

CHAPTER 6: CURRENT MANAGEMENT ISSUES

Chapter 4 lists tasks, linked to specific objectives, which the Management Committee should accomplish. Those tasks are incorporated within the following sections, connecting to several key issues that the committee will encounter. For some issues, further studies should be conducted. As outlined in Chapter 2, the vegetation units themselves can be further analyzed, particularly to refine the boundaries between them. This section outlines the main issues and the types of information that will be needed for decision-making.

All actions to be undertaken on the Elk Creek Conservation Area will go through the decision-making process shown in Chapter 5 and be supervised by the Management Committee. The assessment of vegetative units (Chapter 2) found few management needs in the very near future, other than weed control.

Weed Control

Weeds are an ecological problem in the Elk Creek Conservation Area, where they out-compete native vegetation and compromise sound habitats. The Management Committee should propose a comprehensive strategy that includes mapping, spraying, and pulling weeds. In addition, it may consider supplemental planting of tree and shrub species in areas where woody plant regeneration is impaired, especially in the former Elk Creek channel area. The establishment of tree and shrub species

will help to shade out weeds over time. A weed program should begin very soon and the Management Committee should determine a timeline for completing an inventory of weed distribution, density and species. Anecdotal evidence shows that weeds are mostly found along the roads, in openings that were previously used as landings for the logging operations, and in the riparian areas logged prior to the Streamside Management Zone law. Weed populations should be managed to avoid further infestation.

The most problematic weeds present are:

- spotted knapweed *Centaurea stoebe* L. ssp. *micranthos*, synonym *C. maculosa* or *C. biebersteinii*)
- ox-eye daisy (*Leucanthemum vulgare* Lam., synonym *Chrysanthemum leucanthemum*)
- mullein (*Verbascum thapsus*)
- Canada thistle (*Cirsium arvense*(L.) Scop.).
- orange and yellow hawkweeds (*Hieracium aurantiacum* and *Hieracium caespitosum* Dumort.)

The hawkweeds are new invaders that must be eradicated when found. Lastly, reed canarygrass (*Phalaris arundinacea* L.) is present in the riparian zone. The Management Committee will need to collect more field data to determine the extent to which this species has become established and the appropriate eradication in this sensitive zone.

Coordination with Neighbors and the Public

Goals 3 and 4 outline objectives and tasks related to public outreach and neighbor relations. Several tasks could be started soon. SEC could continue to develop on-site education and interpretation programs that reveal ecological processes and human uses of the Elk Creek Conservation Area. This effort could include community forums, field tours, news releases, and educational programs. The role of Elk Creek to the Swan Lake bull trout population should be a primary focus.

For neighbor relationships, a system could soon be developed to notify neighbors of management plans and decisions. Create opportunities to meet regularly with neighbors through meetings and field tours. The Management Committee should discuss its activities with the Condon Community Council, as opportunities arise.

Fire

Since major fire suppression efforts have minimized the less severe, frequent fires in the Swan Valley, fuel buildups are leading to hotter, more intense fires. The fire regime condition classification is a nationally recognized modeling tool to define the degree of departure from the natural fire frequency. Most of the Elk Creek Conservation Area is within condition class 2, which is described as: *Moderate departure from the reference fire regime of vegetation characteristics; fuel composition; fire frequency, severity and pattern; and other associated*

*disturbances.*¹ See Appendix 11 for an overview of condition classes.

However, timber harvesting over the last 100 years has shaped the Elk Creek Forest more than has fire. Some of the forest may be categorized as condition class 3, because of unnatural disturbances that do not mimic natural successional stages of the biophysical setting or potential natural vegetation group (PNVG). Two PNVG descriptions for the Elk Creek Conservation Area are included in Appendix 7.

Although fire is a natural ecological process in the Swan Valley, as noted in the mission statement, wildfire can rarely be allowed to burn in the Elk Creek Conservation Area. Methods for replicating the effects of wildfire will need to be explored in order to approximate natural conditions. In addition, a more precise fire history for the area should be determined.

Insects and Disease

Like fire, insects and diseases are part of the forest's natural processes. We know that *Armillaria* root rot is infecting one area of the Elk Creek Conservation Area. An action may be necessary or a "no action" outcome may be prescribed after following the decision-making process. However, in some cases, it may be necessary to take measures to control insects and disease, for instance where negative effects will occur on neighboring lands. Further studies will

¹ Rapid Assessment Reference Condition Model, a component of the LANDFIRE project. See www.landfire.gov.

need to be conducted in order to determine both current and projected conditions related to insects and disease.

Stream Habitat and Fish Studies

To monitor stream conditions, it will be necessary to consult with hydrologists and geomorphologists before any management action is considered. Photo points should be established along Elk Creek and the Swan River, as well as in the area where the two Elk Creek channels split in neighboring Section 3. Restoration in the riparian areas should be considered carefully prior to action. There may not be an immediate need to act, despite obvious disturbances due to past logging. (See the example used in Chapter 5 regarding log jams near the confluence of Elk Creek and the Swan River).

