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1.0 INTRODUCTION

The Mt. Emily Recreation Area (MERA) was purchased by Union County in November 2008 for its recreational values and resource management opportunities. The acquisition was accomplished through a combination of grants from Oregon State Parks and Recreation Department ATV Grant Program ($4.4 million) and the Blue Mountain Habitat Restoration Grant Program ($250,000). The 3680 acres is 2 miles north of the City of La Grande and extends from the low foothills adjacent to the Grande Ronde Valley floor upward to the steep slopes and west side of Mt. Emily. The terrain is extremely varied including grassy lowland meadows, flat benches, and steep cliffs with a mixture of rangeland and forestland. Forestland soils predominantly include Tolo silt loam and Hall ranch stony loam, some of the best timber producing soils in the County. The property had been managed for commercial timber production and livestock grazing. Boise (formerly Boise Cascade) owned and managed the property for approximately 35 years. Boise sold their timber land holdings to Colter Ridge Properties, Inc. (sometimes and hereinafter referred to as Forest Capital Partners, LLC) in 2005. Forest Capital Partners, LLC evaluated their timberland holdings and did not find this property met their long-term objectives Community concerns were elevated by the potential threat for development and the realization that the property could potentially be subdivided into 15 residential properties with no public access. The surrounding community has historically used this property for multiple recreational activities, including but not limited to ATV and other motorized uses, hunting, hiking, mushrooming, jogging, biking and horseback riding. In addition, the property also includes the Grande Ronde Bowmen archery range.

The County negotiated a Purchase & Sale Agreement with Forest Capital Partners, LLC and pursued grant funding. Local controversy led to an advisory vote that resulted in 62% of Union County voters supporting County acquisition.

Shortly after acquisition, the Union County Board of Commissioners formed and appointed two Mt. Emily Recreation Area Advisory Committees comprised of motorized users, non-motorized users, and resource oriented management agencies. The Advisory Committees provide a public forum and make recommendations on planning, development, management and maintenance to the MERA Coordinator and County Board of Commissioners. Under the current structure, the two advisory committees conduct joint meetings and work as one advisory body.

1.1 Purpose and Objectives of the Plan

The plan purpose is to: 1) identify the MERA management objectives recognizing the current ecological, social, economic and political environment; 2) provide the program and policy guidelines that will direct the MERA short term and long term management and use; and 3) develop strategies for implementation of various management components.

The overall objectives are as follows:

- Provide and promote safe, diverse and enjoyable outdoor recreation opportunities.
- Minimize impacts upon natural, cultural and visual resources and neighboring properties.

- Protect, manage and enhance natural, cultural and visual resources, including maintaining and promoting healthy ecosystems and their processes.

- Enhance and preserve wildlife habitat where feasible.

A long term goal is that the MERA will be financially self-sustaining subject to sustainable recreation and resource management practices.

1.2 Plan Scope and Organization

The Master Plan for the MERA addresses three areas- 1) a review of existing conditions, including natural, cultural and recreational uses; 2) identification of management plans necessary for short and long term development and management; and 3) establishing review procedures for future project proposals and long-term monitoring.

1.3 Public and Agency Involvement

Extensive public and agency involvement was utilized prior to and following property acquisition to ensure full representation of various interests in MERA. Two Advisory Committees were established to provide resource expertise and diverse user input into the preparation of the resource management plan. The Advisory Committees met monthly during the planning process and participated in public meetings to establish critical information regarding the property and to assist with identifying issues for the management plans.

Public and agency participation will continue to play a major role in long-term property management. The Advisory Committees will review and make recommendations on future project proposals to the MERA Coordinator.

2.0 EXISTING CONDITIONS

2.1 Overview

The Mt. Emily Recreation Area (MERA) is about 3,680 acres on the east face and western uplands of Mt. Emily adjacent to rural residential development on the south and east and large tract private and public (US Forest Service) land on the west and north.

Historically, this property was owned by private commercial timber companies such as Boise Cascade Corporation and managed for timber production and seasonal livestock grazing use. The previous owners allowed public motorized and non-motorized recreational uses, as well as leasing 100 acres to the Grande Ronde Bowmen for an archery range.

As discussed above, Union County purchased MERA in November 2008 to perpetuate public recreational uses and implement sustainable natural resource management practices. Unfortunately, the County was only able to purchase one third of the property's timber volume. Forest Capital Partners, LLC retained the remaining two-thirds of timber volume and they began timber harvest in three of the eight timber units in 2009. The remaining units will be harvested over the next 2 to 3 years.

The County has pursued this Master Plan utilizing a Motorized Advisory Committee for the west portion of the property and a Non-motorized Advisory Committee for the east portion. The Advisory Committees have developed improvement and trail system recommendations through a public process. The recommendations are advanced to the MERA Coordinator who will then update the Union County Board of Commissioners.

This Master Plan is the product of the Advisory Committees', Public's and County Board of Commissioner's efforts and it is intended to guide future development and maintenance of the MERA.

2.2 Cultural Resources

Union County contacted Boise Cascade Corp. and Forest Capital Partners, LLC prior to property acquisition and no known cultural resources had been identified on the property. However, recognizing the County would be pursuing development activities such as constructing parking lots, a campground and recreational trails, Union County contracted with Kathryn M. Boula, Cultural & Natural Resources Consultant, to prepare "Proposal for Cultural Resources Investigations, Mt. Emily Recreation Area, Union County, Oregon"- April, 2009.

The County has also received a hand drawn map from Dennis Griffin, State Archaeologist with the State Historical Preservation Office, that identifies "high probability area[s] that should be surveyed" (see Map A).

Ms. Boula's report explains that Phase I pedestrian surveys will be conducted in Dr. Griffin's high probability areas where development activities are proposed; such as new trails, trailheads and campgrounds.

With projects proposed for 2009 and 2010 the County again contracted with Ms. Boula to prepare "2009 Archaeological Surveys on the Mt. Emily Recreation Area, Union County, Oregon- April 2010" which includes a draft survey report and four site reports. These Survey Areas were identified and evaluated as follows:

Area 1- 53.4 acres- ATV Fox Hill Staging Area, ATV training area, campground & parking lot
Area 2- 15 acres- Onion Flat
Area 3- 0.25 acres- Gravesites above Haywire Creek

Area 1 includes a 10 acre area on the south side of Fox Hill Road in a swale associated with a spring and intermittent stream. This area is west of the kids learners loop and not planned for any development activities. This area includes an old homestead site and surface lithic scatter.

Area 2 Onion Flats (11 acres) is identified to include an extensive prehistoric lithic procurement (quarry) site. This area is northeast of the campground. No development activities are proposed for this area.

Area 3 Suspected Historical Graves
Three suspected historical graves are identified by three piles of encircled basalt boulders near the MERA west property fence. These sites were not disturbed during logging activities in 2009. No anticipated development activities are proposed for this site.

In 2012, the Cultural Resources Protection Program conducted a pedestrian survey using 20 meter transect interval of high to medium probability areas in MERA. Two of the previously recorded sites were observed and updated to cover a larger area. The other previously recorded site observed no change. The rock features previously recorded as graves are thought to be corners of fence by CRPP. Four new sites were identified along with an isolated find. These consisted of lithic scatter and a basalt flake.

3.0 MASTER PLAN OVERVIEW

Union County purchased the Mt. Emily Recreation Area to provide public multi-use, sustainable recreational opportunities and implement sustainable resource management practices. Individual management plans will be developed, implemented and amended for a wide variety of uses and resource elements.

The following descriptions identify individual management plans for existing and anticipated recreational uses and resource elements. Many of the management plans will be developed in cooperation with the County's Motorized and Non-motorized Advisory Committees and resource management agencies.

The County acquired MERA using two financial grants- Oregon Parks & Recreation Department ATV Fund and Blue Mt. Habitat Restoration Program. Each funding source included its own approval conditions that have been collectively coordinated. The ATV Fund required the County to include a Conservation Easement on the property guaranteeing long term recreational use. The ATV grant specifies motorized recreation on the property's western portion above the rim and identifies some motorized access through the lower (eastern) portion of the property. The Blue Mt. Habitat Restoration Program entered into an agreement with the County to limit motorized use on the property's east side for reduced wildlife disturbance. These conditions have been integrated into the Motorized and Non-motorized Trail Management Plans.

Each management plan is designed to identify existing conditions, goals and objectives and short-term and long-term plans. The following descriptions provide the purpose and intent for each management plan.

3.1 Master Plan Preparation Process

Shortly after acquisition Union County appointed two advisory committees to investigate, deliberate and make recommendations to the MERA Coordinator. The Motorized Advisory Committee includes adjacent landowners and members from the following four motorized recreational user classes. It will also include three positions to be held by the general public.:

Class I- ATVs or quads
Class II- Jeeps & other full size off-road vehicles
Class III- motorcycles or single-track
Class IV- Side X Sides

The Non-motorized Advisory Committee includes representatives for adjacent landowners, Grande Ronde Bowman Club, mt. bike, horse back and hiking users. It will also contain three positions to be held by the general public.

Both committees include the same representatives for adjacent landowners, livestock grazing, US Forest Service, Oregon Dept. of Fish & Wildlife, Oregon Department of Forestry and Oregon Parks & Recreation Department.

The Advisory Committees have conducted an extensive public process to develop motorized and non-motorized user opportunities. The Committees' recommendations are reflected in this document and will be advanced to the MERA Coordinator who will in turn look to the County Board of Commissioners for formal adoption. The Advisory Committees will continue their review role as management plans are refined and submitted for adoption.

New recreational proposals are anticipated and the protocol for each proposal will be outlined in its respective management plan.

All Advisory Committee and County Board of Commissioner meetings are advertised on the County's website, and open to the public. An opportunity for public comment is provided on each agenda.

All decisions affecting the MERA will be made in context with the original funding acquisition conditions and the overall goals and objectives of this master plan and individual management plans.

4.0 NATURAL RESOURCE MANAGEMENT

Natural resource management plans address the health and dynamics of the plant and wildlife communities and cultural resources found in the MERA and the preservation of natural geologic features, including natural springs. For purposes of this plan, natural resources management is grouped into six categories: forest management, grazing management, fire management, weed management, wildlife management and cultural resources. Union County's goal is to protect, restore, and maintain the natural resources in the MERA.

4.1 Forest Management Plan

Union County will work with Oregon Department of Forestry to develop a Forest Management Plan (FMP). The FMP will outline a number of tools aimed at the protection, restoration, and maintenance of a healthy, sustainable forest. Forest management including timber harvesting activities will occur on the MERA property in accordance with the Oregon Forest Practices Act and FMP to meet a variety of goals and objectives including:

- To honor community commitments providing sustainable resource management for a healthy forest and to minimize the need for County financial commitments to MERA while at the same time recognizing that the property was purchased with recreational funds with the intention to provide public recreational opportunities.

- To provide for a working, managed forest with a variety of high quality, safe recreation opportunities.

- Stands of trees or other woody species not native to forests of this region may be removed to preserve, perpetuate and interpret natural features that existed historically on MERA.

- Forest management activities including timber harvesting may be necessary to address an insect or disease issue, or to thin the stand for better growth.

- Trees may need to be harvested to restore visitor access by clearing trails and other facilities, and to reduce fuel loads and to salvage commercial timber following a storm event.

- Forest operations will be conducted in accordance with Oregon Forest Practice Act requirements.

One of the management objectives in conducting a timber harvest on the MERA will be to aid in the restoration and preservation of natural communities within the property. Timber harvest is a tool among a set of resource management activities the County will use to pursue its obligations for resource protection and restoration. During timber harvest activities there may be short term impacts on visitors– trails and other nearby facilities may be closed during the harvest or parking areas being used for staging equipment may not be available for public use. Long term timber harvest benefits for visitors include the following: timber removed will improve access and safety for visitors along trails and other facilities, and restored native communities will enhance visitor experiences and revenue generated from commercial forest management activities can potentially enhance the infrastructure and economic viability of MERA.

Prescribed burning or biomass removal may be used as a tool to restore the natural burning cycle, and to decrease fuel loads, improve habitat for native species that evolved with periodic fires, and control exotic plant species.

Other issues that will be included in the FMP are:

1. Recreation and Tourism
2. Forest Resource Management
3. Sustainability
4. Commercial Forest Products
5. Fire
6. Water Resources
7. Information and Education
8. Adjacent Lands
9. Scenic values & visual aesthetics

4.2 Grazing Management: Plan

Milo Hibbert and Wayne Waite entered into a Grazing Lease Agreement on June 1, 2007 with Forest Capital Partners, LLC that included four renewal options. Union County agreed to honor this Agreement which will expire December 31, 2011. The Leasees are authorized to run up to 424 AUMs from June 1 to October 15 each year. This lease includes rules and conditions that will be incorporated into a Grazing Management Plan.

Union County will implement a Grazing Management Plan (GMP) which is intended as a landscape-level management tool. While other tools such as controlled burns and chemical spraying (to control invasive weeds) will also be used, livestock grazing will be the primary management tool for MERA.

As a management tool, cattle grazing, when conducted properly, can have the following benefits:

- Reduce fuel load for potential fires
- Improves grass regeneration
- Improves habitat for many animal and plant species
- Reduces encroachment of noxious weedy species, and undesirable types of plants
- Improves maintenance of grasslands and forestland diversity

Goals addressed in the Grazing Management Plan will include:

- Minimize land degradation from trespassing, trash, human and animal waste, and soil erosion
- Enhance woodlands and understory
- Maintain & enhance corrals and fencing
- Improve & develop livestock water
- Protect and enhance wildlife habitat
- Improve forage production and condition of existing Residual Dry Matter (RDM)
- Minimize soil erosion
- Improve riparian zone management

Revenue raised from the grazing lease fees will be used for property improvements and property taxes. The Grazing Management Plan will be a "living document" and the management strategies will be reassessed as conditions and land uses change.

4.3 Fire Management Plan

Union County and the Oregon Department of Forestry (ODF) will maintain a Fire Management Plan that details fire management guidelines for operational procedures and values to be protected and/or enhanced. The Fire Management Plan for the MERA will provide guidance on preparedness, prescribed fire, wildland fire, and prevention. Values that will be considered in the Fire Management Plan include protection of neighboring private properties and resources, effects of burning on habitats/biota, and

firefighter safety. MERA resources include properties, structures, cultural resources, scenic and visual resources, and wildlife including endangered, threatened, and special concern species, and their associated habitats. The Fire Management Plan will be reviewed periodically to ensure that the fire program is conducted in accordance with local and state fire goals and objectives. Recreation access is very important and the county will work with ODF to develop strategies which will still allow recreational use and access. The county will take measures to help reduce fire risks from recreational uses and implement measures such as law enforcement, education, signing, mapping and on-site fuel reductions to minimize fire risk. There are times during the fire season where fire danger may require public use restrictions. Extreme fire danger or lack of adequate fire fighting resources may require suspension of use.

Fire Management Objectives:

Considerations

- Fire is an essential part of maintaining native biotic communities.
- Prescribed fire can have positive effects on vegetation and wildlife when conducted during the appropriate burning conditions, time of year, and plant phenology, using the proper techniques.
- Uncontrolled wildland fire has negative impacts (damage to neighboring properties, health and safety, etc.)

Fire Management Objectives (General)

- Protect life and resources / property.
- Use prescribed fire for hazard fuel reduction and habitat improvement.

Fire Management Objectives (Specific)

- Prevent human-caused wildland fires.
- Safely suppress all wildland fires using strategies and tactics appropriate to safety considerations, suppression costs and values at risk.
- Provide for and protect habitat for wildlife, especially endangered, threatened, and species of concern.
- Use prescribed fire to reduce hazardous fuels and improve habitat conditions.
- Educate the public regarding fire management and wildfire prevention.

4.3.1 Fire Prevention

Union County and ODF will cooperatively manage recreational access and fire prevention practices. The goal is to allow the maximum amount of safe recreational access during the higher use summer months while increasing fire prevention and education measures as fire risk escalates.

Union County and ODF signed a Fire Prevention Agreement in August 2009 that regulates motorized use on MERA during an ODF declared fire season. This Agreement will remain in effect until amended as conditions warrant. This agreement was amended in 2024. (See Appendix C for details)

Annually the County will need to obtain an ODF "Permit to Operate Power Driven Equipment" for maintenance and improvement projects using power equipment-chainsaws, backhoes, SWECO, etc. ODF will be notified of annual listed activities and ODF will provide fire prevention information to operators.

The County will take measures to help reduce fire risks from recreational uses and implement measures such as law enforcement, education, signing, mapping and on-site fuel reductions to minimize fire risk. There are times during the fire season where fire danger may require public use restrictions. Extreme fire danger or lack of adequate fire fighting resources may require suspension of use.

Each summer Oregon Department of Forestry declares fire season which places extra restrictions on access on forestland protected by ODF, such as Mt. Emily.

The next step in fire prevention after fire season is in effect and wildland fire risk becomes more elevated is to declare a Regulated Use Closure which commonly includes the following restrictions:

1. Prohibition of smoking while traveling, except in vehicles on improved roads, in boats on the water, and at designated locations. An "improved road" is a road that has been constructed for automobile use and is maintained clear of flammable debris.
2. Open fires such as campfires, charcoal fires, and cooking fires are allowed only in designated locations. Portable cooking stoves using liquefied or bottled fuels are allowed. Currently there are no designated areas on MERA, but potential exists to take the necessary legal fire prevention measures at Fox Hill campground to develop it into an officially recognized designated campground.
3. Restrictions or prohibition of non-industrial use of chainsaws which includes private woodcutting. An axe, shovel, and fire extinguisher of at least 8 oz. capacity must be kept with each saw.
4. The use of motor vehicles, including motorcycles and all-terrain vehicles, may be prohibited, except on improved roads
5. Possessing the following fire equipment while traveling in timber, brush or grass areas may be required: one axe at least 26 inches in length, with a head weighing at least 2 pounds; one shovel at least 26 inches in length, with a blade at least 8 inches wide; and one gallon of water or one fully charged and an operational 2.5 lb or larger fire extinguisher.
6. Prohibition on the use of fireworks.
7. Prohibition on the cutting, grinding and welding of metal in dry, grassy or forested areas between the hours of 1:00 p.m. and 8:00 p.m.
8. Prohibition on the use of exploding targets.

The 2009 Fire Prevention Agreement reduces some of the usual Regulated Use Closure restrictions because of the County's prevention and education practices. In light of these extra measures provided by the County to educate, regulate and enforce

fire prevention regulation with MERA users, ODF-NEO District has reviewed the restrictions and agrees to allow OHV (ATVs and motorcycles) use under Regulated Use Closure until an extreme fire danger level is reached with the following conditions.

1. OHV use would be limited to designated roads and trails clear of flammable debris. The County would post and actively enforce usage of only open trails meeting these criteria.

2. ATVs and motorcycles would not be required to carry a shovel or a fire extinguisher. The County would inspect and enforce requirements for adequate exhaust systems and spark arrestors on ATVs and motorcycles using MERA.

3. Other regulated Use Closure requirements such as prohibiting smoking while travelling in vehicles (including ATVs and motorcycles) and prohibiting camp fires (including MERA campground(s) would be in effect under regulated closure.

However when ODF-Northeast Oregon District declares extreme fire danger all OHV use on MERA would be suspended between the hours of 12pm and 8pm. It will be the County's responsibility to inform MERA users when the suspension is in effect.

ODF may also implement as a final precaution an Absolute Closure where all uses are prohibited on forestlands.

4.4 Weed Management Plan

Union County will manage invasive plants and native plant species within the MERA boundaries. Although MERA initially appears to have a relatively low number of exotic species, the property has very high native biological diversity in the riparian areas and meadows where there is considerable potential for spreading weeds.

Exotic species are the greatest threat to maintaining natural diversity. Non-native plants, animals, and pathogens harm the native ecosystem by competing with and displacing native species, accelerating erosion, impacting wetlands, and causing disease and mortality to plants and wildlife. Invasive weed control within the property is needed to preserve and restore the characteristics that are vital to a natural experience. Union County will select and implement the most appropriate weed management tools in the MERA. A comprehensive evaluation of potential impacts associated with exotic plant management will be completed to determine the appropriate methods of weed management for the MERA. Standardized survey, treatment, and monitoring methods will be determined and implemented.

The purpose of the MERA Weed Management Plan is to:

- Decrease weed plant cover and increase native plant cover;
- Document and standardize best management practices to more effectively meet goals and objectives;

- Provide options or tools to managers for reducing the threat to natural and cultural resources;
- Use monitoring to more effectively implement and adapt management practices;
- Determine the minimum tool/treatment or combinations of treatments that restore functioning native plant communities; and
- Restore/maintain native plant communities and wildlife habitat to reduce the County resources dedicated to weed removal.

4.5 Fish and Wildlife Management Plan

Union County will work with Oregon Department of Fish and Wildlife to develop a fish and wildlife management plan for MERA. The plan will provide the fish and wildlife management direction for the property and will be updated periodically to maintain its value as a flexible working document. It will identify needs and guide activities on the area based on the County's commitment to protect, restore and enhance fish and wildlife and their habitats on MERA while providing motorized and non-motorized recreational opportunities.

The following goals and objectives directly apply to the fish and wildlife management:

- Provide sustainable recreational opportunities compatible with maintaining healthy fish and wildlife populations and habitats.
- Maintain healthy and diverse fish and wildlife populations and habitats.
- Protect, restore and enhance fish and wildlife populations and their habitats.
- Ensure MERA activities, programs and facilities are consistent with state and local regulations that protect and recover fish, wildlife and their habitats.

Fish and wildlife management concerns, issues and objectives identified by the Advisory Committees are:

- Access/Recreation
    1. Provide multiple use recreational opportunities.
    2. Limit camping to specific areas on Fox Hill.
    3. Regulate the duration of camping stay.
    4. Manage motorized access points.
    5. Manage motorized and non-motorized recreation to minimize wildlife disturbance.
    6. Complete road closures/re-routes where identified.

- Habitat
    1. Identify key habitats and locations.
    2. Identify problems that may affect identified species and prioritize research needed to improve the situations.
    3. Describe proposed actions for conservation of the identified wildlife and/or habitats.
    4. Identify how the species and results of the actions will be monitored.

5. Conduct forest thinning projects and prescribed fires where necessary to improve stand health and reduce fire hazard.
6. Provide information about wildlife species numbers and distribution.

- Roads
    1. Reduce disturbance to wildlife by abandoning some roads and restricting access to portions of the property by motorized vehicles by placing gates and implementing seasonal closures.
    2. Monitor, survey, and inventory use.

- Other Issues
    1. Assess value of grazing program for habitat improvement by monitoring changes in plant communities and plant vigor and identify potential improvements to current grazing program.
    2. Keep the public informed in a timely fashion regarding planned actions that affect user groups
    3. Include the public in the decision making process on important issues.

4.6 Cultural Resource Management

Union County contracted with Kathryn M. Boula, Cultural & Natural Resources Consultant, to prepare "Proposal for Cultural Resources Investigations, Mt. Emily Recreation Area, Union County, Oregon"- April 2009.

Future development proposals such as new trails, trailheads and parking lots will follow the protocol identified in Ms. Boula's proposal. Prior to any development excavation activities Phase I pedestrian cultural surveys will be conducted by a qualified consultant for high probability areas. If cultural resources are suspected, a site will be further evaluated or abandoned for an alternative site not containing suspected cultural resources. All cultural resource finds will be reported to the County and the State Historical Preservation Office.

