

A Preliminary Overview of the Winburn Parcel

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Introduction

The Winburn parcel is a 160-acre City of Ashland owned tract located about one mile southwest of Reeder Reservoir in the middle of the Ashland Creek Watershed. It is located in the center of Section 32 in Township 39 South, Range 1 East. The property is completely surrounded by lands owned by the U.S. Forest Service, the only other landowner in the Ashland Creek Watershed.

The Winburn parcel provides an interesting chapter in the City of Ashland's history. The property was developed in the early 1920's by Jesse Winburn, a noted and somewhat eccentric public figure. He helped develop an early road to the property and completed small structures and improvements as well as creating small areas and planting several exotic tree species. Remains of the foundations of these structures, as well as remnants of other improvements and changes, can still be found on the Winburn parcel.

Access to the Winburn parcel is poor and can currently only be accomplished on foot. An old U.S. Forest Service Road connecting Reeder Reservoir with the 2060 Road (where it crosses Winburn Ridge) parallels the west fork of Ashland Creek through the center of the parcel, but has been closed for many years and is currently impassable to vehicular traffic.

The Winburn parcel is located at the intersection of Weasel Creek and the west fork of Ashland Creek, which together comprise close to 6,000 acres of watershed above the property. Both streams are perennial and have resident populations of rainbow and cutthroat trout.

Topographically, the parcel is diverse, with numerous ridges and incised drainages associated with easterly flowing Weasel Creek and the northerly flowing west fork of Ashland Creek. Approximately 20 percent of the parcel is comprised of gentle 0 to 20 percent slopes associated with these major streams, their floodplains, and associated gentle low-slope positions. The remainder of the parcel varies from moderate to very steep (35 to 80+ percent) topography. Elevation varies from 3,340 to 3,900 feet above sea level.

Soils on the Winburn parcel are similar to those found elsewhere in the Ashland watershed—decomposed granitics derived from intrusive igneous rocks formed during the Jurassic Age, 145 to 164 million years ago. These gravelly sandy loams are moderately deep, coarse textured soils that can be excessively well drained. The general lack of cohesiveness of these soils allows them to be easily moved, particularly during major storm events when a high likelihood exists for sheet and gully erosion, as well as mass soil movements such as debris slides and debris avalanches. Precipitation on the parcel, which annually averages around 30 to 35 inches, includes some that falls as snow during winter months. The possibility of significant rain-on-snow events can dramatically increase the likelihood of slope failure during major storm events, although no major slope failures appear to have occurred during the most recent major storm event of January 1, 1997.

Vegetation on the property is well established throughout the parcel, dominated by a mixed coniferous forest cover. Openings in this coniferous canopy are rare, except those created by the 1990 helicopter logging. Douglas-fir is the primary coniferous species, with lesser amounts of white fir (more northerly aspects) and ponderosa pine (more southerly aspects). Sugar pine and incense cedar are uncommon on more southerly aspects, and Pacific yew occurs sporadically on the moister, more northerly aspects. Several exotic species, most notably giant sequoia and Norway spruce, were planted during the Jesse Winburn era and are well established in spot locations on the property. Hardwoods are not as common in the stands on the Winburn parcel as

in stands lower in the watershed. Pacific madrone is the most common hardwood, but seldom comprises more than 10 percent of total basal area or trees per acre. Other hardwoods are much less common, including California black oak (southerly aspects) and golden chinquapin and bigleaf maple (moist northerly aspects). Understory vegetation includes oceanspray, hazel, serviceberry, wild rose, princess pine, bracken fern, sword fern, Pipers Oregon grape, dogwood, grasses and other herbaceous vegetation, as well as on moister sites dwarf Oregon grape, trailing blackberry, thimbleberry, twinflower, boxwood, Douglas maple, false solomon seal, Hooker fairybell, and others. Riparian vegetation along perennial streams includes alder, bigleaf maple, dogwood, Pacific yew, and understory species such as various sedges, rushes, and horsetails, as well as many of the more moist site facultative species such as described above.

Other notable resources on the property include various rare or sensitive species, including one federally protected species, the Northern spotted owl. Spotted owls nest within the vicinity of the Winburn parcel and seasonally limit forestry operations during nesting season (April through August or September). Perhaps more importantly, legally mandated protection of spotted owl habitat values will be an important consideration affecting management directions and possibilities on the Winburn parcel. Although not legally mandated, the possibility of the presence of other rare or sensitive species raises the same concerns. These include various other wildlife vertebrate species, fungi, lichens, bryophytes, vascular plants, and perhaps invertebrate species. Most of these rare or sensitive species possibly exist within the Winburn parcel because of the inherent late seral forest conditions that exist both on the parcel and in the watershed as a whole.