A data search is needed to determine use by bull trout and cutthroat trout during all seasons and life stages. The Management Committee could review the MFWP and U.S. Forest Service records for all historic fisheries surveys on Elk Creek. The entire creek could be included because both bull trout and cutthroat trout are known to be migratory and the Elk Creek Conservation Area would need to be used by all migratory fish moving into and out of the Elk Creek basin from either Swan Lake or the Swan River. If data from previous studies is not available, surveys should be conducted.

A number of scientists have given advice on studies that could be performed as a basis for management action for the

riparian habitats. According to Beth Gardner² “It might be wise to gather some baseline fish habitat data on the streams as soon as possible. I would suggest either a R1/R4 habitat survey or a ‘representative reach’ inventory of about 200m or both. The R1/R4 survey is a great way to quickly measure the entire stream in the section. It would take a 3 person crew about four days to survey the section. This gives you good information on the limiting factors but it is not very strong for monitoring. A representative reach takes about 1 or 2 days to complete and gives you outstanding monitoring data, but it is not very good at characterizing the entire stream. Doing both surveys solves the problem. Both take some technical skill.”

In addition, an invertebrate study may be needed in order to further understand the ecological integrity of the aquatic life.

Harvests

The management committee, using the decision-making process, must evaluate all issues related to removing forest products from the Elk Creek Conservation Area, not only related to thinning and other timber harvest, but also considering the removal of firewood, mushrooms, and other foods or materials. When and if timber harvests are approved, they will be used as “showcases” that illustrate how logging can be an ecosystem management tool, not merely a commercial activity.

² Personal Communication from Beth Gardner, Flathead National Forest Fisheries Biologist, March 26, 2007.

Public Access

Unrestricted access to the Elk Creek Conservation Area's many logging roads creates ecological problems, including the weed problem described above. Access is an issue that should be considered early on, including a thorough inventory of roads and culverts. The Management Committee needs to define public access guidelines, appropriate to the mission, including the use of motorized and non-motorized vehicles. Following that, it needs to inform the public about the rules of access.

Until the management committee addresses public access and recreation, access rules will remain the same as on adjacent U.S. Forest Service and Plum Creek Timber lands. Foot, horse and bicycle traffic are allowed. Elk Creek is closed year-round to fishing to protect bull trout. Changes to the public access must be considered by following the decision-making process shown in Chapter 5.

The area directly above and below the Elk Creek Bridge on Elk Flats Road is an area of special management concern regarding the stream channel. In this area, the stream channel makes an "S" curve, flowing generally south, then east, and finally north and under the Elk Creek Bridge. In extreme high water, it tends to cut straight across the "S" curve and flow across the road approximately 100 feet west of the bridge. This is further complicated by a barrow pit on the south side of the road in that area that was cut so that it almost reaches the Elk Creek stream flow channel as it moves easterly above the road. Should the stream channel cut through this area

it is conceivable that it could cut across the Elk Flats Road, leaving the bridged area entirely.

The Elk Flats Road Cooperative will monitor debris build-up in this area. It will propose solutions to the Management Committee, as needed, to maintain the stream channel in the area of the bridge.

Monitoring Ecological Processes

Chapter 2 outlines a number of studies that could be performed to learn more about the forest's past and current conditions. Monitoring the change in natural resource health should begin immediately to provide base knowledge for further study and to gauge the rate and direction of ecological change. Specifically, baseline measures of bull trout habitat should be established as delineated under Goal 1, and trends monitored over time. Monitoring progress on weed control will also be critical for an adaptive management approach.

Monitoring also occurs at the project level. Once an approved management action has been carried out, the results will be monitored over a long enough period of time to determine whether or not the action actually achieved the desired objectives. For each approved decision, the management committee should define the scope of monitoring to follow, carry out the monitoring, analyze the resulting data and integrate the new knowledge gained into subsequent management decisions. This reflects the cyclical nature of adaptive management.

Historic and Cultural Artifacts and Sites.

As described in Chapter 3, the Elk Creek Conservation Area contains sites of significant historic and cultural value. These sites should be further inventoried and decisions made about potential preservation and interpretation. The Management Committee should work closely with the CSKT Preservation Committee in order to conduct cultural resource studies and implement the findings of those studies.

Wildlife

The Elk Creek Conservation Area is similar in many regards to most other valley bottom industrial forest lands. It has been heavily high-graded, with many areas showing severe soil impacts that have affected plant, animal and hydrological system integrity.

Management towards emulating nature and restoration efforts to replace the once-present ponderosa pines could be considered in order to restore this to a more natural and complete ecosystem that includes diverse wildlife species. A long-term restoration program favoring historically dominant tree and plant species within each forest stand and disfavoring noxious invaders would greatly enhance the biological resilience of forest stands to normal stresses such as fire, disease, insects, and weather. Such a restoration program would also greatly increase wildlife habitat values. The recruitment of downed woody debris and standing large diameter snags in the uplands would significantly improve habitat values for birds, small

mammals and all other dependent carnivores.

Anything that can be done to direct these forest stands to natural and historic complexity and diversity, including recreating a multi-story forest canopy, is useful. This would directly benefit the entire wildlife community, improve hydrologic function, and assist in the restoration of the ecological integrity of the larger landscape.