5.0 RECREATIONAL MANAGEMENT

5.1 Motorized Recreation Management

The MERA Motorized Trail System is being developed to provide recreation opportunities to OHV's of all classes. The trail system is open year round with some seasonal closures for winter wildlife range and periodic closure due to poor soil conditions. Trails are limited to designated uses. Class II trails are open to Class IV and III as well, Class IV trails also open to Class III. Currently trails are being designed and developed for all classes of OHV's and skill levels to enhance the trail system and create diversified user experiences.

5.1.1 Motorized Trailheads & Staging Areas

The primary motorized trailhead and staging area was developed in 2009 adjacent to Fox Hill Road which includes a parking lot, loading ramp, trailhead access, campground, vault toilets, and informational signs and materials. A youth learner's loop and parking area were also constructed in 2009 across Fox Hill Road from the primary staging area. In 2017 the parking area was expanded and a motocross track was build adjacent to the youth learners loop North of the staging area there is a ATV training area that is used for skill building and youth courses.

The Fox Hill ~~Road~~ staging area is the primary motorized access for the MERA and provides excellent connectivity to the motorized trail systems on the west portion of the property. This staging area is also intended to provide motorized access for users planning longer rides onto the adjacent US National Forest lands.

Expansion opportunities for all facilities at the Fox Hill Road staging area have been considered and annual monitoring will evaluate the long term need for facilities expansion and improvements. This site in intended to provide day use and overnight camping opportunities

Two secondary motorized trailheads and staging areas have been identified primarily for local users ATVs and motorcycles legally authorized will be able to ride up Owsley Canyon Road and access the upper motorized trail system from Mt. Emily or Owsley Canyon County Roads. Unloading motorcycles and ATVs from vehicles will not be allowed here. This is a secondary trailhead, intended to provide access to local residents. Access will be encouraged at Fox Hill Road staging area.

Local motorized users will also be able to access the motorized trail system from Igo Lane. Again, ATVs and motorcycles legally authorized will be able to drive up Igo Lane to the Upper Igo Lane Trailhead, proceed up the Igo Lane extension connecting to Trail 409 and the upper motorized trail system. Unloading motorcycles and ATVs from vehicles will be allowed here., but trailers will not be allowed due to the narrow road and lack of room to turn around. This is a secondary trailhead, intended to provide access to local residents. Access will be encouraged at Fox Hill staging area.

The County will maintain a map identifying authorized County roads open to legal ATV and motorcycle access.

5.1.2 Trail System

The Mt Emily Recreation Area is currently used extensively by all types of motorized recreationists. The close proximity to the City of La Grande and the contiguous Wallowa-Whitman National Forest, make the area a popular destination for ATVer's.

Primary use occurs in the spring and summer time. Winter often has the site snowed in. There is also a lot of use in the fall season associated with hunting. The area provides a variety of trails for Class I, II, III, and IV
vehicles. Generally, existing roads will be open to all motorized classes Miles of trail per square mile will vary based on terrain, location to staging areas, and proximity to private residences. The highest density of trails is located between the top of the ridge and Fox Hill Road and USFS Road 3120. This area has some gentle terrain which would be well suited to OHV trail construction and is located away from most houses. It is important to have short loops around the staging area so kids and beginners can learn and practice riding skills without getting too far from their vehicles or camp. As the distance increases from the trailhead density will decrease.

Most of the motorized trail system is and will be focused on the upper plateau, west of the Mt. Emily rim. This is to protect wildlife resources, provide a buffer from residential areas and avoid erosion on the extremely steep face.

The Master Plan map will guide managers in the development of the trail system. The lines drawn on the map are conceptual and generally show how the trail system can be laid out. The trails have not been ground checked and will be fit to specific trail construction standards. This motorized trail system map demonstrates trail density, approximate miles of trails, connectivity, destinations and loops.

There are many different experiences that motorized trail users are looking for. The concept is to provide an array of opportunities such as families looking for an easy group ride or several friends looking for a challenge for the day. Since this property is relatively small only so many miles of routes are possible. This entire system could be easily ridden in one day by experienced riders but constructing loops will allow riders to vary the direction and path to create different experiences. Access to the USFS will provide a larger riding area at a much lower trail density.

All trails will be managed to prevent water erosion. Design and maintenance will be in a sustainable manor. Maintenance will need to be provided with hand crews and often times heavy equipment.

The motorized trails system will be a **use-specific designated** trail system, which will help to reduce conflicts, maintain trails in a desired condition, provide specific opportunities, and prevent damage to trails. Each trail in the motorized area will be open to specific use types. Use-specific designed trails will be constructed differently for each use. Trail design can accommodate recreationists' desire for different features.

Conflicts can arise from mixing uses. Trail impacts such as bridges, culverts, and tread surface will be considered for each type of use.

Class IV (4-wheelers & side by sides) users will be able to share existing and new roads with Class II (Jeep) and Class III users.

Class II users (Jeeps & 4x4's) currently use existing logging roads. Some roads will be modified to increase the features and complexity. New Class II routes will increase connectivity and allow for detours around more difficult features for the novice driver. The area has a relatively rocky soil which holds up better to vehicle traffic. There are also some rock outcroppings and rock quarries, which can be used to create rock crawls for some extreme challenges. There are several areas with bluffs overlooking the Grande Ronde Valley which make nice areas for groups and families to take a break or enjoy lunch. The Class II system will provide trail opportunities which will range from an easy drive in the woods with the family to more challenging rock crawl sections to test the skills of the driver and the capability of the vehicle. Considerations will be given for side-by-side vehicles, which are Class II vehicles, but may be managed slightly different due to size and weight. Mud bogs and extreme hill climbs will not be provided.

Class III (motorcycles) will be able to share all Class I and Class II routes. Specific Class III trails will be constructed (1-2 feet wide) that will be exclusively for Class III users.

5.1.4 Over Snow Use

The County intends to accommodate "over the snow machines" based on snow conditions. Motorized over snow use will be restricted to trails 201& 203. Mt Emily County road is also open to motorized use. based off of agreements with the Blue Mt. Habitat Restoration Council.

Currently, the Snow Drifters Snowmobile Club develops a parking area at the junction of USFS 3120 and Fox Hill County Road. They begin grooming a trail on USFS 3120 from this parking area and proceed north. The County and USFS will work with the Snow Drifters Snowmobile Club to pursue authorization for the snow wheelers (4x4 vehicles equipped for going over snow) to use the MERA property and exit on MERA Road No. 208 onto USFS 3120 and proceed south to the Snow Drifter's parking area.

Motorized over snow use will be monitored and adjusted if conditions warrant.

Long-term a new "snow park" somewhere on USFS 3120 may be pursued in cooperation with USFS to accommodate multiple snow use types.

5.2 Non-Motorized Recreation Management

The Mt. Emily Recreation Area provides local non-motorized recreation opportunities for a wide variety of trail users. Non-motorized trails are defined as those trails used for hiking, horseback riding, bicycling, mountain bicycling, walking, backpacking, jogging, running, cross-country skiing, snowshoeing, hunting, and hiking with pack stock such as horses, mules and llamas. The Grande Ronde Bowman Archery Club range is included within the non-motorized area and discussed in Section 5.3.

5.2.1 Non-motorized Trailheads and Staging Areas

There will be three main staging areas to provide access to the non-motorized trail system: Owsley Canyon, Lower Igo and Upper Igo.

Owsley Canyon Trailhead. This will be the main non-motorized trailhead. The site will be designed for horse, mt bike and hiking activities. This trailhead has parking for 20 vehicles and 6 horse trailers, one vault toilet, information board and picnic tables. Future expansion for additional parking may be necessary toward the northeast based on increased use. This site will be monitored and can be expanded if desired by the Advisory Committee and the Union County Commissioners.

Lower Igo Trailhead It is intended for parking for horse trailers, since the road above the site is too narrow for safe travel and turning around with trailers. Fencing and signs have been installed. This is a secondary trailhead, intended to provide access to local residents and equestrian access will be encouraged at Owsley Canyon trailhead. Loading and unloading of ATV's is prohibited at this trailhead.

Upper Igo Trailhead. This site would be designed for vehicle parking without trailers. It can provide motorized trail access to trail #409 and mt bike and hiking access to the non-motorized trail system. Fencing and signs have been installed. No restrooms would be located here, unless requested by adjacent landowners and the advisory committee in the future. This is a secondary trailhead, intended to provide access to local residents. Access will be encouraged at either Fox Hill Road or Owsley Canyon trailheads.

5.2.2 Non-motorized Trail System

The non-motorized trail opportunities for hikers, mt. bikers and horseback riders in the Mt Emily Recreation Area will be provided below the "Rim". Some trails are designed specifically for each type of use while other trails are designed for multiple use. Horses will be allowed to travel cross county in non-motorized trail areas as long as they do not create resource damage or create new trails with repeated use. Cross country use will be monitored and re-evaluated for resource damage. Class 1 e-bike (pedal assist, with no throttle) are permitted on MERA's non-motorized trails. Class 2 and class 3 e-bikes are prohibited.

Trails will provide a connection between staging areas, be constructed as loops, provide access to the USFS land to the north, and traverse most of the non-motorized area. Trails will be constructed and maintained with a specific use in mind. This specific use does not regulate who can use the trail but it may make it less or more appealing to certain user groups. All trails will be multiuse unless designated differently.

Trails will generally be open year round to all users, but may be closed to specific uses or all use due to fire restrictions, events, logging activities, resource damage, wildlife concerns or wet soil conditions as determined by the MERA Coordinator.

Trail users will follow the standard protocol for yielding to different users. Bikes yield to horses and hikers; hikers yield to horses.

5.3 Grande Ronde Bowman Archery Range

5.3.1 Existing Conditions

The Grande Ronde Bowman Archery Club is a non-profit community organization established in the 1950's to promote and encourage archery as a sport. The Club serves over 160 members and operates and maintains an existing 40 acre site on the MERA property and has historically renewed annual leases with the previous landowners. The existing 40 acre site includes practice archery targets, a 3D course, a target field and a target range. The Club promotes archery education through its association with the National Bow Hunters Education Program, the Oregon Bow Hunters Association, the National Field Archery Association and the International Bow Hunters Organization.

5.3.2 Proposed Expansion

The Grande Ronde Bowman Archery Club has requested the opportunity to expand the existing 40 acre site to include an adjacent 60 acres to the north and sign a 20 year lease agreement with the County. The expanded 100 acre site would allow the Club to develop four separate shooting ranges that would enhance their ability to host on-site tournaments and secure funding grants. The Club also proposes to lay out the ranges so two public use non-motorized multi-use recreational trails can bisect from east to west the 100 acre site. The entire 100 acres will be fenced by the Club to exclude livestock grazing. Gates for the two trails will only be closed during the 8 to 14 shoots or tournaments per year.

The Grande Ronde Bowman Archery Club will be solely responsible for site operations and maintenance. The Club will enter into a separate lease agreement with the County that specifically outlines site operations and responsibilities and provides for a cooperative annual review with the County. Future site events such as shoots and tournaments will be authorized through the County's special use permitting identified and explained in this Master Plan.

5.4 Cabin

The MERA includes an unimproved cabin below the Mt. Emily rim in the southern property area. The cabin is structurally sound but needs maintenance and facility improvements, including a restroom. Pursuing grants for initial upgrades is desired, while normal operations and maintenance will be paid through rental fees. The cabin is located on the edge the motorized trail system and within a couple of miles to the Fox Hill staging area. It is desired to have passenger car vehicle access to the cabin either by existing roads from Mt Emily Road or construct a new road from above. The County anticipates working with a volunteer group or club to perform these tasks. Ultimately, the cabin will be rented for overnight use through the County. Rental agreement forms, cleaning deposit and use information will be provided by all users.

5.5 Volunteer Plan

Volunteers are an important part of MERA for the development, operations and maintenance of the trail system and property The volunteer management plan describes policies and procedures for volunteers including camp hosts, trail construction, trail maintenance, adopt a trail, adopt a cabin, equipment operation, trail patrol and administration. Special use permits will be issued by the County for all facility new construction or reconstruction. Volunteer maintenance activities will be coordinated through the County Staff. Volunteers will be required to sign liability waivers and catalog hours donated. (see appendix C for more details)

5.6 Law Enforcement

Law enforcement will be performed by the Union County Sheriff's Office. Historically Union County has received grant funding through Oregon Parks & Recreation Department ATV grant funds on an annual basis for law enforcement duties on MERA and other OHV riding areas throughout the county. Continued Law Enforcement grants will be pursued in the future. Deputies will enforce all MERA regulations. Law Enforcement officers will patrol the property with trucks, ATVs and motorcycles. Enforcement will focus on rules such as ATV stickers, spark arrestors, proper sound levels, proper trail use, safety regulations, possession of ATV Safety Education Card, damage to resources, illegal dumping and other state laws and county ordinances.

In Oregon, Search and Rescue (SAR) operations are the responsibility of the Sheriff's office. Any SAR activities will be the responsibility of the Sheriff and coordinated through their office.

5.7 Sign Installation & Management Plan

A uniform sign installation system will be used for both motorized and non-motorized trails and roads. Signs will be directional and informational, and annually monitored.

6.0 MAINTENANCE & DEVELOPMENT

6.1 MERA Staffing & Operations

The Mt. Emily Recreation Area acquisition was initiated by local volunteers organized into the Mt. Emily Recreation Area Coalition. The Coalition developed the Proposed Mt. Emily Recreation Area Feasibility Study updated on February 18, 2008 and submitted for funding grants. Many of the Coalition volunteers are members on the two Advisory Committees and have contributed many hours to acquisition and management plan development.

The County Planning Department provided part-time staffing to the Coalition and Advisory Committees during the acquisition of MERA.

The County Board of Commissioners have budgeted a full-time staff position, and a part time staffing position to carry out day to day operations and implement the Master Plan beginning July 1, 2010. As needs increase the Board of Commissioners will evaluate staffing requirements and may increase staffing levels.

County Staff will coordinate MERA operations under the direction of the County Board of Commissioners. The County Staff will direct youth crews, volunteers and any seasonal employees and they will pursue grants and work with other agencies on resource management issues. Volunteers will be encouraged to continue participation on the Advisory Committees and encouraged to pursue individual projects. A volunteer management plan outlines the process and commitments required to pursue individual projects or conduct long term management activities. The volunteer management plan includes application forms such as insurance waivers and volunteer agreements.

6.2 Maintenance

Trail system maintenance and development will be pursued with the use of grant funding and volunteer labor. Funding is available for construction of trails through the Oregon Parks & Recreation Departments Recreational Trails Program (RTP) grant programs. Funding for annual maintenance of OHV trails can be pursued though the Oregon Parks & Recreation All-Terrain Vehicle Grant Program. Once the trail system has been constructed, yearly maintenance will be evaluated and pursued where necessary. Revenue from the property (grazing, camping fees, parking fee & timber sales) would also be used for area maintenance. Maintenance standards and schedules will be outline in the MERA Maintenance Plan (Appendix C).

6.3 Monitoring

A monitoring management plan will be developed to annually evaluate recreational and resource management activities. Monitoring will assist with meeting long term sustainability goals. See MERA Maintenance Plan (Appendix C)

6.4 USFS Neighboring Land - Wallowa Whitman National Forest

Land north of the MERA is public land managed by the US Forest Service Wallowa Whitman National Forest. Currently, the area is open to cross county motorized travel. Within the USFS lands there are existing roads and motorized trails (both designated and user built) that provide a popular riding area for OHV enthusiasts. Nationwide the USFS has been mandated to develop Travel Management Plans which will designate specific OHV routes. The Travel Management Plan will change existing motorized use on the public lands, resulting in less opportunities than currently exists. The Travel Management Plan is anticipated to be implemented in 2012.

Upon completion of the USFS Travel Management Plan, the County and the USFS have mutual interest to plan and develop both motorized and non-motorized recreation opportunities that connect with the MERA. The County and USFS intend to develop a memorandum of understanding (MOU) that outlines this interest and agreement on how to proceed with planning, implementation, maintenance, and enforcement of expanded trail systems.

USFS lands could provide longer loops for motorized and non-motorized users which are an important part of a recreation experience. The adjacent USFS lands provide commanding views of the valley and large forest landscapes to the west. Trailheads and campgrounds could be focused on the MERA, providing recreation users with appropriate staging facilities and the opportunities for both short and long recreation loops.

6.5 Economic Benefits

Aggressive economic development within Union County has resulted in one of the lowest unemployment rates in the region. Local and county leadership understand that continued community development and diversification efforts are essential to create a sound economic base and to guarantee future prosperity.

The State of Oregon released its economic development strategy in the summer of 2004 with a series of goals and strategies. Goal 1A is to **"assist businesses, both large and small, to create, retain, and expand jobs."** The Mt. Emily Recreational Area is located only three miles from Interstate 84 and the impact it will have in drawing Northwest tourists to the area will have a significant economic benefit to many local La Grande/Island City area businesses.

The MERA property has good potential to provide motorized Class I, II, III and IV trails for local residents and other travelling recreation users. The Grande Ronde Bowman archery tournaments will attract out of area participants. The proximity to La Grande makes an excellent close-to-home opportunity for all types of local outdoor users. In the summer people are able to access the trail systems and the archery range in the afternoon and evening after school or work. There are potentially enough trail miles for

day rides. As for travelers, the close proximity to I-84 makes for easy access, whether it is for a destination or a stop-over on an extended trip.

ATV users and non-motorized recreationists have a variety of restaurants, motels, and retail outlets at their disposal. Sporting goods, camping equipment and grocery outlets are numerous, as are associated recreational equipment and mechanical support and repair services. An expanded Wal-Mart Super Center is a visible testimony to the health of the County's prosperity and potential. There are more than 900 people employed in leisure and hospitality enterprises within Union County to support recreational enthusiasts.

One of the primary factors for companies currently relocating into the Union County area is the availability of quality recreational opportunities. The Mt. Emily Recreational Area provides expanded recreational opportunity for local residents, but also is an added feature for Union County's economic and development efforts providing an attraction for future employers and their families.

Goal IC of the State Economic Development Strategic Plan is to **"Market Oregon"**. This goal is intended to market products and services within Oregon. Union County has positioned itself as a statewide leader in the manufacturing of recreational vehicles. The Mt. Emily Recreational Area is a perfect fit for those local firms that market and manufacture associated equipment designed for such recreational use. Union County is a major fabricator of all types of recreation trailers in addition to ATV sport units.

There is a clear benefit from this project to residents of Union County, as well as to those in all surrounding Counties. Today, private landowners and investors are closing many areas formerly open to recreational opportunities. "No Trespassing" signs are appearing on land once accessible, leaving little ATV use close to residential and commercial areas.

The Mt. Emily Recreational Area offers guaranteed benefits to Union County citizens, who have enjoyed use of this area for decades and also offers a real possibility for increased "controlled recreational" uses.

Only two miles from the City of La Grande, the Mt. Emily Recreational Area is easily accessible to over half of the County's population. It offers quality recreational opportunities for residents regardless of income, but more especially for those who own and operate ATV's and non-motorized recreational equipment and horses. Based on data from the year 2004, the median family income in Union County was $47,800. It has a working population of some 12,000, representing 61.4% of the county's 19,302 total population of 16 years and older. And, the unemployment rate is one of the lowest in the region.

Although the County's economic status is stable compared to many rural area, 8.5 percent of the families are below the poverty level. An added tangible benefit to the community is that the Mt. Emily Recreational Area would offer accessible, quality

recreational opportunities for residents of the County regardless of income level or recreational equipment ownership.

6.6 Emergency Closures & Public Safety

Emergency closures may occur for resource protection and public safety. Temporary closures may occur associated with timber harvest or other natural resource management activities, increased fire risk, wildlife protection, environmental conditions, and special use events.

Timber harvest activities require temporary closures to protect the general public from logging and timber hauling activities. Other natural resource management activities may require specific area closures. During extreme weather conditions Oregon Department of Fish & Wildlife may request an emergency closure to protect wildlife species.

The County and Oregon Department of Forestry have entered into a Fire Prevention Agreement (July 23, 2009) that limits motorized uses on MERA during ODF designated Regulated Use Closure periods and prohibits motorized use on MERA during ODF designated Extreme Fire Danger periods.

The MERA Coordinator has the discretion to implement temporary and/or area specific closures to protect against resource damage, maintenance, or unsafe trail conditions. Such closures may be limited to specific trails until conditions improve.

Special use events may require general public closures for public safety in the affected area. For example, during Grande Ronde Bowman Archery Club shoots or tournaments the gates to the two bisecting trails will be closed, locked and signed.

6.7 Special Use Permits

Special Use Permits will be issued by the County for all recreational user events, resource management activities and other short term activities. Users applying for Special Use Permits will complete an application form including locational maps (see Appendix SUP), receive MERA Coordinator authorization and display a Special Use Permit during the activity(ies).

Applications for recreational user events will provide proof of insurance, all information about the event and may require a fee, deposit and/or bond based on the type and size of event. The MERA Coordinator will evaluate the application and grant event authorization where conflicts with other events will not be detrimental. Where conflicts may occur users may mediate with the Coordinator. Where mediation is unsuccessful this issue will be referred to the County Board of Commissioners for a final decision.

Applications for resource management activities will include location, travel routes, activity method, proof of insurance, duration and any necessary closures.

Other short term activities that may qualify for a Special Use Permit include access for one-time or short-term activities. Such activities may be authorized by the MERA Coordinator where it can be found the activity will not significantly impact the MERA recreational or natural resource goals and objectives and will not be in conflict with other authorized uses.

6.8 Other Land Acquisition

The MERA area has two 40 acre inclusions and is bordered by other private lands that may become available to enhance the area. Where opportunities exist the County will work cooperatively with interested landowners.

Fox Hill Road is very steep with pitches up to 17% grade. Even in dry conditions this road is difficult to go up and come down. The County will continue pursuing alternate routes with gentler grades to improve MERA access.

The County will follow a similar process used for the initial MERA land acquisition. The County and interested landowner will enter into a purchase and sales agreement, and pursue appraisals and grant funding. All land acquisition activities will be authorized and administered by the County Board of Commissioners. The County will not exercise its eminent domain powers unless requested by the affected landowner(s).

The County's overall land acquisition goals and objectives are to enhance the recreation opportunities and resource management benefits of the MERA.

6.9 Signs & Maps

All directional and informational signs will be uniform in type and conform to other similar areas in Oregon where possible. Temporary signs may be necessary to identify periodic closures, reroutes or events. All signs will be authorized or installed by Union County. See sign plan (Appendix C).

The County will prepare informational maps for public distribution. A fee may be charged to cover the cost of map reproduction and MERA operations.

Mount Emily Recreation Area
UNION COUNTY OREGON

Forest Stewardship Plan
2012

INTRODUCTION

This forest management plan for the newly acquired Mount Emily Recreation Area (MERA) is intended as a guide for the Union County Board of Commissioners. MERA's 3,500± acres and a portion of the merchantable trees were obtained by various grants without county money being used. The objective of the plan is to identify present conditions of the various stands. Most of MERA has been harvested over the past 5 years by Forest Capital as part of the purchase agreement. It points to the needs for continued management. The Commissioners accepted MERA on the condition that they would continue to manage the property for timber and grazing production, as well as for recreation.

