

Oregon, California & Eastern Woods Line State Trail Plan



Nature

HISTORY

Discovery

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INTRODUCTION

The purpose of the *Oregon, California & Eastern Woods Line (OC&E) State Trail Plan* is to provide direction for the development and management objectives and guidelines for the trail from 2007 to 2018.

The OC&E State Trail is a non-motorized trail system that will provide a world class hiking, equestrian, snow-skiing and bicycling opportunities. The plan provides implementation priorities and direction, such as park volunteer projects, park information materials, user information development material, and user conflicts management. The document is divided into several sections:

- Goals and Objectives
- Trail Maps
- Trail Location and Construction Guidelines
- Trail System Benefits and Safety
- Trail Maintenance Guidelines and Strategies

Note: This document does not address the development or maintenance of any privately owned trails or old/new roads located on private property.

As the Klamath Basin grows and develops there will be an increasing need and demand for park pathways and trails. Local, regional and statewide recreational planning efforts have identified trail systems as one of the major features users seek for recreational opportunities. The ultimate result of this plan will be a park resource providing recreational opportunities, environmental aesthetics, open space preservation, transportation alternatives and productive neighborhood partnerships.

Steering Committee

OPRD developed a list of 38 partner groups. Each group was sent information about the planning process and was requested to disperse the information to their members. The groups were put into 12 key categories. Each category was asked to have a representative attend 3 Advisory Committee meetings to assist in the planning process. This was done to develop a steering committee of 8 to 12 members. The following individuals attended the Advisory Committee meetings:

OPRD Steering Team:

- Rocky Houston, State Trails Coordinator
- James Beauchemin, Park Manager
Collier Management Unit
- Chris Parkins, High Desert District
Manager
- Curtis Smith, South East District
Manager
- Letha Sanderson, Region 4 Project
Coordinator
- Larry Miller, Region 4 Manager

Public Steering Committee Members:

- Tom Crist, Klamath County Parks
- Art Sevigny, Klamath Rails to Trails
- Eric Nelson, Klamath Rails to Trails
- Scott Senter, BLM
- Dale Ivan, Klamath Falls Parks & Rec.
- Mel Twyman, Jeld-Wen Timber &
Ranches
- Donna Shelley, Girl Scouts of Winema
- Mike Stinson, ODOT
- Leonard Smith, HDTR/BCH/HACS
- Dave Potter, Klamath Rails to Trails
- Grant Weidenbach, BLM
- Vicky Genge, Girl Scouts of Winema
- Dan & Betty Applebaker, HDTRB/CH

Identified Partners (Groups):

- Eric Nelson, President Klamath Rails to
Trails Group
- Art Sevigny, Vice President Klamath
Rails to Trails Group
- Rich Kehr, Forest Engineer, USFS
Winema Fremont National Forest
- Margaret Bailey, District Ranger,
Southwest Zone USFS Winema
Fremont National Forest
- Genevieve Masters, Deputy District
Ranger USFS Winema Fremont
National Forest

- Al Hahn, Bly District Ranger, USFS Winema Fremont National Forest
- Scott Senter, Outdoor Recreation Planner Bureau of Land Management
- Michael Stinson, District Manager ODOT District 11
- John Elliot, Chairman Klamath County Commissioners
- Stan Strickland, Public Works Director Klamath County Public Works
- Alwin Turiel, Planning Director Klamath County Planning
- Tom Crist, Solid Waste/Parks Manager Klamath County Parks
- Greg Thede, Superintendent Klamath County Schools
- Sandra Ziada, Director City of Klamath Falls Planning
- Dale Ivan, Parks Manager City of Klamath Falls Parks
- Cec Amuchastu, Superintendent City of Klamath Falls Schools
- Mark Campbell, Manager Jeld Wen Ranches & Timberlands Div.
- Shane McDonald, Manager Enterprise Irrigation District
- Ron Hathaway, Staff Chair Klamath Cattleman's Association
- Dawn Brown, Executive Director Travel Klamath
- Steve Masters, Manager Hutches Bicycle Store
- Joe Spendolini, President Chamber of Commerce
- Brent Hakanson, District Manager Wiard Park District
- Ralph Opp, President Klamath Wing Watchers
- Rick Hardy, Vice President Klamath Audubon Society
- Christopher Patterson, Manager Nature Conservancy
- Marstin Brown, Adopt-A-Trail: Oregon Equestrian Trails-Klamath Chapter
- Blake Ironside, Adopt-A-Trail: PG& E Gas Transmission, NW
- Jeanne Pickens, Adopt-A-Trail: Amazing Saddles 4H Club
- Steve Bruce, Adopt-A-Trail: Horse and Carriage Society
- Sue Kiser, Adopt-A-Trail: Girl Scouts Winema Chapter
- Leslie Garrett, Adopt-A-Trail: Brixner Jr. High

OC&E STATE TRAIL VISION STATEMENT

To provide and protect the Oregon, California & Eastern Woods Line Rail-Trail connection from the Klamath Basin to Oregon's Outback for the enjoyment and education of present and future generations

When the OC&E rail line was initially being planned, the vision was to connect the Klamath Basin with the rest of the world by rail. As rail use transitioned to trail use, the connection is still as important. The trail is concerned with providing a connection for local users and others with the outstanding natural, scenic, cultural, historic and recreational sites that the Klamath Basin and Oregon's Outback has to offer. A coordinated trail system through the region can be created by linking the regional "spine" that the OC&E State Trail provides, with all of the important destinations within the region. The OC&E State Trail provides a safe and healthy way to allow users to explore regional recreational opportunities. In town, the trail serves as an urban park and as an alternative transportation route to work, school or other destinations. The rural section of the trail offers opportunities for multi-day excursions or simply to watch the birds and animals as the trail weaves through the waters of the Klamath Basin.

GOALS AND OBJECTIVES

This vision can be achieved through meeting the following Goals and Objectives:

- GOAL 1** **Operate the OC&E State Trail as a state significant non-motorized recreational resource and develop a premium trail for hiking, biking, snow-skiing and equestrian use.**

Objective 1) Recruit and retain dedicated staff, volunteers and resources to ensure adequate maintenance and development is continued and done at the level necessary to provide this resource for present and future generations.

Strategy 1.1) Develop a staffing plan that maximizes current resources and identifies strategies to meet the demands that additional development and higher use levels in the future.

Objective 2) Conduct a Maintenance Management Plan.

Strategy 2.1) Conduct annual, quarterly, monthly and weekly maintenance prioritizations per OPRD Standard Operating Procedures.

Strategy 2.2) Maintenance items that are fiscally significant or of critical importance should be entered into the Facility Improvement Plan (FIP) process.

Objective 3) Create a Development Plan.

Strategy 3.1) Prioritize development that is consistent with operational capacity of staff and volunteers both from a fiscal and a staffing perspective.

Strategy 3.2) Seek resources for development both internally (OPRD) and externally (Grants, Volunteer organizations, Donations, etc).

Objective 4) Develop an Interpretation Plan.

GOAL 2 Create Connections with the OC&E State Trail.

Objective 1) Maintain and increase connections with the local and regional recreation providers, schools and communities to ensure the OC&E State Trail is integrated as part of their planning efforts and provide the following benefits to the community:

Transportation: The OC&E State Trail provides the City of Klamath Falls an alternative non-motorized transportation route to access schools, employment, commercial and to city park facilities increasing multi-modal transportation opportunities for bicycling and walking trails while improving safety and access. It also improves safety for and increases ADA access. The trail is a critical link in the multi-modal transportation system, connecting to several non-motorized trails and bike/ped routes. The trail also connects to several towns in the region, providing the only off-street transportation opportunity for non-motorized users.

Recreation: The OC&E State Trail provides an easily accessible outdoor resource for many forms of recreation, most notably hiking, biking, snow skiing and horseback riding. The trail greatly increases park visitor access to physical activity and fitness opportunities by providing more miles of safe, attractive and desirable routes for users. The trail is connected to several federal, regional and city recreation sites. It also provides loop trail opportunities when users connect park trails and other regional trails together with it.

Reduction of Pedestrian/Bicycle/Auto Accidents: The OC&E State Trail creates connections with existing and future pathways, bike routes and sidewalks connecting residential areas to the commercial areas allowing safer pedestrian/bicycle routes. When the OC&E State Trail crosses city, county or state roads improvements should be made that are consistent with the Oregon Bike & Pedestrian Plan to increase bicycle and pedestrian safety.

Economic: The OC&E State Trail and other recreational trails produce income for communities from tourism, special events, and other uses. Improved recreational opportunities improve the quality of life by making an area more attractive for business relocations and in-migration. Homes along the OC&E State Trail sell for a premium and

the trail key in marketing these homes. Several economic impact studies across the United States have demonstrated that trails provide an economic stimulus to surrounding communities.

Land Use Planning: The OC&E State Trail and other greenway corridors promote park and recreation development, wet land preservation, and buffered environmental protection. The trail preserves undeveloped lands in the urban areas and serves to separate and buffer contradicting land uses.

Environment: Environmental benefits include wildlife preservation, water quality protection, storm water management, preservation of vegetation, and other benefits, such as firebreaks.

Education: The OC&E State Trail corridor often encompasses several different environments along its route (including urban, suburban, agricultural, ranching, woodland, riparian and ancient volcanic) and can be thought of as an outdoor classroom full of educational materials. The scientific community, educators and students can realize the value of trails through a wide range of studies, such as biology, geography, history, recreation management, and art.

Historic and Culture: The OC&E State Trail can educate and increase awareness about the history and culture of the Klamath Basin. Preserved historical sites, such as the trail, provide unique locations for cultural, local and social events. Methods, such as on site interpretive material and promotional literature, aid in the parks effort to preserve historic sites.

Quality of Life: Increases in the quality of life associated with non-motorized trails are realized through expressions of park character and pride, aesthetics of the local environment, economic revitalization of communities, access to the outdoors, opportunities for socialization, and easy increase of mobility.

Disability Access: The OC&E State Trail provides disabled access to and within the trail system with the level of access provided at posted trailheads. The trail from Klamath Falls to Olene provides for universal access currently. The remainder of the trail provides an easy grade that is free from physical barriers and hazards that obstruct access that would allow access with surface improvements.

- Objective 2) Maintain and increase connections with user groups, clubs and other user groups to ensure the trail users needs are understood and integrated into trail planning, development and operations.
- Objective 3) Maintain and increase connections with adjacent land owners and the regional ranching and agricultural communities.
- Objective 4) Maintain existing and recruit more organizations, businesses, schools and/or citizens to donate or volunteer their time maintaining the trail and creating an identity with the trail.

OC&E STATE TRAIL CONNECTIONS WITH REGIONAL AND STATEWIDE PLANNING EFFORTS

City of Klamath Falls

The City of Klamath Falls Transportation System Plan and in the City's Recreation and Open Spaces Master Plan of 2000.

Klamath County

The Klamath County Transportation System Plan and in concept in the Bicycle and Recreation Trail Plan of 1997. There currently is no connection with the Klamath County Parks Master Plans and the OC&E State Trail. Most of their parks are not close to the trail.

USDA, USFS, Winema/Fremont National Forest

The USFS and BLM are currently completing a Travel Management Plan. At the conclusion of this plan the Plan will identify all managed trails in their system and connections with the OC&E State Trail, etc.

BLM Lakeview District, Klamath Falls Planning Area

The Klamath Falls Resource Area Resource Management Plan (June 1995) does not specifically identify the OC&E State Trail, however the proposed development for the Swan Lake Rim Trail and Access Point does create a connection to the trail. This partnership should be developed in the future to provide camping and additional trail opportunities to enhance the OC&E State Trail experience.

OPRD 2014 Strategic Plan

The OC&E State Trail assists in implementing the following goals of the OPRD 2014 Strategic Plan:

Goal 1: NATURAL AND CULTURAL RESOURCES

The Oregon state park system is a rich mosaic of Oregon's natural resources, scenic landscapes and history. In 1998, voters sent a clear message of support for the enhancement of that mosaic through the development, conservation and expansion of Oregon's park system for future generations.

Goal 1: Acquire properties that build upon the diversity and strength of our current system.

Goal 2: OUTDOOR RECREATION

The Oregon Parks and Recreation Department is the principal advocate, leader and source of expertise and support for outdoor recreation.

Goal 2: Promote outdoor recreation in Oregon.

Goal 3: SUSTAINABLE USE AND MANAGEMENT

The Commission and the Department hold a public trust to protect Oregon's park system, including the Willamette River Greenway, State Scenic Waterways and ocean shores. The Department practices sustainable natural resource management that balances the needs of today's outdoor enthusiasts with the need to assure future generations enjoy similar benefits.

Goal 3: Advance the principles of conservation and sustainability in land management, development and business practices.

Goal 4: CULTURAL TREASURES

The cultural history of Oregon—structures, landmarks and special places—extends beyond the boundaries of park properties. The Heritage Conservation Division safeguards this public trust.

Goal 4: Preserve Oregon's rich cultural heritage and broaden public understanding of Oregon's historic places and events

Goal 5: MEMORABLE EXPERIENCES

World-class experiences create vivid memories that enrich the lives of our visitors, and deepen their understanding of Oregon's recreation, natural, historical and cultural resources. Bringing those experiences to life requires a fundamentally strong park system with varied, ample and appealing places to visit; enthusiastic, professional staff; and a special commitment to high-quality interpretive experiences.

Goal 5: Deliver world-class experiences to park visitors.

Goal 6: BEACHES, TRAILS and WATERWAYS

Oregon's park properties belong to the people. The Commission is entrusted with ensuring reasonable access to parklands for all while simultaneously considering resource protection and local land use goals. In particular, access to Oregon's ocean beaches, scenic waterways, trail corridors and other public open spaces demands consistent advocacy, planning and consensus building to ensure enhancement and growth.

Goal 6: Promote access to Oregon's beaches, trails and waterways.

Oregon Statewide Trails Plan

STATEWIDE NON-MOTORIZED TRAIL ISSUES

Issue A: Need for trail connectivity (see trail network definitions below).

Issue B: Need for trail rehabilitation (see trail rehabilitation definitions on the preceding page).

STATEWIDE NON-MOTORIZED TRAIL CONCERNS

Trail Concern 1: Need for more trails in close proximity to where people live. According to the statewide trail user survey, lack of time is the greatest barrier to participation in non-motorized activities. Close to home trails allow people to use trails in a more time-efficient manner.

Trail Concern 2: Need for additional non-motorized trails.

Trail Concern 3: Need to consider public ways (roads, railroads, and utility corridors) proposed for closure or abandonment for non-motorized trail use.

Trail Concern 4: Need for trail accessibility information (such as key trail type and condition information allowing individuals to decide whether a particular trail is accessible to them or not).

Trail Concern 5: Need for regional interagency coordination/cooperation in trail management.

South Central Region: Includes Klamath and Lake Counties.

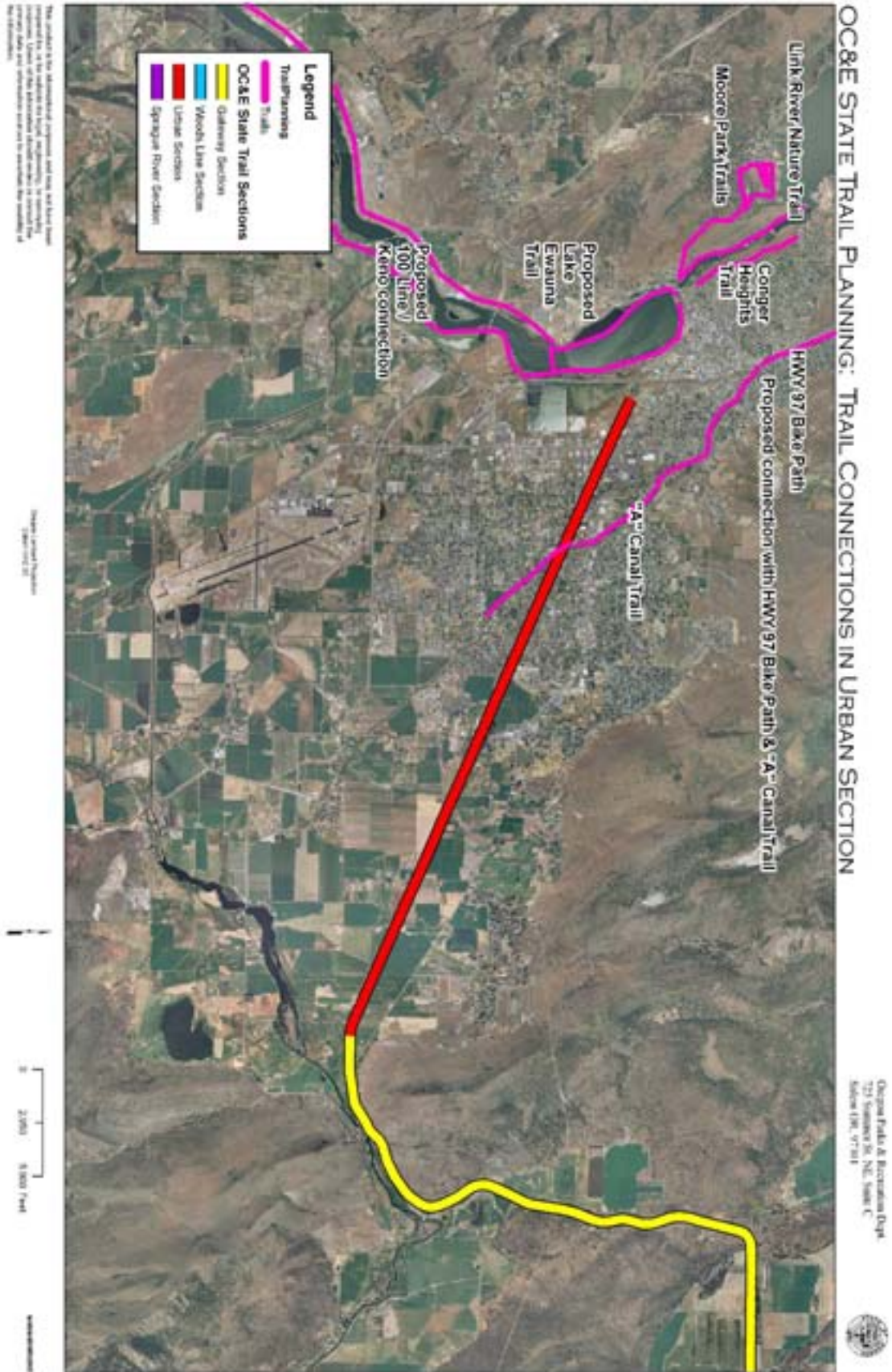
Issue A: Need for trail connectivity.