Snags and coarse woody debris inventories have been done on the Winburn parcel to provide baseline data as of year 2000. In the upland area outside of the riparian and aquatic habitat, an average of 7.5 snags per acre exist, of which 4.25 per acre are 18 inches dbh or greater. Coarse woody debris inventories for the entire Winburn parcel produced numbers in tons per acre, volume (cubic feet) per acre, pieces per acre, and total length (feet) per acre by large end diameter class. Overall, 7.8 pieces per acre 16 feet long and longer totalled an average length of 314 feet per acre.

Unit Descriptions

The Winburn parcel has been divided into 8 units, depending primarily on vegetation and stand conditions as determined by such variables as soils, slope, aspect, disturbance history including recent management history, and others. The brief descriptions of these unit types should help provide further understanding about existing vegetation, as well as resource management potentials, issues, and opportunities on the parcel.

Unit 1 - 55 acres, 4 subunits

Unit 1 is located on 35 to 65 percent southeasterly to southwesterly aspects. Stands are densely stocked with three primary cohorts: (1) an average of 5 trees per acre (tpa) of scattered 200 to 300+ year-old, 30" dbh and larger ponderosa pine, Douglas-fir, and uncommon sugar pine and incense cedar with approximately one-third to one-half of this original cohort (particularly Douglas-fir) removed in the 1990 timber sale; (2) 80 to 100+ year-old primarily 6 to 14-inch dbh Douglas-fir and to a lesser extent white fir and Pacific madrone; (3) 0 to 5-inch dbh seedlings and saplings developed within the last 50 years, particularly in the vicinity of openings, such as created by helicopter logging in 1990. Understory Douglas-fir in cohorts 2 and 3 are moderately to heavily infected with dwarfmistletoe in spots. Residual overstory old growth dominants were under considerable stress from developing understory cohorts. Stand densities are excessive overall (relative density = .87), averaging 750+ trees per acre and 225 square feet per acre basal area. Natural regeneration in heli-openings of multiple species (PP, SP, DF, WF) generally good. Estimated Douglas-fir 50 year site index is 80. These subunits are also in topographical positions and aspects that suggest they could be good locations for fuel reduction zones, particularly along more ridgeline locations.

Unit 2 - 30 acres, 5 subunits

Unit 2 is located on steeper, northerly aspects ranging from 50 up to 85-90+ percent. Douglas-fir is the primary species comprising close to 70 percent of total stand basal area. It occurs in all three cohorts as in Unit 1, but is especially abundant in the larger, older cohorts. An average of 3 trees per acre greater than 30 inches dbh exist in Unit 1. White fir is more common than in Unit 1 (approximately 150 tpa), primarily as understory species up to small pole timber size. Pacific madrone is an integral part of some stands, particularly as mid-canopy tree. Portions of the of unit are overstocked (relative density = .54), although certainly not as bad as most other areas on the property (relative density = .54, 400 trees per acre, 144 ft² basal area). Better site quality (50 year DF site index = 90) and reduced stocking have produced slightly bigger tree size on the average. Dwarfmistletoe in Douglas-fir not as bad as Unit 1. Understory sparse throughout unit. Steepness on northerly aspects makes them prone to slope failure.

Unit 3 - 11 acres

Unit 3 is located on gentle 0 to 20 percent easterly to northeasterly aspects. This unit is associated with major stream and creek floodplains and fans, as well as adjacent low slope positions. The unit is primarily clustered around the intersection of the two major streams— Weasel Creek and the west fork of Ashland Creek. These are moist sites with deep soils that produce high site productivities (50 year site index for DF = 95). Douglas-fir dominates these locations, comprising over 90 percent of the total stand basal area (average 211 total square feet per acre). Stands within the unit tend to be relatively even-aged (usually 80 to 100 years or in some cases

perhaps up to 130 years), with high average diameters and volumes per acre (average of 10 trees per acre greater than 30 inches). However, considerable variation exists within Unit 3 between individual stands in terms of stand densities structures and subsequent volumes. Some small stands are similar to those in Unit 4 (dense, uniform, high volume), while others include diverse characteristics more typical of adjacent riparian habitats. Overall, Unit 3 is overstocked (relative density = .68), indicating the potential for density-related mortality. One small outbreak of major mortality of overstory Douglas-fir has occurred, likely the result of attack by the cadre of beetles that attack Douglas-fir. Dense understory groundcovers include species that thrive in these cooler, moister sites, most notably salal and others like thimbleberry, trailing blackberry, hazel, Hooker fairybell, princess pine, false solomon seal, and others. Potential heritage resources from the Jesse Winburn era are also located in this unit.