An important part of owning forested property is to manage and maintain not only the resources but also the infrastructure. Improving and maintaining forest health is important for all of the resource uses planned for this property. The plan has been prepared by the Blue Mountain Chapter of the Oregon Society of American Foresters. This plan identifies stands of trees to address in terms of approximate area, species mix, general stocking level, volumes in thousands of board feet (MBF), insect and disease presence and overall tree health. Potential harvest times and methods in keeping with the objectives of the commissioners are identified. Forest management for future commercial harvest, pre-commercial thinning, tree planting and fuels reduction are also identified. This plan should be a starting point to bring together a comprehensive plan that includes other resources such as: fish and wildlife, grazing, recreation, fire plans, transportation systems, threatened and endangered species, archeology and the like.

The focus of the SAF Chapter's Plan will be on growth and harvest of trees. The county will develop separate more in-depth management plans for grazing, roads, fish and wildlife and cultural resources among others.

LOCATION

The Mount Emily Recreation Area (MERA) is located on the slope of Mt. Emily. It was obtained to provide recreational opportunities and has been divided into motorized and non-motorized areas. The nearest trailhead for motorized OHV use is within 2 miles north of La Grande. The nearest trailhead for non-motorized use is about 3 miles north of La Grande. MERA consists of 3,450.88 acres, most of which is forested. The area is contiguous and includes two privately held 40-acre parcels.

LANDOWNER OBJECTIVES

- Maintain and improve a high quality recreational experience.
- Improve forest health and productivity over the long term.
- Maintain and enhance wildlife habitat on the property.
- Maintain and enhance the productivity of the soils on the property.
- Maintain and enhance water quality on the property.
- Manage forest stands for sustained future revenue.
- Improve and maintain the forage resource into the future for grazing cattle.
- Maintain roads for future management activities.
- Reduce the potential damaging effects of wildland fire using fuels reduction measures.
- Operate within requirements of the Oregon Forest Practices Act.

HOW TO USE THIS PLAN

The plan is intended to be used as a guide for the county to use in reaching the desired level of forest management intensity and tree stocking on MERA to meet the above objectives. It also provides limited information to manage the range, wildlife and soils to achieve the same objectives. The plan will describe various forest conditions, but specific actions on the ground will need to be planned with more detailed information collected at the time of the action. The forest is dynamic and conditions can change rapidly due to wind, fire, available funding and other actions. The plan should be reviewed and/or updated every 5± years as forest conditions can change rapidly with changes in weather patterns, insect or disease conditions.

The approximate property boundary is drawn in red on the maps. The property has both forest and range land. Most of the forage is produced in forested areas. The land has been classified into stands. Stands are relatively homogeneous areas of similar forest conditions. Stand boundaries are often related to soils boundaries and to species mix of trees. The stands (forest types) are drawn in yellow and numbered on the Forest Type Map. The section entitled "Stand Descriptions/ Recommendations" includes for each type:

- the acreage of that type
- an ocular estimate of volumes in MBF, if any
- a description of insects or disease present above endemic levels
- a potential time frame for harvest
- a summary of management recommendations
- management priorities

The appendices contain reference material and more detailed descriptions of some of the information contained in the plan. In addition, it contains general background information on several forestry related subjects.

LEGAL DESCRIPTION

The legal description is as follows:

Tax Lots 500 and 800 in Township 2 South Range 37 East.
Tax Lots 1200 and 1203 in Township 2 South Range 38 East

located in Union County, Oregon.

PHYSICAL DESCRIPTION

MERA is located on the mountainous terrain of Mt. Emily. The elevation ranges from about 3,000 feet above sea level on the east side to over 5,600 feet in the north end. It measures about 4 miles north to south and about 3 miles east to west. The slopes range from gentle to very steep. Some of the rock outcrops are almost vertical. About ½ the area is on an easterly slope east of the "break" of Mt. Emily. The rest is on west-southwesterly slopes. It is part of the Grande Ronde River watershed with scenic and aesthetic values from within and without. With very small exceptions, all of the forests have been harvested at various times for over 50 years.

The average annual climate in the area of this property follows. Depending on elevation and topography, annual precipitation can vary from 14 to 30 inches. Average annual temperatures will range from 40 to 46°F and frost-free days will be from 60 to 100.

Most of the area is forested. Natural resources in MERA have been managed for over 100 years. Timber harvesting has occurred on most of the area several times including this past year, and some of the gentler sloped area in the southeast corner has been farmed. Grazing has taken place on most of it. Forest Capital is presently completing the harvest on most of the area under an agreement made when the MERA property was obtained. The farmed areas were reforested over 30 years ago. There are several springs on or flowing through MERA.

SOILS

The soils map in the Appendix has corresponding numbers and locations of the soil types. Soil types are outlined in yellow. Listed are soil types and numbers found on the property according to the *Soil Survey of Union County* by the US Soil Conservation Service (now Natural Resources Conservation Service) soils map.

- 6F - Anatone-Klicker complex, 40-65% slopes
- 11C – Cowsley silt loam, 2-12% slopes*
- 13C – Emily silt loam, 2-12% slopes*
- 14C- Emily cobbly silt loam, 2-12% slopes*
- 17E – Gwinley very cobbly silt loam, 2 – 40% slopes
- 18F – Gwinley –Rockly complex, 40-70% slopes
- 19E – Hall Ranch stony loam, 2-35% slopes*

- 19F – Hall Ranch stony loam, 35-65% north slopes*
- 33E – Klicker stony silt loam, 2-40% slopes*
- 35E – Klicker-Anatone complex, 5-40% slopes*
- 40C – Lookingglass very stony silt loam, 2-20% slopes*
- 44C – Olot Stony silt loam, 12-35% slopes*
- 55D – Rockly extremely stony loam, 2-20% slopes
- 58E – Starkey very stony silt loam, 2 – 35% slopes
- 59E – Tolo silt loam – 12-35% slopes*
- 61E- Ukiah-Starkey complex, 5-40% slopes
- 70B – Wilkens silt loam, 1-5% slopes
- 72C – Wolot silt loam, 2-12% slopes

**-denotes forest soils*

An understanding of the soils is important for basic management of forest resources. The soils maps have broad soil classifications, and cannot be expected to pick up some of the smaller soil inclusions. These inclusions can be identified on the ground fairly readily by a trained observer. Detailed information on each of the soil types can be found from the Natural Resources Conservation Service. Soils information can be found online at *http//:soils.usda.gov/survey/.*

Soil productivity can be maintained if soils are not impacted or displaced by events such as compaction or erosion. Man made impacts can be minimized if roads and skid roads are grass seeded and drained properly following any harvest activity. Erosion problems may be caused if native surface roads are traveled during periods of high soil moisture. Travel during very dry weather may cause "dust out" ruts. Often a shovel is all that is needed to correct small drainage problems before they get large on roads and bike, horse and walking trails if attention if paid to surface conditions. Fixing a drainage problem immediately is often very easy. Even if only temporary it may save a lot of damage from occurring. Selecting appropriate logging systems and time of year for harvest will assure only minor and temporary soils management problems from the harvest activity. Many of the soils are shallow and should not be traveled on during the spring when they are saturated. There is a lot of clay in the grassland soils, and it will compact easily.

Management Recommendation

The productivity of all the forest resources is dependent on the basic resource, the soils. Care should always be used in grazing or harvesting timber so that soil productivity is not impaired. Some general rules for achieving this objective follow. Try to avoid compacting soils with high ground pressure equipment or animals. Compaction generally takes place only under certain soil moisture conditions. If the soils are saturated, or wet enough to rut easily they will probably compact. Compacting reduces the amount of air in the soil, and this limits the amount of growth that can be achieved as well as the ability of roots to permeate the soil. Compaction does not allow water to infiltrate the soil, and the water then needs to run off. That causes erosion besides reducing the water holding capacity of the soil needed for plant growth.

Wet soils compact much more readily than do dry soils. Frozen soil generally suffers little or no compaction. A number of trips over dry soils may eventually result in soil compaction in some cases, but compaction occurs slowly and can often be reversed through frost action, root penetration and organisms in the soil. Mechanized operations should minimize the number of trips or passes over a given piece of ground. Another technique is to minimize the amount of ground where heavy equipment is operated. If possible confine heavy equipment to old road or skid trail surfaces where compaction may have already occurred. Avoid compacting productive ground, or dedicate areas to skid trails so the remaining growing sites may continue to produce forest amenities at peak capacity.

Soil stabilization following management activities may be accomplished by several methods. Harvesting timber seldom causes sedimentation. Improperly drained roads, trails and highly disturbed skid trails may cause sedimentation. Water barring roads and skid trails reduces the amount and velocity of water flowing down exposed soils. Water bars need not impede the passage of traffic. "Utah" dips work well on grades less than 8%. Seeding cereal grains or an annual rye and forbs (clovers, etc.) and perennial grasses can reduce the velocity of water flowing over the ground. Plants anchor soil particles so that they are not easily dislodged, and the roots increase aeration of the soils that allows for more rapid infiltration of water thereby reducing runoff. Cereal grains and annual rye grass planted in the fall provide quick cover for the critical first year, while other grasses and forbs provide longer-term benefits. If erosion potential is low to moderate seeding species palatable to livestock, big game and game birds could provide benefits to them along with erosion control.

Due to the extent of open road and trails experiencing year-round use on MERA, a travel maintenance plan is imperative. Soil erosion is evident on many trails. As a result, every effort should be made to curb this trend and incorporate better drainage features into all travel surfaces. Additionally, a rigid maintenance plan must be implemented to significantly reduce erosion from present levels.

Soils management is also important for livestock grazing. The same principles apply. There is substantially more ground pressure applied from livestock's hooves than from most modern large logging equipment. If cows or elk graze in wet meadows they will compact the soil severely limiting forage potential.

- **Avoid compacting soils**
- **Wet soils compact more readily than dry soils**
- **Proper drainage of roads & trails is important**
- **Dry soils can erode by "dusting"**
- **Vegetation reduces erosion**

WATER RESOURCE QUALITY AND FISHERY HABITAT MANAGEMENT

A healthy watershed has always been at the top of a good resource management list. Healthy watersheds mean healthy forests and rangeland and that translates to cool clean water. Cool clean water is essential for wildlife of all sorts as well as for livestock. Streamside vegetation can

also provide insects for fish, and the leaf litter provides nutrients to the stream system. Streams and ponds are very important to recreational settings, especially for hikers, birders and botanists. A more comprehensive fish and wildlife plan will be developed at a later date.

The entire bottomland along streams and springs may be considered riparian. The entire length of streams and springs has the potential to provide for willows or other native hardwood species. Trees and shrubs provide shade to keep streams cooler.

There are no known fisheries issues on the MERA property with the exception of keeping water clean and flowing. That includes keeping good vegetation cover along the streams.

Healthy upland vegetation is also important for conserving a watershed. The lowland streams ultimately get their water from the uplands. The timbered areas and areas along the streams tend to have deeper more productive soils. All kinds of vegetation including trees, shrubs, grasses and forbs should be kept at healthy levels to protect watershed values.

Total tree cover is not the best forest condition to recharge the soil with water. Snow and rain is intercepted by heavy vegetation cover and then released back to the atmosphere before it ever reaches the ground through a process appropriately termed moisture interception. Both an astute commercial thinning and precommercial thinning of trees can help the ground to receive more water and be more beneficial to their subsequent growth. Enough ground cover needs to be retained so that water is not lost to evaporation by sun and wind. Good grass cover provides more than good forage for cattle. A good cover of grass in appropriate areas benefits a watershed. It softens the fall of rain, and the roots keep the ground porous so that water can soak into the profile. Unprotected soil may be impacted by raindrops causing rainwater and snowmelt to run off instead of being absorbed into the ground, thus causing further erosion.

Water resources are limited on MERA. There is at least one year around (perennial) stream on MERA, and Conley Creek flows intermittently on MERA. There are several springs, one pond and potentials for spring development.

Another key to good watershed management is maintaining roads and trails. A little maintenance all the time and everywhere will keep erosion to a minimum.

Management Recommendation

Protect the watershed by not allowing harvest of timber when the soils may be compacted. If reforestation is required it should be done within 3 years as healthy trees provide good protection from erosion. Either do not graze while the meadows are wet, or fence the wet meadows. Develop springs to provide water for cattle and wildlife and protect springs from trampling by animals and compaction from equipment with perimeter fences. Spring developments will need to be maintained to continue providing water. Maintain roads and trails so that sediment does not enter streams. Keep healthy vegetative cover on the ground at all times. If there are wildfires, seed the bare ground with grasses and forbs in the fall, preferably when the soil is still dusty so the seeds are mostly covered or else seed over snow. Do not seed over 8# per acre of a good forestry mix or the grass will be more than needed for erosion control, and will become overly competitive for tree seedling and native vegetation

establishment. Make sure all culverts or bridges allow for at least a 50 year peak storm flood event.

Consider doing some precommercial thinning. This not only helps the health of the remaining trees, but also allows more water to penetrate the watershed. You should seed roads and landings following harvest of timber. See the MERA Watershed Report that will be published separately for more information.

- **Watershed and soils are closely related**
- **Proper drainage of manmade structures reduces erosion**
- **Avoid compaction of soils**
- **Vegetation reduces erosion**
- **There are spring development potentials**
- **Forest management should promote a healthy watershed**

Priority: Medium high to high. With the exception of roads, the watershed is in good condition, assuming reforestation will take place where required under the Oregon Forest Practices Act.

NOXIOUS WEEDS

There are noxious weeds present that are on the county noxious weed list. Some of the weeds noted include hounds tongue, Canadian thistle, knapweed and a low growing prickly weed found mostly along roads and trails. Noxious weeds can quickly become a problem. A management recommendation would be to make annual weed patrol ***and control*** a priority to reduce existing populations and prevent spread of noxious weeds. Following precommercial or commercial thinning there is likely to be a period of several to 5 years in which there will be weeds, especially bull thistle, present. A good seeding of grass and forbs will help reduce the weed population. Check with the County Weed Control Department in the Public Works Department for Noxious Weed identification and control methods. It is your responsibility to control noxious weeds. See the MERA Noxious Weed Report that will be published separately. Noxious weeds should be addressed in a more detailed grazing plan.

- **Several noxious weed species are present**
- **Control is much easier and cheaper while populations are low**
- **Contact the County Weed Department**

WILDLIFE MANAGEMENT

Mule deer, Rocky Mountain elk, wild turkeys, bear, cougar and probably wolves along with many species of small mammals and birds use the property. Both standing and down snags are available for small mammal and bird feeding and nesting habitat. There are sources of year-around food, water and good cover for larger mammals. The property provides diverse habitats for many species of birds and mammals.

Management Recommendation

The recreation area needs no special additional manipulation for wildlife. Forest management recommended later in this plan will not have a significant impact on wildlife populations either good or bad provided logging slash is reduced so that large mammals can continue to travel easily across the property. Future timber harvest should consider leaving snags and down woody material for wildlife of various species. This type of material is used by both birds and small mammals for nesting and cover substrate. The insects that start to break the wood fiber down are often themselves food for birds and mammals, and other insects such as carpenter ants may be predators on insects harmful to the trees.

There is a good mix of forested and open areas to accommodate many wildlife needs. Snags and down woody material is available for birds and small mammals. There is hiding cover, rearing and den habitat for large mammals.

Placing nest boxes for birds and bats while developing maintenance program for nest boxes could be considered. These species help to control insect populations. There is plentiful water and food available for wildlife, but developing additional water sources would help to disperse and possibly increase wildlife of all kinds. If a hawk's nest is found in a tree, protect the nest. In the type of management being considered for this property, protecting the nest tree would be adequate for the needs of the raptors. An exception would be if a goshawk nest is found. Several acres around the nest should have enough timber cover to discourage red tail hawks from taking over the nest. For more information see the MERA Wildlife report that will be published separately.

- **Many species are present, both game and non-game**
- **Wildlife can be affected by forest management, both positively and negatively depending on species, time of year and habitat required**

FOREST MANAGEMENT

FOREST TYPE DESCRIPTIONS/RECOMMENDATIONS

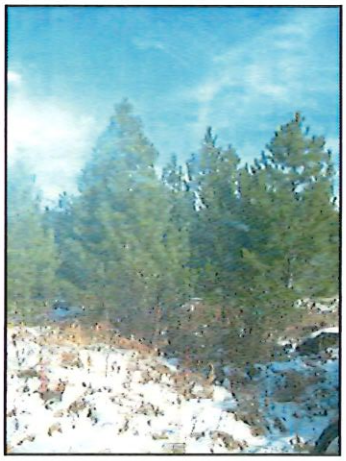
A forest type will have similar soils, species, stand structure, sizes and ages. The types are indicated on the type map by solid lines with a number identifying each type. Management activities such as harvest or pre-commercial thinning could take place within one forest type or across several forest types. Most of the forested areas on this property have been harvested several times since the early 1900's.

Forest management areas are divided into NW (Northwest), NE (Northeast), SE (Southeast) and SW (Southwest) for ease of classification purposes. These areas correspond to the logical truck haul routes for the types. However, in many cases types that would logically be treated at the same time may be in different areas. The NW area is that area west of the Mt. Emily rim in Sections 6, 7, 18, 12 and 13. The NE area is that area east of the rim in Sections 5, 6, 7 and 8. The SE area is that area east of the rim in Sections 16, 17, 18 and 20. The SW area is that area

west of the rim in Section 18, and all of the MERA property in Sections 19, 24 and 25. Some types will cross the boundaries of these areas. Those types will be labeled according to the area in which most of the type resides.

TYPE NW1 – Ponderosa Pine Plantations I – 269 acres

Type NW1 consists of about 269 acres mainly on south and east facing slopes in the northwest of the property. It was clearcut 15 or 20 years ago after most of the overstory trees had been severely defoliated by the spruce budworm. It was then replanted to ponderosa pine at the rate of about 300 trees per acre. The survival rate was very good, and natural seedlings filled in a lot of the spaces with the result that many places have 500+ trees per acre. This type is fully stocked. There are scattered overstory trees, most of which are infected with dwarf mistletoe.



Management Recommendations

Included in this type are some small areas with very dense natural regeneration having 2,000+ trees per acre. The species in these thickets are mostly tamarack (western larch) and lodgepole pine. The diameters range from about 2 – 8" DBH (diameter breast high, 4.5' above the ground). The thickets make up less than 10% of the area and should be considered for pre-commercial thinning soon in order to keep individual crop trees healthy and to reduce the risk of insect attack and mortality.

This type will not be ready for harvest for another 10-15 years. At that point it could be commercially thinned either for pulpwood or small sawlogs, depending on the market at that time. If markets are not available at that time we suggest letting it grow until there are markets. As the crowns close in there will be less understory available for grazing, and the trees should begin to self-prune.

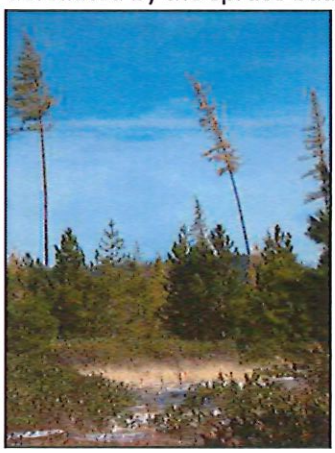
Sawlog volume available for harvest – low to none for 15 years. If markets support it, some of the scattered overstory should be removed to keep mistletoe from spreading to the young trees. The scattered overstory could be considered for firewood removal if other markets are not available.

- **Clearcut 15-20 years ago due to insect mortality**
- **replanted to pine at ~300 trees per acre**
- **Precommercial thin thickets 1-5 years**
- **Possible harvest for forest health, may have some revenue in 15+ years**

Priority for action: Low for harvest, moderate to high for precommercial thinning in select areas and high for sanitation harvest or scattered overstory tree removal.

TYPE NW2 – Ponderosa Pine Plantations II – 270 acres

Type 2 consists of about 270 acres mainly on west and north facing slopes in the northwest of the property. It was clearcut 20+ years ago after most of the overstory trees had been severely defoliated by the spruce budworm. It was then replanted mostly to ponderosa pine and western larch at the rate of about 300 trees per acre. The survival rate was very good, and natural seedlings especially Englemann spruce, white fir, western larch and Douglas-fir filled in especially on the north slopes with the result that many places have 500+ trees per acre. Ceanothus, a nitrogen fixing shrub, is the major understory species. If a wildfire starts in this type it will burn very hot due to the high concentration of Ceanothus that also makes it difficult to access for fire fighting. The trees are sapling, pole sized and even small sawlog sized in some of the higher sites. This type is fully stocked to overstocked depending on the amount of natural regeneration. This type also has scattered overstory trees infected with dwarf mistletoe.



Management Recommendations

Included in this type are some small areas with very dense natural regeneration having 2,000+ trees per acre. The species in these thickets are mostly tamarack (western larch), Englemann spruce and white fir. The diameters range from about 2 – 8" DBH (diameter breast high, 4.5' above the ground). The thickets make up less than 5% of the area and should be considered for pre-commercial thinning soon in order to keep individual crop trees healthy and to reduce the risk of insect attack.

This type could be ready for a commercial harvest in 10 years. At that point it could be commercially thinned either for pulpwood or small sawlogs, depending on existing markets at that time. As the crowns close in the trees will start to shade out the Ceanothus and hopefully self prune which will provide a better product for lumber. Sawlog volume available for harvest – low to none for 10 years. Remove mistletoe infected overstory.

- **Clearcut 20+ years ago due to insect mortality**
- **Replanted to pine at ~300 trees per acre**
- **High natural recruitment in <15 acres resulting in 500 – 2,000+ trees per acre in need of precommercial thinning.**
- **Potential commercial harvest in 10+ years**
- **Remove mistletoe infested overstory**

Priority for action: Low for harvest, moderate to high for precommercial thinning in select areas.

TYPE NW3 – White Fir/Englemann Spruce Sawlog – 89 acres

This type is higher elevation white fir and Englemann spruce overstory with 1-2 MBF (thousand board feet) of merchantable logs. These trees are susceptible to windthrow, insect and/or diseases now that they are open grown. There are other species but they make up less than 5% of the trees. There are 89 acres in this type. Some of the area has been logged recently and there is not a lot of regeneration. These are likely to seed in naturally within the next 3-5 years. Other parts of the type have not been harvested for 20-30 years and are fully stocked with natural reproduction from seedlings to trees 16"+ dbh (diameter breast high or 4.5' above the ground). Most of the reproduction is white fir and Englemann spruce. There are a couple of small areas that have higher sawlog volumes. One area has about 20 MBF and the other has about 50 MBF. These are steeper rocky areas that will be difficult to justify harvesting until there is a very high market price for logs.

Management Recommendation

Because the type is fully stocked for the most part, a commercial harvest could take place as soon as the market for white fir and Englemann spruce is adequate. An overstory removal is recommended within the next 10 years. That will leave a stand of healthy young trees for the future. Thickets of pre-commercial trees should be thinned as soon as that is feasible. Sawlog volume available within 10 years – 100 to 200 MBF.

- **1-2 MBF per acre**
- **Commercial harvest of 100-200 MBF when markets are favorable but within 10 years**
- **Precommercial thin about 40 acres**

Priority: High to moderate for commercial and pre-commercial harvests.

TYPE NW4 – Pole Thickets – 87 acres

This type has 87 acres of pole sized trees. The species mix is mostly western larch and lodgepole pine with some white fir. There are over 2,000 stems per acre with diameters from 2-8". The thickets need to be thinned to release the dominant trees for growth. Growth now is very slow, and the smaller trees are starting to die out. The trees could be thinned for posts and poles if the market is good enough. This type is definitely overstocked.