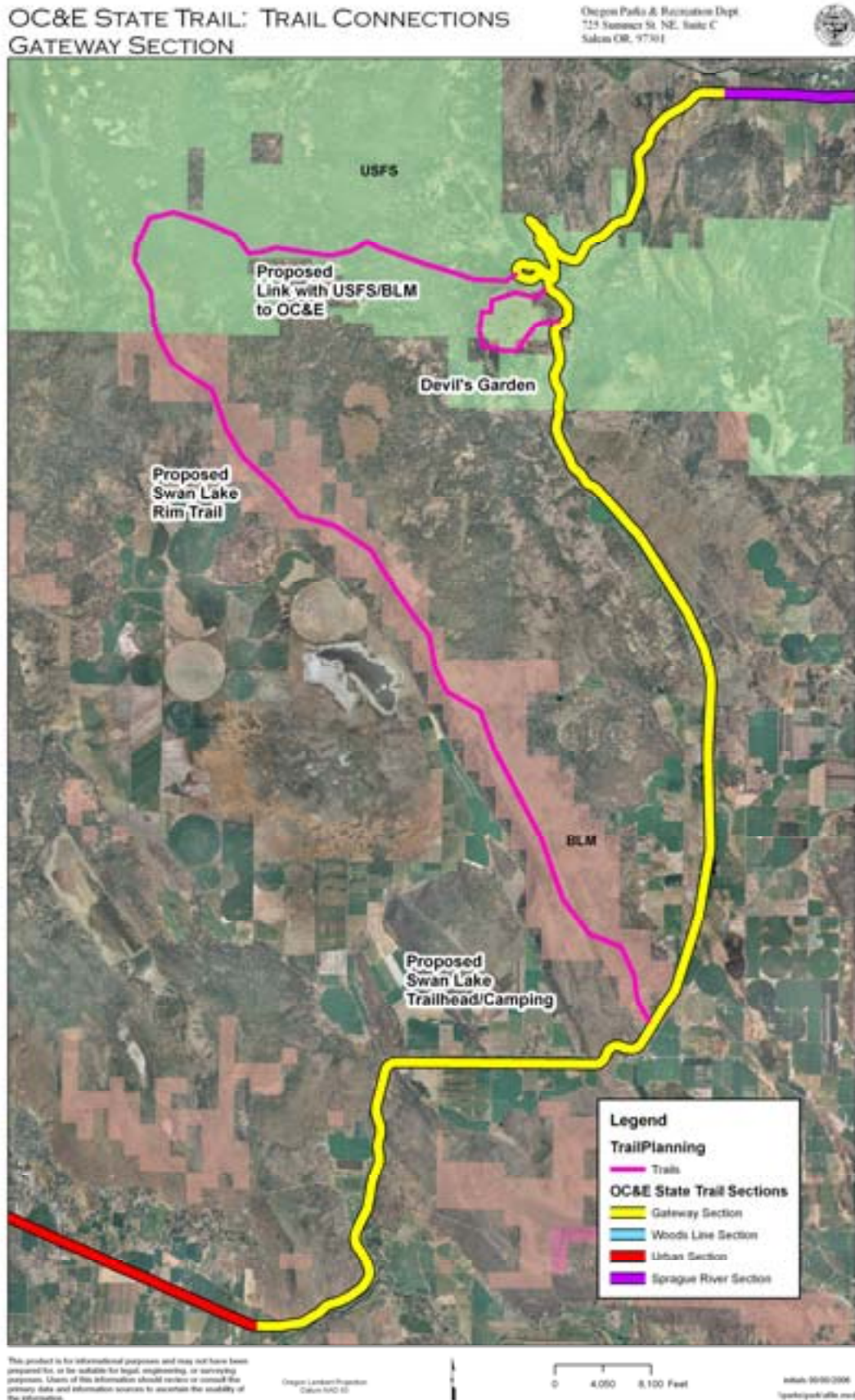
Issue B: Need dedicated funding for trail operation and maintenance.

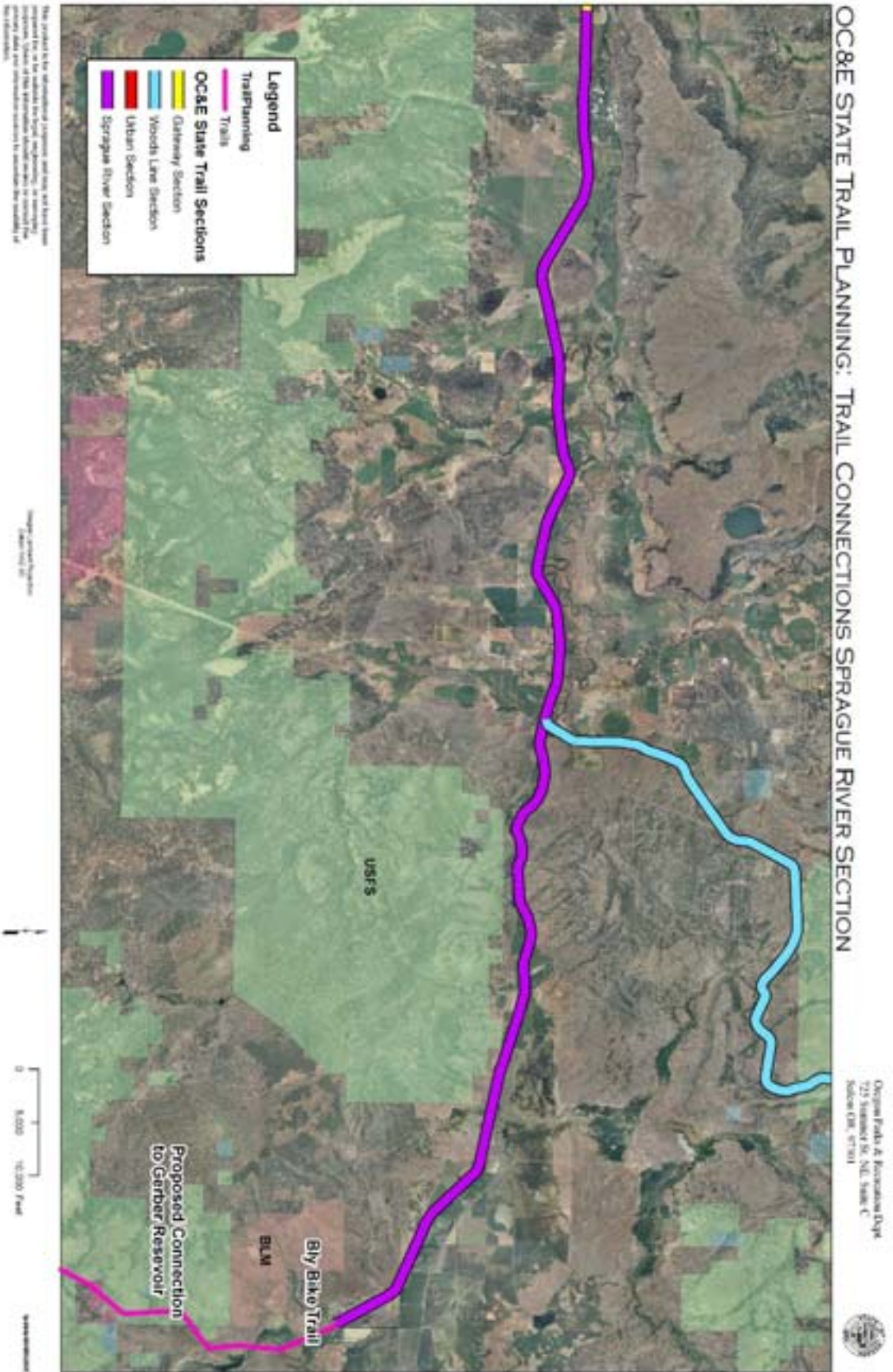
Issue C: Need for better education/information on the sharing of multiple-use trails.

OC&E STATE TRAIL CONNECTIONS

The OC&E State Trail transverses through the mountains and valleys of the Klamath Basin coming in contact with many other recreational sites. The following maps show existing and potential connections that the OC&E State Trail makes:







**OC&E STATE TRAIL: TRAIL CONNECTIONS
WOODS LINE SECTION**

Oregon Parks & Recreation Dept.
721 Southwest St., NE, Suite C
Salem, OR, 97301



This product is for informational purposes and may not have been prepared for, or be suitable for legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the suitability of the information.

Oregon Lambert Projection
Datum NAD 83

0 4,800 9,700 Feet

10/16/2008
1park@oregon.gov

OC&E STATE TRAIL SYSTEM BENEFITS AND SAFETY

There are two purposes of this section: first, to present some concluding evidence that trails, and other parts of the non-motorized trail system, will benefit the overall recreational experience in South Central Oregon; and second, to address the issues of safety and community/user involvement.

A. Ten Economic Benefits of Greenways and Trails

There are many ways in which a trail system, designed with easy accessibility, can benefit a community. The following information discusses ten different economical benefits a community can enjoy from a trail system.

1. **Real Property Values**--*Many studies demonstrate that parks, greenways and trails increase nearby property values. In turn, increased property values can increase local tax revenues.*

In a survey of adjacent landowners along the Luce Line Rail-Trail in Minnesota, the majority of owners (87%) believed the trail increased or had no effect on the value of their property. New owners felt that the trail had a more positive effect on adjacent property values than continuing owners. Furthermore, a survey of Denver residential neighborhoods shows the public's increasing interest in greenways and trails. From 1980 to 1990, those who said they would pay extra for such amenities in their neighborhood rose from 16% to 48%.

2. **Increased Property Tax Revenues**--*An increase in property values generally results in increased property tax revenues for local governments. This benefit is slowed due to the limitations set in Oregon tax codes, but is cumulative in the long run.*

Many arguments made for investments in trails, parks and open spaces claim that these acquisitions pay for themselves in a short period of time, due in part to increased property tax revenues from higher values of nearby property.

Locally and nationally, bicycle and pedestrian facilities have proven to be a cost effective use of public funds. Maryland's Northern Central Rail-Trail found that while the trail's cost to the public in 1993 was \$191,893, it generated State tax revenue of \$303,750 in the same year. This revenue was a direct result of a growing economy's sales, property and income taxes.

3. **Construction/Development Perspectives**--*Proximity to greenways, rivers and trails can increase sales price, increase the marketability of adjacent properties, and promote faster sales. Clustering the residential development to allow for establishment of a trail corridor or greenway can also decrease overall development costs and result in greater profits for the developer.*

For example, the new subdivision on the A-Canal and Homedale proactively promoted the connection with the OC&E State Trail when it was developed.

Another example, a land developer from Front Royal, Virginia, donated a 50-foot wide, seven-mile easement, for the Big Blue Trail in Northern Virginia. This easement provided a critical trail link along the perimeter of his subdivision. The developer recognized the amenity value of the trail and advertised that the trail would cross approximately 50 parcels. All tracts were sold within four months.

4. **Expenditures by Residents**--*Spending by local residents on greenway related activities helps support recreation oriented businesses and employment, as well as other businesses that are patronized by greenway and trail users.*

5. **Commercial Uses**--*Greenways and trails often provide business opportunities, locations and resources for commercial activities, such as recreation equipment rentals and sales, lessons, and other related businesses.*

The following two examples are how trails have helped local commercial areas across the nation:

- a. The downtown area of Dunedin, Florida was suffering a 35 percent storefront vacancy rate in the early 1990's until the Pinellas Trail came into town. Now, storefront occupancy is 100 percent and business is booming.
- b. A study of the Oil Creek Bike Trail, in Pennsylvania (Pennsylvania State University, 1992) revealed that the average visitor spends \$25.85 per day. This was broken down into \$9.09 for food, \$6.27 for transportation, \$2.56 for lodging (many visitors camp) and \$7.94 for equipment and other activities.

6. Tourism--*Trails are often major tourist attractions that generate expenditures on lodging, food, and recreation oriented services. Greenways along trails can also help improve the overall appeal of a community to perspective tourists and new residents.*

Many Americans prefer to visit places, such as greenways and trails that offer safe, scenic recreation and transportation for the whole family. The U.S. Department of Transportation, in its *National Bicycling and Walking Study (NBWS)* final report, estimates that 131 million Americans regularly bicycle, walk, skate or jog for exercise, sport or recreation. For example, peak-season hotel rooms along Wisconsin's Elroy-Sparta State Park Trail are booked up to one year in advance. A study revealed that the average visitor travels 228 miles to experience the trail.

7. Agency Expenditures--*The agency responsible for managing a trail can help support local businesses by purchasing supplies and services. Jobs created by the managing agency may also help increase local employment opportunities.*

8. Corporate Relocation--*Evidence shows that the quality of life of a community is an increasingly important factor in corporate relocation decisions. Greenways and trails are often cited as important contributors to quality of life.*

In a June 8, 1989 article, the *San Francisco Chronicle* noted that when corporations are relocating, the number one factor was a location that would attract and retain key personnel. Corporate real estate executives now say that employee 'quality of life' issues are as important as cost when deciding where to locate a new factory or office.

Furthermore, natural open space, greenways, and trails are prime attractions for potential home buyers. According to research conducted in 1995 by *American Lives, Inc.* for the real estate industry, 77.7 % of all homebuyers and shoppers in the study rated natural open space as either 'essential' or 'very important' in planned communities. Walking or biking paths ranked third.

9. Public Cost Reduction--*The conservation of rivers, trails, and greenways can help local government and other public agencies reduce costs resulting from congested roadways, environmental degradation, and other natural hazards, such as flooding.*

The construction of multi-use trails allows more Americans to replace automobile trips with non-motorized trips. According to the *NBWS* report, the American public saves from 5 to 22 cents for every automobile mile replaced by walking and bicycling, due to reduced pollution, oil import costs, and costs due to congestion, such as lost wages and lost time on the job.

10. Intrinsic Value--*With all of the previously mentioned benefits of trails it is important to remember the intrinsic environmental value of preserving rivers, trails, parks and other open space corridors.*

B. Four Social Benefits of Trails

1. **Community Character**--Not only do bicycle and pedestrian facilities enhance the quality of life for many individuals, but trails and pathways can also be an expression of community pride and character. In many cases it means preserving the natural and historical resources of a region.
2. **Close to Home Recreation**--An explosion in the number of people who participate in outdoor recreation has led to an increased demand for bicycle and pedestrian facilities.

Participation in trail uses, such as hiking, walking, mountain biking, and in-line skating have experienced phenomenal growth in recent years. Multi-use trails provide convenient access to the outdoors while promoting health and fitness activities. These trails are becoming especially popular among people living in cities and suburban areas, where recreation opportunities close to home are scarce.

3. **Convenient Transportation**--Nearly half of all trips people make within their communities can be made easily on foot or bicycle. Fifty percent of all personal travel trips are less than 3 miles long. Personal business trips, like doctor visits, household errands, and visits to friends account for 41.5% of all trips. Such personal short distance trips are well suited to travel by walking or bicycling. Public rail-trails, multi-use trails, and on-road bicycle facilities offer communities a means of safe convenient transportation and keep the essential links within a community open to all. They can connect neighborhoods to schools, work places, commercial and cultural centers, historic sights, and transit stations.
4. **Health and Fitness**--The health benefits of exercise derived from recreational activities, such as bicycling and walking lessen health-related problems and reduce health care costs. Trails, spacious sidewalks, and greenway trails offer adults and children alike the opportunity to integrate moderate, individualized exercise with their daily trips to work, school, the library or shopping.

Regular, moderate exercise has been proven to reduce the risks of many health problems, such as coronary heart disease, diabetes, certain kinds of cancers, and obesity. Regular exercise can also protect against injury and disability because it builds muscular strength and flexibility. In addition to the health benefits that bicycling and walking offer, consider also the improvement of physical health reduces health care costs. People who exercise regularly have 14% lower claims against their medical insurance and spend 30% fewer days in the hospital than people who do not exercise regularly.

C. Community Safety

Communities can take several steps in reducing accidents that can occur between automobiles, pedestrians, and bicyclists. The following are suggestions on how to create a safer environment for all modes of travel:

- **Encourage schools, safety organizations, and law enforcement agencies to deal with bicycle and pedestrian safety issues and to focus on the most important safety problems.** The development of public education campaigns should be keyed to the most important causes of accidents, injuries, and deaths. For example, the leading cause of bicycle accidents occurs when cyclists ride on the wrong (left) side of the street. By educating bicyclists to obey traffic rules and to ride safely with motor vehicles most accidents can be prevented.
- **Promote the use of safety equipment among bicyclists (e.g., lights, helmets, reflectors) and encourage safety groups to develop programs promoting the purchase and use of safety equipment among the bicycling public.** Ideas for public involvement include community 'safety days' centered on trails or group presentations to local clubs and schools. It is

recommended that safety presentations are more effective when the information is tailored to the particular audience. A good example, for school-aged children is to set up a mock street or trail on the school grounds with lines, obstructions and signs. Children who make up a large percentage of bicycle traffic can then practice safe bike riding habits on the course.

- **Encourage agencies' placing traffic calming devices at uncontrolled locations, i.e. no stop or traffic signal control.** Roads at crossings should be designed for slower speeds. When designing roads, you can improve their design by adding trees, reducing pavement width, signage, medians, and other traffic calming devices.
- **Encourage city planning commissions to design neighborhoods for both pedestrians and autos.** Local streets can be designed to induce lower vehicle speeds. Existing streets can be retrofitted with traffic calming features, such as reduced widths at crossings, center refuse islands and improved markings for crossings. There are grant programs that can fund most of the improvements. Cities can discourage school districts from placing elementary schools along major streets and thus limit children's exposure to traffic and speeding vehicles.
- **Employment centers can contribute to reducing the number of crashes, injuries, and deaths among agency staff.** Provide training and awareness programs for employees. Encourage staff to use bicycle safety equipment.

D. Crime Control and Emergency Vehicle Access

A well-designed trail prevents many security problems. Although crime is a common concern many studies have proven that ***crime does not increase at trail locations or on adjacent properties.***

If problems will occur they will most likely happen in parking lots. Parking Lot Design (fencing, lighting, one entrance point to trail) can solve most safety concerns. Park staff patrols at trailheads and other activity areas can also solve many problems at these locations. Lighting along the entire trail is not recommended.

Trails should always be planned to accommodate security, safety and emergency equipment (fire engines and ambulances) when possible. Construct Bollards at access points that can be removed or folded over in the event an emergency vehicle needs to enter onto the trail.

Other safety considerations should include emergency telephones and landscaping. Emergency telephones or call box systems with direct connections to 911 are a worthwhile consideration--especially along remote sections of a trail. Landscaping along trails should consist of low shrubs and tree branches that should be cropped close to the trunk, at least 10 feet from the ground, so that potential offenders will not have an easy place to hide.

E. Community Involvement

The following are ideas adapted from *Trails in the Twenty-First Century*, by the Rails-to-Trails Conservancy (1993):

To maintain and develop relationships with adjacent landowners:

1. Adjacent Landowners need to know who to contact about specific problems.
2. Maintain trail on a regular basis and consider involving citizens in trail upkeep with volunteer work groups and 'adopt-a-trail' programs.
3. Promptly respond to problems, such as unauthorized motorized vehicles use, vandalism, theft of trail signs, and graffiti. Consistent quality upkeep of the trail will build community confidence in the ability to manage the trail.
4. Consider scheduling regular meetings to receive input from users, residents and landowners.
5. Invite landowners on a trail tour led by a park ranger or someone who is involved with trail management or planning.

6. To win support of landowners, consider writing personal letters testifying of the benefits of trails.
7. Make sure adequate facilities, such as restrooms and drinking fountains are provided so that adjacent landowners are assured that trail users will stay on the trail.

F. Park Trail Events and Publicity

1. Trail Tours
2. Trail Work Day
3. Photo Competition
4. Trail-athon' or Walk-a-thon
5. Poster/Logo Contests "Name the Trail"
6. Decorative Bicycle Parade
7. Nature Walks
8. Newspaper Column

Natural Resource Inventory

The Natural Resource Inventory includes an inventory of wetlands and sensitive habitats and a review of the Oregon Natural Heritage Information Database to identify potential threatened or endangered species.