Unit 4 - 9 acres

Unit 4 is located on gentle to moderate (10 to 45 percent) westerly to northwesterly aspects. This unit is dominated by a very dense (relative density = .83) even-aged (100 years) stand of primarily 12 to 24 inch dbh Douglas-fir (over 90 percent of tpa and basal area are Douglas-fir). This stand was initiated following an intense disturbance at the turn of the century, most likely the 1901 wildfire. Stand growth has been excellent (50 year site index for Douglas-fir is 95), but high relative densities, small crowns (average crown ratio = .226), high basal areas (265 average) and rapidly declining radial growths are indicative of a stand under considerable stress. Very little understory vegetation exists under this dense stand. Dwarfmistletoe is minimal, having been shaded out over the years in this rapidly growing stand. Structurally, Unit 4 has excellent characteristics from a wildfire management perspective, with minimal surface fuels or ladder fuels, although imminent in-stand mortality from excessive stand densities will reduce its effectiveness over time, much as has begun in Unit 3.

Unit 5 - 20 acres

Unit 5 is located on moderate (15 to 45 percent) westerly aspects east of Ashland Creek. This unit is dominated by relatively equal amounts of Douglas-fir and white fir stems per acre (approximately 600 total), although the Douglas-fir is typically of larger average diameter. An estimated one-third to one-half of the larger conifers greater than 30 inches dbh (primarily Douglas-fir) were harvested in the 1990 helicopter sale, leaving a current average of over 4 scattered trees per acre in this larger size class, including one of which is a large pine. A diversity of ages and sizes of Douglas-fir and white fir up to 130 years and 18 inches dbh characterize the stand, although close to 90% of the shade tolerant white fir are 10 inches dbh or less. Stand densities are generally high (relative density = .85, 230 average basal area), although somewhat variable (some stands are extremely high density while others are more open). Dwarfmistletoe disease in Douglas-fir is heavy in spots in Unit 5. Logging slash is also high in portions of this unit. A unique spring/seep area with associated riparian vegetation is located midslope towards the bottom of this unit.

Unit 6 - 11 acres

Unit 6 is located on very steep (65 to 85%) northwesterly aspects. This unit is dominated mostly by a two-cohort stand: larger Douglas-fir and occasional pines 20 inches dbh and larger (slightly over 20 per acre) over a dense stand of understory Douglas-fir and white fir primarily from 1 to 6 inches dbh and up to 30 feet height. Some of the larger conifers greater than 30 inches

dbh were removed in the 1990 timber sale, but close to 7 tpa of this size class remain. Current stand densities are not excessive in Unit 6 (relative density = .58, basal area - 165, tpa = 330±), primarily because about three-quarters of the stems per acre are less than 4 inches dbh (Douglas-fir, white fir, Pacific yew). Dwarfmistletoe is well established in many of the overstory Douglas-fir, serving as possible spotted owl habitat. This overstory dwarfmistletoe will continue to infect the Douglas-fir understory over time, perhaps resulting in species composition shifts (particularly to white fir). The younger understory Douglas-fir will continue to be infected by dwarfmistletoe infected overstory trees. Very steep slopes make this unit prone to slope failure, although no major events appear to have occurred in 1997. The steepness and multi-layered canopies also make Unit 6 a low priority from a wildfire management perspective.

Unit 7 - 24 acres

Unit 8 comprises the various aquatic ecosystems associated with perennial streams and creeks on the property, as well as their associated riparian buffers. The aquatic and riparian ecosystems along the west fork of Ashland Creek and Weasel Creek are excellent examples of healthy, functioning ecosystems and pristine salmonid fish habitat for the Siskiyou Mountains. Existing riparian vegetation is well established and has been previously described. Their excellent condition of this stream system is of obvious importance in terms of water quality and delivery for the City of Ashland. The size of Unit 8 was determined by assigning appropriately sized riparian management areas to existing streams on the property as required under State of Oregon forest practices rules. Major streams and creeks on the property generally require a minimum of 50 to 70 feet of riparian management areas on either side. However, these same waterways are required to have a 300-foot riparian buffer under U.S. Forest Service guidelines. Obviously, considerable difference exists between the two regulatory standards, and the City of Ashland may choose to expand on the acreage in Unit 8 listed here based on management objectives developed for the Winburn parcel.