Management Recommendation

Commercially or pre-commercially thin this type soon. If not thinned, this type may take another 30+ years to produce sawlogs.

- **2,000+ trees per acre**
- **Potential post market when thinning**
- **Precommercial/commercial thin within 10 years**

Priority – High for thinning.

TYPE NW5 – DF/PP Mistletoe Overstory – 23 acres

This type has 23 acres of Douglas-fir and ponderosa pine overstory that is heavily infested with mistletoe. It is on rocky, thin soils, and natural reproduction while present is not plentiful. The trees are of poor form and vigor. Trees have been harvested from this type in the past. There is about 2 MBF per acre. This type is stocked as it is a poor site. It would be difficult to replant. There is mistletoe in Douglas-fir, tamarack and ponderosa pine.

Management Recommendation

The overstory should be harvested as soon as adequate markets are available so that the infected overstory does not completely infect the reproduction. At that time evaluate whether planting will be needed or desired. There will only be about 20 MBF available for harvest so this could be marketed with some of the other harvests.

- **High rate of dwarf mistletoe infection in overstory**
- **Overstory removal will protect understory**
- **Only 20 MBF, a small harvest**

Priority – High priority for management action

TYPE NW6 – WF/LP Thicket – 13 acres

This is a small area of white fir and lodgepole pine on the SW boundary of the NW area. It has been commercially thinned in the past 5 years. The tree sizes are from pole to small sawtimber. It covers 13 acres and has 2-3 MBF per acre. This type has been commercially thinned to release the better trees. It is on moderately good soils and will do well if managed.

Management Recommendation

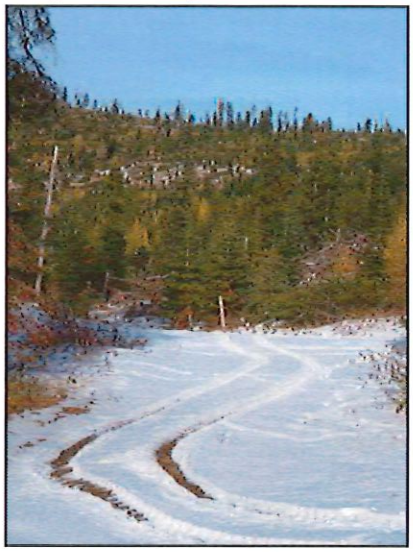
Commercially and/or pre-commercially thin in this area while harvesting NW5.

- **Recently commercially thinned**
- **2 – 3 MBF per acre**
- **In relatively good shape**

Priority – Low to Moderate, dependent on markets.

TYPE NW7 – Natural Reproduction – 161 acres

This type consists of 161 acres in several areas over the landscape. The natural regeneration came in after harvesting. It was probably harvested because of spruce budworm damage and/or mortality. These are some of the higher sites for growth. It is not unusual for "naturals" to seed in too thick following a disturbance. The species mix is white fir, western larch, Douglas-fir, Englemann spruce and lodgepole pine. The trees vary from seedlings to small poles. There are individual overstory trees and groups of overstory trees scattered throughout the type. The overstory is generally in poor condition. The regeneration tends to be overstocked.



Management recommendation

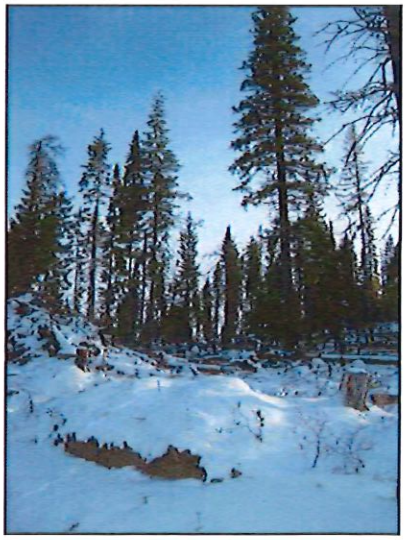
A pre-commercial thinning will be needed at some point. Whenever a good market for small sawlogs is available consider a sanitation overstory removal. This will be a very small timber sale but will keep the understory healthy. Even a break-even project would provide a job for the community while improving the timber stand as some of the overstory has mistletoe that could spread to the younger trees. A firewood sale should be considered. Due to the scattered nature of the overstory, the smaller diameter of the logs and the poorer form this is not likely to make money but would be a stand improvement project.

- **Precommercially thin 10+ years**
- **Remove overstory**

Priority – moderate for pre-commercial thinning, high for removing diseased trees.

TYPE NW8 – Recent Harvest – 63 acres

This type has been harvested in the last couple of years. It consists of 63 acres. There is little regeneration at this point, but there are enough trees left to be considered stocked with the expectation that they will naturally regenerate the area. Most of the overstory is white fir and Englemann spruce with about 3 MBF per acre. It has been commercially thinned in the last 5 years. The wide spacing on deep soil makes this type susceptible to windthrow.



Management Recommendation

Wait 3 to 5 years until a good market returns and natural regeneration is plentiful and then conduct an overstory removal. This would be a commercial harvest able to generate some revenue. An estimated volume to be harvested would be 225 MBF. Even if regeneration is not present in adequate quantities consider harvesting and plant where needed.

- **Recently commercially harvested**
- **About 3 MBF per acre**
- **Susceptible to windthrow**
- **Consider harvesting overstory either when natural regeneration has filled in or if it starts getting more windthrow, within 5 years**
- **Could harvest about 225 MBF, considered a small size sale**

Priority - medium

TYPE NW9 – White Fir non-harvest – 38 acres

This type consists of about 38 acres on the northwest boundary. It consists of steep rocky slopes that were not harvested through 2011. The volumes per acre are fairly heavy for this sector at about 6MBF of a mix of white fir, Douglas-fir, tamarack and a few ponderosa pines. There is the usual amount of Douglas-fir and tamarack mistletoe. The white fir has a lot of defect due to old top kill, breakage and rot in the stems.

Management Recommendation

Little or no action needs to be taken in the near future. If there is a strong market price for white fir a small timber sale of probably less than 100 MBF of sanitation and salvage could be considered. Logging would be expensive due to low volume and difficult terrain.

- **Higher volume of sawlogs, about 6 MBF**
- **Difficult to harvest**
- **Could provide hiding cover for big game, and cool cover for summer**

Priority - low

TYPE NE1 – Ponderosa Pine - Douglas-fir – 277 acres

Located on the lower or east portion of this area, this type has about 277 acres and has been harvested in the last several years. The species mix has an overstory of ponderosa pine (80%) with Douglas-fir (15%), western larch and white fir (5%) either mixed in or the majority species in small areas. This is a moderately productive site well suited to growing ponderosa pine and Douglas-fir. If the overstory closes in, Douglas-fir has the advantage as an understory tree. There are areas where reproduction is adequate, but the area of this type south of Conley Creek has a heavy grass understory and reproduction is scarce there except for small patches that

existed prior to this last harvest. Volume per acre ranges from 3 – 6 MBF per acre. The average volume is about 4 MBF per acre. Sawtimber ranges from 10" to 26" DBH. There are only minor insect and disease occurrences in this type. There are many small areas of ¼+ acres of sapling and pole sized trees throughout this type that are overstocked.

Management Recommendation

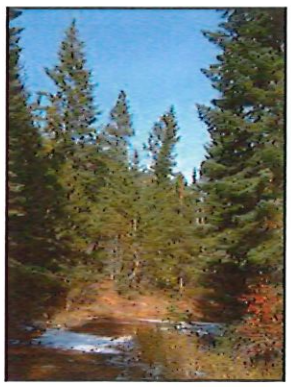
This type has been harvested in the last 3 years. It is in good condition to grow very well and remain healthy. To be managed for non-motorized recreation, little or no management activity is recommended for over 10 years. The larger trees will continue to grow at about a 4% rate over the next 20 years if we do not have another drought or insect or disease problems. Some overstory, up to 30% of the volume, could be removed without harming the aesthetic value. The type should be checked for reproduction in about 3 years. If none is present consider planting trees.

- **Nice sawlog stand**
- **Averages about 4 MBF per acre**
- **Recent harvest, no harvest projected for the next 10 years**
- **Low insect and disease occurrence**
- **Check south of Conley Creek for regeneration in 3 years, if needed plant**

Priority – Low for harvest, moderate for reproduction, moderate to high for pre-commercial thinning.

TYPE NE2 – Mixed Conifer – 129 acres

This type is about 129 acres. It has been harvested in the last several years. It is on the more north and east facing slopes with slightly better soils than Type NE1. The species mix is Douglas-fir, white fir, western larch and ponderosa pine. Volume per acre is about 3 MBF. This type is fully stocked. A lot of the remaining trees are pole to small sawtimber. The trees are mostly healthy with some dwarf mistletoe especially in western larch and some Douglas-fir. Areas within the type are overstocked. This type is a little more productive than NE1. It is a multi-aged stand with seedling to sawlog sized trees. There are many small thickets of sapling and pole sized trees scattered throughout this type.



Management Recommendation

The overstory should have a sanitation/small sawtimber harvest in the next 3 to 10 years. The timing should be planned when a good

sawlog market returns. A good pulp market would also be a good time to salvage and to further thin the dense patches of white fir. Pre-commercial thinning of clumps of sapling and pole sized trees would also help the stand. A projected harvest volume at 1-2 MBF/acre would be 200 MBF in 10+ years. The type is fully stocked at this time.

- **Productive fully stocked site. About 3 MBF per acre**
- **Plan a sanitation/salvage harvest within 10 years, sawlog and pulp**
- **Remove trees with mistletoe to protect other trees**
- **Precommercial thin scattered thickets anytime, 30 to 40 acres**

Priority – Medium for sanitation and thinning.

TYPE NH – Helicopter/Mixed Conifer – 311 acres

This type has about 311 acres. Parts have been harvested in the last 15 years. It is on the steep south and west slopes in the north end of the area. The landing and roads for helicopter harvest are in place. The species mix is Douglas-fir, white fir, western larch and ponderosa pine. Volume per acre is about 2 MBF. This type is fully stocked. It is a multi-aged stand with seedling to sawlog sized trees.

Management Recommendation

This area should be left to grow until enough volume is available to make helicopter logging profitable. This is likely to take 20 to 25 years. The type is fully stocked at this time.

- **No forest management activity needed in the next 10 years**
- **2 MBF per acre**

Priority – Low

TYPE NE3 – Pre-commercial Thin Mixed Conifer – 17 acres

This type is in Conley Canyon on steep northeast facing slopes. It is a sapling to pole sized stand of white fir, Douglas-fir and western larch on productive ground. It has about 17 acres. There is a small amount of small sawlog volume. The trees still are relatively healthy, but individuals are beginning to die due to competition.

Management Recommendation

Pre-commercially thin and reduce slash fire hazard as soon as possible. This definitely should be done within the next 10 years. If there is a good biomass market, some of the thinning may be able to be salvaged. This stand is at high risk for fir engraver and other bark beetles to become active. There probably will not be a commercial sawlog market for the thinning. The type is severely overstocked at this time.

- **Precommercially and/or pulp thinning within 10 years**
- **Already some mortality due to crowding**
- **Good site with healthy trees**

Priority – High for pre-commercial thinning

TYPE NE4 – Mixed Conifer on Steep Slopes – 295 acres

This type has about 295 acres. It has been harvested in the last year. It is on steep north and east facing slopes. This is a good growth site but it does require logging by skyline. Roads are in place to do that. The species mix is Douglas-fir, white fir, western larch and ponderosa pine. There is very little commercial sized timber left, and that which was left was due to the difficulty and expense of logging. The trees are mostly healthy with some dwarf mistletoe especially in western larch and some Douglas-fir. This type is now a stand of saplings and pole sized trees.

Management Recommendation

This type should be monitored over the next 4 years to see if there is enough healthy stocking to satisfy the Oregon Forest Practices Act. If planting is needed it will need to be done in the next 4-5 years. There is no need to harvest in this stand for the next 30 – 50 years. Mistletoe in the stand should be monitored for spread into other trees in this forest type.

- **Mixed skyline and tractor ground**
- **30+ years to next commercial harvest**
- **Check for reforestation need in 3 years**

Priority – High for reforestation needs, low for harvest consideration

TYPE SE1 – Ponderosa Pine - Douglas-fir – 430 acres

This type covers most of the SE area. It is about 430 acres and has been harvested last year. It is a continuation of NE1, and as has many similarities. The species mix has an overstory of ponderosa pine (80%) with Douglas-fir (15%), western larch and white fir (5%) either mixed in or the majority species in small areas. This is a moderately productive site well suited to growing ponderosa pine and Douglas-fir. If the overstory closes in, Douglas-fir has the advantage as an understory tree. Reproduction is adequate in the brushy ninebark and oceanspray areas but the area with grass and snowberry understory has not regenerated. New seedlings are not necessary to meet Forest Practices rules, but would be desirable to have another generation of trees starting to grow. The small openings that were created by past harvests tend to be

overstocked, and that might happen over time if natural regeneration is successful. Volume per acre ranges from 3 – 6 MBF per acre. The average volume is about 4 MBF per acre. Sawtimber ranges from 10" to 26" DBH. There are only minor insect and disease occurrences in this type. There are minor amounts of dwarf mistletoe in both the ponderosa pine and the Douglas-fir. That should be addressed in the next entry. Scattered throughout this stand are small areas of ¼ to a couple of acres that are overstocked with saplings and poles.

Management Recommendation

The southern half of this type was harvested last year. The north half was harvested a couple of years earlier. It is in good condition to grow very well and remain healthy. To be managed for non-motorized recreation, little or no management activity is recommended for over 10 years. The larger trees will continue to grow at about a 4% rate over the next 20 years if we do not have another drought or insect or disease problems. Some overstory, up to 30% of the volume, could be removed without harming the aesthetic value. The type should be checked for reproduction in about 3 years. If none is present consider planting trees to keep the aesthetic character over the long run. The only recommendation is pre-commercial thinning the small overstocked clumps of both ponderosa pine and Douglas-fir in the next 5 years.

- **3 – 6 MBF per acre**
- **Minor amounts of insect and disease**
- **High value for recreation**
- **Some reforestation may be desirable to keep the area stocked in the future**
- **Precommercially thin small overstocked areas, 40+ acres**

Priority – Low for harvest, moderate for reproduction and pre-commercial thinning.

SE -A– Aspen - <1 acre

There are a few small remnant patches of aspen less than an acre in size in SE1. We did not see any trees larger than seedling or sapling. These trees do not have a commercial value at this time but could be very aesthetic and would be a good addition to a recreation area. They are also a preferred browse species for elk and cows. If development of a few stands of aspen is desired some action will need to be taken quickly. The trees are root sprouts that are overtopped by conifers, and they are not very vigorous due to competition.

Management Recommendation

If development of these stands is desired all of the conifers should be removed for a distance of at least 50' from the outlying sprouts. Then the cleared area will need to be fenced with high fences to keep elk, deer and cattle from entering them. The fences can be either native pole fences or wire fences about 8' tall. This could be a good volunteer project. The USFS has had a lot of experience in doing aspen restoration that they are willing to share.

- **If Aspen are desirable they will need to be protected**
  - **Fence with tall fences**
  - **Remove all conifers within desired area**

Priority – depends on interest in having aspen groves. High if desired, low if not

SE2 – Steep Ponderosa Pine and Douglas-fir – 15 acres

SE2 is located on a relatively small steep northeast facing rocky hillside. Most of it has never been harvested due to the difficulty to do so. The area north of the rocky outcrop is mostly ponderosa pine and the area south of the outcrop is mostly Douglas-fir with some white fir. There are about 15 acres in this type. This is a lower productive site with a lot of rock and is densely populated with sawlog sized trees. There is little to no regeneration. Access for harvest would be difficult making it an expensive harvest. Volume per acre ranges is from 8 - 12 MBF per acre. This type is slow growing due to the crowding of the trees. There are only minor insect and disease occurrences in this type. This area is used heavily by turkeys, and mule deer use it for escape cover.

Management Recommendation

This type has not had any harvest for many years. It is slow growing but appears to be healthy. Little or no management activity is recommended for over 10 years. It is good escape cover for the population of elk and mule deer in the area.

- **Steep rocky refuge, fully stocked with sawtimber**
- **Little to no regeneration**
- **8 – 12 MBF per acre**
- **Very difficult to harvest due to location**

Priority – Very low for harvest.

TYPE SE3 – Older Plantation – 52 acres

This type is located in the northwest portion of this area. It was planted to ponderosa pine below the road, with ponderosa pine, Douglas-fir and even a few white pines above the road! White fir has naturally seeded into the better sites. It covers 52 acres and most has been commercially thinned this year. The trees are 45 – 50 years old, and are large enough for small sawlogs and pulp. This type tends to have a lot of brush in the understory and that is likely to increase now that some of the trees have been removed. If trails are built through it sight distances would quickly become very short. The trees appear to be healthy and they are growing quite well. There is little insect or disease activity in this type. The species mix is ponderosa pine (70%) with Douglas-fir and western larch (25%), and white fir (5%). This is a moderately productive site well suited to growing ponderosa pine and Douglas-fir. Where commercial thinning has taken place the trees should grow very rapidly but will have a lot of limbs. There is very little reproduction but that would not be expected in an even aged stand of

trees this age. Volume per acre is about 1.5 MBF per acre. Sawtimber ranges from 10" to 12" DBH and is quite tapered.

Management Recommendation

This type is in good condition to grow very well and remain healthy. No management activity is recommended for over 10 years. Expect rapid growth. In 20 years there should be some nice trees to commercially thin.

- **Recently harvest, consider a harvest in 10 to 20 years**
- **A healthy young stand of trees**
- **This area will become very brushy**

Priority – Low for harvest.

SE4 – Old field plantations – 35 acres

This type is in smaller areas scattered throughout the SE quadrant and collectively amount to about 35 acres. It appears to have been planted in old fields that had been homesteaded at one time. It was planted to ponderosa pine 25 to 35 years ago. This was before much attention was paid to genetically selecting trees from which to gather seeds. That resulted in cones being picked from trees that produced a lot of cones. These were often open grown with a lot of low branches that produced cones and were easy to pick. That may be the reason they are slow to naturally prune even though they were planted on a 12 foot by 12 foot grid. Survival was very high. Most of this type has been mechanically thinned. There are some natural stands that have the same characteristics in the same area. Not all of them have been precommercially thinned. The trees are very limby but seem to be growing very well. Because they have been planted closely together, there are not a lot of natural seedlings. The natural seedlings are a minor mix of ponderosa pine and Douglas-fir. This is a moderately productive site well suited to growing ponderosa pine. Volume per acre is about 1.5 MBF per acre in small limby sawlogs.

Management Recommendation

This forest type has started to close in again and growth of individual trees may start to decline in the near future. If a good pulp market is present consider a pulpwood thinning. Pruning these trees would be a good activity for volunteers as that would increase the aesthetics of those stands and improve the quality of sawtimber in the future. Over the long run this type should be commercially thinned as the trees get larger until a wider spacing of the better trees meets your aesthetic requirements. The short run would be from 5-15 years and the long run as long as 100 years.

- **A healthy plantation of pine**
- **Consider a commercial thinning in 10 – 20 years**

Priority – Low to medium for commercial harvest for 5 to 10 years, medium and depending on strength of markets following that period.

TYPE SW1 – Dry Ponderosa Pine, recent harvest – 530 acres

This type has about 530 acres and has been harvested in the last several years. It is mainly a dry aspect ponderosa pine type with minor inclusions of moist site mixed conifer on sheltered slopes. The mixed conifer sites have Douglas-fir and western larch. A few small areas (<5 acres) have white fir and Englemann spruce. Timber volume averages about 1.5 MBF per acre and can best be described as "clumpy". Species mix is about 80% ponderosa pine, 15% Douglas-fir and 5% white fir. It is a multi-aged stand with ages ranging from seedling to 30 inches dbh.

A major disease problem is dwarf mistletoe that is slowing the development of the trees. There is almost 100% mistletoe in ponderosa pine overstory. There have been minor pine beetle attacks causing mortality. Insects are at endemic levels at this time.

Most of the sapling and pole sized stands have recently been thinned. These are small areas scattered throughout this type. There are several small areas that were too steep for ground logging and too small for skyline harvest that still have 8 MBF+ per acre of sawtimber.

Management Recommendation

The overstory should have a sanitation harvest in the next 3 to 7 years. The timing should be planned when a good sawlog market returns. A good pulp market would also be a good time to salvage the mistletoe infested pole component. The objective of this harvest should be to sanitize the mistletoe from this type. Hopefully in the next 3 to 7 years more natural regeneration will have taken place. If there is little or no regeneration the area will need reforestation. A projected harvest volume would be up to 800 MBF. The type is fully stocked at this time.

- **Major mistletoe problem**
- **Harvested recently, left stocked**
- **Sanitation harvest next 3 to 7 years to reduce mistletoe in overstory**
- **May need reforestation following next harvest**
- **Projected harvest of about 800 MBF, a mostly young stand would be left**
- **Past bark beetle mortality, monitor for new activity**

Priority – High for sanitation of mistletoe and regeneration of a healthy stand of trees.

TYPE SW2 – Mixed Conifer – 30 acres

Type SW2 consists of about 30 acres in the northeast of this area just west of the rim. This is a recently harvested area that has about 1.5 MBF of merchantable timber on it. The species mix is white fir, Douglas-fir, western larch and ponderosa pine. The area has not been reforested, but natural regeneration is likely to take place to increase the amount of natural regeneration that is present.

Management Recommendation

Monitor this area to make sure natural regeneration does take place. This type will not need a commercial harvest for 20+ years. Once the type is fully regenerated with the majority of the young trees over 10' tall the overstory could be removed. This potential harvest would take place more than 10 years from now.

- **No commercial harvest for 20+ years**
- **Monitor for possible reforestation need**

Priority – low to moderate

TYPE SW3 – Ponderosa Pine – 25 acres

This type has not been harvested in the last 10 years. It has 3+ MBF per acre on 25 acres. The stand has a high incidence of dwarf mistletoe that will spread to any regeneration that takes place. At this time there is little regeneration due to the grass and snowberry understory, and the fact that it is on a dry southwest to west slope.

Management Recommendation

The major problem with this stand is the dwarf mistletoe in the overstory and that natural regeneration is not taking place. Harvest the overstory and poles when a market allows, and replant to ponderosa pine. The volume to be harvested would be about 75 MBF. An option would be to let it grow and that should be done in any case until a good market returns. A third option would be to plant ponderosa pine in the understory and harvest the overstory after the planted trees reach about 5 feet and before they large enough to become infected with mistletoe.

- **3 MBF per acre**
- **High mistletoe incidence**
- **Little regeneration**
- **Harvest trees with mistletoe and plant to pine, difficult site to regenerate**
- **About 75 MBF to harvest, a small sale**

Priority – high to moderate

TYPE SW4 – Steep Mixed Conifer – 14 acres

This type has several small areas within SW1. They consist of about 14 acres and are mostly Douglas-fir (80%), western larch (5%) and white fir (15%) on steep slopes that will require skyline logging. The areas are too small to justify moving equipment in to harvest, especially on this low log market. They may be able to be harvested at the same time a neighbor does their

harvesting. Volume per acre is about 8 MBF in relatively small sawlogs. This type is overstocked.