Oregon Natural Heritage Information Database

The survey was set at two distances from the trail: 5 miles and 1/10th of a mile. These two distances were utilized to identify potential species that would have habitat on the trail and those species that could be impacted by the trail and our activities. The first list is a 5 mile radius of the trail's boundary. The findings are:

<u>Scientific Name</u>	<u>Common Name</u>	<u>No. of polys</u>	<u>FED Status</u>	<u>State Status</u>	<u>ONHIC list</u>	<u>Last Observed</u>
<i>Actinemys marmorata marmorata</i>	Northern Pacific pond turtle	1	SOC	SC	2	1991-07-06
<i>Astragalus applegatei</i>	Applegate's milk-vetch	2	LE	LE	1	1994-06-08
<i>Bartramia longicauda</i>	Upland sandpiper	1	SOC	SC	2	1998-06-18
<i>Brachylagus idahoensis</i>	Pygmy rabbit	1	SOC	SV	2	1972-
<i>Canis lupus</i>	Gray wolf	1	LE	LE	2-ex	1927-06-27
<i>Carex eleocharis</i>	Involute-leaved sedge	1			2-ex	1919-08-02
<i>Castilleja chlorotica</i>	Green-tinged paintbrush	1			1	
<i>Catostomus snyderi</i>	Klamath largescale sucker	1	SOC		4	1995
<i>Chasmistes brevirostris</i>	Shortnose sucker	4	LE	LE	1	2006
<i>Coturnicops noveboracensis</i>	Yellow rail	3	SOC	SC	2	2004-06-10
<i>Deltistes luxatus</i>	Lost River sucker	4	LE	LE	1	2006
<i>Eriogonum prociduum</i>	Prostrate buckwheat	1	SOC	C	1	1994-07-06
<i>Fluminicola sp. 20</i>	Crooked Creek pebblesnail	4			1	1997-10-07
<i>Fluminicola sp. 7</i>	Lake of the Woods pebblesnail	1			1	1994-06-21
<i>Fluminicola sp. 8</i>	Lost River pebblesnail	1			1	1997-10-03
<i>Grus canadensis tabida</i>	Greater sandhill crane	1		SV	4	1986-04-16
<i>Haliaeetus leucocephalus</i>	Bald eagle	3	LT,PDL	LT	4	2003
<i>Heliotropium curassavicum</i>	Salt heliotrope	1			2	1931-07-07
<i>Histrionicus histrionicus</i>	Harlequin duck	1	SOC	SU	2	1958-06-14
<i>Lampetra lethophaga</i>	Pit-Klamath brook lamprey	2			4	1970-07-31
<i>Lampetra minima</i>	Miller Lake lamprey	1	SOC		1	199?
<i>Melica stricta</i>	Nodding melic	1			2	1993-07-12
<i>Pelecanus erythrorhynchos</i>	American white pelican	1		SV	2	1983
<i>Podiceps auritus</i>	Horned grebe	1		SP	2	1983-05
<i>Progne subis</i>	Purple martin	1	SOC	SC	2	1940-PRE
<i>Pyrgulopsis sp. 7</i>	Lost River springsnail	3			1	1997-10-06
<i>Rana pretiosa</i>	Oregon spotted frog	2	C	SC	1	1934-08-09
<i>Rorippa columbiae</i>	Columbia cress	2		C	1	1997-09-22
<i>Salvelinus confluentus pop. 1</i>	Bull trout (Klamath River population)	1	LT	SC	1	1990-PRE
<i>Thelypodium brachycarpum</i>	Short-podded thelypody	2	SOC		2	1923-07-18
<i>Thelypodium howellii ssp. howellii</i>	Howell's thelypody	1	SOC		2-ex	

The second list was a 1/10th of a mile radius of the trail's boundary. The findings are:

<u>Scientific Name</u>	<u>Common Name</u>	<u>No. of polys</u>	<u>Kingdom</u>	<u>FED Status</u>	<u>State Status</u>	<u>ONHC list</u>	<u>Last Observed</u>
Actinemys marmorata marmorata	Northern Pacific pond turtle	1	animal	SOC	SC	2	1991-07-06
Bartramia longicauda	Upland sandpiper	1	animal	SOC	SC	2	1998-06-18
Brachylagus idahoensis	Pygmy rabbit	1	animal	SOC	SV	2	1972-
Canis lupus	Gray wolf	1	animal	LE	LE	2-ex	1927-06-27
Carex eleocharis	Involute-leaved sedge	1	plant			2-ex	1919-08-02
Catostomus snyderi	Klamath largescale sucker	1	animal	SOC		4	1995
Chasmistes brevirostris	Shortnose sucker	2	animal	LE	LE	1	2006
Coturnicops noveboracensis	Yellow rail	2	animal	SOC	SC	2	2004-06-10
Deltistes luxatus	Lost River sucker	2	animal	LE	LE	1	2006
Fluminicola sp. 20	Crooked Creek pebblesnail	2	animal			1	1997-10-06
Fluminicola sp. 8	Lost River pebblesnail	1	animal			1	1997-10-03
Grus canadensis tabida	Greater sandhill crane	1	animal		SV	4	1986-04-16
Haliaeetus leucocephalus	Bald eagle	1	animal	LT,PDL	LT	4	2003
Heliotropium curassavicum	Salt heliotrope	1	plant			2	1931-07-07
Histrionicus histrionicus	Harlequin duck	1	animal	SOC	SU	2	1958-06-14
Lampetra lethophaga	Pit-Klamath brook lamprey	2	animal			4	1970-07-31
Lampetra minima	Miller Lake lamprey	1	animal	SOC		1	199?
Podiceps auritus	Horned grebe	1	animal		SP	2	1983-05
Progne subis	Purple martin	1	animal	SOC	SC	2	1940-PRE
Pyrgulopsis sp. 7	Lost River springsnail	1	animal			1	1997-10-03
Rana pretiosa	Oregon spotted frog	1	animal	C	SC	1	1909-09-15
Rorippa columbiae	Columbia cress	1	plant		C	1	1997-09-22
Salvelinus confluentus pop. 1	Bull trout (Klamath River population)	1	animal	LT	SC	1	1990-PRE
Thelypodium brachycarpum	Short-podded thelypody	2	plant	SOC		2	1923-07-18
Thelypodium howellii ssp. howellii	Howell's thelypody	1	plant	SOC		2-ex	

Environmental Sensitivity

The trail system will provide opportunities for trail users to observe ecological features, such as stream corridors, and wet land edges. The trail is located to take advantage of many positive environmental qualities in the Klamath Basin and the Sprague River, such as views, natural vegetation, wildlife, geologic, and water features.

Any additional natural surface trails within the Right of Way will be aesthetically pleasing and provide a pleasant recreational experience. On steep slopes and highly vegetated areas, the selection of trail locations will be based upon trail user preferences, topography and visual compatibility.

In visually or environmentally sensitive areas, special location and/or construction methods will be used which protect the site from environmental or visual impact. Examples of visually or environmentally sensitive sites are: wet lands, riparian areas, highly visible hillsides, areas with significant vegetation, highly erodible soils, unstable slopes and ridgelines. Minimal visual or construction impacts on highly vulnerable sites can be achieved through certain techniques, such as limits of disturbance, fencing, site specific trail routing, erosion control measures, site specific adjustment of construction standards and design guidelines, and site specific construction practices. Use of one or more of these techniques should minimize environmental, visual or construction impacts.

Guidelines for Sensitive Sites

Construction Practices For Sensitive Sites: Disturbance fencing limits should be implemented to minimize construction impacts. Construction limits should be as small as practical to construct the trail. Significant vegetation root zones should be considered when locating the trail and establishing construction limits.

Erosion Control: Methods should be employed to protect areas adjacent to the trail from impacts both during and after construction. (See Drainage Planning and Slope Management Guidelines sections)
Indigenous Materials: Indigenous construction materials should be used for retaining walls, bridges, and barriers wherever possible.

Existing Vegetation: Existing significant vegetation should be preserved wherever possible. Trees, riparian vegetation, scrub oak, and rare plants are considered significant. Root zones, as well as above ground vegetation require protection when preserving plants. In general, the area within the drip line of trees, especially on the down slope side of the vegetation, is sensitive to disturbance. If root zones are impacted or grades are changed significantly, temporary irrigation may be necessary.

Re-Vegetation: Native and/or self-sustaining plant materials should be used for re-vegetation of all disturbed areas where trails pass through native or non-irrigated sites. Re-vegetation can be used to provide screening. Construction techniques to preserve vegetation and trail routing techniques should be used to minimize visual intrusion. Deciduous trees should be planted on the south side of the trail to provide shade in the summer, but allow snow and ice to melt in the winter. Conifers should be planted on the north side of the trail to reduce wind.

Natural Considerations: Where significant wildlife or other natural features exist, special trail routing, construction methods and trail use should be considered.

Noxious Weeds: Noxious weeds are a problem all over Oregon. Noxious weeds should be managed proactively and be consistent with the Department of Agriculture's approved practices. Herbicides, mowing, hand pulling and other methods should be used to manage noxious weeds.

Wetlands: Trails that cross or are located adjacent to wetlands should be designed for minimal impact. Wooden boardwalks or other techniques may be necessary to impose minimal construction impacts. Wildlife needs should also be considered when setting trails near wetlands.

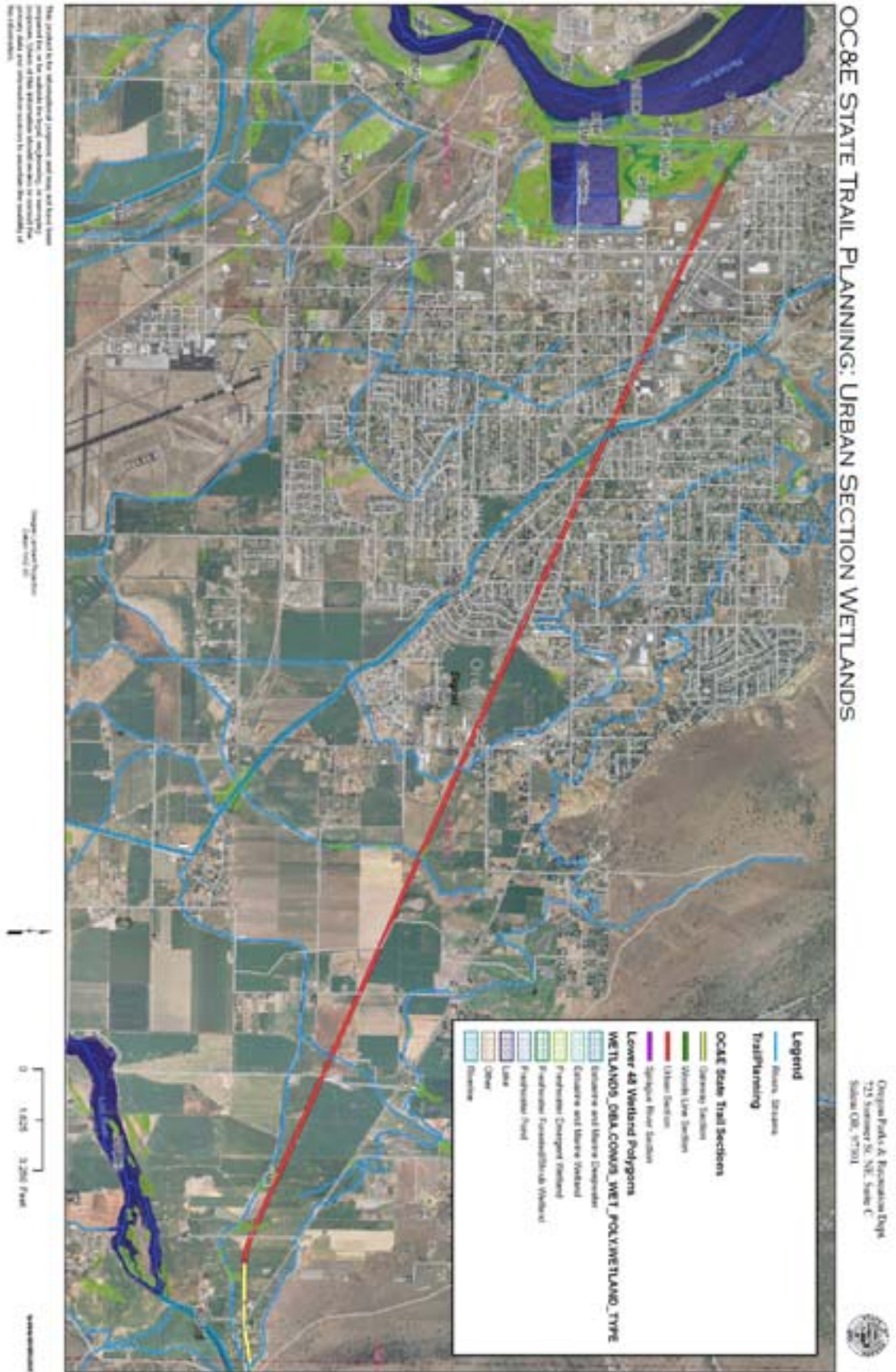
Visually Sensitive Areas: Locations that are visually sensitive, such as tallus slopes, may require reduced cut and fill slopes, hand-construction, and low retaining walls to minimize site disturbance and visual intrusion.

Environmentally Hazardous Areas: Where environmental hazards are present, special trail construction techniques or locations should be used to mitigate the hazard. Hazardous areas, such as steep slopes, lightning prone areas and rockslide areas should either be avoided or be closed seasonally when hazardous conditions are a problem.

Micro Climatic Trail Use Opportunities: Locate the trails for both summer and winter activities, where possible, given the terrain and climatic considerations. Identify snow retention areas for possible cross-country ski trails. In open areas, place trail alignment to take advantage of wind protection and shaded canyon areas.

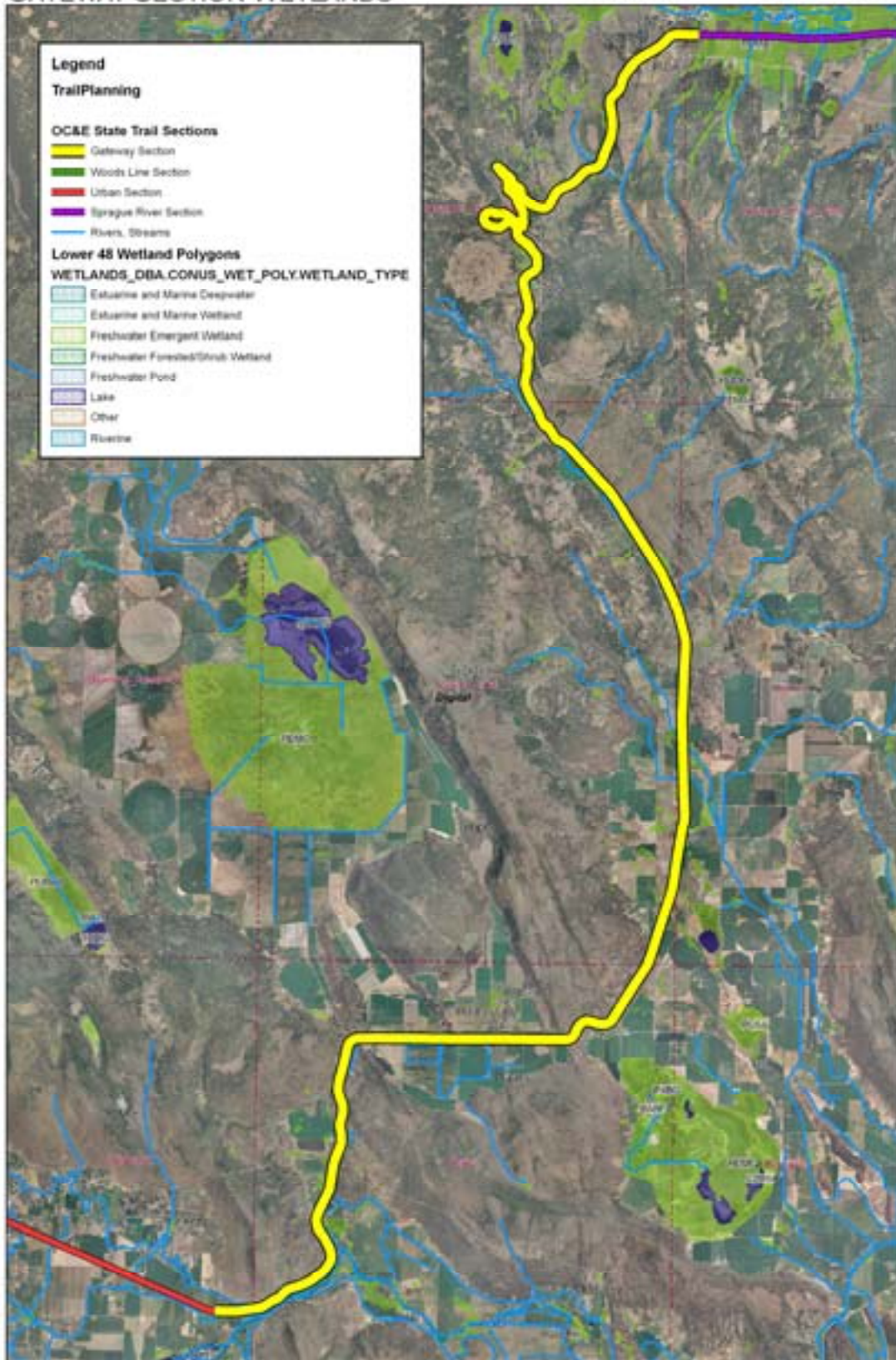
Wetland Inventory

An inventory of the wetlands found near the OC&E State Trail was completed. The following maps show the proximity and classification of wetlands.



OC&E STATE TRAIL:
GATEWAY SECTION WETLANDS

Oregon Parks & Recreation Dept.
725 Summer St. NE, Suite C
Salem OR, 97301

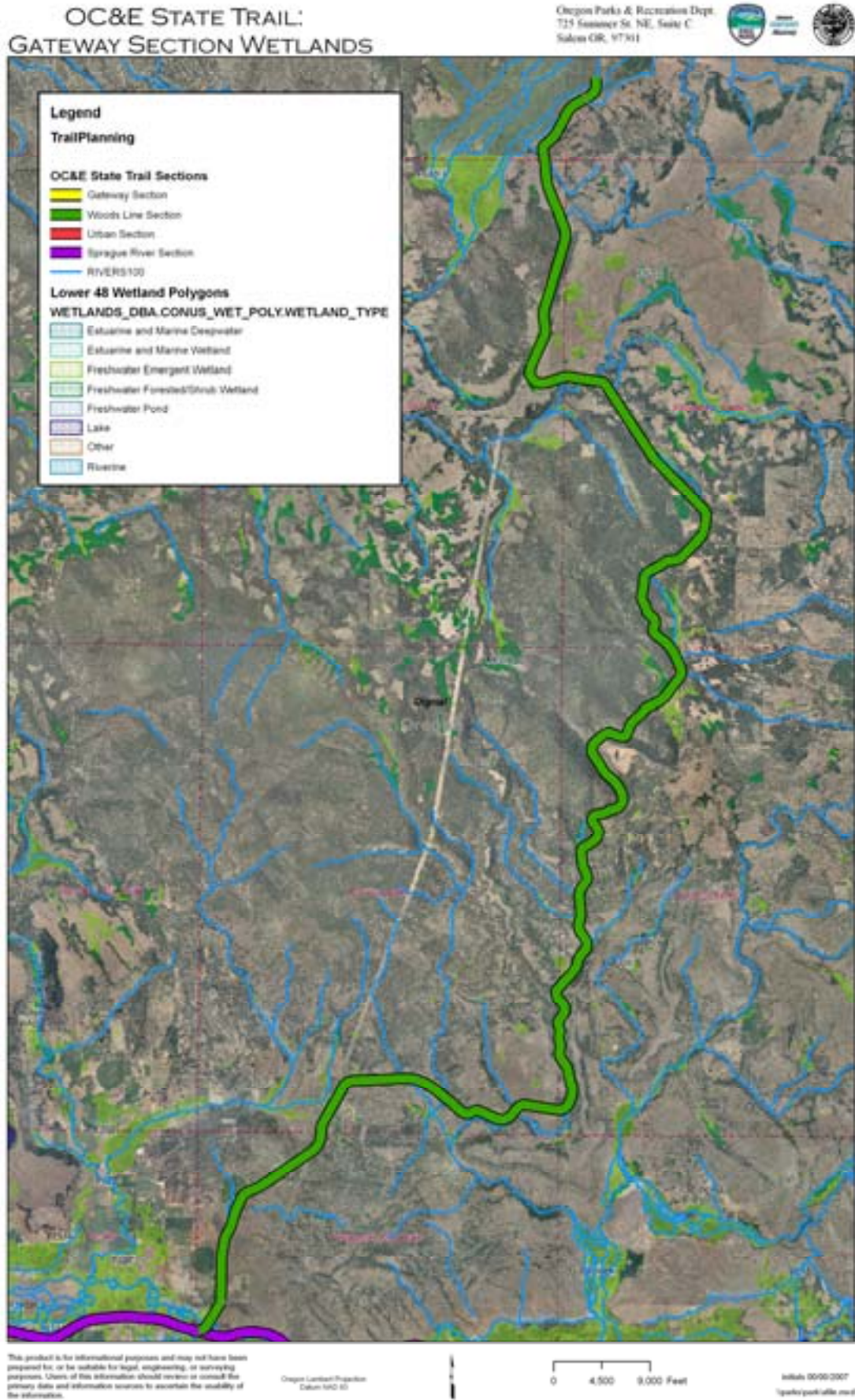


This product is for informational purposes and may not have been prepared for, or be suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information.

