



Small Woodland Services, Inc.
Forest & Resource Management

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Keith Woodley, Pam Barlow
City of Ashland
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Keith, Pam,

At our August meeting, you asked me to review the City-owned forestlands and make preliminary recommendations as to appropriate "next steps" or "high priorities" in the management of those lands. I have since walked a good portion of those lands and made preliminary assessments of forest and ecosystem health, wildfire potential, and needed management practices. The following short report is the result of that work. Please note that this is not a silvicultural prescription for any of the areas in question, but rather an overview of the entire area, with subsequent suggestions for management priorities.

I hope this information is useful to you in your planning.

Sincerely,

Marty Main, President
Small Woodland Services, Inc.

Enclosure

"Specializing in sound forest management for private, non-industrial small woodland ownerships"

Forest Management Plans • Timber Cruising • Reforestation • Thinning & Stand Improvement • Timber Sales/Administration

**A Preliminary Assessment of Forest and
Resource Management Priorities on
City of Ashland Owned Lands**

**Marty Main
Small Woodland Services, Inc.
October, 1995**

Introduction

Small Woodland Services, Inc. was commissioned by Keith Woodley and Pam Barlow of the City of Ashland to make a quick overview of their forestlands in order to help them establish priorities in the management of those lands. An 'on-the-ground' walkthrough of the City-owned parcels was conducted in September 1995, although detailed analysis of the forests and/or associated resources was not made at that time. Nonetheless, given existing ecological, geological, silvicultural, and topographical realities, certain management activities suggested more immediate usefulness and/or applicability, particularly given the City's primary and often overlapping objectives for this area—protection of watershed values and maintenance of quality and quantity of water for the City, maintenance and/or promotion of forest and ecosystem health, and reduction in wildfire hazard and risk.

This preliminary assessment should not be construed as a silvicultural prescription or management plan for any of the areas described and/or the City-owned forestlands in general. Additional, more detailed information would be needed before a well-planned, professionally based program for needed forest and resource management activities could be undertaken. Too, this short report makes no attempt to assess the political or social context within which the ultimate decisions must be made.

General Overview of Forest and Resource Management Suggestions

The Forest Plan for City of Ashland Forest Lands completed in May, 1992 by R.J. McCormick and Associates clearly spells out a general management for all the City-owned forest lands. It also provides a foundation on which this report rests. The management direction suggested in that plan is professional and sound and fully deserves to be carefully adhered to. This report offers little new direction, but rather provides perhaps a slightly more site specific analysis. It also updates management direction slightly, based on changes that have resulted in the three-plus years since the McCormick plan was developed.

The McCormick Plan, on page 3 of Chapter 1, states,

"In our judgement, created disturbance that emulates natural ecological processes must be reintroduced into the watersheds. If this does not occur, there is a very high risk of catastrophic wildfire and a rapid loss of old growth and other age classes through insects and disease."

I fully concur with that assessment and add that three years of time without "created disturbance" has substantiated and further aggravated the existing problems. Mortality of overstory conifers from insects has advanced further into the City-owned lands and is very likely to continue. Loss of overstory conifers ultimately contributes to soil instability as roots die and lose strength, contributing to decreased soil stability with potential negative impacts upon hydrologic realities in the watershed. Snag development, coupled with ongoing vegetative growth and subsequent increases in fuel loading in the last three year, has even further increased the chance for catastrophic wildfire. Reversing these trends of declining stand vigor and subsequent increased likelihood of stand mortality from either insects and/or wildfire seems even more urgent than three years ago. Without a proactive approach of implementing "created disturbance that emulates natural processes," catastrophic wildfire is clearly imperative, with a significant if not overwhelming decline of virtually *all* of the values so clearly associated with City-owned forestlands. Obviously, this type of wildfire could easily threaten significant portions of the City of Ashland itself.

Preliminary Assessment of Management Priorities

1. REDUCE WILDFIRE POTENTIAL AND IMPROVE STAND VIGOR IN PARCELS 4 AND 5 DELINEATED IN MCCORMICK PLAN.

I am strongly inclined to believe that this is the highest priority on the City-owned lands at this time for the following reasons:

- A. Considerable mortality of merchantable overstory Douglas-fir has occurred in these two parcels as shown on the accompanying map. Bark beetles are well established on other ownerships in the vicinity (a major kill occurred several years ago in Lithia Park to the north, removed almost all overstory merchantable Douglas-fir) and the beetles are obviously spreading to other stressed stands at low elevations in the bottom of the watershed on City of Ashland-owned lands.
- B. The most likely source of ignition for wildfire below the Ashland watershed is within the City of Ashland city limits. Parcels 4 and 5 guard the "throat" of the watershed and would be an obvious location to prevent wildfire from spreading upvalley into the Ashland Creek watershed. Fuel reduction work accomplished on these parcels would provide a good spot to initiate wildfire suppression tactics.
- C. Wildfire burning easterly upslope in Parcels 4 and 5 could possibly be stopped at ridgeline fuelbreaks, preventing encroachment of more wildfire further to the east and into homes within the Ashland City limits.