Management Recommendation

Commercially thin when the opportunity presents itself. The trees still are relatively healthy. It would be good to do this within the next 10 years if possible.

- **Small steep areas, will require skyline logging**
- **8 MBF per acre**
- **Healthy stand of trees**
- **Too small to harvest unless done when skyline harvesting other areas**

Priority – medium

SW5 – Pre-commercial Pine – 13 acres

This type contains about 13 acres of sapling and pole sized ponderosa pine. There are over 800 stems per acre and self thinning is starting to take place.

Management Recommendation

Pre-commercially thin as soon as you can. Leave trees should be spaced at an average of 12'+ leaving the largest most vigorous healthy trees. Leaving good trees is more important than the spacing. Trees with mistletoe should be removed.

- **Precommercial thin in the next 3 years**
- **Remove mistletoe infected trees**

Priority – high

Non-Forest (NF) – 270 acres

There are about 270 acres of rock outcrop and open rocky, brushy, grassy, or seasonally wet areas. These are not capable of growing trees of any economic value. The steep grassy areas provide habitat for deer and elk.

FORAGE

Cattle have grazed on portions of MERA for many years. Besides forage, there is water for some livestock. There are many potential sources of water that either have not been developed or have not been maintained. More water sources would improve distribution of cattle. Not all of the area is fenced and cattle do not use the entire MERA property.

Management Recommendation

There are not many water sources for cattle at this time. This results in cattle going to the one live stream to get water. There are several springs that if developed would help to keep the cattle better dispersed over the property. Salting away from water also helps to distribute the cattle. Either cattle guards or good gates would help MERA users enjoy the area more. Check forage utilization several times over the grazing season so that over grazing in some areas does not occur. Because cattle will be interacting with recreationists consider requiring the lessee to ride the area weekly to check on possible conflicts. This interaction could result in non-beneficial effects several ways. It could detract from the recreational experience for some, and it could result in reduced gains for the cattle. Fences should make allowance for passage of young deer and elk. Oregon Department of Fish and Wildlife can provide specifications for fences. MERA could become a showcase for grazing cattle in the forest, sometimes called agro-forestry. See the MERA Grazing Report published separately for more information and recommendations.

ROADS & TRAILS

There is a good road system in place for harvest of timber. Most of the area has been harvested recently using either ground based or line logging. The only area that has not been harvested is the helicopter unit in the north end of the property, and the present roads would serve that type of harvest. See the roads map for illustrations.

At present the roads and trails on MERA need a maintenance plan. Maintenance needs range from very little to fairly major drainage issues. The lack of maintenance and drainage on heavily used travel corridors (particularly on trails used by non-logging activity) is causing noticeable erosion.

Management Recommendation

Develop a rigid monitoring and maintenance plan. Review all travel corridors annually and plan maintenance accordingly. If annual repair and maintenance of travel corridors is not possible, those routes should be closed until necessary repairs are conducted to prevent additional resource damage and increased erosion rates

The roads used for harvest the past 5 years should be in good condition following the harvest that has been taking place. Some closing out maintenance such as final shaping and pulling ditches should be done to set them up for low maintenance until the next harvest. Not all haul roads were used for recent harvests. Large areas in the northwest portion were not used because there was little or no commercial volume. These roads should be included in a maintenance plan.

All roads that had been used for logging should be maintained at some level to provide access for management and fire fighting. Management should include brushing out and grading to

keep roads in good condition for travel. ATV travel will have a tendency to dust out roads if they have not been rocked. The road can become difficult for fire engines to travel as the fines are removed from the surface, leaving a rough rocky road bed. If the roads are pulled back in every 1 or 2 years they can be kept in good shape.

Erosion control water bars and dips can get filled in or rutted out with ATV traffic. Proper placement of water bars will reduce erosion from water. They need to be regularly maintained to keep them operational. That can be done along with the above mentioned maintenance. There are culverts located on the main roads. These should be marked so they are easily located for checking yearly or more often to make sure they are operational. Spring is a good time to do this. A clogged culvert will quickly lead to a washed out road bed.

The ditches on the main roads should be pulled as soon as possible. There are several places where filled in ditches are starting to develop problems with the road surface. Some of this is due to recent harvest operations. Erosion is starting to take place in some places. This can be cured by clearing ditches and, in some places, by providing a dip to turn water off the roads. Once initial maintenance is done in the non-motorized area it will not need attention nearly as much as in the motorized area. Volunteers with shovels could open ditches that have sloughed in so that water does not saturate the road prism, but instead flows down ditches to culverts.

- **Monitor at least yearly, spring is the best time**
- **Maintain drainage to prevent erosion**
- **Assure that selected roads are open for fire protection and suppression**

Priority: High to maintain and improve road systems in both motorized and non-motorized areas.

ARCHEOLOGICAL AND CULTURAL RESOURCES

Archeology and cultural resource surveys have not been completed but plans are being made to have them completed. Native Americans have undoubtedly used these areas as they would have made good hunting grounds and could have been camping grounds. Old cultural resources are evident in some places in the form of garbage dumps and small orchards. It appears that some of the planted areas in the southeast quadrant were old fields of some sort. The pond in the southeast has been used as a source of irrigation water and there are several springs that could be developed for domestic use. The Archeological and Cultural Resources Report will be published at a later date after surveys have been completed.

RECREATION

This area was obtained for recreation use. It has a long history of being used for recreation, especially when owned by Boise Cascade. It is close to La Grande, the major population area of Union County. It is some of the lowest forested areas of the valley and a pleasant protected area in which to recreate. The primitive infrastructure of roads made it a prime area for hiking

and running. The archery club has been using portions of the area for many years with targets set up over a large area and a common area to use for gatherings and contests. Mountain bikers have built and maintained trails for their use. The area is used for horseback riding, hunting and ATV's. Union County is and has been fortunate to have this area for its people to use for many purposes. The area has been logged several times and cattle have grazed in at least some of the area for many years. Good forest management allows a good recreation experience and can be used to enhance the recreation experience.

A recreation plan is being prepared for the area. Some improvements such as parking areas and pit toilets are already installed. See the recreation plan being prepared by the county for more information.

AESTHETIC AND SCENIC RESOURCES

MERA has two distinct sides from an aesthetic or scenic view. It is located in the scenic Blue Mountains of northeast Oregon. The east side is seen from the Grande Ronde Valley. It takes in much of the forested east slope of the south extension of Mount Emily, the scenic anchor of the valley. The southeast portion of MERA has 100+ year old ponderosa pine and some Douglas-fir of the same age. Trails wind through the 100 foot tall trees with interspersed meadows and one year around stream. The forested view from within is enhanced with glimpses of the valley floor and the mountains on the east side of the valley. The flora consists of several different plant associations. Other places on this east side are more open with fewer overstory trees and more young trees. This area provides more continuous views across the valley.

The west side of MERA is "on top" of the south flank of Mount Emily. This area also is forested with some interspersed small meadows. The trees here tend to be younger (<50 years) in plantations. The species are a mix of relatively pure ponderosa pine and mixed species with few ponderosa pines giving a varied aesthetic experience. You can lose yourself in the solitude of 30 to 40 foot young trees that block long distance views or look for long distances from vantage points. High points provide views of the Blue Mountains to the south and west. The rim of Mount Emily that divides the two areas provides awesome views of the valley, the ringing mountains and beyond. The Eagle Cap Wilderness can be seen to the east.

Improvements in trails and other infrastructure including educational signing can greatly improve the ability of the general public to take in the beauty of this valuable county resource. With carefully planned forest management the scenic and aesthetic values of MERA will be able to be maintained and enhanced while producing various forest products (recreation, mushrooms, logs, big game, etc) for the local economy.

THREATENED AND ENDANGERED SPECIES

No threatened or endangered species were observed while this plan was being prepared. As far as has been generally reported none, are known to exist in MERA. That does not mean that some of the far ranging threatened and endangered animals such as wolves and wolverines will not pass through this area. It is likely that they will. More study and additional reports by

biologists would be needed to identify plants that may be on the list. There is always the chance that some obscure plant, insect or animal may be discovered in the future.

FIRE PLAN

A fire plan is important for this property due to its recreational emphasis as well as for harvest of timber of timber and other forest management uses. A fire plan would include road and trail management as well as fuels management.

Road and trail maintenance are key to providing access for fire fighters in the event of a wild fire. Maintenance is also important in the event that use of prescribed fire for fuels management is planned. All roads that have been used by trucks and pickups should be maintained including keeping brush from encroaching and proper drainage to provide easy and quick passage by wildland fire engines. Roads that have deep ruts, including deep ruts caused by ATVs, slow passage for access and/or escapement for fire fighters. Rolling dips are preferable to steep and deep water bars for drainage. Maintained road and ATV trails will be useful as firebreaks in the event of ground fires, and also expedite fire crews in reaching or escaping from fires.

It is important that fire fighters can refill their fire engines as quickly as possible when fighting wildland fires. Consider developing ponds where there are springs or streams that could be used for firefighting either by ground or air. Helicopters can pick water up from ponds that are developed if necessary. Time is very important to keep small fires from becoming large fires. The Oregon Department of Forestry can advise you as to location of ponds for fire reservoirs.

Fuels management is also important to reduce both the risk and severity of wild fires. Clearing significant amounts of fuel from 50-100 feet on both sides of roads and trails will reduce the risk of fires starting from recreational users. Reduced fuels also provide a "green fire break" in the event of severe fires or crowns fires. They become a focus of attack for fire fighters. Precommercial thinning and treatment of the slash along roads and trails will reduce the risk and severity of fire.

Another part of the fire plan would be to thin out the trees where you have ladder fuels to keep a fire that might start from "crowning out". Cleaning up slash from thinning and harvesting will also reduce fire severity. Some slash can be left on the ground to recycle nutrients, but slash concentrations can become a hazard. Continuing grazing also helps to keep fire intensity and rate of spread down by reducing the amount of fuel on the ground. See the **Fire Prevention Agreement** between Union County and the Oregon Department of Forestry in the appendix for more details.

SUMMARY

The following summary of activities will guide management of MERA. Adherence to this schedule will help ensure that resource values are preserved and that resource goals are met. Activities that prevent the potential for loss of resource and/or economic value should be given

the highest priority. Likewise, when resource losses are identified through monitoring, remediation / action to protect resources should be given the highest priority.

Activities are listed by priority:

1) = High priority, conduct annually / as needed.
2) = Medium priority, conduct in 2 to 4 years.
3) = Low priority, conduct next five years or as budgets allow.

1) Conduct annual inspection survey of all travel surfaces (roads and trails) and schedule maintenance according to need.

   Conduct annual inspection of forest health and schedule harvest and thinning activities according to need.

   Plan projects for volunteer workers.

   Noxious weed patrol/control.

2) Remove mistletoe infected scattered overstory.

   Begin precommercial thinning program.

   Start commercial sanitation program.

   Reforest where needed.

   Monitor pulpwood market.

   Monitor post & pole market, thin select stands if market is available.

   Consider aspen restoration project.

3) Continue precommercial thinning.

   Consider pruning planted stands, especially in selected trails areas.

   Re-evaluate potential markets.

Table of Recommended Forest Management Actions for MERA

Area	Action	Priority	When(years)	Acres	Volume MBF
NW1	PCT	Mod-High	1 to 5	40	-
	Sanitation	High	1 to 2	All	10 cords
NW2	PCT	Med-High	1 to 5	20	-
NW3	Harvest	Med-High	1 to 10	-	100-200MBF
	PCT	High-Med	1 to 5	70	-
NW4	PCT	High	1 to 5	30	-
NW5	Harvest	High	1 to 5	-	20MBF
NW6	Comm. Thin	Med-High	1 to 5	-	15MBF
NW7	PCT	Med	1 to 10	50	-
	Sanitation	High	1 to 5	50	-
NW8	Harvest	Med	3 to 5	25	75MBF
NW9	Harvest	Low	5 to 10+	15	100MBF
NE1	PCT	High	1 to 8	15	-
	Plant	Med	2 to 5	80	-
	Harvest	Low	2 to 10+	80	150MBF
NE2	PCT	Med	3 to 5	10	-
	Sanitation	Med	1 to 5	As needed	200MBF
NEH	Harvest	Low	10+	80	?
NE3	PCT	High	2 to 10+	10	-
SE1	PCT	High	2 to 5	15	-
	Plant	Med	2 to 5	As needed	-
	Harvest	Low	3 to 10+	As desired	-
SE Aspen	Encourage	Low	1 to 10+	As desired	-
SE2	Harvest	Low	10+	90	-
SE3	Harvest	Low	10+	25	-
SE4	Harvest	Med to Low	5 to 10+	20	-
NE4	Plant	Med to High	3 to 5	20	-
	Harvest	Low	10+	80	-
SW1	Sanitation	High	1 to 5	All	<500MBF
	Plant	High	2 to 6	All	-
SW2	Monitor Reg	High	2 to 5	All	-
	Harvest	Low	20+	All	-
SW3	Harvest	High to Med	2 to 5	All	75MBF
	Plant	High	3 to 6	All	-

PCT – Precommercial Thinning, Comm. – Commercial, Reg. – Regeneration
Acres – estimated acres needing management activity.

APPENDIX

GLOSSARY OF TERMS

Age class - One of the intervals into which the range of ages of trees in a stand are divided into for descriptive purposes.

Annual ring - The growth layer of one year on a tree, as viewed on the cross-section of a stem, branches, or root. One year's growth consists of a layer of lighter-colored wood (springwood) and a layer of darker-colored wood (summerwood).

Aspect - The direction toward which a slope faces (exposure).

Basal area - a. The cross-sectional area of the bole of a tree 4.5 feet (breast height) above the ground. It is expressed in square feet per acre and is calculated by: diameter of tree squared times .005454.

b. The sum of all the individual tree basal areas for a stand of trees; it is expressed as square feet of basal area per acre. This serves as an indicator of how well a stand is occupying a given piece of land.

Blowdown - Trees that have been knocked over by wind.

Blue stain - A fungus discoloration, predominantly bluish, but sometimes grayish or brownish in appearance; it is confined almost exclusively to sapwood, usually in pines. Blue stain is usually introduced to trees by bark beetles boring into the inner bark and cambium.

Board foot - A volume measure of lumber: 1 foot wide by 1 foot long by 1 inch thick.

Bole - The main trunk of a tree.

Cambium - A layer of cells between the woody part of the tree and the bark. Division of these cells results in diameter growth of the tree through formation of wood cells (xylem) and inner bark (phloem).

Canker - a sore on the outside of a tree caused by a disease. Often soft or "bleeding", or with fungus spores on it.

Co-dominant - A tree in the stand of trees that is growing well and is generally above many trees in the stand. Even-aged stands often have co-dominant trees. They are slightly below the dominant trees in an uneven-aged stand.

Commercial thinning - A forest operation that consists of removing sawtimber-sized trees from a developing young stand that is in need of thinning (see "Forest Operations", Appendix A). The removed trees have a commercial value.

Conk - A hard, spore-bearing structure (mushroom) of a wood-destroying fungus that projects outside the bark of a tree. It is most commonly observed on fir trees.

Conifer – a cone-bearing tree.

Crown - The canopy of green leaves and branches formed by a tree. The amount of ground shaded by crowns is often referred to as "crown cover" and is expressed as a percent of the total ground area shaded.

Cruising - Measuring standing trees to determine the volume of wood on a given tract of land (in board feet). Used for harvesting, purchasing, and general management.

DBH - Diameter of a tree outside the bark at breast height, which is 4.5 feet off the ground on the uphill side of the tree.

Defect - Any irregularity or imperfection in a tree or log that reduces the volume of sound wood and consequently reduces the volume cruised (and scaled) from the tree.

Dominant – the biggest, tallest trees in a stand. They easily stick out above the others and generally have larger crowns than other trees in the stand.

Even-aged - Refers to a stand of trees in which relatively small age differences exist between individual trees.

Forest type - A descriptive term used to group tree stands of similar character in composition and development, differentiating them from other stands.

Gall – an abnormal growth, usually on a limb of a tree.

Intermediate – A tree in a stand that has its crown completely surrounded by other trees in the stand. It does not stick out above the general canopy.

Intermittent – refers to a stream that flows water for part of the year and dries up for a part of the year. The channel has defined channel characteristics such as banks. Usually is not completely vegetated.

Leader - The growing top (terminal shoot) of a tree. The distance between each whorl of branches up a tree's stem generally represents one year of height growth.

Leave trees - Trees left after a harvesting operation.

Mature - The age at which a tree's growth rate begins to decline, and decay begins to reduce salvageable tree volume in a stand. This occurs sometime between 90 and 200 years of age.

MBF - Abbreviation for 1000 board feet.

Merchantable timber - Trees that can be converted into saleable products. Generally this includes trees 10" DBH or greater. Also referred to as "sawtimber".

Multi-storied – a stand of timber with definite levels of trees. There might be a 100-year overstory, a 70-year stand under that, and a pole-sized stand under that.

Noxious – refers to undesirable weeds or plants. These plants are not native to the area and have been officially listed on a county list of plants to be kept under control or eradicated. Because

they are not native and have no native enemies they often spread rapidly and widely, and crowd out native plant populations.

Overstocked - A condition of a stand, indicating that there are more trees present than desired.

Overstory removal - This is a type of harvest designed to remove larger and overmature trees which overtop the remainder of the stand

Pole timber - Timber with a DBH of approximately 6-11".

Precommercial thinning - Removal of some of the trees in a young stand to reduce overall competition for water and nutrients. Trees thinned from these stands have no commercial value, hence are "precommercial".

Reforestation - The natural or artificial restocking of an area with forest tree species. The natural restocking of a site is often referred to as "natural regeneration".

Residual stand - Trees, often of commercial size, left in a stand after thinning to grow until next harvest. Also referred to as "leave trees", these trees are also important for natural regeneration of a site.

Sanitation/salvage harvest - This is an operation in which trees that are dead or in poor condition are harvested before they no longer have any commercial value. This is common where insect-infested or diseased timber is dying or is already dead and should be removed from a stand. This practice also releases healthy trees for additional growth and cleanses the stand of disease.

Sapling - A tree that is 2-5 inches DBH.

Sawtimber - Trees with commercial harvest value, generally 10" DBH or larger.

Second growth - A forest of trees that develops after harvest of the original stand (which often was "old growth"). These stands are generally between 40 and 90 years of age.

Seedling - Any tree, either natural or planted by man that is less than 2" DBH.

Site index - A measure of forest site quality, based on the height (in feet) that dominant trees reach at a given age. It is generally expressed in 50 or 100-year site index. Site index is an indication of the productivity of a forested site. Site indexes are often grouped in "site classes", which give a numerical rating of a site's productivity, generally from 1 to 7, 1 being the highest productivity and 7 the lowest.

Slash - Treetops, branches, bark, and other debris left after a forest operation.

Slash treatment – reducing the amount of slash left on the ground by mechanical means, piling and burning, full length harvesting or broadcast burning.

Stagnation - The condition in a stand where tree growth occurs at a very slow rate due to close tree spacing (overstocking) and high competition.

Stand - A group of trees in one geographic area that is uniform enough in species composition, age, and arrangement to be distinguishable from adjoining areas of forest.

Stand density - A relative measure of the amount of tree stocking on an area compared with other areas.

Stumpage - The value of timber as it stands uncut in the woods.

Suppressed - a tree whose crown is under the crowns of larger trees and does not get enough sunlight to grow rapidly. Usually a slow growing tree.

Thinning - Cutting in a stand to increase the growth rate of the leave trees. It can be precommercial or commercial depending upon whether the trees removed during thinning have a commercial value.

Timber - A term loosely applied to forest stands or their products; also wood in forms suitable for heavy construction (beams, ships, bridges).

Understory - That portion of the trees or other vegetation in a forest stand below the canopy.

Uneven-aged - Term applied to a stand in which there are considerable differences in the age of the trees present.

MERA SOILS INFORMATION

6F – Anatone Klicker complex, 40 – 65% slopes

These soils are found in irregularly shaped areas on mountainous upland at elevations from about 2,500 to 5,000 feet. The Anatone and Klicker soils are so intricately intertwined that it is not practical to map them separately. The Anatone soil is a grassland soil while the Klicker soil is a forest soil, so there will be "islands" of trees in the grassland. The average annual precipitation is about 17 to 30 inches per year with an average frost-free period of 100 to 120 days.

The Anatone soils are shallow and well drained. It is derived basalt with some windblown dust or ash in the surface layer. Depth to fractured basalt is from 10 to 20 inches with the soil layer being quite stony. Effective rooting depth is from 10 to 20 inches. Runoff is rapid and water erosion hazard is high.

The Klicker "islands" have relatively deep, well-drained soils. It too is derived mainly from basalt. Depth to basalt is from 20 to 40 inches, and that is the effective rooting depth. Runoff tends to be rapid, and the risk of soil erosion is high.

As a whole, this soil unit is used as rangeland, but is also used for some timber production and wildlife habitat. The native vegetation for the Anatone soils is mainly bluebunch wheatgrass, Idaho fescue and stiff sagebrush. The native vegetation for the Klicker soils is mainly ponderosa pine, elk sedge and pinegrass. Trees will grow at a rate of about 200 board feet per acre per year on the average.

Management for this soil unit should take into consideration the erosion risk. Well-designed and drained road systems will help to reduce erosion. Plant competition will often delay regeneration of ponderosa pine following logging or death of trees, but a fully stocked stand of trees will eventually become established.

11C – Cowsly silt loam, 2 – 12% slopes

This deep, moderately well drained soil is on mountainous uplands. It formed in loess (wind carried and deposited soils) and volcanic ash overlying native soils formed from volcanic tuff and basalt. The native vegetation is mainly coniferous forest with an understory of grasses, forbs and shrubs. It is found at elevations from 3,500 to 5,000 feet and has an average annual precipitation of 17 to 30 inches. The climate provides an average annual air temperature of 43-46° F and an average frost free period of 60 to 100 days. Depth to bedrock is 60 inches+. Permeability is moderate in the top layers and slow in the lower layers. Runoff is slow to medium, and the potential hazard of water erosion is slight to moderate. Effective rooting depth is 20 to 60 inches.

These soils are mainly used for timber production, but are well suited to woodland grazing and wildlife habitat. The site index for ponderosa pine ranges from 99 to 112 on a site index of 105. These soils are best suited to growing ponderosa pine and Douglas-fir. Mean annual growth can be 400+ board feet per acre per year based on a 120-year rotation. A managed stand with several age classes of trees can produce 300 to 350 board feet per acre per year.

Some factors to keep in mind in producing and harvesting timber are regeneration and windthrow. Conventional methods of harvest can generally be used, and roads and landings can be protected from erosion by logging when dry or frozen, and waterbarring and grass seeding following logging. Plant competition can delay natural regeneration. Plant competition usually does not prevent eventual development of a fully stocked stand of trees providing a seed source is available. In droughty areas planted seedling survival can be improved by providing shade for the seedlings. Trees are commonly subject to windthrow during periods when the soil is excessively wet and winds are strong.

The potential understory is mainly elk sedge, pinegrass and Idaho fescue. The density of the tree stand limits the production of vegetation suitable for grazing. If overgrazed, the proportion of preferred forage plants decreases quickly and it is difficult to restore the proportion because of the aggressiveness of less desirable forage plants. Grazing should be managed to keep the desired balance of preferred forage plants in the stand. Grazing should be delayed until the soils have dried and firmed up in the spring to avoid compaction and the more desirable plants have achieved sufficient growth to withstand grazing pressure.