Oregon Lambert Projection
Datum: NAD 83

0 3,950 7,900 Feet

Initials: 00/00/2007
ispark@parkville.mad



Non-Recreational Use of OC&E State Trail

The OC&E State Trail is a park. The same rules and regulations that apply to all State Parks apply to the OC&E. Uses of OPRD properties require a permit or easement. Through this process OPRD will allow non-recreational use of the right of way under certain circumstances and only on certain sections of the right of way. The non-recreational use will be limited to certain times of the year, with prior approval by OPRD and shall not interfere with the recreational uses of the Park. The key non-recreational uses that occur on the right of way addressed specifically include:

Grazing: Can assist in fire prevention and weed management, but also has other affects. The railroad did not allow grazing on the right of way. However, local ranchers did put up temporary fences and use the area for grazing during days that the rail was not in use without approval from the railroad.

Over grazing tends to create a larger weed issue. The cattle tend to destroy trail usability by loosening the trail ballast, accelerate volcanic soils breaking down and create an adverse maintenance issue for the trail. Cattle place gravel onto the decking of bridges through their movement, which reduces their lifespan and creates additional maintenance issues.

Cross-fencing of the right of way for grazing will not be permitted. It removes access for the public. In addition, grazing cattle in smaller sections become very intimidating to the general public.

Policy: Pursuant to 736-010-0035 Grazing will be allowed by permit only. Grazing will be allowed only in areas where the trail is not improved. Grazing areas will be reviewed and updated periodically by the Park Manager. The changes will be based off of improvements to the trail, trail use levels, natural resource issues and other pertinent information. Grazing will be permitted only if it has minimal adverse affects on recreational activities. The establishment of parallel fencing by the grazing applicant will be the preferred method to reduce recreational conflicts and adverse affects to the trail tread.

Implementation: OPRD will follow ORS 607.300-365 in managing non-permitted grazing activities. The steps will include:

1. Ensure fencing is adequate and did not lead to astray livestock. Fence maintenance will be prioritized by the Park Manager.
2. Contact livestock owner and notify of their presence on our property.
 - a. Discuss permit requirements and/or;
 - b. Discuss removal of animals, if not willing to do permit and/or;
3. Consistently uncooperative and non-compliant grazing violators will be referred to the OPRD Property Manager. They will pursue other options to resolve the issue including, citations, local law enforcement or legal resolutions to the situation. Legal resolutions could include allowing grazing with an agreement to add additional fencing/repair fencing.

Vehicle Access: Occasional passenger vehicle access has marginal impacts to the trail surface. Off-road vehicles (ATVs, Dirtbikes) create impacts at a higher rate. Recreational or agricultural use of Off-road vehicles will not be allowed on the trail. Frequent road access creates compaction and degradation of the native soils and produces pot holes and other maintenance issues for the trail. The trail is not designed to have vehicle access frequently.

Policy: Only authorized vehicles will be permitted on the right of way. Emergency access will be allowed for adjacent property owners and other public agencies. The park manager can permit exceptions for limited access for short periods of time. Vehicles will maintain reduced speeds (less than 20 mph) and have non-aggressive tread to minimize adverse effects to the trail tread. Any access beyond this will require an easement.

Implementation: The gate lock system will be continued to reduce unauthorized vehicle access on the trail. A gate database should be developed to clearly and quickly identify authorized

padlocks at each gate and contact information for all authorized lock owners. The Park Manager will work with adjacent property owners and other public agencies on access issues. Easements and access issues will be referred to the OPRD Property Manager.

Access Points/Crossings: There are several historical access points/crossings that have been in place prior to OPRD's ownership. OPRD has no plans to increase the number of access points. However, OPRD will review requests for a permitted access point and make decisions on a case-by-case basis.

Policy: No additional access points are planned to be added. Additional access points will be reviewed by the Park Manager and the OPRD Property Manager using the OPRD permit process. OPRD will review the access permit to determine if there will be any natural resource, recreational or other issues that would be impacted by the new access point.

Implementation: The Park Manager will work with adjacent property owners and other public agencies on access issues as permits are applied for. Unauthorized access points will be addressed as identified. The Park Manager will work with the OPRD Property Manager to identify if unauthorized access points will be allowed, per the permit process, or will be removed.

Cattle Movement: Historical sites for movement from field to field on either side of the right of way will be allowed with prior notification. OPRD does not want to have new lateral movement sites. Routes that run up or down the trail for extended lengths will be reduced. Due to the impacts on the trail tread from cattle movement, OPRD will require the trail tread be restored to its condition after any cattle movement up or down the trail. OPRD has worked with several adjacent property owners to develop strategies to reduce conflicts and minimize damage to the trail. OPRD needs notice of planned cattle movement to ensure adequate notice to the public to reduce conflicts.

Policy: Currently identified historical crossing sites will be continued. No new sites will be established, unless authorized by the OPRD Property Manager and is mitigated.

Implementation: The Park Manager will work with adjacent property owners on cattle movement. The Park Manager will refer new sites to the OPRD Property Manager.

Cultural, Historical, Natural and Wildlife Resources: The trail has several cultural, historical, natural and wildlife resources that are unique and need to be preserved. The removal of any cultural artifacts, archeological artifacts or fossils will not be allowed. The removal of plants, rocks, soil or other natural resources will not be allowed. Hunting or feeding wildlife will not be allowed. Fishing is allowed, per Oregon Fish & Wildlife rules and regulations.

Policy: Administrative Rule 736-010-0055 will be followed.

Implementation: The Park Manager will follow the enforcement options in Administrative Rule 736-010-0055. The Park Manager will work with local law enforcement and ODFW to enforce any additional laws affiliated with the impacting cultural, historical, natural or wildlife resources.

Long-Term Operation & Maintenance Policies

Operations and Maintenance Defined

Operations and Maintenance (O&M) refers to the day-to-day upkeep as well as the smooth and safe functioning of a trail, greenway or trail/greenway system. The term Stewardship refers to long-term care and oversight of the trail resource. This is essential to assure it will be sustained as a quality component of the community infrastructure and a good neighbor to adjacent properties and surrounding natural environment. Stewardship also includes building community support and advocacy so the integrity of the trail or greenway will not be compromised in the future.

Routine Maintenance refers to the day-to-day regimen of litter pick-up, trash and debris removal, weed and dust control; trail sweeping, sign replacement, tree and shrub trimming and other regularly scheduled activities. Routine maintenance also includes minor repairs and replacements such as fixing cracks and potholes or repairing a broken handrail.

Remedial Maintenance refers to correcting significant defects as well as repairing, replacing, or restoring major components that have been destroyed, damaged, or significantly deteriorated during the life of the project. Minor repairs such as repainting, seal coating asphalt pavement, or replacing signs may occur on a five to ten-year cycle. Major reconstruction items might occur over a longer period— up to 100 years or more— or after an event such as a flood. Other examples include stabilization of a severely eroded hillside, repaving a trail surface, or replacing a bridge. Remedial maintenance should be a consideration in formulating a long-term capital improvement plan, though budgeting could be on an individual and as-needed or anticipated basis.

Proper handling of water runoff is a key element of trail maintenance.

A quality O & M program addresses specific required tasks and begins with sound design, durable components, and a comprehensive management plan. The responsible officials and entities should embrace the plan at the beginning.

Programs and protocols that will endure should be instituted, including training of field and supervisory people. In addition, community groups, residents, business owners, developers and other stakeholders should be engaged in the long-term stewardship effort.

Maintenance Management Plan

Maintenance management plans (MMP) encompasses and supplies solutions for the planning and control of activities associated with maintenance activities of park facilities. Generally, it incorporates labor and materials needed to keep park facilities operational for public use. OPRD uses MMPs as an assessment tool to determine staffing levels and work priorities.

The OC&E State Trail had an MMP assessment completed in 2002. The plan at that time indicated that the trail needed about 3.80 full time employees to complete all of the routine maintenance activities. Currently, OPRD has 1.08 full-time equivalent (FTE) employees (0.75 FTE Ranger; 0.33 FTE Ranger Aide). Additional hours have been contributed through inmate labor work crews, volunteers and community service workers. The staffing level is low, but is consistent with OPRD's staffing levels for parks in the area. However, since 2002 the OC&E State Trail has continued to add facilities. Therefore, an updated MMP needs to be completed to ensure all items are captured. Additionally, as new facilities are developed, they should be assessed for operational capacity to maintain them.

Trail Maintenance Guidelines

Trails must do many things: promote safety, protect the environment, and provide quality experiences. Indeed, an excellent project concept may die on the vine if these challenges are not adequately addressed. Here is an outline of the key elements of this vital aspect of trail management:

Guiding Principles for a Successful Program

The following guiding principles will help assure preservation of a first class system:

- Good maintenance begins with sound planning and design
- Foremost, protect life, property, and the environment.
- Promote and maintain a quality outdoor recreation experience.
- Develop a management plan that is reviewed and updated annually with tasks, operational policies, standards, and routine and remedial maintenance goals.
- Maintain quality control and conduct regular inspection.
- Include field crews, police and fire/rescue personnel in both the design review and on-going management process.
- Maintain an effective, responsive public feedback system and promote public participation.
- Be a good neighbor to adjacent properties.

An effective O & M plan should include the following areas:

- Maintenance: Routine and Remedial
- User Safety and Risk Management
- Programming and Events
- Resource Stewardship and Enhancement
- Marketing and Promotion
- Oversight and Coordination
- Mile markers can assist with maintenance as well as provide information for trail users.

Following are some of the typical O & M Activities for various types of trail amenities:

- Inspection and Citizen Response
- Trail Surface Maintenance
- Repaving and Pavement Overlays
- Sweeping/Street Sweeping (For On-Street Facilities)
- Street Surface Upkeep and Repair (On-Street Facilities)
- Parking Lot Repair at Trailheads
- Maintain Connecting On-Street and Sidewalk Routes
- Vegetation and Pest Management (e.g. Trimming Overhanging Branches)
- Irrigation Systems
- Litter and Trash Removal
- Graffiti and Vandalism Control
- Dust Reduction
- Address Detours/Disruptions (With Workable Alternative Routes)
- Remedy "Social Trails" (Such as Shortcuts)
- Repair Trail Structures and Fixture/Erosion Control
- Signage (Especially Safety Signage), Striping and Lighting
- Rest Areas, Shelters and Water Stations (Including Equestrian)
- Toilet Facility Service
- Patrol, Security, Enforcement, Safety Hazard Reduction
- Special Event Policies and Permitting
- Education and Enforcement
- Accident and Incident Data Tracking

User Safety and Risk Management

User safety is critical to trail design, operations and management. Trail planners and managers should implement a safety program that includes: systematic risk management assessment, inter-agency design

review for all proposed improvements and accident and crime reporting. In addition to department managers, planners, designers and engineers, law enforcement, fire/rescue and field maintenance personnel should be consulted in the design and review process.

Important steps in this process include:

- Use sound design and engineering principals in the planning and design phase. For instance, trail designs should conform to currently established standards such as the Guide for the Development of Bicycle Facilities available from the American Association of State Highway and Transportation Officials (AASHTO). Safety and regulatory signage should conform to the Manual of Uniform Traffic Control Devices available at <http://mutcd.fhwa.dot.gov/> from the Federal Highway Administration. For good references that address accessibility standards, design of primitive trails, mountain bike facilities, bridges, boardwalks, and other facilities, visit the American Trails website: www.americantrails.org.
- Consult experts in bicycle facility engineering for difficult situations such as at-grade street crossings, trails built next to roads, mid-block crossings and other challengers. It may be advisable to have an engineer review the entire plan set. Remember, bikes are vehicles and should be treated as such.
- Include all points of view. Involve members of both genders, a variety of age groups, and law enforcement and fire/rescue people in reviewing plans. Concerns with respect to safety and security will vary depending on the perspective.
- Implement an emergency response protocol with law enforcement, EMS agencies, and fire and rescue department that includes mapping of trail and open space access points, design of trails and access roads (to accommodate up to 6.5 tons), an "address/location positioning system" such mile markers to identify locations and, where appropriate, 911 emergency phones in remote areas.
- Implement a data base management system with law enforcement and fire/rescue to track specific location and circumstances of all accidents, reported incidents and crime and create a safety follow-up task force to address any problems that develop.
- Routinely inspect for safety hazards, defective structures, missing safety signs, etc.
- Promote user courtesy and trail etiquette and post and enforce safe user behavior and bicycle speed limits (in congested and risk areas).
- Have a user feedback plan and problem hotline. Develop a procedure for timely and effective response.
- Identifying roles and responsibilities of all workers is essential to good O & M planning.

Several steps can be effective on organizing leadership and effective administration of an O & M program including:

- Preparing and distributing an O & M manual with a specific listing of all functions, frequency of tasks, quality standards, and estimated unit costs and/or staffing requirements. This should be translated into an annual budget that anticipates build-out in five-year increments.
- The program should be goal-oriented and mission-focused based on the written and agreed to policies and guidelines.
- A lead individual or committee should be identified to serve as liaison/advocate for the system. This lead person should also work cooperatively with the respective department and agency heads and staff to assure a coordinated effort amongst all of the participants.
- Allocate discrete and adequate funding based on the written O & M program manual and annual budget.
- The program must be cost-effective with sustainable funding sources identified.
- Key participants in the O & M program should meet at least twice a year to assess performance for the past season and set direction, priorities, and funding needs for the upcoming season.
- Several agencies or jurisdictions may be involved in the management. Greenway systems often including neighboring communities or infrastructure partners such as a stormwater

management agency or a highway department. An interagency maintenance agreement may be based on a memorandum of understanding (MOU) or other agreement that covers responsibilities, sharing of equipment, standards of performance, and cost sharing if applicable.

O & M costs and revenue

O & M costs can vary substantially depending on the facility, climate, and complexity of the system. For urban trail systems an annual per-mile cost might run from \$2500 to \$10,000.

Different sources of revenue may be identified including:

- General fund allocations;
- Revenue from right-of-way leases such as cable use;
- Participation and partnering with the stakeholders such as a flood control agency, streets department, or a homeowners association;
- Creation of an endowment from philanthropic or other sources to generate on-going revenue;
- Recruiting volunteers, youth and adopt-a-trail participants and sponsors.
- While the annual O & M costs may seem intimidating, it is important to note that the return to the community in terms of recreational benefits, health and fitness, and economic development have been shown through a number of studies nationwide to be multi-fold.

Development of the OC&E State Trail System

Trail Tread Development

The OC&E State Trail is a 100 mile trail, comprised of two railroad right of ways. The trail goes from a growing urban center reaching out into the mountains and valleys of Oregon's outback. The trail tread will be developed to embrace the transition. The Trail will be divided into four zones for tread development. Attachment **** illustrates the four zones. They are as follows:

Urban Section (Klamath Falls to Olene, approximately 9 miles)

- Trail will be 10-12 ft wide, paved and allow all non-motorized recreation.
 - A natural surface trail, less than 2 ft in width will be allowed for equestrian, mountain bikers and hikers.
 - Trail is currently 8 ft wide pavement. Trail pavement improvements will be completed after Gateway section has gravel base improved. Some sections will not allow a wider trail tread.
- This classification of trail will have the highest priority for maintenance and development.

Gateway Section (Olene to Sprague River, approximately 30 miles)

- Trail will be 8 ft wide, compacted gravel and allow all non-motorized recreation.
 - A natural surface trail, less than 2 ft in width will be allowed for equestrian, mountain bikers and hikers.
 - A 5 ft wide paved trail, with a 5 ft compacted gravel trail connected will be considered once the entire Gateway Trail section is improved and the Urban Section pavement improvements have been completed. The long-term goal will be to look at a 10 ft pavement trail.
- This classification of trail will have the 2nd highest priority for maintenance and development.

Sprague River Section (Sprague River to Bly, approximately 25 miles)

- Trail will be 8 ft wide, Compacted gravel surface and allow all non-motorized recreation.
 - Currently, the trail is a 8 ft wide rolled ballast and native materials.
 - Pavement will be considered after all other sections improvements have been completed.
- This classification of trail will have the 3rd highest priority for maintenance and development.

Woods Line Section (Near Beatty to Sycan Marsh, approximately 30 miles)

- Trail will be 8 ft wide, rolled native materials and allow all non-motorized recreation.
 - Certain sections, specifically the first 10 miles may require compacted gravel improvements to improve recreational access.
- This classification of trail will have the 3rd highest priority for maintenance and development.

The following map shows where the sections are located:



DRAFT

Trailhead Development

Trailheads function as the key access points for the OC&E State Trail. There will be three different levels of trailheads developed: Pedestrian Access, Vehicle Access and Equestrian Access. The trailhead guidelines are as follows:

- **Pedestrian Access Trailheads**

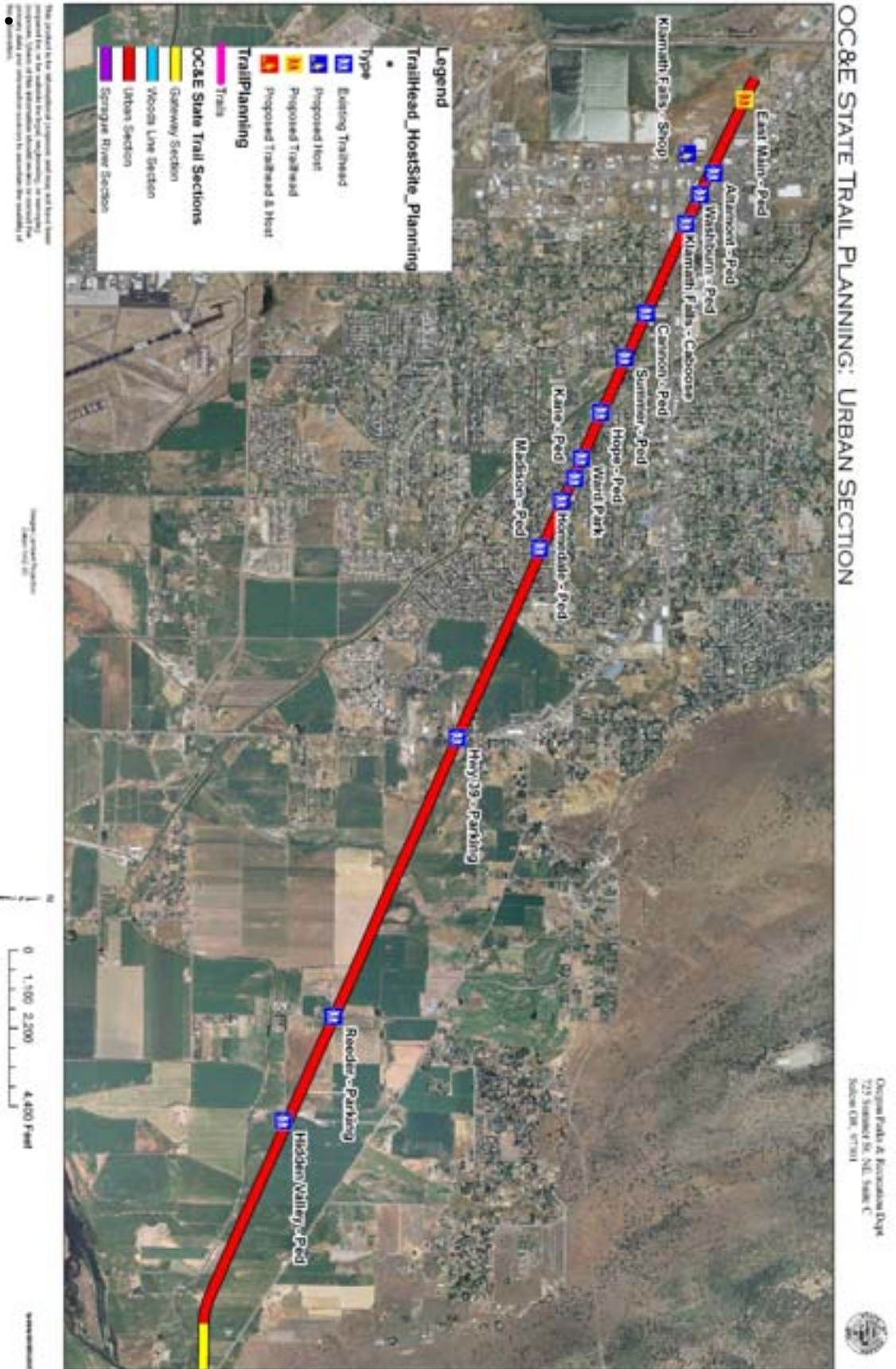
- Amenities: Pedestrian access trailheads will be the most basic trailheads on the OC&E. They may appear merely as road crossings with minimal signage and bollards to reduce unauthorized use of the trail. They may also have a kiosk, trail map, park rules sign and benches.
- Locations:
 - Existing:
 - Altamount (Urban Section)
 - Washburn (Urban Section)
 - Cannon (Urban Section)
 - Summer (Urban Section)
 - Hope (Urban Section)
 - Ward Park (Urban Section)
 - Kane (Urban Section)
 - Homedale (Urban Section)
 - Madison (Urban Section)
 - Hidden Valley (Urban Section)
 - Hwy 140/Old Overpass (Gateway Section)
 - Hwy 140/Swede's Cut (Gateway Section)
 - Dairy (Gateway Section)
 - Hilderbrand Rd (Gateway Section)
 - Hilderbrand Rd #2 (Gateway Section)
 - Bodnar Rd (Gateway Section)
 - Egert (Gateway Section)
 - Sprague River (Sprague River Section)
 - Godow Spring (Sprague River Section)
 - Sprague River Access (Sprague River Section)
 - Ivory Pine (Sprague River Section)
 - Railroad Rd (Woodline Section)
 - Ferguson Mtn (Woods Line Section)
 - Sycan Siding (Woods Line Section)
 - Sycan Road (Woods Line Section)
 - Sycan Road #2 (Woods Line Section)
 - Yellow Pine (Woods Line Section)
 - 3207 Road (Woods Line Section)
 - 3227 Road (Woods Line Section)
 - 3702 Road (Woods Line Section)
 - Proposed:
 - East Main (Urban Section)