Management activities in Parcels 4 and 5 designed to reduce wildfire potential and improve stand vigor include the following: Construction of shaded fuelbreak along ridgelines; helicopter logging to remove dead and dying merchantable conifers and restore more optimal stand densities; pre-commercial thinning and release treatments to improve stand vigor and subsequently resist insect attack; and resulting slash treatment to reduce fuel loads through piling and burning and/or prescribed underburning.

Shaded Fuelbreak Construction. Two shaded fuelbreaks created along ridgelines in a "T" shape would provide optimal opportunities for suppression wildfires moving either upvalley in southeasterly directions or upslope in northeasterly directions. Both fuelbreaks would be approximately 2,000 feet long and 200 feet wide. The southeast/northwest fuelbreak would tie into an existing shaded fuelbreak on a private parcel to the southeast.

Helicopter Logging. This could accomplish three important objectives: (1) remove standing dead merchantable snags that rapidly increase rate of wildfire spread and are significant impediments in wildfire suppression; (2) remove dying, diseased, defective, or otherwise suppressed trees, thereby creating more optimal stand densities and decreasing likelihood of further spread of bark beetle populations up into watershed; (3) retrieve log value that would otherwise be lost, with revenue obtained hopefully to be reinvested into further wildfire prevention or ecosystem health management activities. Key to the development of an effective helicopter timber sale is generation of larger amounts of volume necessary to interest operators that use these expensive machines. Obtaining additional volume from other City-owned parcels (most notably Parcel 3 and Parcel 6) and/or other ownerships may be necessary. Ideally, the helicopter timber sale would be completed prior to other silvicultural or wildfire prevention work so that slash created during the logging could be incorporated and accomplished during these other management activities. Openings created during helicopter logging could be planted with conifers, if necessary.

Pre-commercial Thinning and Release. Although helicopter logging of dead, dying, diseased, defective, or otherwise suppressed conifers will slightly reduce stand densities, the majority of the stands in Parcels 4 and 5 will remain significantly overstocked, under considerable stress, and still likely for attack and demise by bark beetles. Pre-commercial thinning and release designed to reduce stand densities to more optimal levels comprised of the preferred leave trees of the highest vigor is the best way to improve overall vigor such that trees can resist and/or survive bark beetle attack. Building stand vigor is not an instantaneous process, however, as it takes conifers at least several

years to respond to improved conditions. It is for this reason that pre-commercial thinning/release must be kept ahead of expanding bark beetle infestation. The opportunity to save a stand via stand density reduction is gone once bark beetles are already firmly entrenched in that stand.

Slash treatment following commercial harvest and/or pre-commercial thinning/release. Ideally, utilization and/or treatment of slash created during management operations is completed in order to reduce subsequent fuel loads. This is a high priority on ridgelines or other designated fuelbreaks. Although not as critical as in designated fuelbreaks, slash and fuel reduction elsewhere in these units is still highly desirable. Utilization in Parcels 4 and 5 is probably impractical due to the steep topography and resulting potential impacts from such activities. Prescribed underburning would be the preferred method of slash treatment because it most closely emulates the natural occurrence of fire. Prescribed fire would have to be very carefully applied to minimize duff reduction and potential soil surface erosion. If slash loads are too large following treatment, piling and burning is a secondary option.

Forty privately-owned acres along the eastern property line of Parcel 5 provide an excellent example of the benefits of stand density reduction. This parcel received a pre-commercial thinning/release treatment in the late 1980s, followed by an aggressive utilization of slash on these somewhat gentler slopes. Not only was wildfire danger significantly reduced (an effect that remains to this day), but few if any trees have succumbed to bark beetles or other factors in the interim. Upgraded stand vigor allowed individual trees to gradually recover from excessive in-stand competition and the stand appears vigorous and healthy today.

2. OTHER PROJECTS

The above described project, or some portion thereof, is of the highest priority on the City-owned forestlands. Other projects to be considered are as follows:

Stand density reduction on remainder of City ownership. Although the need

is not as dramatic as in the lower portions of the watershed, stand density reduction should be considered on all City-owned lands. In essence, stand densities more typical of the pre-fire exclusion era are desired. Additional volume created in a sanitation/salvage timber sale throughout the remainder of the ownership could improve the viability of a helicopter logging. Dwarfmistletoe infected Douglas-fir should be particularly targeted for removal, along with other dead, dying, defective, or heavily suppressed conifers. Pre-commercial thinning from below could also improve stand densities while retaining preferred larger healthy overstory conifers. Although most of the stands higher in the watershed above Parcels 4 and 5 appear healthier and more vigorous at this time than those lower in the watershed, maintaining that vigor through proactive stand density reductions prevents the future attack and mortality caused by bark beetles. Obviously, some areas have greater needs for density reduction than others, but distinctions and/or priorities were not attempted with this report.