17E - Gwinly very cobbly silt loam, 20 to 40% slopes

This shallow, well-drained soil is most often found on ridgetops, but in some places is on south and west facing side slopes in uplands. It is formed by a mix of transported and residual material mainly from basalt and volcanic tuff. There is some windblown soil in the surface layer. It is found at elevations from 2,300 to 4,600 feet. Average annual precipitation is 16 to 24 inches, the average temperature is 45 to 50^{0}F, and has 100 to 150 frost free days.

Permeability is slow, and available water is only 1 to 2.5 inches. Water supplying capacity is 10 to 20 inches and effective rooting depth is 10 to 20 inches. Runoff is slow to medium and erosion hazard is moderate to high. This soil type is usually used for rangeland and wildlife habitat.

The potential native plant community is bluebunch wheatgrass, Idaho fescue and Sandberg bluegrass. If the range is overgrazed, the proportion of preferred forage plants decreases and less preferred forage plants increases. Chances of reseeding this soil type are low.

These soils respond well to proper grazing use. Deferred grazing, rotation grazing and aerial spraying for brush control work well. Livestock should be managed to protect the soil from erosion.

18F - Gwinly - Rockly complex, 40 to 70% slopes

This soils unit is on south and west facing side slopes in uplands. It is found at elevations from 2,300 to 4,600 feet. Average annual precipitation is 16 to 24 inches, the average temperature is 45 to 50^{0}F, and has 100 to 150 frost free days.

This soils unit is about 50% Gwinly very cobbly silt loam and 40% Rockly extremely stony loam. The soils components are so intermingled it is not practical to map them separately. Also included in this unit are small areas of rock outcrop and Watama, Ukiah, and Starkey soils.

The Gwinly soils are shallow and well drained. It is form mainly from basalt and volcanic tuff, with some windblown soils in the surface layer. Permeability is slow, and available water is only 1 to 2.5 inches. Water supplying capacity is 5 to 10 inches and effective rooting depth is 10 to 20 inches. Runoff is slow to rapid and erosion hazard is slight to high.

The Rockly soil is very shallow and well drained. It is formed mainly from basalt, with some windblown soil in the surface layers. Permeability is moderate with an available water capacity of about 0.3 to 1.0 inch. Water supplying capacity is 5 to 10 inches. Runoff is slow to rapid, and the hazard of water erosion is slight to high. Both the Gwinly and the Rockly soils are used as rangeland and for wildlife habitat.

The potential native plant community is bluebunch wheatgrass, Idaho fescue and Sandberg bluegrass. If the range is overgrazed, the proportion of preferred forage plants decreases and

less preferred forage plants increases. Chances of reseeding this soil type are low due to the cobbly and stony surface and the steepness of slope.

These soils respond well to proper grazing use. Deferred grazing and rotation grazing work well. Livestock should be managed to protect the soil from erosion.

19E – Hall Ranch stony loam, 2 – 35% slopes

This moderately deep well drained soil is on mountainous uplands. It was formed by overland flow and residual soils with some windblown soil and volcanic ash in the surface layer. The native vegetation would be mainly coniferous forest with an understory of grasses, forbs, and shrubs. It is found at elevations from 3,000 to 4,000 feet. Average annual precipitation is 18 to 30 inches, average annual air temperature is 40 to 45˚F, and the average frost free period is 50 to 100 days.

Permeability is moderate. Water supplying capacity is 8 to 16 inches. Effective rooting depth is 20 to 40 inches. Runoff is slow to medium, and the hazard of water erosion is moderate.

These soils are used mainly for timber production. They are also used for woodland grazing and wildlife. Ponderosa pine is the favored tree, with a site index of 85 to 95 on a site index of 90. The potential production is almost 300 board feet per acre per year on a well stocked, managed stand. Conventional methods of ground skidding are suitable for harvest of timber. Roads and landings can be protected from erosion by waterbarring and grass seeding following harvest.

Plant competition delays but does not prevent natural regeneration. In areas of south facing slopes that are droughty in the summer, seedling survival can be improved by providing shade for the seedlings.

The potential native understory plant community on these soils is mainly bluebunch wheatgrass and Idaho fescue. The density of the tree stand eventually limits the production of vegetation for livestock grazing. Livestock grazing should be managed so that the desired balance of preferred forage species is maintained in the plant community.

19F – Hall Ranch stony loam, 35-65% north slopes

This moderately deep well drained soil is on mountainous uplands. It was formed by overland flow and residual soils with some windblown soil and volcanic ash in the surface layer. The native vegetation would be mainly coniferous forest with an understory of grasses, forbs, and shrubs. It is found at elevations from 3,000 to 5,000 feet. Average annual precipitation is 18 to 30 inches, average annual air temperature is 40 to 45˚F, and the average frost free period is 50 to 100 days.

Permeability is moderate. Water supplying capacity is 8 to 16 inches. Effective rooting depth is 20 to 40 inches. Runoff is rapid, and the hazard of water erosion is high.

These soils are used mainly for timber production. They are also used for wildlife habitat. Ponderosa pine and Douglas-fir are the favored trees, with a site index for ponderosa pine of 85 to 95 on a site index of 90. The potential production is almost 300 board feet per acre per year on a well stocked, managed stand. High lead logging is the preferred method as it is more efficient and is less damaging to the soil surface. Conventional methods of ground skidding will work but need to be used carefully. Roads and landings can be protected from erosion by waterbarring and grass seeding following harvest.

Plant competition delays but does not prevent natural regeneration. The potential native understory plant community on these soils is mainly elk sedge, pinegrass and Idaho fescue. The density of the tree stand eventually limits the production of vegetation for livestock grazing. Livestock grazing should be managed so that the desired balance of preferred forage species is maintained in the plant community.

33E - Klicker stony silt loam, 2-40% slopes

This is a moderately deep, well-drained soil on mountainous uplands. It is mainly formed of basalt, but has some loess (wind carried and deposited soils) and volcanic ash in the surface layer. The native vegetation is mainly coniferous forest with an understory of bunchgrasses, rhizomatous grasses, annual forbs and perennial shrubs. It is found at elevations from 2,500 to 5,000 feet and has an average annual precipitation of 17 to 30 inches. The climate provides an average annual air temperature of 43-45^0 F and an average frost free period of 100 to 120 days. Depth to bedrock ranges from 20 to 40 inches. Runoff is slow to rapid, and the potential hazard of water erosion is slight to high depending on associated vegetation.

These soils are mainly used for timber production, but are well suited to woodland grazing and wildlife habitat. The site index for ponderosa pine ranges from 71 to 80. These soils are best suited to growing ponderosa pine and Douglas-fir. Mean annual growth is about 200 board feet per acre per year based on a 160 year rotation. A managed stand with several age classes of trees can produce 300 to 350 board feet per acre per year.

Some factors to keep in mind in producing and harvesting timber are regeneration and windthrow. Conventional methods of harvest can generally be used, and roads and landings can be protected from erosion by waterbarring and seeding. Plant competition, especially from rhizomatous elk sedge and pinegrass can delay natural regeneration. It usually does not prevent eventual development of a fully stocked stand of trees providing a seed source is available. In droughty areas planted seedling survival can be improved by providing shade for the seedlings. Trees are commonly subject to windthrow during periods when the soil is excessively wet and winds are strong.

The potential understory is mainly elk sedge, pinegrass, bluebunch wheatgrass, and Idaho fescue. The density of the tree stand limits the production of vegetation suitable for grazing. If overgrazed, the proportion of preferred forage plants decreases quickly and it is difficult to restore the proportion because of the aggressiveness of less desirable forage plants. Grazing should be managed to keep the desired balance of preferred forage plants in the stand. Grazing

should be delayed until the soils have dried and firmed up in the spring and the more desirable plants have achieved sufficient growth to withstand grazing pressure.

35E - Klicker - Anatone complex, 5 - 40% slopes

This mapping unit is in irregularly shaped areas on mountainous uplands. The native vegetation is mainly ponderosa pine and bunchgrasses. It is found at elevations from 2,500 to 5,000 feet and has an average annual precipitation of 17 to 30 inches. The climate provides an average annual air temperature of 43-45^0 F and an average frost free period of 100 to 120 days.

The unit is about 50% Klicker stony silt loam and about 40% Anatone extremely stony loam. Included in this soils unit are small areas of Bocker, Cowsly, Hall Ranch and Olot soils and rock outcrop.

The Klicker soil is moderately deep and well drained. It is formed from basalt with some windblown and ash soils in the surface layers. Permeability is moderately slow. Available water capacity is about 4.5 to 6 inches and water supplying capacity is 8 to 16 inches. Effective rooting depth is 20 to 40 inches. Runoff is medium to rapid, and the hazard of water erosion is slight to high.

The Anatone soil is shallow and well drained. It is derived mainly from basalt with some windblown and ash soils in the surface layer. Permeability is moderate. Available water capacity is about 1 to 2.5 inches and water supplying capacity is 5 to 10 inches. Effective rooting depth is 10 to 20 inches, runoff is medium to rapid, and the hazard of water erosion is slight to high.

These soils are mainly used for timber production, but are well suited to woodland grazing and wildlife habitat. The Klicker soil is suited to the production of ponderosa pine; however, the trees commonly are widely scattered or are only in small stands in areas where the soil is deep enough to support them. Management is therefore limited by the nature of the stand. On the basis of a site index for ponderosa pine of 76 the mean annual growth is about 200 board feet per acre per year based on a 160 year rotation. A managed stand with several age classes of trees can produce up to 300 board feet per acre per year.

Some factors to keep in mind in producing and harvesting timber are regeneration and windthrow. Reforestation must be carefully managed to reduce competition from undesirable understory plants. The low available water capacity generally influences seedling survival in areas where understory plants are numerous. Trees are commonly subject to windthrow during periods when the soil is excessively wet and winds are strong. Roads and landings can be protected from erosion by constructing dips or waterbarring and seeding

The potential understory on the Klicker soil is mainly elk sedge and pinegrass. The density of the tree stand limits the production of vegetation suitable for grazing. The potential plant community on the Anatone soil is mainly bluebunch wheatgrass, Idaho fescue and Sandberg bluegrass. Stones on the surface, shallow rooting depth and steepness of slope limit the production of vegetation suitable for livestock grazing. Grazing should be delayed until the soils

have dried and firmed up in the spring and the more desirable plants have achieved sufficient growth to withstand grazing pressure.

40C - Lookingglass very stony silt loam, 2 to 20% slopes

This deep moderately drained soil is found on uplands. It was formed from windblown soils and volcanic ash overlying older residual soils formed from volcanic tuff and basalt. Native vegetation is mainly coniferous forest and an understory of grasses, forbs and shrubs. It is found at elevations of 2,700 to 3,700 feet, has an average annual precipitation of 17 to 30 inches, and average annual air temperature of 45 to 48^0 F and a frost free period of 110 to 140 days.

Permeability is moderate to 21 inches and very slow below that depth. Water supplying capacity is 14 to 18 inches, and effective rooting depth is 20 to 40 inches. Runoff is slow to medium and the hazard of water erosion is slight to moderate. Water is perched above the clay subsoil in winter and spring.

These soils are usually used for timber production, woodland grazing and wildlife. It is best suited to growing ponderosa pine. The site index for ponderosa pine is 85 to 90 based on 100 years. The soils are capable of producing 300 board feet per acre per year on the average. Over 400 board feet per acre per year can be produced on a fully stocked sawlog size stand. Conventional ground skidding methods of harvest are suitable. The soils can be compacted when wet, so harvest should be restricted to frozen or dry conditions. Roads for year around use need heavy base rock.

Plant competition delays natural regeneration of trees, but does not prevent the eventual development of a fully stocked stand. Seedling survival on south facing droughty slopes can be improved by providing shade for seedlings. Trees are commonly subject to windthrow when the soils are excessively wet and the winds strong.

The potential understory plant community is mainly elk sedge, pinegrass, bluebunch wheatgrass and Idaho fescue. The production of forage is limited by tree stand density. Livestock grazing should be managed to that the desired balance of preferred species is maintained in the plant community.

44C – Olot silt loam, 2-12% slopes

This moderately deep, well-drained soil is found on ridgetops on mountainous uplands. It was formed by volcanic ash and wind carried and deposited soils over a native soil formed from dominantly by basalt. The native vegetation is mainly coniferous forest with an understory of shrubs, forbs and grasses. It is found at elevations of 3,000 to 5,000 feet. The climate provides an average annual precipitation of 18 to 35 inches, an average annual air temperature of 42 to 46° F, and an average frost-free period of 30 to 90 days.

The soil has a moderate permeability to 19" and slow permeability below that depth. Rooting depth is 20 to 40 inches. Water supplying capacity is 13 to 17". Runoff is slow to medium, and

the hazard of water erosion is slight to moderate. These soils are usually used for timber production and for wildlife habitat. Its use for grazing is limited to a short time following harvest of timber on grasses seeded on open, disturbed areas.

These soils are well suited to the production of timber and wildlife habitat. It is well suited to growing Douglas-fir and western larch. The site index for Douglas-fir ranges from 70 to 75 on a 50 year basis. The potential average annual production is 375 board feet per acre per year. A managed forest with several age classes can produce more board feet per acre per year.

The main concern in producing and harvesting timber is to disturb the ashy surface layer as little as possible. The ashy soils can hold and easily give up to vegetation high amounts of moisture. This is what provides the high level of growth as the soil is not particularly high in nutrient values. During wet periods ground harvest can easily displace the soil causing deep ruts and/or skid trails. During dry periods the soil is also easily displaced and the dust can get very deep.

Conventional methods of harvest can be used. Roads and landings can be protected from erosion by proper design including shallow grades, water bars, well designed and placed culverts and erosion seeding. Natural regeneration is often delayed due to native plant competition, but fully stocked normal stands can be expected given time. Windthrow can be a problem when the soils are wet.

55D – Rockly extremely stony loam, 2 to 20% slopes

This very shallow, well-drained soil is found on ridge tops and on south and west facing slopes of uplands. It was formed mainly from basalt. Some loess and volcanic ash is found in the surface layer. Native vegetation is mainly bunchgrasses, annual forbs and sagebrush. It is found at elevations of 2,600 to 4,600 feet.

Permeability is moderately slow. Water supplying capacity is 1 to 3 inches, and effective rooting depth is 5 to 10 inches. Runoff is slow to medium and the hazard of water erosion is slight to moderate.

These soils are used mainly for rangeland and wildlife habitat. In good condition, the native vegetation would be bluebunch wheatgrass, Sandberg bluegrass and stiff sagebrush. Usually it does not do well with range seeding. Good grazing management is the best way to keep preferred forage species and production high. Livestock grazing should be managed to that the desired balance of preferred species is maintained in the plant community. The production of forage suitable for grazing is limited by the very shallow depth to bedrock, droughtiness and stoniness.

58E – Starkey very stony silt loam, 2 – 35% slopes

This shallow well-drained soil is found on uplands. It was formed from residual soils or soils carried overland mainly from volcanic tuff and basalt. Native vegetation is mainly bunchgrasses

and annual forbs. It is found at elevations of 2,800 to 4,000 feet. Included in this unit are small areas of Gwinly, Ukiah and McMurdie soils.

Permeability is slow due to the clay in its makeup. Water supplying capacity is 4 to 9 inches, and effective rooting depth is 10 to 20 inches. Runoff is slow to rapid and the hazard of water erosion is slight to high.

These soils are used mainly for rangeland and wildlife habitat. In good condition, the native vegetation would be Idaho fescue, bluebunch wheatgrass and Sandberg bluegrass. The production of vegetation suitable to livestock grazing is limited by stones on the surface and low available water capacity. Usually it does not do well with range seeding. Good grazing management is the best way to keep preferred forage species and production high. Livestock grazing should be managed to that the desired balance of preferred species is maintained in the plant community.

59E - Tolo silt loam, 12-35% slopes

This deep, well drained soil is found on mountainous uplands. It was formed by volcanic ash and wind carried and deposited soils over a native soil formed from wind carried and deposited soils and basalt. The native vegetation is mainly coniferous forest with an understory of shrubs, forbs and grasses. It is found at elevations of 3,000 to 4,200 feet. The climate provides an average annual precipitation of 18 to 35 inches, an average annual air temperature of 42 to 45^0 F, and an average frost-free period of 50 to 100 days.

The soil extends to 65 inches or more with a moderate permeability to 33". Rooting depth is to 60 inches or more. Runoff is medium to rapid, and the hazard of water erosion is moderate to high. These soils are usually used for timber production and are used for wildlife habitat. Its use for grazing is limited to a short time following harvest of timber on grasses seeding on open, disturbed areas.

These soils are well suited to the production of Douglas-fir and western larch. White fir and Englemann spruce are other common species on these soil types. The site index for Douglas-fir ranges from 75 to 85 on a 50 year basis. The potential average annual production based on a 110 year rotation is 460 board feet per acre per year. A managed forest with several age classes can produce 500 to 600 board feet per acre per year.

The main concern in producing and harvesting timber is to disturb the ashy surface layer as little as possible. The ashy soils can hold and easily give up to vegetation high amounts of moisture. This is what provides the high level of growth, as the soil is not particularly high in nutrient values. During wet periods ground harvest can easily displace the soil causing deep ruts and/or skid trails. During dry periods the soil is also easily displaced and the dust can get very deep.

If exposed, this soil is very prone to rill and gully erosion. Roads and landings can be protected from erosion by proper design including shallow grades, water bars, well designed and placed culverts and erosion seeding. Natural regeneration is often delayed due to native plant

competition, but fully stocked normal stands can be expected given time. Ground harvesting methods can be used if used with care on these soils.

70B – Wilkens silt loam, 1-5% slopes

This deep, somewhat poorly drained soil is in mountain meadows on uplands. It was formed by volcanic ash and wind carried soil over a native soil formed from basalt. The native vegetation is mainly grasses, sedges and annual forbs. It is found at elevations of 3,200 to 5,000 feet. The average annual precipitation is about 17 to 32 inches, an average annual air temperature of 41 to 45^0 F, and an average frost-free period of 50 to 100 days.

The soil extends to 60 inches or more with a moderate permeability to 26". Rooting depth is to 60 inches or more. Water supplying capacity is about 10 to 12 inches. Runoff is slow, and the hazard of water erosion is slight. These soils are usually used for rangeland. It is also used as wildlife habitat.

If the range vegetation is good or excellent condition, the native grasses are mainly tufted hairgrass, redtop, and bluegrass. Sedges are also important plants in this unit. If the range condition is seriously deteriorated seeding is needed. Plants that tolerate wetness should be seeded. Grazing should be delayed until the soil has drained sufficiently and is firm enough to withstand trampling by livestock. This unit is poorly suited for recreational development.

72C - Wolot silt loam, 2 – 12% slopes

This deep well drained soil is on uplands. It formed in volcanic ash deposited over a soil that formed in native soils derived mainly from basalt and windblown material. The vegetation is mainly coniferous forest and an understory of grasses, forbs and shrubs. Elevation is 2,700 to 3,900 feet. The average annual precipitation is 18 to 25 inches. The average annual air temperature is 45 to 48 degrees F and the average frost free period is 100 to 150 days.

The soil depth is about 60 inches and permeability is moderate to a depth of 29 inches and moderately slow below this depth. Available water capacity is about 11 to 24 inches with a water supplying capacity of 13 to 25 inches. Effective rooting depth is 60 inches or more. Runoff is low to medium and the hazard of water erosion is slight to moderate.

This unit is used mainly for timber production and wildlife habitat. It also could be used for cultivated crops. It is well suited to the production of Douglas-fir and ponderosa pine. The site index for Douglas-fir ranges from 71 to 80. The site index for ponderosa pine is 100 to 110. On the basis of a site index of 75 the potential production per acre of wood fiber is 50 thousand board feet per acre from an even-aged fully stocked stand at 120 years.

The main concern in producing and harvesting timber is to disturb the ashy soil layer as little as possible. This layer has exceptionally high available water capacity and nutrients important to plant growth. To attain little disturbance harvesting when the soil is neither too wet nor too dry is essential. Disturbed soil is to rills and gully erosion and to sloughing.

Roads and landings can be protected from erosion by proper drainage and seeding grasses. Plant competition delays regeneration of trees but does not prevent eventual development of a fully stocked normal stand.

This unit is well suited to recreational development but limited during dry seasons due to dustiness. Recreation areas can be protected from dry season dust erosion by providing and maintaining plant cover.

WOODLAND OWNER ASSISTANCE

TECHNICAL ASSISTANCE

Forest landowners wanting technical assistance or information regarding management or acquisition of forest resources have several sources to draw from. Some information is available free of charge, and other information is available for pay. It is important to understand what kinds of services are available as well who will benefit from the offered service. An important question to ask is whether the person offering the service works for you, in your interest, or for someone else that would benefit from offering you advice. There is often an important distinction to be made whether you obtain information from professional resource managers (foresters, wildlife biologists, fisheries biologists, hydrologists, engineers, etc.) or from someone in the business of harvesting the resource (logging contractors, livestock operators, guides, etc.). Following are some sources of technical assistance and some information about the sources.

Professional Consulting Foresters

Consulting foresters are self-employed individuals with education (at least a Bachelor's degree in Forestry) and experience in Forestry. They are available to work for you for a fee, usually based on an hourly rate but sometimes on a percentage of harvest rates. A consulting forester works for you in your best interest. A consulting forester does not represent a mill, logging contractor, timber broker or anyone else that would benefit from the sale of your timber. A consulting forester represents you, and you pay him for his advice and work.

Consulting foresters can advise you on the condition of your timber and other forest resources such as water, forage, wildlife, understory vegetation, and the like. They advise you of all facets of a timber sale, including which trees to harvest, how much to harvest, the logging systems best suited for your land, markets and best times to harvest. The forester should be able to answer any questions you have about forest resource management, or find a reliable source to answer your questions. A consulting forester often makes you enough extra money to pay for his services.

A forester may not be able to answer all of your questions. There are usually other professionals in forested resource management available to help you in other areas of concern such as wildlife or forage management, or in specialty areas such as forest genetics. These individuals work on a consultation basis the same as described for foresters in the above paragraphs.

To find a certified forestry consultant go to: www.forestry.org or www.acf-foresters.org .

Oregon Department of Forestry

The Oregon Department of Forestry has foresters, hydrologists and other professional resource managers available to provide information for you. They have many helpful pamphlets and other sources of information as well providing on the ground advice. The advice and information is available free of charge. They are a good source of information but are limited in the amount of time they can spend with individuals. A Service Forester is available for management information and to administer federal subsidy programs such as SIP (Stewardship Incentive Program), FLEP (Forest Land Environmental Programs), CRP (Conservation Reserve Program) and others. Specials programs become available from time to time and they can advise you about them.

Service Foresters are helpful in initial assessments of forest resource needs and opportunities. They are knowledgeable about local forest products markets and logging, thinning or planting contractors. Advice on forest taxes and laws concerning harvest of your timber is available through them.

The State FPO (Forest Practices Officer) can also be of assistance to you. The FPO can advise you about harvesting rules, notifications of operation and harvesting in stream side and other sensitive areas. The FPO's main job is to see that all laws regarding the harvest of timber, the Oregon Forest Practices Act, are followed.