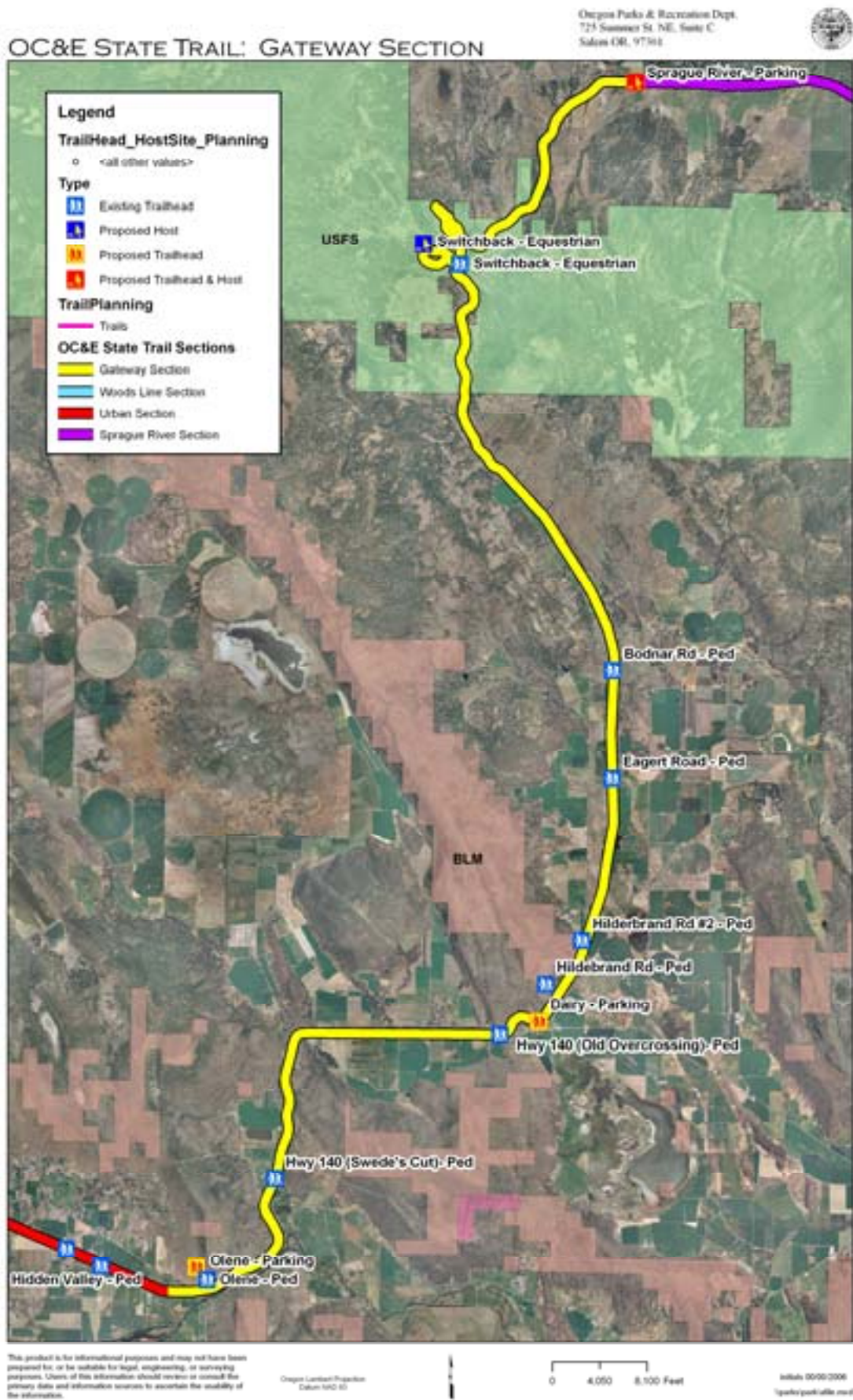
- **Vehicle Access Trailhead**

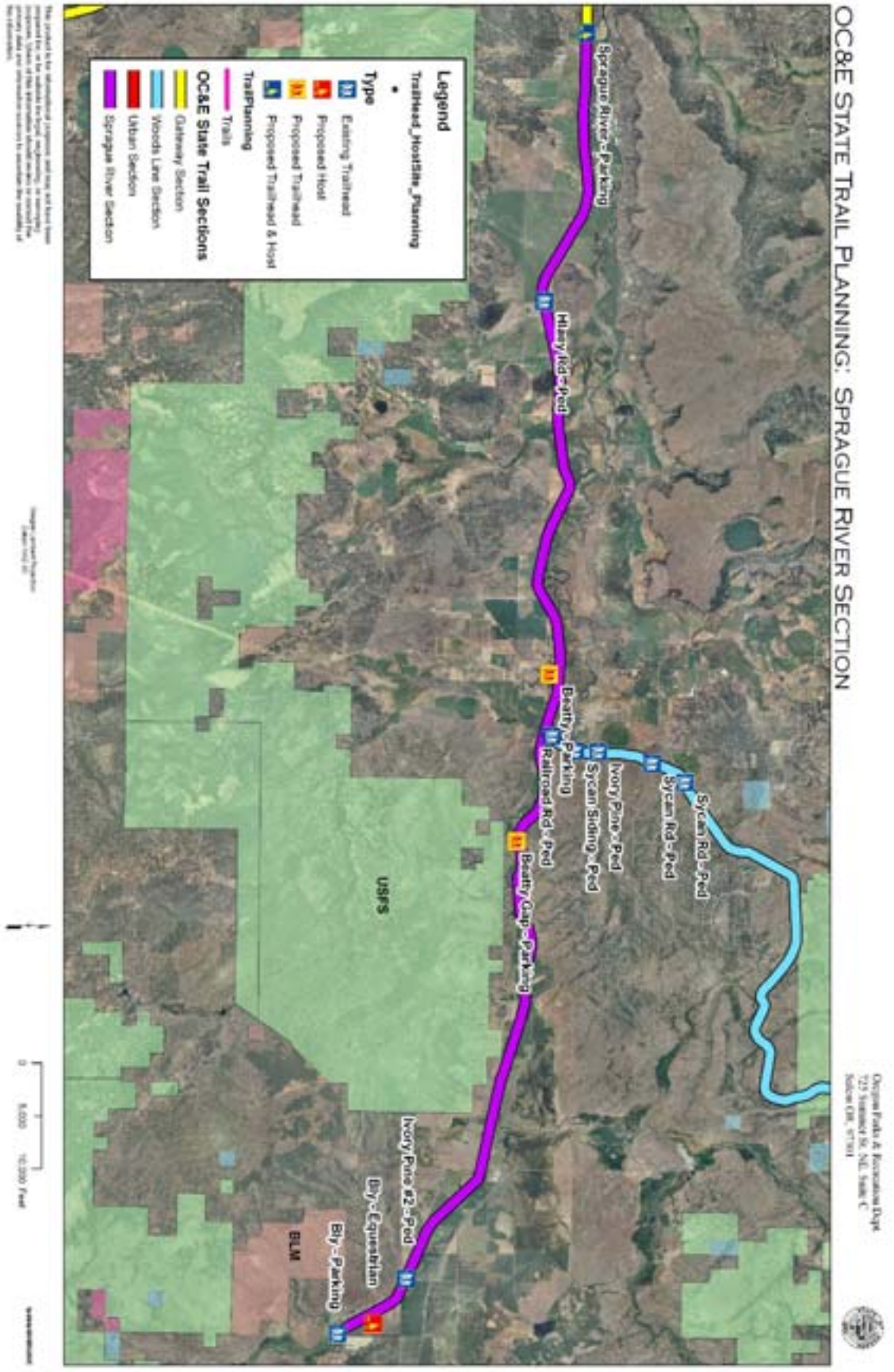
- Vehicle access trailheads will have parking for trail users. There are three design guidelines that, as follows:
 - Standard Vehicle Access
 - Amenities: The standard vehicle access trailhead will have minimal amenities and will vary in size, depending on the space and use level. The surface will be typically graveled, but could include pavement. The trailhead could have bollards, informational signage, a kiosk, trash receptacles and benches or picnic tables. Seasonal restrooms may be provided at a standard vehicle access trailhead.
 - Locations:
 - Existing:
 - Hwy 39 (Urban Section)
 - Reeder (Urban Section)
 - Bly (Sprague River Section)
 - Horse Glade (Woods Line Section)
 - Proposed:

- Dairy (Gateway Section)
 - Ivory Pine (Sprague River Section)
 - Beatty (Sprague River Section)
 - Beatty Gap (Sprague River Section)
 - Sycan Marsh (3702 Rd) (Woods Line Section)
 - Developed Vehicle Access
 - Amenities: The developed vehicle access is essentially a standard vehicle access trailhead with the addition of a vault toilet. The developed vehicle access may have additional day use facilities, interpretive features or serve as destination trailheads along the trail. The trailhead will be typically paved, but could be only graveled. Primitive Camping may be an added feature.
 - Locations:
 - Existing:
 - Caboose (Urban Section)
 - Switchback (Gateway Section)
 - Bly (Sprague River Section)
 - Horse Glade (Woods Line Section)
 - Proposed:
 - Olene (Urban Section)
 - Dairy (Gateway Section)
 - Egert Rd (Gateway Section)
 - Reeder Rd (Gateway Section)
 - Sycan Marsh (3702 Road) (Woods Line Section)
 - Deluxe Vehicle Access
 - Amenities: The deluxe vehicle access trailhead will be the level of amenities for vehicle access trailheads. They will be the key sites for the OC&E State Trail to enhance access to the outlying sections of the trail. These sites will include amenities like water, electricity, hosts, etc. The trailheads will typically be paved. Primitive Camping may be an added feature.
 - Locations:
 - Existing: There currently are no deluxe vehicle access trailheads.
 - Proposed:
 - Klamath Falls Shop (Urban Section)
 - Dairy (Gateway Section)
 - Switchback (Gateway Section)
 - Sprague River (Sprague River Section)
 - Bly (Sprague River Section)
- **Equestrian / Large vehicle Access Trailheads***
 - Amenities: The equestrian access trailheads will have a larger turning radius (minimum of 85 ft) and allow parking for trailers. The trailhead may have any of the amenities associated with the standard, developed or deluxe vehicle access trailheads. Primitive Camping may be an added feature.
 - * *Note: Equestrian sites may be identified in vehicle access sites as well.*
 - Locations
 - Existing:
 - Switchback (Gateway Section)
 - Bly (Sprague River Section)
 - Horse Glade (Woods Line Section)
 - Proposed:
 - Dairy (Gateway Section)
 - Sycan Marsh (3702 Road) (Woods Line Section)

The following maps show the locations of the trailheads in each section of the trail:









OC&E STATE TRAIL: WOODS LINE SECTION



Phasing of Trail Improvements

The OC&E State Trail steering committee spent time at each meeting looking at potential development opportunities of the trail. Two separate map exercises were conducted to collect development ideas. As the planning process continued, additional time was spent collecting more ideas. At the last meeting, the steering committee prioritized the list that was collected over the entire process.

A priority list was developed that looked at two key areas: Overall priority of development and development per the trail section prioritization model. The overall development was broken into a four point prioritization scale, as follows:

- Priority 1 – Projects that should be scoped, engineered and planned for in the next 2 to 3 funding cycles. These are projects that have an immediate benefit to trail users and/or coincide with the direction the steering committee felt the trail should move towards.
- Priority 2 – Projects that should be planned for and developed in the next 3 to 6 funding cycles. These projects have a moderate benefit to trail users and/or are not critical to short-term trail development goals.
- Priority 3 – Projects that should be planned for and developed in the next 5 to 10 funding cycles. These projects will enhance the trail user experience and implement long range trail development goals.
- Priority 4 – Projects that will be taken on if funding and opportunities arise. These projects are beneficial, but not essential for trail users.

Trail development can not all be accomplished at one time. The trail improvements will be phased in over the life of the plan. Each improvement will be reviewed by OPRD to ensure that sufficient resources are available to maintain the addition to the trail. This could be a combination of OPRD staff, volunteer labor, inmate labor or any other resource available.

OPRD encourages trail partners to seek funding opportunities to allow development to occur quicker. OPRD typically will want the development to be consistent with the trail plan's priorities and will need to sign off on most projects as the land manager. Trail partners have had a successful history in getting grant resources for the OC&E State Trail.

Trail priorities are as follows:

Trail Feature	Priority Rating	Reason or additional information
General Trail Development		
Asphalt surface	1	In UGB
Connect to Downtown Klamath Falls	1	Connectivity
Protection	1	Protect Trail & Surface from Mis-use
Trash Recepticals	1	Same as benches in UGB not in rural areas
Funding	2	Adequate program funding (More)
Gravel	2	Imported gravel surface upgrade
Red Trail Area	2	Signage
Staffing	2	Appropriate OPRD Staffing (More)
Vault Toilet	2	In more rural ares every 10 miles & at parking lots
Partner with BLM, USFS & local jurisdictions	2	Single Track & Trail Head
Parking	3	Key areas Bly, Betty as needed
Scenic Areas	3	Tied in with signs & Benches as identified
Install new style benches	3	
Connecting kids with older groups	3	Gear for younger groups to connect with older groups. Connect future "birders" Hikers, etc.
Contouring along paved trail section	3	
Interpretive opportunities	3	
stable, under MUP permit.	4	
Geographical / Native Features	4	If exist same as scenic areas with signs
Parallel Single Track	4	Horse & Mt. Bike more challenging
Integrate more Railroad theme substance and artifacts depicting location/name chronology).	4	
	4	
Urban Section		
sewer & expand building for toilet, etc.	1	
furniture & fixtures.	2	
Develop Interpretive Site at East Main St Site with Engine	2	
Acquire OC&E Locomotive and restore for display	3	
Trestle Bridge - Cambell	4	
Gateway Section		
Trailhead Olene	1	No Parking There
Campground	3	Lower Loop @ Switch Back (Partner with USFS)
CXT Toilet at Reeder Road Trailhead	2	
11.15	3	
Dairy/ Swan Lake Trailhead	3	Trailhead; equestrian offloading & camping; water; linkage to BLM future trail on Swan Lake Rim
Egert Rd Trail Head	3	Anchor at both ends of Switch Back
Sprague River Section		
Sprague River Trail Head	1	Anchor at both ends of Switch Back
4' pave to Bly	4	Long Distance bike traveler
Woods Line Section		
Connect Woods Line at Sycan	3	Connect to camp grounds, Sycan Marsh & South Intentie Trail
Construct a rock wall (vehicle barrier) – Woods Line MP 11.5	2	

Potential Acquisitions

The goal of the the OC&E State Trail is not to acquire additional property to lengthen the trail. The OC&E State Trail may require additional property to enhance the access for trailheads. Potential sites for acquisition include:

- Olene – 1.5 Acre
 - Property has been identified as a potential donation. This site would allow the Olene trailhead become a vehicle access trailhead and serve as a key trailhead for the Urban and Gateway sections of the trail.
- Dairy Y - .5 Acres
 - This is property that currently lies in the middle of the Y at Dairy. This property would allow a vehicle access trailhead to be developed. It would serve as a key site for the Gateway section.
- Sprague River – 3-4 lots
 - Potentially, additional property would need to be acquired to make the previous station at Sprague River a vehicle access trailhead. This site would be a key site for a potential host and become a destination for the Gateway and Outback sections of the trail.
- Beatty Gap – 5 Acres
 - The site would allow a vehicle access trailhead be developed. It would serve as a key site for the Outback and Woods Line sections of the trail. A bridge would need to be placed at this site and this would need to be coordinated with the county.

Scenic Sites

There are several sites along the OC&E State Trail that are scenic and provide the trail user with sweeping vistas or unique natural history sites. The key scenic sites on the OC&E State Trail are the following:

- Beatty Gap
- Five Mile Creek
- Switchback
- Sprague River section

Interpretation Planning

Interpretation refers to a program designed to provide informative and educational material to people on a variety of topics directly related to the OC&E State Trail. These topics are usually related to the areas natural or cultural resources, but can include other topics. The information can be presented utilizing a variety of media such as signs and displays, brochures, guided walks and tours, web sites, information kiosks, and K-12 curriculum guides.

Interpretive Level of Service Descriptions

Level Five: Can include a visitor facility of some kind. May be only a small visitor contact building or a full service interpretive center. Can also include outside interpretive structures. Serves as a base for outreach education programming. Offers staffing and interpretive access year round and 7 days a week. Have multiple interpretive sites in the park and supporting guided and self-guided trails. Offers staff-run programs and tours. Has staff who are dedicated to interpretive duties on a year round basis and additionally dedicated interpretive staff for the summer season.

Level Four: A high season only version of Level 5. May include a dedicated interpretive building, large or small, but will only be seasonally open. May include outside interpretive structures that can be self-guiding for both high and off-season use. Has dedicated interpretive staff on a seasonal basis.

Level Three: Generally would not include dedicated interpretive building with interior access. May include outside interpretive structures. Offers only seasonal programs and tours. Can be provided by dedicated staff, other staff, area support, volunteers or may be self-guiding.

Level Two: Generally providing self-guided opportunities such as sign structures, walk and tours. Provides occasional seasonal staffed programs. Staff would come from a "higher" level park, or the area office. Programming might be event or request based.

Level One: Provides an information kiosk and some freestanding interpretive signs. No programming or interpretive staff presence.

Currently, the OC&E State Trail has been determined to be a Level 2 park. The OC&E State Trail has several interpretive items including 13 interpretive panels, a caboose, brochure, etc. However, a formal Interpretation plan has not been developed. An interpretive plan is scheduled to be completed in 2009.