Issues/Concerns/Opportunities

1. Management objectives need to be determined for the Winburn parcel. How are they similar to or different from the remainder of the City of Ashland ownership?
2. The Winburn parcel is the only private parcel in the middle of the Ashland Creek Watershed, which is part of the federally designated 51,000-acre Mt. Ashland Late Successional Reserve (LSR). Although not legally bound to abide by the same LSR regulations as the adjacent USFS lands, the City of Ashland obviously operates in concert with USFS in the Ashland Creek Watershed. Although the 1990 harvest significantly changed the late seral characteristics of the Winburn parcel, it still retains many important functional and compositional late seral features, most notably an average of 4 trees per acre greater than 30 inches dbh. Unfortunately, many of these trees have been under significant stress for many years, although it is hoped that recent stand density reduction in their vicinity in Units 1 and 5 improve their vigor and long-term survival.
3. Excessive stand densities and presence of Douglas-fir dwarfmistletoe disease has resulted in significant stand decline in many portions of the Winburn parcel. In most cases, these stand development trends can be reversed through appropriate and carefully applied stand management activities. The importance of such activities depends in large part on the City-derived objectives for the parcel.
4. The topographical location and relative steepness of the Winburn parcel do not provide significant wildfire management opportunities with several exceptions, most notably portions of Unit 1, particularly if coordinated with similar fuel reduction activities on adjacent USFS ownership. Management of stand structures and densities with associated slash treatment could reduce wildfire potential property-wide, however, by creating a less flammable vegetational profile. Spot treatment of logging slash from the 1990 helicopter harvest could also reduce wildfire hazard.
5. If removal of merchantable timber is prioritized as part of sensitive and proactive management strategies for the Winburn parcel, it should be coordinated with timber sale activities elsewhere on the City ownership and perhaps with similar activities with adjacent USFS lands.
6. Northern spotted owls are the only federally protected threatened or endangered species in the area. Their occurrence in the vicinity could seasonally restrict timing of forest operations, as well as alter prescriptions in order to insure maintenance of habitat critical to their long-term viability. Thinning and stand density reduction may improve foraging habitat values in overstocked stands and has been fully supported to date by both USFS and ODF wildlife biologists.
7. Inventories for other rare or sensitive species (vascular and non-vascular plants, molluscs, etc.) have not been completed for the parcel, although some formal surveys have been completed for USFS ownership in the watershed. The City of Ashland is not legally bound to conduct such surveys. A survey for rare and/or sensitive vascular plants was conducted for the rest of the City ownership within the Ashland Creek Watershed by Wayne Rolle of the U.S. Forest Service. No inventories of bryophytes, lichens, mosses, fungi, etc., have been

conducted to date.

8. A slope stability/geological hazard zonation report was completed for the Winburn parcel by B. G. Hicks. This work should help guide any prospective management activities.
9. A management plan for the aquatic and riparian resources on the City of Ashland ownership in the watershed, including the Winburn parcel, have not yet been developed. To date, as a minimum, no activity has occurred within a legally mandated 100-foot riparian management area on the City ownership, except in some cases during the 1990 helicopter harvest. Healthy, fully functioning aquatic and riparian ecosystems are vitally important to the City of Ashland. They also have regional significance as examples of such healthy ecosystems within the Siskiyou Mountain province.
10. A cultural resource inventory of heritage resources on the Winburn parcel has not been prioritized and/or completed. Resources include items such as foundations, old road grades, meadow, exotic planted trees (giant sequoia, Norway spruce), etc.
11. Vehicular access to the Winburn parcel is currently non-existent, although road reconstruction/renovation perhaps to some minimal standard could be considered. Does the City of Ashland have legal access to the Winburn parcel? If so, would the City want to develop such access? Obvious pros and cons exist. The actual road grade has partially washed out in one location between Reeder Reservoir and the Winburn parcel, an old USFS road, washed out and grown over, can be hiked from the upper end of Reeder Reservoir in 30 to 45 minutes. Two major road crossings on the Winburn parcel have also washed out, with large non-functional culverts still in place. Lack of access will obviously affect management options and decisions in the future. To date, non-commercial stand density reduction and subsequent slash burning have occurred only via foot access.