In Union County the Service Forester or FPO can be reached at:

State Forestry Office
611 Twentieth Street
La Grande, OR 97850
(541) 963-3168

Union County Extension Service

The Union County Extension Service is part of Oregon State University. The Extension Forester provides educational programs to private landowners. The Extension Forester also will provide many educational materials, or help you to find what you need. Advice is available free of

charge. He will also provide you with a monthly newsletter of interest to most landowners. The Extension Forester can be reached at:

Union County Extension Office
10507 N. McAlister Lane
Island City, OR 97850
541-963-1061

Natural Resource Conservation Service

Another source of technical information about forest soils and conservation practices is the Natural Resource Conservation Service. This is a federal agency that works with natural resource owners. They can provide advice on many subjects including grazing, fencing, streamside management, planting grass or other conservation plantings, spring development, bridge and culvert design and other areas. They too help administer federal subsidy programs that provide cost share money for conservation plantings, spring developments, wildlife planting and many other practices. The amount of funding and cost shares is continually changing, so it is best to check with them whenever specific information is needed.

Natural Resource Conservation Service
AG Service Center
1901 Adams Ave.
La Grande, OR 97850
(541) 963-4231

Financial Assistance

Woodland owners can often obtain cost share assistance for many conservation practices. Cost shares are not provided for commercial operations such as harvesting timber, but are available for other activities. These activities include but are not limited to tree planting, precommercial thinning, slash piling, erosion control, riparian planting and other conservation practices. The Farm Services Agency is responsible for disbursing funds for programs you have signed up for, while Oregon State Forestry or the Natural Resource Conservation Service assists in planning and assuring that the work is done correctly.

Farm Service Agency
AG Service Center
1901 Adams Avenue
La Grande, OR 97850
(541) 963-4231

There are many different types of programs available, and the cost share programs change almost on a yearly basis. Asking questions of several of the technical assistance people will help to provide you with the wide array of programs available in a given year.

Fish, Wildlife and Watershed Information

There are two major places to obtain information and advice about fish and wildlife matters. The Oregon Department of Fish and Wildlife will provide personal information as well as many pamphlets and bulletins regarding management of fish and wildlife on your property. The Grand Ronde Model Watershed Program and associated programs can provide advice as well as financial support for water related programs. The offices in La Grande are:

OR Department of Fish and Wildlife
107 20th Street
La Grande, OR 97850
(541) 963-2138

Grande Ronde Model Watershed
10901 Island Avenue
La Grande, OR 97850
(541) 962-6590

OREGON'S FOREST PRACTICES ACT

The Oregon Forest Practices Act establishes standards that encourage and enhance the growing and harvesting of trees while maintaining the environmental quality of the forest. Major components addressed are the trees, soil, air, water resources and wildlife and aquatic habitats. Riparian areas next to streams, lakes and estuaries have been given special protection using BMP's (Best Management Practices) developed through extensive field studies. These areas plan an important role in protecting water quality and fish populations. Wildlife often finds all of the necessities of life in these areas. Wetlands and the land adjacent to them are also provided special protection to maintain the water quality and quantity and the fish and wildlife values this resource contributes to the forest environment.

The Act regulates activities during precommercial and commercial operations on all private and state forestlands. It provides for this regulation of forest operations to be under the Oregon Department of Forestry coordination. Through agreements, federal forestland agencies meet or exceed these practices on the lands they manage.

Forest Practices Rules require the landowner, timber owner or operator to file a written notification with the State Forester through its local District or Unit offices **at least 15 days** before starting an operation. Operations notification forms are available for this. Maps of the operation are a part of the notification. This advance notice gives state foresters the opportunity to review the work site, identify potential problem areas and help landowners and operators avoid problems. If there are no sensitive features in the proposed harvest area, the 15-day waiting period might be waived at the discretion of the State Forester. If the operation encompasses a sensitive area such as a stream or area with special biological characteristics an

additional written plan is required and then a 15-day waiting period is required before starting your operation. If some resources such as eagle nest or roost is near your property you will be notified if you need a written plan and the time periods in which harvesting would be allowed.

Copies of the Forest Practices Act and Regulations are available at all Oregon Department of Forestry offices. Your local office is located at 611 Twentieth Street in La Grande. The phone number is 541-963-3168.

Notification of Operations on forestlands is required when:

1. Harvesting of forest tree species
2. Road construction or reconstruction
3. Site preparation for reforestation
4. Slash disposal or treatment
5. Chemical treatment
6. Precommercial thinning
7. Clearing forest land for conversion to any non-forest use
8. Commercial cutting of firewood
9. Surface mining.

STATE OF OREGON
PERMIT AND NOTIFICATION REQUIREMENTS

Oregon Revised Statute, ORS 477.625 states that every person conducting an operation using power-driven machinery shall first obtain from the State Forester a written permit for the calendar year. "Operation" means any industrial activity, development, and improvement on or within one-eighth mile of forest land. "Forest land" means any forested land, woodland, brushland, cutover land, and land clearing which during any time of the year contains enough flammable forest growth, slashing, or debris to constitute a fire hazard.

Operations requiring permits are:

1. Logging
2. Sawmilling
3. Clearing of land on rights-of-way
4. Thinning and/or pruning
5. Well drilling
6. Blasting
7. All other uses of fire in any form

Oregon Revised Statute, ORS 527.670 states that an operator, timber-owner, or landowner, before commencing an operation, shall notify the State Forester. "Operation" means any commercial activity relating to the growing, harvesting, or processing of forest tree species. In addition, this notification will be required at least 15 days prior to commencement of the operation.

Operations requiring notifications are:

1. The harvesting of forest crops
2. Road construction or reconstruction of existing roads.
3. Site preparation
4. Application of insecticides, herbicides, rodenticides and fertilizers
5. Clearing forest land for change to non-forest use
6. Treatment of slashing after completion of operations
7. Pre-commercial thinning or release

Both the "Permit to Operate Power-Driven Machinery" and the "Notification of Operation" can be filled out on the same permit form at offices of the State Forester. The office where these permits may be obtained is:

Oregon Department of Forestry
611 Twentieth
La Grande, OR 97850
(541) 963 3168

FIRE PREVENTION AGREEMENT

Between

Oregon Department of Forestry & Union County- Mt. Emily Recreation Area

July 23, 2009

Introduction

The Mt. Emily Recreation Area (MERA) is owned by Union County and is managed for multiple uses including Off Highway Vehicle OHV usage such as ATVs and motorcycles. MERA is protected from wild land fire by the Northeast Oregon District of the Oregon Department of Forestry (ODF). The legal authority for imposing fire prevention measures lies with ODF.

Authority

The authority to regulate public use on lands protected from fire by the Oregon Department of Forestry falls under the requirements developed in Oregon Revised Statutes, Chapter 477 (ORS 477) and Oregon Administrative Rule, Chapter 629 (OAR 629). These are the same statutes and rules that other forest landowners and the general public are required to follow during fire season and public use restrictions such as Regulated Use Closure.

Background

When ODF declares fire season there are no restrictions on OHV or other motorized use of MERA. However under Regulated Use Closure there are two restrictions that apply to motorized and OHV use. These restrictions state:

- Off-road use of any motorized vehicles, including motorcycles and all terrain vehicles (ATV's), is prohibited, except on improved roads or for the commercial culture and harvest of agricultural crops. An improved road is defined as a road that is maintained for passenger car use and is fully clear of any flammable material, including grass

- Possession of the following fire fighting equipment is required while traveling, except on state and county roads: one axe, one shovel, and one gallon of water or one operational 2½ pound or larger fire extinguisher.

At the request and acceptance of an increased potential of fire by Union County, ODF has been asked to review the Regulated Use Closure restrictions to determine what could be done to increase the time period of OHV use on MERA.

Prevention Requirements

In light of the extra measures provided by the County to educate, regulate and enforce fire prevention regulation with MERA users, ODF- NEO District has reviewed the restrictions and agrees to allow OHV (ATVs and motorcycles) use under Regulated Use Closure until an extreme fire danger level is reached with the following conditions:

1. OHV use would be limited to designated roads and trails clear of flammable debris. The County would post and actively enforce usage of only open trails meeting these criteria.

2. ATVs and motorcycles would not be required to carry a shovel or a fire extinguisher. The County would inspect and enforce requirements for adequate exhaust systems and spark arrestors on ATVs and motorcycles using MERA.

3. All OHV use on MERA would be suspended when ODF- Northeast Oregon District declares extreme fire danger. The only exception to this total suspension will be motorized use including OHVs of the Old Mt Emily Road. It will be necessary for any vehicles or OHVs (excluding motorcycles) traveling the Old Mt. Emily Road under extreme fire danger to comply with the standard tool requirements of carrying fire fighting equipment of one shovel and one operational 2½ pound or larger fire extinguisher. The County would inform MERA users and enforce the suspension under extreme fire danger. It will be ODF's responsibility to notify the County when conditions reach extreme fire danger and suspension is required. ODF also would notify the County when

conditions changed and usage could resume. It will be the County's responsibility to inform MERA users when the suspension is in effect.

4. Other Regulated Use Closure requirements prohibiting smoking while travelling in vehicles (including ATVs and motorcycles) and prohibiting camp fires (including MERA campground(s)) would be adhered to and actively publicized, regulated and enforced by the County. **These requirements would go into effect when Regulated Use Closure is declared.**

5. As a condition of this waiver the County will provide 50 person hours of fire prevention education and enforcement of MERA users starting when **ODF enacts Regulated Use Closure** AND strict enforcement of the use suspension under extreme fire danger. The County will be responsible for advertising the use suspension under extreme fire danger in local newspapers and will post these fire prevention requirements (use restrictions, no campfires, no smoking) at key points in MERA.

Agreement

It is mutually agreed that the items identified above will be adhered to by both parties.

_____ _____

John Buckman
State Forester Representative **Date**

_____ _____

Union County Commissioner

Date

MAPS

FIRE PREVENTION AGREEMENT

Between

Oregon Department of Forestry & Union County- Mt. Emily Recreation Area

April 16, 2024

Introduction

The Mt. Emily Recreation Area (MERA) is owned by Union County and is managed for multiple uses including Off Highway Vehicle OHV usage such as ATVs and motorcycles. MERA is protected from wild land fire by the Northeast Oregon District of the Oregon Department of Forestry (ODF). The legal authority for imposing fire prevention measures lies with ODF.

Authority

The authority to regulate public use on lands protected from fire by the Oregon Department of Forestry falls under the requirements developed in Oregon Revised Statutes, Chapter 477 (ORS 477) and Oregon Administrative Rule, Chapter 629 (OAR 629). These are the same statutes and rules that other forest landowners and the general public are required to follow during fire season and public use restrictions such as Regulated Use Closure.

Background

The Oregon Department of Forestry (ODF) annually implements fire restrictions through proclamation governing public use on ODF protected land during moderate, high and extreme fire danger. Those restrictions are reviewed and updated annually to address changing uses. MERA is located in the ODF La Grande Units protection.

Prevention Requirements

In light of the measures provided by the County to educate, regulate and enforce fire prevention regulations with MERA users, ODF- NEO District has reviewed the restrictions and agrees to allow OHV (ATVs and motorcycles) use consistent with ODF Public Use Restrictions with the following conditions:

1. During "High and Extreme Fire Danger" OHV use would be limited to **MERA designated roads and trails**. The County would post and actively enforce usage of only open trails emphasizing no off road/trail travel.

2. Motorcycles would not be required to carry a shovel or a fire extinguisher during high and extreme fire danger. The County would inspect and enforce

requirements for adequate exhaust systems and spark arrestors on motorcycles using MERA.

3. All OHV use on MERA would be suspended between the hours of 1200 and 2000 when ODF- Northeast Oregon District declares extreme fire danger. The only exception to the hours of operation suspension will be motorized use of Public Use Roads (including the 3120 road and Mt Emily Road). It will be necessary for any vehicles or OHVs (excluding motorcycles) traveling on designated roads and trails during the open time period in extreme fire danger to comply with the standard tool requirements of carrying firefighting equipment of one shovel and one operational 2½ pound or larger fire extinguisher. The County would inform MERA users and enforce the suspension under extreme fire danger. It will be ODF's responsibility to notify the County when conditions reach extreme fire danger and suspension is required. ODF also would notify the County when conditions change and Motorized usage during the designated hours could resume. It will be the County's responsibility to inform MERA users when the suspension is in effect.

4. During extreme conditions and with critical fire severity potential, taking into account both fuel conditions and resource availability, the Oregon Department of Forestry retains the right to restrict all motorized use on MERA. The only exception to this suspension will be vehicles and OHVs on Public Use Roads (including the 3120 road and Mt Emily Road). The County would inform MERA users and enforce the suspension. It will be ODF's responsibility to notify the County when conditions warrant the complete suspension. ODF also would notify the County when conditions moderate and Motorized usage can resume. It will be the County's responsibility to inform MERA users when the suspension is in effect.

5. Fire danger requirements prohibiting smoking except while travelling in vehicles (including ATVs and motorcycles) and prohibiting campfires (including MERA campground(s)) would be adhered to and actively publicized, regulated and enforced by the County. **These requirements would go into effect consistent with Public Use Restrictions when Fire Season is declared.**

6. As a condition of this waiver the County will provide a minimum of 50 person hours of fire prevention education and enforcement to MERA users starting when **ODF Fire Season is declared** AND strict enforcement of the hours of use suspension and or complete suspension. The County will be responsible for advertising the suspensions in the local newspaper, website and social media.

7. As a part of the prevention education and enforcement for MERA users, the County will place Fire Danger signs and public use restrictions at the Fox Hill, Owsley Canyon and Igo Lane Trailheads. Included on the fire danger signs will be instructions on reporting fires and the recommendations that all users have

immediate access to a cell phone in order to facilitate the reporting. Installation, maintenance and updating the fire danger signs will be a major part of the prevention requirements.

Agreement

It is mutually agreed that the items identified above will be adhered to by both parties.

Matt Howard 4/16/24

Matt Howard
State Forester Representative **Date**

Paul Anderes PA 5-1-24

Paul Anderes
Union County Commissioner

Date

Attachments: 1 - 2024 Public Use Proclamation

Insert 2024 Public Use Proclamation

MERA Trail Management Plan

1. Introduction

The MERA Motorized Trail System is being developed to provide recreation opportunities to OHV's of all classes. The trail system is open year round with some seasonal closures for winter wildlife range and periodic closure due to poor soil conditions. Trails are limited to designated uses. Class II trails are open to Class I & IV and III as well, Class I & IV trails also open to Class III. Currently trails are being designed and developed for all classes of OHV's and skill levels to enhance the trail system and create diversified user experiences.

The MERA Non-Motorized Trail System is intended to provide quality recreation opportunities to a wide variety of trail users. Hiking, birding, running, horseback riding, mountain biking, skiing, berry picking, hunting, and snowshoeing are some, but not all, of the common uses. The majority of the non-motorized trails are multiuse, though some trails may be designed with a particular use in mind and therefore may be less desirable for other uses. Additionally, there are some trails that have regulated use and direction. The trails are all built and maintained to a sustainable standard and laid out in a stacked loop design which provides ease of maintenance, a variety of trail experiences, and opportunities for expansion and connectivity with other trail systems.

Trails will generally be open year round to all users, but may be temporarily closed to specific uses at certain times due to fire restrictions, events, logging activities, resource damage, wildlife concerns or wet soil conditions as determined by the MERA Coordinator.

2.Definitions & Abbreviations

-Sustainable trail: "Sustainability means creating and maintaining trails that are going to be here for a long time. Trails with tread that won't be eroded away by water and use. Trails that won't affect water quality or the natural ecosystem. Trails that meet the needs of the intended users and provide a positive user experience. Trails that do no harm to the natural environment." USFS Trail Construction and Maintenance Notebook (2007)

-RTP: Recreational Trails Program

-USFS: United States Forest Service

-IMBA: International Mountain Bicycling Association

-MMTF: Man Made Technical Feature

-Committee: MERA Non-Motorized or Motorized Advisory Committee

-Proponent: Person or group making a Proposal

- New Trail Construction: The act of developing new or renovating previously built recreational trail where the renovation goes beyond normal maintenance, this includes MMTF, tread, and facilities.

- Maintenance: any activity to maintain the usability and sustainability of trails within MERA, including: ensuring trails are passable by the users for which they are managed; preventing environmental damage resulting from trail deterioration; protecting public

safety; and averting future deferred maintenance costs. Any modifications/ alterations that go beyond the tasks listed above shall be considered new trail construction.
-TMO: Trail Management Objective

3. Existing Trail Inventory Procedure

3.1. The existing trails and roads on MERA shall be GPS'd by the County, or it's designated representative, inventoried, and evaluated for potential inclusion in the MERA trail system.

3.2. Those trails included in the MERA Trail System shall be named and/or numbered and otherwise signed in accordance with the MERA Sign Plan.

4. New Trail Proposal Procedure

4.1 Submission of New Trail Proposal Any person or user group may submit a proposal for a new trail to the Committee. The proposal shall be a detailed written document containing, at a minimum, a demonstrated need for the trail, the intended uses, the allowed uses, sustainability compliance, the specific location, trail features, how the trail complements existing trails, a trail adoptee, funding, timeline, aerial photos, and contour maps. The Proposal shall be submitted electronically to the MERA Coordinator for distribution to the Committee.

4.2 Review of New Trail Proposal New trail proposals shall be presented to the Committee at a regularly scheduled meeting by the Proponent, who will be available to answer questions. The Committee will assess the Proposal for thoroughness, compliance to applicable standards, demonstrated need, suitability, and whether it complements the existing trail system.

4.2.a. The Committee will take action at the end of the Proposal presentation and discussion to either accept, deny, or table the Proposal.

4.3 Walk-thru of New Trail. Once the trail proposal has been reviewed and approved by the Committee, a walk-thru will be scheduled. The walk-through will be a week long period where Committee members have the chance to walk the trail and send comments to the MERA Coordinator. At a minimum, the walk-thru will be performed by the Coordinator and the trail Proponent. The walk-thru will be open to all Committee members for participation. The purpose of the walk-thru is so the Coordinator and Committee members can see the actual proposed trail laid out on the ground and have an opportunity to ask questions, identify issues, and discuss related responsibilities. A yes or no recommendation to proceed will be made by the Coordinator at the conclusion of the one-week period.

4.3.a. Any conflicts or issues unable to be resolved during the walk-thru which result in a negative recommendation to proceed may be taken up by the Committee at their next regularly scheduled meeting.

4.3.b. Prior to the walk-thru, the Proponent will flag, stake, or otherwise mark the intended trail route in such a fashion that the trail flow, features, MMTFs, etc., will be

generally recognizable. Contour maps and/or aerial photos showing the trail route and features will also be provided by the Proponent for the walk-thru.

4.4 Approval of New Trail Construction. Upon receipt of a notice to proceed from the Coordinator, the Proponent will notify the Coordinator of estimated construction dates and timelines and be allowed to begin construction if all other local, state, and federal requirements have been met and there are no conflicts with other MERA activities in that time period.

4.5 Final Walk-thru of New Trail. The trail Proponent shall notify the Coordinator when construction is complete. The Coordinator, Proponent, and Committee user group representative(s) from the initial walk-thru, shall do a final walk-thru to assure that the trail complies with the proposal and meets the sustainable construction and maintenance standards of. If problems are found to exist, the trail Proponent shall make the necessary modifications for approval. Problems, if any, and possible solutions, will be addressed during the walk-thru and a yes or no notice of acceptance given at the conclusion of the walk-thru.

4.5.a. Any conflicts or issues unable to be resolved during the final walk-thru which result in a negative notice of acceptance may be taken up by the Committee at their next regularly scheduled meeting.

4.6 Adoption of New Trail. When a trail has received a notice of acceptance after the final walk-thru, the Committee will review the trail proposal and make final approval and adoption of the new trail into the MERA trail system. Upon final approval and adoption, the trail will be GPS'd and added to the system map. MMTF's will be GPS'd, photographed, and kept on record at the Coordinator's office.

6. Standards for Trail Construction & Maintenance

6.1. Trail Construction and Maintenance
All trails will be of a sustainable design and constructed and maintained according to the standards outlined in IMBA's "Trail Solutions: IMBA's Guide to Building Sweet Singletrack" (2004), the USFS "Trail Construction and Maintenance Notebook" (2007), "Natural Surface Trails by Design" (2004) by Troy Scott Parker or NOHVCC great trails. RTP's "Equestrian Design Guidebook for Trails, Trailheads, and Campgrounds" (2007), will be used to incorporate trail and trailhead design elements to accommodate equestrians and reduce potential conflicts.

6.2. Additional references may be adopted as needed to provide standards not covered in (6.1).

6.3. Standards The standards referenced in (6.1) and any other standards that may be adopted, shall be maintained at the MERA Coordinator's office, be available for review by the general public, and referred to collectively as MERA Trail Standards.

7. Decommissioning of Trails

If the MERA coordinator determines that a trail or MMTF does not meet the MERA Trail Standards and or is not being maintained to a safe standard, then the trail or MMTF will be either closed or decommissioned as seen fit by the MERA Coordinator. Before decommissioning, the MERA Coordinator may seek a recommendation from the MERA advisory Committee.

8. Unauthorized Trail/MMTF Construction

All new construction must have the approval of the MERA Coordinator and the MERA Advisory Committee. If it comes to the attention of the Coordinator or Committee that a trail or MMTF is being built without approval, it will be the MERA Coordinators responsibility to contact the builder and educate the individual on the new trail proposal process. If the builder is non-compliant and or cannot be identified, then MERA Coordinator may decommission the trail or MMTF. Unauthorized trail construction at MERA is subject the civil penalties in accordance with Union County Ordinance NO. 2021-05.

9. Trail Adoption/Maintenance Agreements

7.1. Organizations may adopt trails or enter into a trail maintenance agreement with the County in accordance with the MERA Volunteer Plan administered by the MERA Coordinator. It shall be a goal to achieve long term adoption of all trail in MERA.

7.2. All maintenance shall be performed to the sustainable standards set forth in (6.1) the MERA Maintenance Plan.

10. Trail Management

8.1. Trail Use Guide (summarized MERA Trail Rules formatted for public posting. See Appendix A for formats with different amounts of detail.)

1. Use Open Trails Only. Stick to trails which are designated for your use and respect closures, area boundaries, and the privacy rights of adjacent landowners.

2. Leave No Trace. Be aware of the condition you are leaving the trail in. No littering! If you pack it in; pack it out.

3. Maintain control of your vehicle, bike, horse, dog, and good humor. You could meet someone at the next corner.

4. Be Courteous. Courtesy is Contagious. Familiarize yourself with trail etiquette and yield right-of way willingly and accordingly. Always make your presence known when overtaking from behind and show respect by slowing to the speed of the other user when passing.

5. Never Spook Animals. You are a guest in their home; act accordingly.

6. Plan Ahead. Know your equipment, your ability, your animals, and the challenges you are likely to encounter.

7. Be an Ambassador. Your actions on the trail will reflect on your recreational activity as a whole. Keep trails open by setting a good example of environmentally sound and socially responsible trail use.

10.2. Trail Etiquette

*Yield right-of-way to those passing you from behind or traveling uphill.
*Motorized vehicles yield to mountain bikes, runners, hikers, and horses.
*Mountain bikes yield to runners, hikers, and horses.
*Runners and hikers yield to horses.