Gates

The long-term goal to reduce the number of gates as appropriate. Currently, it assists with trespassing, livestock issues, fencing issues, other land owner issues and reduces motorized use on the trail. The gates will be removed as use levels increase and fence quality/conditions improve.

Trailhead Counters

Place trail counters at a minimum of 1 per trail section, with goal of trail counter at the major trailheads.

TRAIL CONSTRUCTION GUIDELINES

The design, development and implementation of the OC&E Woods Line State Trail non-motorized trail plan will consider safe shared use paths throughout the trail system. In order to provide a safe shared use trail system, trail construction guidelines should include such things as: width, surface materials, slopes, appropriate sight distances, signs, and trail curvatures. Trail use types are identified and different standards for various trail use types are delineated.

Trails will generally be open to bicycles, pedestrians, joggers, hikers and equestrians. Equestrian trails will be specifically designated on paved sections of the trail. Signs at trailheads and significant access points should specify allowed uses and define user etiquette. Motorized vehicles except those for emergency or maintenance purposes will be prohibited from using the OC&E Woods Line State Trail non-motorized trail system.

Safety Within Pedestrian Friendly Zones: The most important factor for pedestrians on the roads is the speed of vehicles. High-speed traffic is intimidating for pedestrians because it increases road noise and shortens reaction times for drivers. Drivers are less likely to yield for pedestrians and, when collisions occur, serious pedestrian injuries are more likely to result.

Roads at crossings should be designed for slower speeds. When designing roads, you can improve their design by adding trees, reducing pavement width, signage, medians, and other traffic calming devices. Pedestrian deaths and injuries can be prevented in two ways: 1) Make roadways safer for pedestrians by installing 'pedestrian friendly' design features, especially at intersections. 2) Provide a transportation system where people can find a convenient alternative to driving. By encouraging the development of safe and accessible pedestrian networks, most trips and traffic volumes can be reduced. 3) Add sidewalk markings. 4) Remove parking within the right of way of the OC&E State Trail where the trail crosses a road. This would allow enhanced visibility for trail users and for drivers.

Pedestrian Friendly Zones: Creating a more accessible urban area often involves landscaping, traffic calming, zero setback and/or mixed use zoning. Preservation or reinvention of historic areas contributes both to pedestrian access and community character.

The following guidelines provide specific recommendations for how trails should be constructed to reduce maintenance and environmental impacts and should be followed in the construction of trails.

General Guidelines

- National standards are important when considering trail user safety, and the potential liability to the park, so AASHTO and/or national standards should be followed where practical. But due to the dynamic nature of outdoor recreation on the OC&E State Trail, national standards are not always practical.
- *OC&E State Trail's* unique character is a valued quality and should reflect that character in setting and materials. When possible, materials indigenous to the site should be used in construction. When the use of indigenous materials is not possible, use of historic looking materials should be considered. The use of rail road themed development should be considered and enhanced as possible.
- Trails should be located and constructed in such a manner as to minimize maintenance and maximize access.
- Trails should follow natural contours where possible and respect surrounding land forms. For example, trails crossing steep sites should flow with the landform.
- Drainage features, such as water bars, rolling dips or culverts should be constructed where appropriate to reduce erosion.
- Trail cross slope should not be between 5-8% for natural surfaced trails and 1-2% for paved and concrete surfaced trails.
- Trail running slope should be less than 8% as allowed by natural contours.
- Trail slopes should match expected user volumes and types. Refer to *ODOT Bike/Pedestrian Plan* or *AASHTO Guide For the Development of Bicycle Facilities* for further guidance.

Recommendations for Environmentally Sensitive Sites

Special location or construction methods may be necessary to reduce impacts and minimize disturbance in environmentally sensitive areas. Examples of visually or environmentally sensitive sites include: wetlands, highly visible hillsides, significant vegetation areas, highly erodible soils, unstable slopes, and ridgelines.

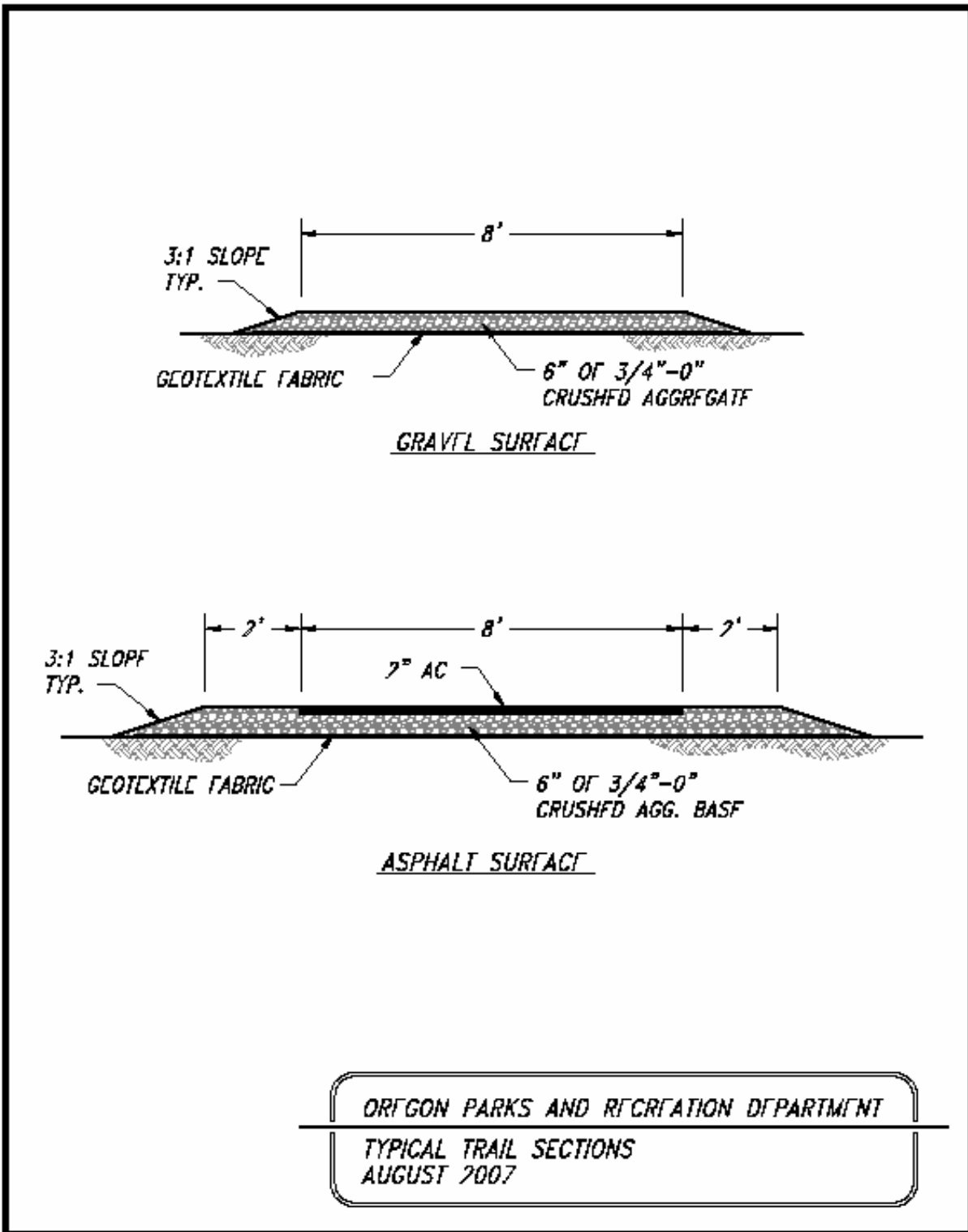
Techniques, such as site specific trail routing, erosion control measures, site specific adjustment of construction standards, and site specific construction practices should be implemented to minimize environmental, visual or construction impacts. Construction methods that should reduce impacts include installing retaining walls to reduce cut and fill slopes on a visually prominent hillside, hand construction of the trail, stabilizing a hazard that is located within or adjacent to a trail corridor or installing a tree well around a significant tree to be preserved.

Each environmentally sensitive site is unique, specific trail proposals through such locations need to be considered on a case-by-case basis.

Vertical/Horizontal Clearance Guidelines

A 10 foot vertical clearance from the trail surface is recommended. The vertical clearance to obstructions will be a minimum of 10 feet across the clear width of the path. A minimum of 2 feet beyond the trail surface will be the minimum horizontal clearance guideline.

Trail Surfacing Guidelines



Natural Surface: Natural surfaced sections of the trail will vary widely, based on several factors. The main natural surface trail will be the existing rail bed that will have ballast or native soils. These surfaces will have a rolled surface and be on average 8 feet in width. The other natural surface trails will be trails adjacent to the main trail that will serve as alternative trails for equestrians, mountain bikers or hikers. They will typically be 2 feet in width and will be less than 10% in their slope, has a 5-8% cross-slope and follow the contours of the surrounding landscape.

Gravel Surface: Gravel surfaced sections of the trail will typically be 8 feet in width. The use of a geotextile fabric is preferred to minimize compaction of aggregate into native soils and ballast. The surface will be comprised of 6" of contractor's grade $\frac{3}{4}$ minus crushed aggregate. In sections where there is sufficient ballast, 4" of aggregate can be used.

Asphalt Surface: Asphalt surfaced sections of the trail will typically be 8 feet in width. The width of the trail can vary to a 10 or 12 foot width in the Urban Section to reduce users density issues. The width of the trail can vary to a 5 foot width in the outlying sections of the trail. The use of a geotextile fabric will be recommended for all asphalt sections. The surface will comprise of a minimum 2" asphaltic concrete. There will be a minimum 4" $\frac{3}{4}$ minus crushed aggregate base, with a preferred base of 6". The shoulders will be 2 feet in width, as the rail bed width will permit. A 3 foot shoulder should be considered to assist in supporting the edges of the asphalt.

Americans with Disabilities Act

In 1990, Congress passed the Americans With Disabilities Act. Among other provisions, the act prohibits state and local governments from discriminating on the basis of disability and requires government services, programs, and activities to be accessible to people with disabilities. Technical assistance concerning the law's application is available by calling 1-800-USA-ABLE.

Where potential use and/or ADA access needs warrant, provide trail access through, around, over or under major barriers. For pedestrians, add or improve sidewalks, create safe crossings, add ADA-compliant ramps, and modify intersections where needed.

Almost 15 years ago, William Whyte wrote, "If circulation and amenities are planned with (the disabled) in mind, the place is apt to function more easily for everyone."

Crosswalk areas can be raised to the level of the sidewalk. Such a raised crosswalk will have additional traffic calming benefits, serving as 'speed tables' that will slow traffic speed at intersections.

Access for the Disabled: While it is clearly not practical for all types of trails in a mountainous environment to be fully accessible to the disabled, where reasonably appropriate, the trail system should comply with the standards set forth in this law. Until such time as more definitive standards are set forth, this section of the trail plan will provide direction as to what trails are required to comply with this law and how OC&E State Trail will approach the improvement of trails.

All trails that provide access between parking lots and public facilities, such as recreation areas or park facilities are required to comply with ADA. All of the OC&E State Trail grades will comply with ADA guidelines, however the firmness may not ADA guidelines in the Gateway, Outback and Woods Line sections of trail.

A trail is considered ADA accessible if it meets the following criteria:

- Tread Width: 36 inch minimum width.
- Trail Surface: Asphalt and concrete are the most accessible. Compacted crushed stone also works well, provided that the stones' diameter is less than $\frac{3}{8}$ inches. Loose gravel is not recommended.
- Tread Obstacles: Where tread obstacles exist, they shall not exceed 2 inches (50 mm) high maximum.
- Passing Space: Where the clear tread width of the trail is less than 60 inches (1525 mm), passing spaces shall be provided at intervals of 1000 feet (300 m) maximum. Passing spaces shall be

either a 60 inches (1525 mm) minimum by 60 inches (1525 mm) minimum space, or an intersection of two walking surfaces which provide a T-shaped space complying with ADAAG 4.2.3 provided that the arms and stem of the T-shaped space extend at least 48 inches (1220 mm) beyond the intersection.

- Cross Slope: The cross slope shall not exceed 1:20 maximum. *EXCEPTIONS* : For open drainage structures, a running slope of 14 percent is permitted for 5 feet maximum (1525 mm) with a cross slope of 1:20 maximum. Cross slope is permitted to be 1:10 at the bottom of the open drain, where clear tread width is 42 inches (1065 mm) minimum.
- Running slope of trail segments shall comply with one or more of the provisions of this section.
 - No more than 30 percent of the total trail length shall exceed a running slope of 1:12.
 - Running slope shall be 1:20 or less for any distance.
 - Running slope shall be 1:12 maximum for 200 feet (61 m) maximum. Resting intervals complying shall be provided at distances no greater than 200 feet (61 m) apart.
 - Running slope shall be 1:10 maximum for 30 feet (9150 mm) maximum. Resting intervals complying shall be provided at distances no greater than 30 feet (9150 mm) apart.
 - Running slope shall be 1:8 maximum for 10 feet (3050 mm) maximum. Resting intervals complying shall be provided at distances no greater than 10 feet (3050 mm) apart.

EXCEPTION: Where the surface conditions require slopes greater than 1:33 for proper drainage, a 1:20 slope is permitted.

- Ramps, not stairs, should be provided for grades exceeding the 5% maximum at a trailhead.
- Ramp grades should not exceed 8% and have a level landing for every 30 inches of vertical rise and have a slip resistant surface.
- 32 inches high handrails should be installed on all ramps and bridges.
- Fully accessible trails should have a rest area every 1000 feet, preferably cleared with a bench outside of the trail path with the distance between rest areas posted at the trailhead.
- One or more accessible parking space should be provided at trail parking lots.
- If gate or bollards are planned to prevent motorized vehicle access to the trail, maintain 32-inch clearance to ensure or provide wheelchair access.

Signs and Trail Maps

Signing will be installed at key points on the trail system with information on direction, safety and trail policy. These guidelines are intended to provide general direction for signs and their placement. Locations for signs need to be evaluated on a case-by-case basis and signs should only be posted where necessary to avoid visual pollution.

Regulatory Signs

Requirements for the use and placement of signs, including regulatory signs at intersections, will follow the standards set forth in the *Manual on Uniform Traffic Control Devices* (MUTCD) section on 'Traffic Control Devices for Bicycle Facilities' and will apply to all multi-use paved trails within the jurisdiction of road right of way. Bicycle Crossing Signs near a road approaching a crossing will conform to MUTCD standards. The OPRD Sign Manual and OC&E State Trail Sign Manual will be followed for all other signs.

Informational Signs

- Signs indicating allowed uses should be posted at trailheads.
- At high volume multiple-use trailheads, informational signs indicating user etiquette should be posted.

Trail User Information Sign: This sign should be placed at all major trailhead facilities where trails are accessed. It should be located where it is clearly visible and where it does not impede trail use or present a hazard to trail users. It should include a trail map.

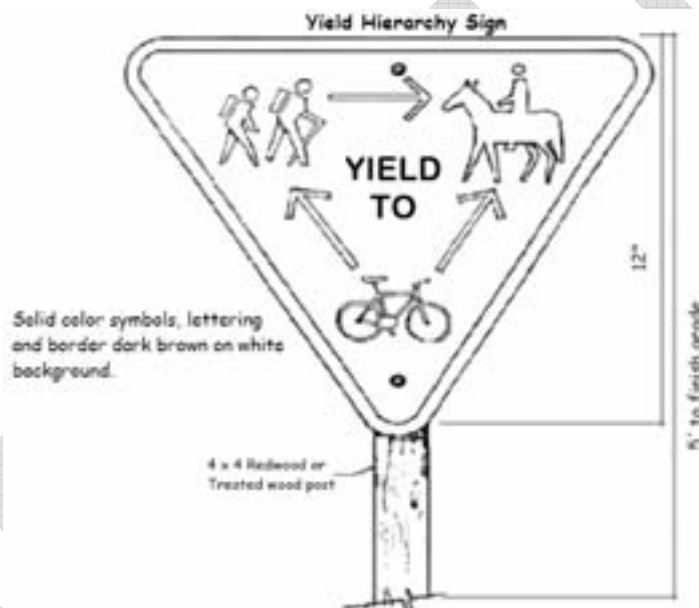
Trail Courtesy Sign: Trail courtesy signs should be posted at all trailheads. A shortened user courtesy sign should be installed at trail access points. This sign can be placed on the same post as the 'Yield Hierarchy Sign,' wherever the Trail User Information sign is not located. The Trail Courtesy sign should also be located on 'Stop' and 'Private Property Signs'.

Trail Mileage Markers: The trail will have trail mileage markers every ½ mile of the trail. The Woods Line section of the trail will have a separate mileage marker numbering system.

Trail Courtesy Brochures

A Trail Courtesy Brochure can be an effective tool in encouraging safe and courteous trails use. Any maps, guides, other trail related literature or trail user education or orientation programs should contain similar information. It may be developed as a stand alone brochure of the principals should be added to any trail guides or maps.

Yield Hierarchy Sign: This sign should be placed at all major access points of multiple use trails. It should be located where it is clearly visible and where it does not impede trail use or present a hazard to trail users.



OC&E STATE TRAIL MAPS

Mapping includes the multiple use trail system, the trailheads and use areas. These systems will be connected so that people have access to and from trails to major use areas and facilities. The Trail Maps will be consistent with OPRD Map/Brochure design guidelines. Full-sized, trail maps can be obtained from both the park welcome center and Oregon Parks and Recreation Department headquarters in Salem. For more information call 800-551-6949 or goto www.oregonstateparks.org.

Trail guides and maps provide greater access to non-motorized travel for visitors to the park as well as enriching the transportation, recreational and educational experiences of all. Maps and guides should contain the following information:

- Locations of trails, trailheads and a description of trail route, steepness and accessibility. Accessibility ratings, including the presence of staircases or barriers should be noted and fully accessible trails should be clearly marked.
- Pedestrian/bicycle corridors with wheel chair access, cross walks, and trail connections clearly shown.
- Location of facilities, such as parking lots, drinking water, rest rooms and benches should be marked.

APPENDIX:

APPENDIX A: HISTORY OF THE OC&E

APPENDIX B: LIST OF SOURCES

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Appendix A: History of the OC&E

Klamath Basin Tribal History

For thousands upon countless thousands of years the tribes of the Klamath Basin survived by their industriousness. They believed everything they needed to live on was provided for by the Creator in this rich land east of the Cascades. When the months of long winter nights were upon, they survived on their prudent reserves from the abundant seasons. Toward the end of March, when supplies dwindled, large fish runs surged up the Williamson, Sprague, and Lost River. At the place on the Sprague River where (g'mok'am'c) first instituted the tradition, they still celebrate the Return of /c'waam/ Ceremony.

The six tribes of the Klamaths were bound together by ties of loyalty and family. They lived along the Klamath Marsh, on the banks of Agency Lake, near the mouth of the Lower Williamson River, on Pelican Bay, beside the Link River, and in the uplands of the Sprague River Valley. The Modoc's lands included the Lower Lost River, around Clear Lake, and the territory that extended south as far as the mountains beyond Goose Lake. The Yahooskin Bands occupied the area east of the Yamsay Mountain, south of Lakeview, and north of Fort Rock. Everything they needed was contained within these lands.

In 1826, Peter Skeen Ogden, a fur trapper from the Hudson's Bay Company, was the first white man to leave his footprints in the Klamath Basin. The newcomers came first as explorers, then as missionaries, settlers and ranchers. After decades of hostilities with the invaders, the Klamath Tribes ceded more than 23 million acres of land in 1864 and entered the reservation era. They did, however, retain rights to hunt, fish and gather in safety on the lands reserved for them "in perpetuity" -- forever. The Klamath Reservation was established in 1864 by treaty and covered about fifty square miles of land east and northeast of Klamath Falls.

