birch, western white pine (several infected with blister rust), lodgepole pine, western hemlock, western redcedar, and Douglas-fir.

An estimated 2,000 saplings per acre exist in this plantation, which is way too many. All trees show only fair height (fifteen feet maximum for red alder, less for other species) and diameter growth (1-2 inches) thus far. This is not very good for hardwoods, probably as a result of the drought susceptible soils.

Dominant understory vegetation includes salal and bracken fern. Several larger slash piles have been burned.

**Stand 2:** Thirteen-acre Stand 2 is a mature mixed hardwood/conifer stand, heavy to the red alder. Good quality saw-log sized red alder and black cottonwood dominate the site, with bigleaf maple and birch also making up an important component. The surprisingly good quality of the hardwoods may be attributed to the existence of a small area of silt loam soils found in this depression. Both clumps and scatterings of shade tolerant western hemlock and western redcedar are also present, most frequently in the understory, and a few Douglas-firs can also be found. The understory has plenty of vine maple, red elderberry, trillium, salmonberry, sword fern, bleeding heart, and nettles.

Many tree heights average over 100 feet tall. Merchantable trees per acre are estimated to vary between 50 and 120.

**Stand 3:** Stand 3 is mostly pole and small saw-log sized hemlocks, Douglas-firs, and western redcedars. It's pretty thick, with maybe 600 trees an acre. The stand is in the northwest corner near the house, and I counted between 20 and 30 rings on some of the stumps that remained from the small clearing we created around the house.

Most of the trees seem to still have lots of live crown on them, but underneath them there is hardly any vegetation. Also, the annual growth rings on the trees we aged also have gotten a lot closer together over the last ten years, so I'm thinking it's time to thin.

**Stand 4:** Stand 4 is approximately three acres dominated by large saw log big leaf maple and western redcedar. Also present are Douglas-fir, western hemlock, and red alder. Understory vegetation includes swordfern, salmonberry, vine maple, Indian plum, red elderberry, and some young alder. Its health would be characterized as very good.

## Inventory/Timber Example 3

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

#### Stand 1: Mixed conifer

Type: Saw log with fairly even 90 year-old conifers. The 10.26 acres of Stand 1 contain most of the potential commercial tree products. A sample composition includes: Douglas-fir – 56%, western redcedar – 25%, western hemlock – 7%, bigleaf maple – 6%, and bitter cherry – 6%. The tallest trees appear to be over 130' tall. The Stand has a high canopy cover of approximately 70 – 80%. The majority of the conifers are high quality, with few branches. There are few young trees in the understory and one or two dying trees with very few snags. A soft layer of duff from 2 - 6 inches deep covers most of the forest floor. The two old logging roads still show soil compaction.

Trees	Shrubs	Understory Plants
Douglas-fir	Vine maple	Sword fern
Western redcedar	Red huckleberry	Trailing blackberry
Western hemlock	Beaked hazelnut	Salal
Bigleaf maple	Devil's club	Varied mosses and lichens
Bitter cherry	Salmonberry	Vanilla leaf, trillium, Oregon grape
Pacific yew (1)		Stinging nettles
Red alder in disturbed skid trail		Invasive: English holly (minimal)

#### Stand 2: Mixed deciduous

The east- and south-facing 4.4 acres in Stand 2 consists primarily of big leaf maple, a few mature black cottonwood and western red cedar interspersed with red alder with bitter cherry on the edge. The stand has a significant vine maple understory. The boundary of Stand 2 adjacent to open grass area contains invasive Himalayan blackberry and some reed canary grass. Some non-native, specimen planting has occurred on the north edge of the Stand (deerhorn cedar, Japanese maple, incense cedar and giant sequoia). The northwest grass border edge of Stand 2 contains wetlands.

Trees	Shrubs	Understory Plants
Bigleaf maple	Beaked hazelnut	Thimbleberry
Western redcedar	Willow	Salmonberry
Black cottonwood	Vine maple	Devil's club
Bitter cherry	Cascara	Stinging nettles
Heritage apple and crab apple	Thimbleberry and salmonberry	Oregon grape

#### Stand 3: Mixed deciduous, scattered western red cedar, and heritage apple trees

Bigleaf maples dominate Stand 3 which is 0.2 acre. A number of bitter cherry trees thrive on the eastern edge of the stand; while a few large western redcedar are present as well. In addition, this stand includes heritage apple trees planted by earlier generations (70+ years ago).

<b>Trees</b>	<b>Shrubs</b>	<b>Understory Plants</b>
Bigleaf maple	Vine maple	Invasive: Himalayan blackberry
Bitter cherry	Cascara	
Western redcedar		

**Stand 4: Red alder**

Red alder and Himalayan blackberries dominate Stand 4, approximately 0.8 acre. The 10-15 year-old red alder which cover approximately 50% of the Stand self-planted on what was a hay field. The other half of the Stand is covered with 15 years of Himalayan blackberry growth.

<b>Trees</b>	<b>Shrubs</b>	<b>Understory Plants</b>
Red alder		Invasive: Himalayan blackberry