When yielding to horses, move off the trail on the downhill side if possible and say a few words of greeting to the horse rider in a relaxed voice. This verbal exchange allows the horse to recognize the yielding user as a person rather than a threat. Being partially obscured by brush or wearing a helmet or pack can alter the human outline enough that a horse won't recognize them without hearing them speak. Let the horses pass and go at least 3 horse lengths down the trail before re-entering the trail.

Trail courtesy signs will be conspicuously posted as reminders of trail etiquette.

10.3. Motorized Trail 490.

On the portion of MERA Motorized Trail 490, which is a motorized trail that-runs through the non-motorized area between Upper Igo Trailhead and Mt Emily Rd, all motorized users will yield right-of -way to all non-motorized users. The trail part of trail 490 will be motorized use only.

10.4. Closures

Trails will generally be open year round to all users, but may be temporarily closed to specific uses at certain times due to fire restrictions, events, logging activities, resource damage, wildlife concerns or wet soil conditions as determined by the MERA Coordinator.

10.5. MERA Motorized Trail Rules

1. Persons operating motorized and non-motorized vehicles in the MERA shall:

a. Obey regulatory signs;

b. Restrict speed and manner of operation to reasonable and prudent practices relative to terrain, prevailing conditions, equipment, personal capabilities, personal safety and the safety of all park visitors;

c. All yield to pedestrians;

d. Use caution when approaching turns or areas of limited sight distance;

e. Not disturb or harass wildlife; and

f. Comply with any additional requirements of the MERA rules.

g. Observe seasonal closure of Trail 490, October 1- March 31.
h. Over snow travel permitted on trails 201,202,203.

2. Regulations and Restrictions Pertaining to the Operation of Off-Highway Vehicles on Designated Union County Roads

a.Pursuant to the regulatory authority granted to Union County under ORS 821.200 and 821.020

1. Union County Roads designated as being open for public travel for OHVs shall be defined and designated by an "Off-Highway Vehicle Travel Map". This map shall be maintained by Union County and may be changed, modified or amended by Union County through the public process. These maps will be made available to the public.

2. Any person operating an OHV on any designated Union County Public Right-of-Way must have in their possession a valid current driver's license issued by the State of Oregon, or by any other state.

3. When operating on any Union County road designated for OHV use, OHVs shall be considered to be "motor vehicles" as defined in the Oregon Motor Vehicle Law, and shall be required to maintain at least the minimum liability insurance coverage required by such Law.

4. It shall be a violation of this Ordinance for any person to operate an OHV on any Union County Public Right-of-Way not designated for use by OHVs.

b. The provisions of Section 3(A) shall not apply to any person operating an OHV on any Union County Public Right-of-Way for bona fide agricultural purposes. For purposes of this ordinance "agricultural purposes" is defined to mean the use of land for the production of food, fiber, weed control, fire mitigation, maintaining ditches or other activities intended for the maintenance of real property, and the growing of crops and/or the grazing of animals on natural prime or improved pastureland, as well as the clearing of vegetation exclusively for the growing of crops and/or grazing of animals.

10.6. Non-motorized Multi-use Trail System

All trails will be open to all non-motorized user groups unless designated with a specific use. In general trails will contain design elements to accommodate all user groups such as improved sight lines, speed control devices, and go-arounds for man-made technical features (MMTF). Some trails will be more open and flowing, intended for all uses, while others will be more winding and technical, designed with a particular user group in mind. All users will be expected to observe basic trail etiquette, and adhere to the MERA Non-Motorized Trail Rules.

10.6.a. The benefits of a multi-use trail system are:

1. Multi-use trails best accommodate the needs of the most users by dispersing the users across an entire trail system.
2. Sharing trails helps build a trail community through a spirit of cooperation to preserve and protect a common resource.
3. Multi-use trails are most cost effective for land managers as they require less signs, staff, monitoring, and enforcement.
4. Multi-use trails empower responsible, experienced users and the opportunity for peer regulation is enhanced.
5. Multi-use trails take better advantage of the available space.
6. Multi-use trails require less trail miles and therefore have less impact.
7. Multi-use trails manage the most users.

10.6.b. MERA Non-motorized Trail Rules.

1. Obey regulatory signs.
2. Restrict speed and manner of operation to reasonable and prudent practices relative to terrain, prevailing conditions, equipment, personal capabilities, personal safety and the safety of all park visitors.
3. Use caution when approaching turns or areas of limited sight distance.
4. Horses and hikers will be allowed to travel cross-country in the non-motorized trail areas as long as they do not create resource damage or create new trails with repeated use. Cross-country use will be monitored and evaluated for resource damage.
5. Mountain bikes will be restricted to those trails designated for their use.
6. No cutting corners or switchbacks on trails.
7. All users will adhere to posted trail etiquette.
   1. Yield right-of-way to those passing you from behind or traveling uphill.
   2. Motorized vehicles yield to mountain bikes, runners, hikers, and horses.
   3. Mountain bikes yield to runners, hikers, and horses.
   4. Runners and hikers yield to horses.
8. Do not disturb, harass, or chase wildlife or livestock.
9. No littering. Pack it in, pack it out.
10. Use open trails only.
11. Do not use closed trails or areas.
12. Leave gates the way they are found unless otherwise posted.
13. All dogs, pets or domestic animals must be controlled by the owner at all times.

11. Conflicts

11.1. Conflicts-- Preemptive Measures

11.1.a. Proper Trail Design, Layout, and Maintenance. The trail system will employ stacked loops, open sight lines, and speed control features to help disburse the users

over a wider area, avoid blind corners, and reduce surprises to encourage proper behavior.

11.1.b. Information & Education. Informing and educating the users about the rules, regulations, and trail etiquette will establish a basis for appropriate trail behavior by minimizing uninformed, unintentional, and careless actions by users. This can be accomplished through conspicuously posting rules and trail etiquette signs, newspaper articles, and providing the information to the various user group organizations for distribution.

11.1.c. User Involvement. Actively involving users on the Advisory Committee gives them a better understanding of trail planning, management, conflict resolution and to better appreciate one another's needs, expectations, and perspectives.

11.1.d. Rules & Regulations. Well thought out regulations provide the MERA Coordinator with the authority to enforce safe and courteous trail behavior and help clarify for users what is expected of them. Regulations should be posted prominently at trailheads and other appropriate locations.

11.2. Conflicts--Resolution

11.2.a. Conflicts which exceed the ability of the affected parties to resolve on their own will be presented to the MERA Coordinator. The Coordinator will investigate the conflict to his satisfaction and render a decision of resolution.

11.2.b. If one or both of the affected parties take exception to the Coordinator's resolution, they may appeal the decision and request that the Advisory Committee take up the matter at their next regularly scheduled meeting. The Committee will take action based on their findings.

11.2.c. If one or both of the affected parties take exception to the Advisory Committee's decision of resolution, they may appeal the decision and request the Union County Commissioners take up the matter at their discretion. Rulings by the Commissioners are final and not subject to appeal.

12. Monitoring

12.1. Continual close monitoring of both the trail system and user satisfaction is critical to assess whether the overall recreational goals and objectives of MERA, (keeping users safe, minimizing negative impacts to natural resources, and providing high-quality visitor experiences) are being attained as well as the intended goal and objective for each trail area.

12.1.a. Monitoring the physical trail system for maintenance needs, compliance with sustainable standards, actual and potential hazards, proper and appropriate design elements, negative impacts to natural resources, needs for closures, etc. will ensure that the trails are safe, sustainable, properly used, and maintenance resources are appropriately and adequately employed.

12.1.b. Monitoring user satisfaction is critical to determine whether existing trails and facilities are performing as intended and meeting the needs of users as well as gauging the need for expansion or modification of the trail system.

12.1.c. A number of different methods will be utilized to monitor the ongoing effectiveness of trail system management. These will include, but not be limited to, the following:

1. Observation and inspections by the MERA staff
2. Observation and inspections by volunteer patrols
3. Observation of enforcement patrols
4. Feedback from users, user group representatives and organizations
5. Feedback at public meetings
6. A "bulletin board" on the MERA website
7. Other methods deemed necessary and appropriate by the Coordinator or Committee

Revised 4-20-2011

UNION COUNTY – MT. EMILY RECREATION AREA (MERA)

Volunteer Management Plan

Purpose of Volunteer Program

Volunteers have been integral in the acquisition and development of MERA. In an effort to provide more structure and coordination to these ongoing efforts, as well as explore ways of utilizing the skills and desires of citizens to participate, Union County is formalizing its volunteer program. Union County values the donation of effort and time from volunteers as a means to extend the abilities of its staff in managing MERA while also providing education and access to citizens. In order to provide a well-organized and successful volunteer program, Union County and MERA staff will follow the policies set forth in this volunteer plan.

Entry into MERA Volunteer Program

MERA staff will be available to receive inquiries via phone and email, as well as personal contact at events, from citizens interested in volunteering for MERA. Anyone, regardless of race, creed, disability, sexual orientation, age, etc. may become a MERA volunteer. All volunteers are required to provide their own transportation to the location of a project or a pre-arranged meeting place. Due to the physical nature of many volunteer activities, some may not be appropriate for all volunteers. Young children may participate in appropriate projects but they must be accompanied by parents or responsible guardians and must be pre-approved by the MERA Coordinator.

Individuals or groups wanting to volunteer on MERA must complete a Volunteer Information form, Emergency Contact form, and a Release of Liability form. These forms will be available online or can be faxed or mailed upon request. These forms, once signed, are valid for one year and must be renewed annually. A volunteer's contact information will not be voluntarily provided to any other entity outside Union County without permission of volunteer.

There is a possibility that a volunteer will be denied the opportunity to participate in a project if they do not have the appropriate knowledge, skills or abilities required to effectively contribute to project completion and /or could put themselves or another volunteer at a safety risk. Staff will communicate and document any such concerns with volunteer. Effort will be made to find a more appropriate project for the volunteer.

Orientation and Training

Volunteers will receive an orientation on projects led by MERA staff, including a project description, terrain, weather conditions, and other site hazards. Training for these projects may include the safe and proper use of tools, need for personal protective equipment (PPE), method of task implementation, and be provided on the spot and on the job. At any time for any project, volunteers are able to ask questions of staff or state their need for more instruction in order to carry out the project successfully.

Safety

Of paramount importance is the safety of volunteers and staff while working on MERA projects. Many projects involve physical work and the use of tools where injuries can occur. To mitigate the potential for injury, Union County has established the following guidelines for project safety:

- Volunteers will receive an orientation and safety information from the project leader prior to the start of the activity. The orientation and safety talk may follow a safety checklist including key points such as hydration, proper tool use, and sun protection.
- Staff will possess completed Release of Liability and Emergency Contact forms for each volunteer on the project. Volunteers that are under the age of 18 need to be accompanied by an adult and be on the adult's forms. The Release of Liability is important for safety because it serves as a reminder that project work can result in injury and should be carried out carefully. The Emergency Contact form instructs staff on whom to contact in the event of an injury impairing communication with a volunteer and the absence of a volunteer's friend or spouse.
- Tools for volunteer use need to be maintained in good condition so that they perform as intended. They will be transported and used carefully so as not to endanger the volunteer or others. Misuse of tools during a volunteer project, especially to the extent that someone could be injured, may result in a volunteer being dismissed.
- Personal protective equipment (PPE) may be provided as appropriate for particular tools in use. If volunteers are approved to use their own tools, including power tools, they may wear the appropriate PPE as required by policy.

Conduct

Volunteers will be treated fairly, politely and without discrimination by staff and are expected to treat staff and other volunteers in the same manner. Volunteers are representing MERA and Union County and are expected to act as professionals while volunteering. Those volunteers

who do not maintain this standard may be dismissed and not allowed to return to the volunteer program.

When participating in a project on behalf of MERA, a volunteer may **not**:

- Remove from the site any materials including but not limited to antlers, bones, flowers, seeds, whole plants, historic articles, artifacts, fossils, or rocks unless under the direct approval of staff.
- Smoke
- Carry firearms
- Bring a dog, horse or other pet with them onto the property while participating in a volunteer project, even if access rules for the site allow pets at other times.
- Bring companions with them onto property without the pre-approval of staff and the companion's completion of Release of Liability and Emergency Contact forms.
- Cause damage to the property, either habitat or structures, through intentional action or negligence.

Conflict Resolution

Volunteers that are unhappy or dissatisfied with a project, a fellow volunteer, or a staff member are encouraged to communicate with that staff member. If they are uncomfortable approaching the staff member with whom they have a conflict, they are encouraged to contact the MERA Coordinator.

If staff has concerns about a volunteer's performance on a project, especially that which interferes with achieving project success, they should communicate those concerns to the volunteer with consideration to privacy and confidentiality whenever possible. If communication with the volunteer does not correct the situation, staff should communicate with the MERA Coordinator who will determine appropriate next steps. This procedure should also be followed if a volunteer is disregarding the conduct guidelines. If staff observes directly or are told by individuals that a volunteer's actions on a project are threatening to their own or other individuals' safety or welfare, staff may ask the volunteer to leave immediately and/or escort them from the property.

Use of County Property

The County provides volunteers with tools and equipment as is necessary and available to participate in a project. Volunteers are expected to carry and use tools carefully and as instructed so as not to endanger themselves or others, cause damage to the property, or intentionally break or render a tool unusable. If a volunteer is participating in an independent project where they use County equipment, they need to fill out and sign the Equipment Check

Out Form and have staff approval. This form will also alert staff to maintenance or repair needs after use. In opening and closing property gates, volunteers will maintain the confidentiality of any gate combination provided to them by staff for access.

Last edited 4-18-2023

MERA Sign Plan

1. **Introduction**
The MERA sign plan is consistent with signing found at other Federal and Oregon State Recreation Areas. It provides a format presenting enough information to users that they can have a safe, high quality recreational experience without being visually or aesthetically distracted by sign pollution.

2. General
A comprehensive signage system is important for every trail network. Signs should be placed at trailheads, intersections, and other key locations and be consistent throughout the network in design, color, type, font, and appearance. Proper size, placement, and a positive tone are critical and will inspire trail users to obey the rules. The guidelines are contained in this plan and all signs shall be approved by the MERA Coordinator prior to installation.

3. Kiosks
3.1. Each trailhead, campground, training area, key location, etc. will have a conspicuously placed kiosk for posting information.

3.2. Information presented may include, but not be limited to, rules and regulations, maps, notices, parking layout, brochures for guided hikes, trail conditions, closures, etc. The information may be posted in the format deemed most appropriate to convey the message as approved by the MERA Coordinator.

4. Trail Markers
4.1. Trail markers will be brown carsonite, double sided, 4" wide, and located at each end of a trail as well as at each intersection.

4.3. The markers will use federal recreation, universal symbol decals, 3" x 3", white graphic on brown background to indicate the allowed activities, trail numbers, etc. Add a red slash to any graphic to prohibit the activity.

4.4. Each trail marker shall include at least the following:
1. trail number
2. difficulty rating for that trail section

4.5. Each trail marker may also include the following:
1. Agency logo
2. trail name
3. trail courtesy reminder (who yields to who)
4. prohibited uses
3. special uses, if any (i.e. one way downhill)

5. directional arrow, if needed

5. Trail Numbers

5.1. All approved trails in MERA will be given a trail number consistent with their intended use as shown in the chart in 5.4.

5.1.a. Subcategories may be created within each main category as needed.

5.1b. Intersections may also be numbered to aid navigation.

5.2. Some trails in MERA may at times be informally referred to as "roads", but only those commissioned Union County or USFS roads in or adjacent to MERA will be officially recognized as roads. (i.e. Fox Hill Rd, Mt Emily Rd, Owsley Cyn Rd, Igo Lane, USFS 3120, etc.)

5.3. Definitions of Trail Types

5.3.a. Motorized

Oregon ATV Classes (as of 1/1/12)
*Class 1 ATV--(Quads, 3-wheelers)
*Class 2 ATV--(Jeeps, Sand Rails, SUV's, etc.)
*Class 3 ATV--(Motorcycles)
*Class 4 ATV--(Side X Sides)

5.3.b. Non-motorized

*All Season Multi-use Doubletrack Trail--(Gravel based doubletrack not subject to seasonal closure, open to all user groups)
*Multi-use Singletrack Trail--(Natural based singletrack subject to seasonal closure, open to all user groups)
*Special/Restricted Use Trail--(Singletrack Trail with restrictions [i.e. one way, user specific, etc.])

5.4. MERA Trail Numbering System

Motorized
1-99.....Motorized Intersections
100-199.....Class 1 Trail--(open to Class 1,3)
200-299.....Class 2 Trail--(open to Class 2,3,4,1)
200-249.....Class 2 Trail--Suitable for stock SUV--(open to Class 2,3,4,1)
250-299.....Class 2 Trail--Suitable for Jeeps--(open to Class 2,3,4,1)
300-399.....Class 3 Trail--(open to Class 3)
400-499.....Class 4 Trail--(open to Class 4,3,1)
500-599.....Reserved for Future Motorized Use

Non-motorized
600-699.....All Season Multi-use Doubletrack Trail--(open to all user groups)
700-799.....Multi-use Singletrack Trail--(open to all user groups)
780-799.....Multi-use Trail with Equine Emphasis--(open to all user groups)
800-899.....Special/Restricted Use Trail--(some restrictions apply)
900-999.....Reserved for Future Non-motorized Use
X1-X99.....Non-motorized Intersections

5.5 Names. Trails, sections of trails, geographic features, and man made technical features may also be given names.

5.5.a. The names would be used in conjunction with the trail numbers.

5.5.b. All names must be approved by the Committees.

6. Trail difficulty ratings systems:

motorized	non-motorized
1. green circle--easy	1. green circle---easy
2. blue square--intermediate	2. blue square---intermediate
3. black diamond--advanced	3. black diamond---advanced
4. double black diamond--expert	4. double black diamond---expert

7. Information Signs

7.1. Signs for use on trails and inside MERA.

7.1.a. Signs may be posted within MERA to name a trail, indicate a landmark, identify an area or object, give directions, warn about hazards, etc. to the extent necessary to provide a safe, quality recreational experience.

7.1.b. To the extent possible, regulatory signs should employ a positive tone instead of a restrictive tone to encourage and inspire the users to obey the rules.

7.1.e. All graphics will be white and appropriately sized to fit the 9" x 12" format with any required text.

7.2 Signs for use at trailheads and staging areas and campgrounds.

7.2.a. Signs may be posted at trailheads, staging areas, campgrounds, etc. to identify areas, give directions, show parking orientation, etc. to the extent necessary to properly inform users of the location and purpose of MERA facilities.

7.2.b. To the extent possible, regulatory signs should employ a positive tone instead of a restrictive tone to encourage and inspire users to obey the rules.

7.2.c. All signs will be, brown, attached 48" above ground level to a brown pressure treated 4" x 4" post, gate, or fence as needed, in a conspicuously visible area appropriate to convey the information.

7.2.d. All letters and numbers on the sign will be of the same font type (Symbol?) , white in color, and no less than 3" in height. Samples will be kept at the MERA Manager's office.

7.2.e. All graphics will be white and appropriately sized to fit the format with any required text.

8. **Temporary signs**

Some activities on MERA such as races, poker rides, tournaments, etc. will require temporary signing and/or flagging during the event. Signing and flagging must be approved by the MERA Manager prior to installation and removed within a reasonable time after the conclusion of the event. Details will be included in the special use permit for the event.

9. Acknowledgements

A trophy type plaque 8" x 8" may be attached to the kiosks or other structures to acknowledge the efforts of volunteers and identify material donors.

MERA Maintenance Plan

1.0 Purpose

MERA is home to both motorized and non-motorized recreation. The motorized area consists of approximately 35 miles of trails. These trails consist of Class I, Class II, Class III, and Class IV. All trails in the motorized area are specific use. Additionally, the non-motorized system adds another 45 miles of trail to MERA. Some trails are designated for specific use, others are multiuse. Trail types consist of hiker/ running, mountain biking, and equestrian. It is recognized that there has been a significant investment into the trail system by Oregon State Parks, Union County, and volunteers. To protect this investment routine maintenance and monitoring insures the safety of the intended users, and integrity of the natural resources.

This plan will serve as a guide to annual and long term maintenance at MERA. The primary objectives of this plan being,

- Provide a quality recreation experience to a diverse group of users;
- Protect user safety and manage agency risk;
- Ensure continued resource protection;
- Protect the investments made by other agencies and volunteer efforts;

As the trail system develops this plan should be reviewed biennially and be adapted to changes in the trail system.

2.0 Trail Inspections

Trail inspections are key to maintaining a safe and exciting environment for trail users. The frequency of inspection will be determined by:

- Trail difficulty
- Age of the trail (New trails will require much more frequent inspection until their tread has settled.)
- Presence of wooden bridges, ladders, skinnies. (Wood features shall be inspected annually)
- Significant weather events

Inspections will be carried out during day to day operations by Union County Employees or volunteers. Trail conditions will be recorded and given to the MERA coordinator to better help determine a maintenance schedule. If during an inspection, it is determined a trail has changed from its intended difficulty or poses a threat to user safety the trail in question will be closed until repaired.

Because of limited resources it is not likely that every trail will be inspected during the season. Union county staff may defer inspection until more resources become available.

3.0 Trail Closures

In some events closing a trail or even the entire trail system is the most appropriate means of preventing damage to the trail or natural resources. Additionally, by doing so the user is also protected from any defects in the trail. Trail closures also may occur while repairs are being made. The MERA

Coordinator will decide if and when a trail needs to be closed. See section 6.6 of the MERA Master Plan for more details.

4.0 Trail Maintenance

Maintenance activities will be carried out by Union County Staff and Volunteer efforts. Funding will be provided through grants, taxes, and donations. All Maintenance must be approved by the MERA Coordinator before any work begins.

Trail Maintenance: will be defined as any activity to maintain the usability and sustainability of trails within MERA, including: ensuring trails are passable by the users for which they are managed; preventing environmental damage resulting from trail deterioration; protecting public safety; and averting future deferred maintenance costs.

Routine maintenance: Scheduling of routine maintenance will be determined by the MERA coordinator. Priority of maintenance will be determined by the trails difficulty, level of usage, and level of importance. For example, MERA loop (Trail 724) is one of our most used trails and is one of the main arteries of MERA. Therefor it has a higher priority than some other trails. All non-urgent maintenance items will be grouped together and a trail maintenance day will be planed. By doing so we will maximize our efficiency and effectiveness. This maintenance will be carried out by the MERA Coordinator and Volunteer efforts. See the Volunteer Management plan in appendix C of the MERA Master Plan for details regarding volunteer efforts.

Urgent Maintenance: If it is determined during an inspection that a defect in the trail poses a risk to safety, makes the trail impassable, or trail damage will continue if left unaddressed then the trail will be closed or defect flagged. The closure will remain in place until repairs can be completed.

5.0 Maintenance Specifications

All maintenance shall be performed to IMBA, NOHVCC great trails, or "Equestrian Designs Guidebook for Trails, Trailheads, and Campgrounds" standards. (Copies of these are in the MERA coordinators office and can be provided for reference on request.)

There are limits to trail features, trail grade, and tread design that correspond with the difficulty of each trail. Additionally, each trail serves a different purpose in our trail system. All trail maintenance shall be performed with the original intended use in mind.

6.0 Reporting

Once a maintenance item has been completed it will be reported to the MERA Coordinator for approval and recording. This is to help identify areas that are in consistent need of repair. So better long term solutions can be identified and implemented. If a repair item could not be completed during the current season it will be recorded and made a priority for the following season.