From the first, Klamath Tribal members demonstrated an eagerness to turn new economic opportunities to their advantage. Under the reservation program, cattle ranching were promoted. In the pre-reservation days horses were considered an important form of wealth and the ownership of cattle was easily accepted. Tribal members took up ranching, and were successful at it. Today the cattle industry still remains an important economic asset for many of the tribal members. The quest for economic self-sufficiency was pursued energetically and with determination by Tribal members. Many, both men and women, took advantage of the vocational training offered at the Agency and soon held a wide variety of skilled jobs at the Agency, at the Fort Klamath military post, and in the town of Linkville. Due to the widespread trade networks established by the Tribes long before the settlers arrived, another economic enterprise that turned out to be extremely successful during the reservation period was freighting, in August of 1889, there were 20 Tribal teams working year-round to supply the private and commercial needs of the rapidly growing county. A Klamath Tribal Agency - sponsored sawmill was completed in 1870 for the purpose of constructing the Agency.

By 1873, Tribal members were selling lumber to Fort Klamath and many other private parties, and by 1896 the sale to parties outside of the reservation was estimated at a quarter of a million board feet. With the arrival of the railroad in 1911, reservation timber became extremely valuable. The economy of Klamath County was sustained by it for decades. By the 1950's the Klamath Tribes were one of the wealthiest Tribes in the United States. They owned and judiciously managed for long term yield, the largest remaining stand of Ponderosa pine in the west. They were entirely self-sufficient. They were the only tribes in the United States that paid for all the federal, state and private services used by their members.

In 1954, the Klamath Tribes were terminated from federal recognition as a tribe by an act of congress. During the process of termination the elected Tribal representatives consistently opposed termination. There was, in addition, a report from the Bureau of Indian Affairs (BIA) which concluded that the Klamath Tribes were NOT ready for termination and recommended against it. Despite this consistent official opposition from the Tribes and the BIA, congress adopted the Klamath Termination Act (P.L 587). Not only did they see the end of federal recognition and supplemental human services, but tragically the reservation land base of approximately 1.8 million acres was taken by condemnation and the Klamath's were terminated as a Tribe. This single act of Congress had devastating effects on the Klamath Tribes

and several other tribes across the country. However, in 1975 a fully functioning tribal government was reestablished, and the Klamath Tribe was recognized by the federal government in 1986. The 2000 census showed the tribe to consist of 2,632 members.

History of Klamath County

Klamath County was established on October 17, 1882. It was created from the western part of Lake County and named after a tribe of Indians which white travelers called the Klamath, also spelled Clammite. Klamath County is situated in south central Oregon. The county is bounded on the south by California, on the east by Lake County, on the north by Deschutes County, and on the west by Jackson and Douglas Counties. The county, Oregon's fourth largest, has 6,135 square miles. When the Legislative Assembly created Klamath County in 1882, it designated Linkville as the county seat, although it gave the voters the chance to select another site at the 1884 general election. Linkville was renamed Klamath Falls in 1893.

The government of Klamath County consisted originally of a county judge, two county commissioners, clerk, treasurer, coroner, surveyor, and sheriff. The judge's position was abolished in 1965, and the number of county commissioners increased from two to three. The 1890 census cited a population of 2,444. Since then the county has experienced steady growth. The 2000 population of 63,775 represented a 10.52% increase from 1990.

Historically, Klamath County's economy has been based on timber and agriculture. Three-fourths of the county is forested; however, over half of it is publicly owned. The large stands of timber have resulted in the development of wood products industries in the county. In spite of the altitude, short growing season, low rainfall, and cold winters, agriculture plays an important role in the local economy. Excellent soil, adequate water for irrigation, extensive sunshine, and the introduction of cash crops such as potatoes and feed barley contribute to the agricultural industry. There is the potential to develop geothermal energy through the exploitation of the geothermal water found in many parts of the county. The many lakes and mountains, including Crater Lake National Park, attract tourists and recreational visitors to the county.

Oregon California & Eastern Railroad History

The city of Klamath Falls (originally known as Linkville) had long desired a railroad, and when the Southern Pacific completed its line into town from Weed, CA in 1909 the citizens went wild with celebration. The city had their link to the outside world, and better yet, that link was looking like it might turn into a major mainline railroad running between Oregon and California. However, by 1911 the railhead stopped at Kirk, 40 miles north of town, leaving the city partway up a dead-end branch line.

Business on the new railroad boomed from the start, but the plentiful business very quickly exceeded the capacity of the single track railroad to the south to transport it. The citizens also felt that the Southern Pacific was charging too much, and many who celebrated the arrival of the railroad a few years before quickly grew to resent being at the mercy of only one railroad. It was not long before cries for some form of competition to SP were being heard.

Into this scene stepped Robert Strahorn, a railroad builder who had big plans to provide competition to the SP. Strahorn had a long history in railroad building in the northwest, and had laid out many towns along Union Pacific lines in Idaho. He had been deeply involved with the building of a railroad in the Willamette Valley in western Oregon immediately prior to coming to Klamath Falls.

Strahorn's plans called for a 400-mile long system based out of a central hub at Silver Lake, OR. From Silver Lake one line would go south to Klamath Falls, another line would go southeast to a connection with the narrow-gauge Nevada-California-Oregon Railroad at Lakeview, another line would go east to a connection with a Union Pacific branch line at Crane, OR, and another line would go north to a connection with the joint Oregon Trunk/Union Pacific line at Bend. The established community of Burns was initially left off of the system, but after protests were heard Strahorn added plans for a 20-mile long branch line into the town off of the Silver Lake-Crane line. Another branch was proposed to drop down into the cattle country of southeastern Oregon. The proposed system would connected several dead end

railroads in the central part of the state with each other and would provide the citizens and businesses of Klamath Falls with alternates to the Southern Pacific. Total construction costs for the planned railroad amounted to \$6,000,000. Strahorn quietly formed the Oregon California & Eastern Railroad on 6 October 1915, but no immediate construction took place.

In addition to the “core system” outlines above, Strahorn also apparently dreamed of building another line west from Klamath Falls to a connection with the Pacific & Eastern Railroad’s Medford-Butte Falls line at Butte Falls, OR, then farther west to a connection with the California & Oregon Coast Railroad, which was intent on building a line from Grants Pass southwest towards the sea port of Crescent City, CA. Strahorn also envisioned another possible line that would run southeast to a connection with the Western Pacific’s Salt Lake City-Oakland mainline somewhere in northern Nevada.

Strahorn held a grand public meeting on 18 August 1916 in which he set forth three requirements for his proposed system, which were a right-of-way from Klamath Falls through Dairy to Sprague River, a terminal in Klamath Falls, and a cash subscription of \$300,000 to get construction started. Raising the money to fund the cash subscription required issuing a bond, which was initially vetoed by the mayor as he felt that the city lacked the authority to issue such bonds. An active campaign was mounted by the citizens of the city, and after some persuading the mayor consented to putting the issue of whether to issue the bonds or not to a public vote. The city electorate approved issuing the bonds by a wide margin in the November 1916 election. The city council authorized the bonds in December, and they were placed a short time later. To fulfill the terminal requirement, a group of prominent citizens pooled \$50,000 of their own money to purchase a lot on the corner of Seventh and Klamath Streets in Klamath Falls.

The Klamath Falls Municipal Railway was organized by the city, and Strahorn contracted himself to the city to build the first 20 miles of line to Dairy. The spring and early summer were spent obtaining right-of-ways and gathering needed supplies, and the first ground was broken on 4 July 1917. Strahorn promised to have the line completed to Olene in three months, to Dairy in six months, and to Sprague River in a year. However, construction crept forward at a snail’s pace from day one, and the first section of the line to Olene, less than ten miles from Klamath Falls, was not completed until a year after the start date. The balance of the first 20 miles to Dairy was finally completed in early 1919.

Shortly after completing the first segment of the line Strahorn went back to the city with an offer to buy the railroad in exchange for \$300,000 worth of income bonds and a promise from Strahorn to complete the line to Sprague River, 20 miles beyond Dairy. Once again the issue was put to a vote of the citizens, and the proposal was approved in an election held in May 1919. The city deeded the first 20 miles of completed railroad to Strahorn’s Oregon, California & Eastern Railroad on 29 May 1919.

Strahorn set out to finance the next 20 miles of line through the sale of first mortgage bonds, which he marketed mostly by himself. Construction proceeded slowly, however, as Hildebrand, less than five miles beyond Dairy, was not reached until 25 August 1922. The next 20 miles to Sprague River was finally completed on 16 September 1923, and a “golden spike” to mark the completion of the first 40 miles was held on 12 October 1923. The final stretch into Sprague River involved crossing Bly Mountain, which Strahorn initially planned to bore a tunnel through. However, the money to bore a tunnel was not available, and Strahorn instead built his railroad across the top of the mountain using a pair of “temporary” switchbacks, to be replaced with the planned tunnel at a later date.

The completion of the OC&E to Sprague River did open up vast new stands of timber to harvesting, and in many cases loggers had already accumulated huge decks of logs adjacent to the grade before any rails had been laid. In the summer of 1923 the railroad was already delivering 40 carloads of logs per day to the Southern Pacific for shipment to sawmills around the Klamath Basin, and new requests for sidings to load log cars on were being received on a regular basis. By the following summer Strahorn was boasting that his railroad was handling around a billion board feet of lumber each month.

On 26 March 1925 the OC&E filed an application with the Interstate Commerce Commission to build two lines out of Sprague River, one extending 65 north to Silver Lake plus a 15-mile branch line northwesterly along the Williamson River from a connection with this line at a point 20 miles north of Sprague River, and the other extending 65 miles east to Lakeview.

It was at this point that outside influences finally caught up with Strahorn and the OC&E. Both the Great Northern and Southern Pacific railroads had their eye on the railroad. The SP was looking to build a shortcut for eastbound lumber traffic to run from Klamath Falls southeast to a connection with their transcontinental mainline in western Nevada, and combining the OC&E with the Nevada-California-Oregon railroad from Lakeview to Wendel, CA, then over the Fernley & Lassen railroad from Wendel, CA to Fernley, NV would complete this shortcut with a minimum of new construction. The SP was also not happy with the prospect of sharing traffic from the Klamath Basin with anyone else, and acquiring the OC&E would prevent it from ever making a connection with any other railroads it was trying to reach. However, the GN was seeking to build south from Bend to Klamath Falls at this point, and their plan was to build this line through Silver Lake. Almost their entire proposed line south from Silver Lake would closely parallel the OC&E projected and completed lines.

The news soon broke in the Klamath Falls newspapers that Strahorn was negotiating to sell the OC&E to the SP. The headlines of the newspapers screamed about how Strahorn has duped the city and its citizens, but the public outcry did not stop Strahorn from agreeing to sell his stock in the OC&E to the Southern Pacific for \$495,000. The citizens of Klamath Falls then went to court seeking to get the money advanced to Strahorn back, most notably the \$300,000 in construction money and the property donated for the terminal that was never built. Other issues involving the railroad were also contested, such as the right of the railroad to cross city streets.

ICC approval for the construction of the various proposed extensions and for the SP to acquire control of the OC&E both came in May 1926. However, the ICC placed one important stipulation on the SP's control of the OC&E, namely a requirement that it should sell a one-half interest in the company to the Great Northern. The Southern Pacific took full control of the OC&E on 22 July 1927, and a contract to sell a one-half interest in the company to the GN was signed on 18 November 1927, with the transaction being finalized on 23 March 1928. The only one of the approved extension ever constructed was a line that ran 26.4 miles from Sprague River eastward to Bly, and that was accomplished by order of the ICC. Construction on the extension began on 3 July 1927, but the job was not completed until the end of 1928, and even then weather prevented regular operations from commencing until 30 April 1929.

Only two branches were ever built by the OC&E, with both of them stretching less than two miles off the mainline. The first ran 1.84 miles from Swan Lake Junction to Swan Lake, and the second was intended to run from 6.70 miles Dairy to Bonanza, although only 1.57 miles of the proposed line were completed. The Swan Lake branch was abandoned on 22 September 1929, and the Bonanza branch was cut back several times throughout the history of the railroad, with at least a stub remaining at the end of operations.

The OC&E maintained independent operations until 1933, when the two parents took over operations directly. For the first few years the parent roads handled operations in one year intervals, later changed to five year intervals. The OC&E continued to run with its own crews until attrition thinned the ranks out, after which operations were handled by employees brought in by whichever parent that was handling operations at the time. All motive power and equipment used on the line would also be provided by the operating road.

Dominant traffic on the OC&E was always log traffic bound for sawmills in Klamath Falls, and no less than six different lumber companies built logging railroads off of the OC&E at various points by various companies through the years, and a great many more logging outfits loaded lumber onto railcars on sidings along the route. The OC&E also handled whatever other traffic that was offered to it, including agricultural traffic in the form of grain and potatoes, livestock and inbound petroleum products. The OC&E also provided switching services for a number of industries in the immediate vicinity of Klamath Falls.

All of the logging railroads built off of the OC&E were gone by 1948 save for one. Lumber giant Weyerhaeuser Timber Company had started acquiring timber in the area around Klamath Falls by 1904, and the company's holdings by 1905 amounted to 158,000 acres, with more being added as it became available. Weyerhaeuser was not in a big hurry to commence operations until it had two railroads to compete for its business, and as such construction of the mammoth mill located a few miles south of

downtown Klamath Falls did not get underway until 1928, right after it became apparent that the Great Northern would finally complete its long-sought line into the city from the north. Some in both the timber industry and the community were concerned that there were already far too many sawmills operating in the pine country around Klamath Falls, and that the addition of a Weyerhaeuser plant would only accelerate the rate of timber harvesting beyond the already un-sustainable levels. Some people in the community voiced opinions that Weyerhaeuser ought to sell its timber to existing operators, while others tried to convince the company to buy one of the existing sawmills instead of building a new one. Weyerhaeuser determined to build its own plant, and when the sawmill went on-line in December 1929 it had a capacity greater than the next four biggest mills in the Klamath basin combined.

Construction of the logging railroad that would supply the mill got underway in the summer of 1928. The first operation went westward into the Cascade Range, with the end of the logging railroad eventually reaching clear into Jackson County. The first logs were delivered to the sawmill site on 4 February 1929, ten months before the sawmill would saw its first log. The "West Block" railroad provided the bulk of the logs processed by the mill into the 1940's. The railroad continued to run until 1956, when the remaining timber to the west was deemed to be insufficient to support the continued operation of the logging railroad. The railroad was thus abandoned, with many of the grades turned into truck roads.

In addition to the "west block" of timber that fed the mill's appetite for the first decade of operation, Weyerhaeuser also held a huge "east block" of timber that was centered 60 miles northeast of Klamath Falls. The OC&E ran close to this block, but Weyerhaeuser was at first reluctant to use the common carrier railroad due to difficulties in agreeing to what Weyerhaeuser considered to be a reasonable rate for the movement of logs into Klamath Falls. Weyerhaeuser was giving some serious thought to constructing its own railroad line to the timber, but those plans were scrapped after an agreement with the OC&E was reached in 1939. Work on the railroad that would tap the east side block started in 1940, with a connection established with the OC&E near Beatty. The OC&E had fallen on hard times by this point, and Weyerhaeuser gave the road a new lease on life.

Construction on the logging railroad, known as the Woods Railroad, headed northward, with the northernmost point (500 Transfer), some 45 miles from Beatty, reached in 1958. Weyerhaeuser built several spurs off of this line to various camps through the years. The company also built a shop building at Sycan, about a half mile north of Beatty, to repair the logging and railroad equipment used in the east side block, and an interchange yard was also built at this point. Within a short time period Weyerhaeuser became the only large shipper left on the OC&E. Besides the logging railroad Weyerhaeuser also loaded logs at Bly and, after 1970, purchased and modernized a sawmill in Bly, further increasing the timber giant's reliance on the OC&E.

Operations on the east side block saw many changes through the 50 years that it operated. Spur line logging (the practice of building railroads to the harvest sites) was gradually phased out, replaced by trucks bringing logs from the harvest sites to various reloads established along the railroad. The last of the spur lines were finally replaced in 1961. Diesels came to the railroad in the form of four switchers purchased from Baldwin in 1950 and 1951, almost completely replacing steam. The last use of a steam locomotive came on 7 April 1960, when one was fired up to fill in for an ailing diesel.

Weyerhaeuser had been an early convert to the practice of sustained yield forestry, and for the first 45 years of operations at Klamath Falls the company had practiced selective cutting on its lands, leaving uneven aged stands. However, by the mid-1970's economics and changed views within the timber industry caused Weyerhaeuser to re-evaluate its management, and a decision was made to transition the forests away from selective cutting. The company opted to instead start practicing even-age management, which meant periodic clear cutting of stands followed by intensified management to promote high growth and restocking rates. To transition the forests to the new way of doing things much of the existing forests had to be clear-cut to make way for the planned even-age stands. Weyerhaeuser concluded that it would now need to use its private railroad and the OC&E at a much higher rate than before in order to get this glut of timber out.

Weyerhaeuser quickly ran into problems with the transportation end of its plans. The OC&E had long been a neglected stepchild of both of its corporate parents, and the physical plant was nowhere near

capable of holding up under the rapid increase in car loadings. Log shipments over the OC&E had averaged 8,000 a year through the 1960's, but by 1970 this total was up to 18,000, including shipments of finished products from the Bly mill. Neither Burlington Northern (Successor Company to Great Northern) or Southern Pacific were willing to put money into the railroad to rehabilitate it, especially for the one shipper that remained. The obvious solution was for Weyerhaeuser to buy the OC&E, and negotiations to do so started in 1974.

The deal to buy the OC&E was worked out in due time, and Weyerhaeuser took possession of the OC&E on 1 January 1975. Total purchase price was \$2.38 million. What Weyerhaeuser got for its money was the entire railroad, four cabooses, two fire service tank cars, five flat cars, and some other miscellaneous pieces of rolling stock.

The first order of business on the new railroad was rehabilitation. The roadbed and track structure were in terrible shape, as maintenance had not been a high priority under the previous joint SP-GN ownership. Weyerhaeuser spent a grand total of \$7.8 million dollars over the next seven years to rehabilitate the railroad, including replacing between 6,000 and 8,000 ties per year and dumping a lot of ballast. A tamper and some other track equipment was purchased to assist with the track work. Weyerhaeuser's fleet of wooden log cars was also wearing out and had to be replaced, and as a solution the OC&E purchased large numbers of steel flatcars that were equipped with log bunks and placed into service. The railroad also bought numerous boxcars, gondolas, and other types of freight cars, removed the bodies, and produced acceptable log cars from the remaining frames.

Five Alco road switchers were purchased from the Southern Pacific at the start-up of operations, but none of them ran on arrival, and the Sycan shops were not able to make the units run properly despite spending a small fortune in repairs. Four of the units were turned back to the SP, while the fifth destroyed itself in a fire and was scrapped. Weyerhaeuser then leased power from various sources, including the Southern Pacific, Burlington Northern and Union Pacific until mid-1976, when seven re-manufactured locomotives arrived from Morrison-Knudson. All seven were re-built from ex-Union Pacific General Electric-built U25B type locomotives. Five of the seven were re-powered with Electro-Motive Division of General Motors-built model 567 prime movers, while the other two were stripped down and made into slug units (locomotives that have no prime movers in them, instead relying on power provided by connecting units to run their traction motors). The OC&E at the time was handling around 100 carloads of logs per day from Sycan, which had to be taken down to Klamath Falls in two cuts of 45 cars each, as that was the limit on train length imposed by the length of the switchback tail tracks at Bly Mountain. Normal operational patterns saw two locomotive/slug/locomotive sets operating on the railroad, with the fifth unit cycled through the shop for required inspections and repairs. Any trains approaching the switchbacks that were longer than 45 cars had to reduce their train size, which resulted in many extra trains ran from Klamath Falls to Sprague River to collect log loads set out by excess-length trains.

Operations in the first years of Weyerhaeuser ownership saw as many as seven different jobs called each day, consisting of three or four road jobs and up to three yard jobs. The railroad only got busier, with the peak of over 35,000 loads per year handled in 1978-1979, including around 4,000 loads of lumber and woodchips from the Bly mill. Four additional Baldwin road switcher-type locomotives were purchased to help handle the massive amount of traffic that the railroad was generating at the time. However, car loadings went into a steep decline after that, with 14,276 loads handled in 1982, almost all logs as the Bly mill closed. At this point Weyerhaeuser finally decided to do something about the switchbacks that limited train lengths over Bly Mountain. After considering various possibilities, the solution decided upon was to lay a second tail track at each switchback, meaning that the railroad could now handle up to 90 cars on each train, which meant that one single road job could bring all logs from Sycan and Bly to Klamath Falls in one train instead of the two or three required before the second tail tracks were added.