Prescribed underburning, Reeder Reservoir area. Intense wildfire, accompanying destruction of soil stabilizing vegetation, and ultimate direct inputs of considerable amounts of sediment would be most detrimental in the immediate vicinity of Reeder Reservoir, where sediment input would be direct. Southwesterly aspects on the slopes northwest of Reeder Reservoir represent an optimal opportunity to begin a proactive program of trying to reduce fuel loads through the use of prescribed underburning. This is the type of "created disturbance that emulates natural ecological processes" described in the McCormick plan. An excellent, pre-existing U.S. Forest Service shaded fuelbreak provides an ideal uphill boundary for a prescribed underburning unit. Obviously, the burn would have to be conducted in coordination with the U.S. Forest Service as the unit would have to cross property lines.

Erosion control activities and other mitigating procedures. The McCormick plan outlines several needs that have yet to be addressed. Their reiteration here is meant to emphasize their importance. They include such soil erosion control activities as reworking and/or resurfacing portions of the canyon road to Reeder Reservoir, attempting mitigating procedures to reduce erosion from the quarries, etc.

Explore long-term possibilities for Winburn parcel. The City should explore the feasibilities of long-term forest and resource management planning for the Winburn parcel. Proactive management will always be impeded by lack of access to this parcel. Management of this parcel may be best accomplished by an entity such as the U.S. Forest Service, who owns all of the land around the Winburn parcel. Monies obtained in a sale of the Winburn parcel could be earmarked for more progressive management of the remainder of the City-owned forestlands.

Coordination of resource management planning with U.S. Forest Service. The Ashland Ranger District of the U.S. Forest Service has recently (1995) completed an excellent analysis of the Bear watershed, in which the City's lands are located. Obviously, the U.S. Forest Service has a long and vested interest in appropriate management of these lands, as well as qualified personnel to help implement sound forest and resource management activities. It would obviously behoove the City to develop a more formal working relationships with the Ashland Ranger District such that coordinated and integrated projects could be undertaken (i.e., prescribed burning, fuel reduction, and other wildfire prevention activities; coordinated timber sales and/or other service contracts; instream and watershed habitat improvement projects, etc.).

Summary

A preliminary assessment of the forestlands owned by the City of Ashland suggested a high priority for fuel reduction and forest health improvement practices on the parcels lowest in the watershed. These include stands currently with significant stress loads and insect-related mortality. These areas are all described in the 1995 Bear Watershed Analysis (Ashland Ranger District, U.S. Forest Service) as lying within the most extreme area of high hazard/extreme risk for wildfire. Fuel reduction and other fire prevention activities undertaken here represent the first opportunity to suppress wildfire before it spreads upcanyon, as it most likely would do in this topographical situation. Suggested management activities in this area include shaded fuelbreak construction, helicopter logging, pre-commercial thinning and release, and treatment of ensuing slash.

Other secondary priorities outlined in this report include: stand density reduction on the remainder of the City-owned forestlands; prescribed underburning in the Reeder Reservoir area; various erosion control activities; exploration of long-term possibilities for the Winburn parcel; and coordination of resource management planning and perhaps implementation with the U.S. Forest Service.

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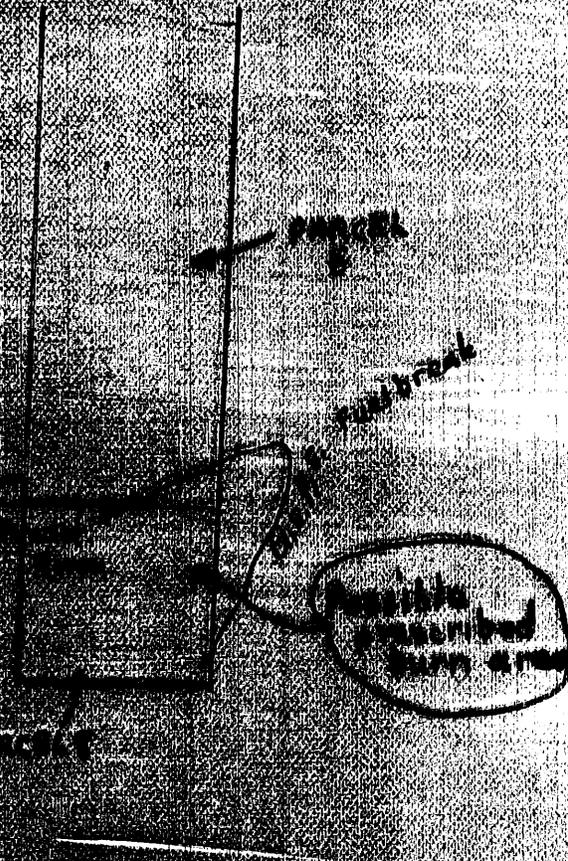
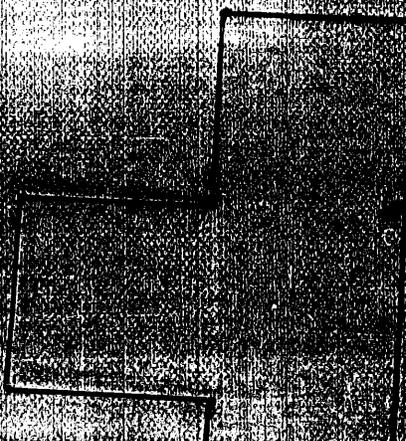
PARCEL 5



PARCEL 6

PARCEL 7

PARCEL 8



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