The early 1980's also saw the demise of the Baldwin switchers that had been powering the woods line for over thirty years. Replacement power came in the form of two EMD GP-9 type locomotives purchased from the Burlington Northern, and for a while the new arrivals were mated with the OC&E's Baldwin road switchers. However, by the spring of 1984 the GP-9s had been re-wired so that they would run with the OC&E slugs. Typical motive power assignments saw the Woods Railroad running with two GP-9's and

two slugs, while the standard power on the OC&E was a quartet of the M-K rebuilds. A third ex-BN GP-9 and another M-K rebuild moved in from another operation filled out the motive power fleet at this time.

Car loadings handled by the OC&E finally stabilized at around 8,000 loads a year. Carload totals for 1989 showed a total of 8,303 loads handled by the railroad, consisting of three carloads of potatoes, eight carloads of scrap, 678 carloads of asphalt switched into WITCO in Klamath Falls, and 7,614 loads of logs. Operations saw a similar decline, with the railroad making only three runs a week to the Bly in the last years of operation. Employment likewise dropped, from 38 in 1982 down to 18 in the late 1980's. Motive power needs also dropped, and as a result all but one of the eight Baldwin diesels owned by the OC&E and the Woods Line were gone by the mid-1980's.

By the late 1980's Weyerhaeuser had basically achieved the beginnings of the even-age management that the company was looking for, but with the result that most of the company's forests were now very young and had years to go before they would be ready to harvest. Facing a shortage of timber on company owned lands, Weyerhaeuser started bidding for U.S. Forest Service timber sales, but lost out to Roseburg on a couple of large sales that lay adjacent to the east side unit. By the spring of 1990 Weyerhaeuser decided to scale back operations at Klamath Falls to adjust to the new realities. A full thirty percent of the workforce at the Klamath Falls mill was laid off, followed closely by a decision to eliminate the OC&E and the Woods Railroad.

The last train on the Woods Railroad ran on 2 February 1990, and the last OC&E log train to Bly ran on Sunday, 29 April 1990. The following day the last logs brought out were delivered to the Klamath Falls sawmill, and on Tuesday 1 May a clean up run was made to return all empty log cars from the last run, plus all log cars stored in sidings along the line, and some other equipment into storage at Sycan. A number of other cars remained in storage at Bly. Two locomotives made the return trip to Klamath Falls, and Oregon's last log hauling railroad fell silent.

Weyerhaeuser hired a consultant to evaluate its options with the railroad. WITCO still had to be switched, and during the spring and summer months the railroad fired up one of the two locomotives stored in Klamath Falls a couple times a week to shuttle the tank cars between WITCO and the interchanges with the BN and SP. Meanwhile, some local groups, led by the Great Western Railroad Museum, started efforts to preserve the railroad as a potential tourist attraction for the area. The museum submitted three bids to Weyerhaeuser for all or part of the OC&E, and all three bids were rejected by Weyerhaeuser by March 1991. After the bids were rejected the museum appealed all the way to the very top of Weyerhaeuser, with no avail.

Weyerhaeuser finally elected to liquidate the railroad in mid-1991. Three ex-BN GP-9 type locomotives and three cabooses were moved north to the large Weyerhaeuser operations out of Longview, Washington. The rest of the equipment on the railroad, consisting of the five M-K diesels, the two M-K slugs, two ex-SP cabooses, 311 log cars, two wooden snowplows, six fire service tank cars, eleven ballast hoppers, and other miscellaneous equipment were all placed up for sale, with bids due by 30 September. The railroad was re-activated for one last time, and between 5 September and 25 September a total of ten trains were run to bring all equipment down into Klamath Falls. The first trains run moved all the cars stored in Bly to Sycan, and then 45-car trains were built in Sycan for the trip to Klamath Falls. Trains were kept at that length to avoid having to double the trains through the switchbacks. The final OC&E train over the old mainline ran on 25 September 1991 when the last of the cars from Sycan, a total of 79 log cars riding on friction bearing trucks, were taken down to Klamath Falls, and the OC&E was done for. An application to abandon the railroad was filed with the Interstate Commerce Commission at about this time.

Buyers were found for the M-K locomotives, and they were shipped off to new owners. An initial deal to sell the log cars to the Kiamichi Railroad in Oklahoma fell through, and in the end the bulk of the log cars, along with most of the other railroad equipment, was cut up for scrap in Klamath Falls. The OC&E also had a fleet of 150 boxcars leased from BRAE corp, and after the demise of the railroad these cars were transferred to other Weyerhaeuser railroads.

Permission to abandon the railroad was received in December 1991, and the Weyerhaeuser auctioned the railroad off early the following year. Southern Pacific got the contract to scrap the railroad, and scrapping operations commenced in August 1992. Work on removing the railroad started at the very ends of the system at Bly and 500 transfer, and work progressed until snows shut the project down that winter. The rest of the railroad was scrapped during the spring and summer of 1993.

The great mill in Klamath Falls that was fed by the OC&E and Weyerhaeuser's network of private logging railroads finally closed in May 1992, and in 1996 Weyerhaeuser exited Klamath Falls altogether after selling all timberlands in the area to U.S. Timberlands and the remaining operations of the Klamath Falls plant (particleboard, plywood, and hardboard) to Collins Products Company. The OC&E grade was eventually taken over by Oregon State Parks, and it has been made into a bike trail. Much of the Woods Railroad grade remains intact and part of the trail system as well. A few pieces of equipment from the operation reside in Klamath Falls, mostly privately owned. Some of the locomotives and the three cabooses sent north to Longview are still in existence today. A chapter in Oregon Railroad History has been closed. February 27, 1991: Oregon, California & Eastern Railway Company (OC&E), owned by Weyerhaeuser Corporation since 1975, files for abandonment of the OC&E right-of-way with the interstate Commerce Commission (ICC).

History of the Oregon California & Eastern Woods Line State Trail

Local citizen's identified early on what the asset the OC&E Woods Line rail corridor would be to the community. The Klamath Rails to Trails Group (KRTG) formed to pursue the acquisition of the OC&E Woods Line as a Rail to Trail. They worked with the US Forest Service, BLM and OPRD to identify the most feasible use of the corridor. A feasibility study was completed by the US Forest Service and the most economically feasible use of the corridor was as a trail. The KRTG identified early on that it needed the capacity and resources of a larger Agency to manage the trail. It worked with OPRD to become the owner and manager of the trail.

The dedication and able leadership of several people, including Betty Anderson, Klamath Rails to Trails Group's (KRTG) first president; John Monfore, Weyerhaeuser's Land Use and Right of Way manager, and Pete Bond, State Parks Trails Coordinator, resulted in the OC&E coming under State Parks management. Betty Anderson was recognized by the Rails to Trails Conservancy for her work, which included securing the first paving grant for the trail. In the ensuing years, Art Sevigny, president of KRTG for ten years, worked tirelessly as a volunteer, spearheading bridge decking and many other important projects. He and his wife Maureen also secured more than \$800,000 in trail improvement grants.

November 13, 1991: the ICC grants abandonment of the OC&E but also grants the possibility of a rail banking exception.

December 25, 1991: the rail banking exemption becomes effective.

June 22, 1992: requests for interim trail use are due to the ICC.

May 13, 1992: OC&E requests an extension of time to negotiate the sale of the right-of-way for interim trail use and public use by the ICC. The OC&E states they are currently negotiating with the Winema National Forest and Oregon State Parks and Recreation Dept. (OPRD) and the Right-of-Way Coalition (KRTG), but an agreement has not yet been reached.

May 18, 1992: ICC grants an extension for public use negotiation until August 30, 1992.

April 6, 1992: Klamath Rails to Trails Group (KRTG) submits a draft Memorandum of Understanding between their group, OPRD, Winema N.F., Freemont N.F. and the B.L.M. for cooperative management.

July 9, 1992: An Interim Trail Use and Rail Banking Agreement is signed by Brian Booth, Chairman of the OPRD Commission and D.C. Williams, President of the OC&E. The OC&E is quit claimed to Oregon State Parks and Recreation Department for a consideration of \$10.00.

October 1992: Klamath Rails to Trails Group in cooperation with OPRD seeks an Intermodal Surface Transportation Efficiency Act (ISTEA) grant through ODOT, which runs the program in Oregon. The grant would be for AC paving of a 3.5 mile section of the trail between Washburn Way in Klamath Falls and the Hwy 39.

January 20, 1993: ISTEA grant proposal for the paving project is approved by the Oregon Transportation Commission.

Spring, Summer & Fall 1993: State Parks starts signing and basic maintenance on the OC&E utilizing staff at Collier State Park. This is very limited due to budget and manpower concerns.

November 4, 1993: An agreement between OPRD and ODOT for the ISTEA grant is made and signed by ODOT Region Manager, Dale Allen and OPRD Director, Robert Mieinen.

January thru March 1994: The Memorandum of Understanding is signed between OPRD, KRTG, Fremont N.F., Nature Conservancy and Weyerhaeuser on the 45 mile section of the Woods Line right-of-way.

Spring thru Fall 1994: Some limited site work (primarily installing vehicle controls) is done by OPRD staff and KRTG on the OC&E.

September 19, 1994: James Beauchemin, Park Manager, arrives at Collier Management Unit. An agreement to utilize the ODOT maintenance yard in Klamath Falls as a staging area for OPRD personnel working on the OC&E is established.

Fall 1994: OPRD is told by ODOT, whom after receiving a letter from the U.S. Dept. of Transportation, that the land match value for the ISTEA grant is not a sufficient match. OPRD disputes this. After some research it is found that the donated land can be part of the match for the ISTEA grant. OPRD hires an appraiser who reappraises the OC&E lands.

March 1, 1995: Park Ranger position for Collier Unit is filled.

April 18, 1995: A public meeting was held by Collier Park staff to update interested parties on OC&E projects. Ranchers from Sprague River and the Bly area disrupted the meeting by saying they want the OC&E lands back. One rancher, Ed Bartell, was most vocal.

May 2, 1995: Deputy Director, Nancy Rockwell and Area 7 Manager, Loring Larsen meet in Sprague River with several ranchers, toured parts of the OC&E and listened to concerns. A meeting that afternoon was held with a large group of ranches that stated they wanted to take the OC&E lands back. Rockwell tells the ranchers this is not possible under the Rail Banking land status. Rockwell offers to try and come up with some type of land management agreement between the ranchers and OPRD. The selected contact person for the ranchers is Ed Bartell of Sprague River.

July 19, 1995: Deputy Director, Nancy Rockwell, Property Manager, Dave Wright and Area 7 Manager Loring Larsen meet with Sprague River and Bly rancher's group at Olene. A proposal was presented for land management agreements for parcels of OC&E lands that run through the rancher's various properties. Once again, the ranchers stated that they want the land back and OPRD has no rights to the land.

August 3, 1995: The U.S. Department of Transportation accepts the new OPRD appraisal and the ISTEA grant is again viable.

August 1995: Ranchers from Sprague River and Bly attend an ODOT meeting in Klamath Falls to dispute public support for the OC&E Woods Line State Trail. They ask ODOT to rescind the ISTEA grant.

August 10 1995: Weyerhaeuser quit claims an additional parcel of land adjacent to the OC&E in Klamath Falls for a trailhead at the request of James Beauchemin, Park Manager.

August 1995: ODOT Regional Manager, Dale Allen tells OPRD that they want to have another public meeting before releasing the ISTEA funding for 3.5 miles of trail paving on the OC&E.

September 1995: OPRD Director, Robert Meinen and Deputy Director, Nancy Rockwell meet with ODOT regarding the proposed public meeting and ODOT's concerns with the OC&E.

October 10, 1995: Area 7 Manager, Loring Larsen and Property Manager Dave Wright appear before the Klamath County Commission and discuss OPRD plans for the OC&E.

October 25, 1995: A capacity crowd attends the ODOT hearing on the OC&E paving project held at OIT campus. The majority of the speakers are in favor of the trail and the ISTEA paving grant. Comment is limited to the 3.5 mile paving project, but several ranchers speak about taking the right-of-way back anyway.

November 15, 1995: ODOT officially announces the ISTEA grant will proceed. The bid process begins with construction planned for Summer 1996.

Summer 1995: OPRD installs the first nine sets of gates (with a pedestrian pass-through) on the OC&E to calm rancher's trespass concerns. They are very well received and trespassing complaints decrease greatly.

Summer 1995: OPRD receives an ODOF grant of \$4,000 to plant trees at the planned trailhead near Crosby Street. Trees planted by contract that Fall.

October 3, 1995: Through a cooperative effort between OPRD, KRTG and Weyerhaeuser the OC&E trail is graded between Washburn Way and Olene, for 7.5 miles.

March 8, 1996: An official Adopt-a-Trail signing ceremony is held at Hwy 39 for Brixner Middle School and the Winema Girl Scouts (the first of adopting groups).

March 28, 1996: ODOT Regional Manager, Dale Allen and OPRD Director, Robert Meinen discuss removal of the Olene/Hwy 140 trestle.

September 16, 1996: Paving and development for 3.5 miles of the OC&E (Washburn to Hwy 39) begins with a preconstruction meeting at ODOT in Klamath Falls. ODOT, OPRD and the contractor are present (Klamath Pacific).

November 13, 1996: All major construction items are complete on the OC&E paving project (first 3.5 miles). The project was well coordinated between OPRD, ODOT and Klamath Pacific.

March 18, 1997: Tour of Olene overpass by Larry Miller, Area Manager and Jim Beauchemin, Park Manager with ODOT local managers. ODOT again restates public safety and transportation restrictions concerning this trestle. ODOT again proposes removal alternatives; they will develop proposals for OPRD administration to review.

April 18, 1997: OPRD learns about a City/County/ODOT planning process (Future Transportation Improvements). It identifies road proposals for the next 20-year period. A major proposal identifies alignment of the Eastside Expressway onto the OC&E Woods Line State Trail in the area just recently paved. This proposal would completely eliminate much of the newly developed section of the OC&E Woods Line State Trail. Highway alignment on other sections of the OC&E are also considered east of Hwy 39 and at Olene. The Rail-Banking status could be jeopardized. OPRD volunteers and KRTG circulate informational flyers and contact media to bring public attention the matter. Trail supporters and neighbors join in opposition to the road plans. OPRD management testifies against utilizing the OC&E State Trail for highway routing.

May 3, 1997: OC&E Woods Line State Trail - Grand Opening Event dedicating the newly paved section is sponsored by KRTG in cooperation with OPRD, featuring various entertainment and trail activities.

May 12 thru June 6, 1997: City, county and ODOT officials drop plans to realign the Eastside Expressway onto the OC&E Woods Line State Trail after considerable public opposition.

September 1997: First edition of the OC&E Woods Line State Park brochure is published by OPRD. Considerable historical research, editing and graphic design was coordinated by Angela Rouf, Park Ranger. The OC&E logo was also a product of this effort.

May 30, 1998: KRTG organizes the first National Trails Day Event, which is held on the Woods Line at Horse Glade Trailhead. The event includes hiking, bicycling and equestrian participation; also a BBQ meal is served. This becomes a major KRTG sponsored annual event each June. It is relocated to the Switchbacks Trailhead in subsequent years.

June 18, 1998: ODOT removes the Hwy. 140 Trestle near Poe Valley Road after coming to agreement with OPRD. Plans include rerouting of the trail to an at-grade crossing, while preserving the ability to reestablish the trestle for train or trail use.

October 10, 1998: Eagle Scout, Justin Cook, takes on the project of installing decking and railing on an OC&E trestle near Hildebrand. The project is a cooperative effort with KRTG and OPRD overseeing installation. The decking design is a prototype to future trestle projects.

September 1999: Illegal drug manufacturers dump toxic residue (metamphetamine) on OC&E land near the former Hwy. 140 Trestle, causing site closure, testing and clean up. Cleaning of the site by a qualified contractor was arranged with the materials and tainted soils removed.

September 23, 1999: The historic OC&E Caboose is relocated to the Main Trailhead near Crosby Street. It has been in the subject of an intense exterior restoration project coordinated by Art Sevigny of the KRTG. It is established as a historic railroad display featuring the last caboose used on the OC&E, as well as signifying the rail-to-trail conversion of the railroad. Funding was provided through a SYMMS Grant.

September 12, 1999: The completion of installing decking and railing on seven trestles was celebrated with a "golden Spike" ceremony at the Beatty Gap Trestle. This project finally provides a continuously linked trail for the entire 100 mile system; truly a benchmark for the OC&E State Trail. Funding was provided through a SYMMS Grant submitted by KRTG and sponsored by OPRD. Construction activities were coordinated by Art Sevigny and involved extensive use of Community Service workers.

October 1999: Installation of two miles of fiber optic cable from the "A" Canal Bridge to Hwy 39 was complete under a permitted agreement between Pacific Fiber Link and OPRD. Construction provided opportunity to contour slopes for ease of mowing, additional shoulder gravel and wood chips, enclosure of irrigation ditching with pipe and grass seeding.

July 2000: The Merritt Creek Trestle was decked and handrails installed through a cooperative agreement with the USFS, Bly Ranger District. The project, involving this four hundred foot long trestle, took an eight-year process from beginning to completion. The Forest Service donated all related materials and labor. The structure was purchased by State Parks from Weyerhaeuser when control of the Woods Line was transferred to OPRD. The trestle stands on USFS land, but is under a Special Use Permit with OPRD.

May 2001: The OC&E Shop has been completed and is now the maintenance building for the trail system. The building was a donation from Walt Badorek and formerly housed Norco Welding Supply at Washburn and 6th Streets. Donation arrangements were coordinated by Caye Houk, Park Ranger. OPRD staff and volunteers dismantled the steel structure and reassembled the building on OC&E lands near the

original switching Main Yard. Weyerhaeuser donated this land specifically for a maintenance facility at the request of James Beauchemin, Park Manager. The shop is located west of Washburn at its crossing with the OC&E right-of-way. This provided for a major advancement in the maintenance needs of the OC&E State Trail.

August 21, 2001: Grading, compacting and installation of mileage markers for the entire trail provided a significantly improved trail surface, but not to the extent hoped. This project included the installation thematic milepost markers at half-mile intervals. Funding was provided through a SYMMS Grant.

2002: Bollards, Benches and Thematic Trailhead signs were installed during year 2002.

October 29, 2002: Paving is completed on the second section of the OC&E from Hwy 39 to the community of Olene. This newly paved 3.8 miles offers scenic vistas and a trailhead at Reeder Road. Funding was provided the federal Transportation Enhancement Act, which was submitted by KRTG and sponsored by OPRD. Prior to the paving all vicinity ditching was cleaned or deepened, inadequate culverts were replaced and culvert bulkheads were installed.

2003: A grant by the City of Klamath Falls for a Safety Crossing Signal at Washburn Way was submitted.

August 2004: A series of thirteen historical Interpretive Signs were installed along the OC&E State Trail. They highlight the railroad theme of the right-of-way and locations with historic names receive signpost mounts. Historic research and design provided by Mayer/Reed design.

June 4, 2005: A dedication ceremony gave notice of two newly completed trailheads on the OC&E State Trail at the Switchbacks and at Bly. The trailheads feature: ample parking, permanent tables, interpretive signing, thematic kiosks and railroad style benches. In addition the Switchback Trailhead offers a vault restroom and equestrian hitching post. The trailheads were developed in partnership with KRTG and OPRD. Funding was provided through a Recreational Trails Grant.

Spring 2006: Washout repairs made near Olene, Beatty Station and River Springs Ranch.

Summer & Fall 2006: Warner Creek Corrections Work Crew participates in rebuilding extensive sections of fencing on the OC&E right-of-way.

November 2006: Tree planting and trail connection project at Jefferson Square.

APPENDIX D: List of Sources

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