

Fishermen's Bend Recreation Area Management Plan Environmental Assessment



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BLM/OR/WA/AE-15/013+1792

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Chapter 1 Introduction and Background

Fishermen's Bend is a popular recreation facility on the North Santiam River in Marion County, Oregon. In order to effectively manage the site, the Bureau of Land Management (BLM), Cascades Resource Area has prepared an Environmental Assessment (EA) that describes and analyzes alternative approaches to managing the site. The BLM will utilize the information contained in the EA to formulate a final Recreation Area Management Plan that would guide BLM's actions at Fishermen's Bend for the next ten to fifteen years.

The BLM's approach to meeting recreation demand encompasses two distinct recreation management areas (RMAs): Special Recreation Management Areas (SRMAs) and Extensive Recreation Management Areas (ERMAs). The 1995 Salem District Resource Management Plan, (RMP) in recognition of the site's value as a recreation resource, identified the planning area as an SRMA (Figure 1). Changes in BLM National policy for Recreation and Visitor Services provide new guidance on applying RMA allocations. The guidance issued in 2011 and 2014 more clearly defines the application of SRMA and ERMA allocations. Lands outside of those RMA allocations are not designated for recreation. Prior to the release of this guidance, under the 1995 RMP (the No Action Alternative) the BLM designated SRMAs where the lands in question were experiencing heavy recreation use or where the BLM planned to make large investments in staff, funding, facilities, or time.

The Fishermen's Bend SRMA boundary defines the planning area, helps determine the management of recreation use, and represents a commitment from the BLM to provide a higher level of recreation-related resources when compared with BLM-administered lands outside the SRMA. The SRMA designation would provide for the protection of recreation setting characteristics (physical, social, and operational). The BLM purchased 17 acres of undeveloped land adjacent to the park in 2001 that is included within the planning area boundary and managed as part of the recreation facility (EA Section 1.7.2).

This EA has been prepared to present and analyze a range of potential management strategies for BLM-administered lands within the Fishermen's Bend SRMA. An EA is a public document that provides a tool for decision making by describing reasonable alternatives, considering their possible effects, and disclosing to the public what the BLM is considering. Additional site-specific environmental analyses will be prepared for these project plans prior to implementation of individual development projects in order to comply fully with the requirements of the National Environmental Policy Act (NEPA).

The release of this EA marks the beginning of a formal 30-day comment period. Stakeholders and members of the public are encouraged to provide feedback regarding the management alternatives during this period. After considering these comments, the BLM would formulate and release a final Recreation Area Management Plan. A Decision Record that outlines the rationale for the decision, as well as an implementation schedule that identifies the proposed timing of specific projects, would accompany it.

Table 1: Scope of This Planning Effort

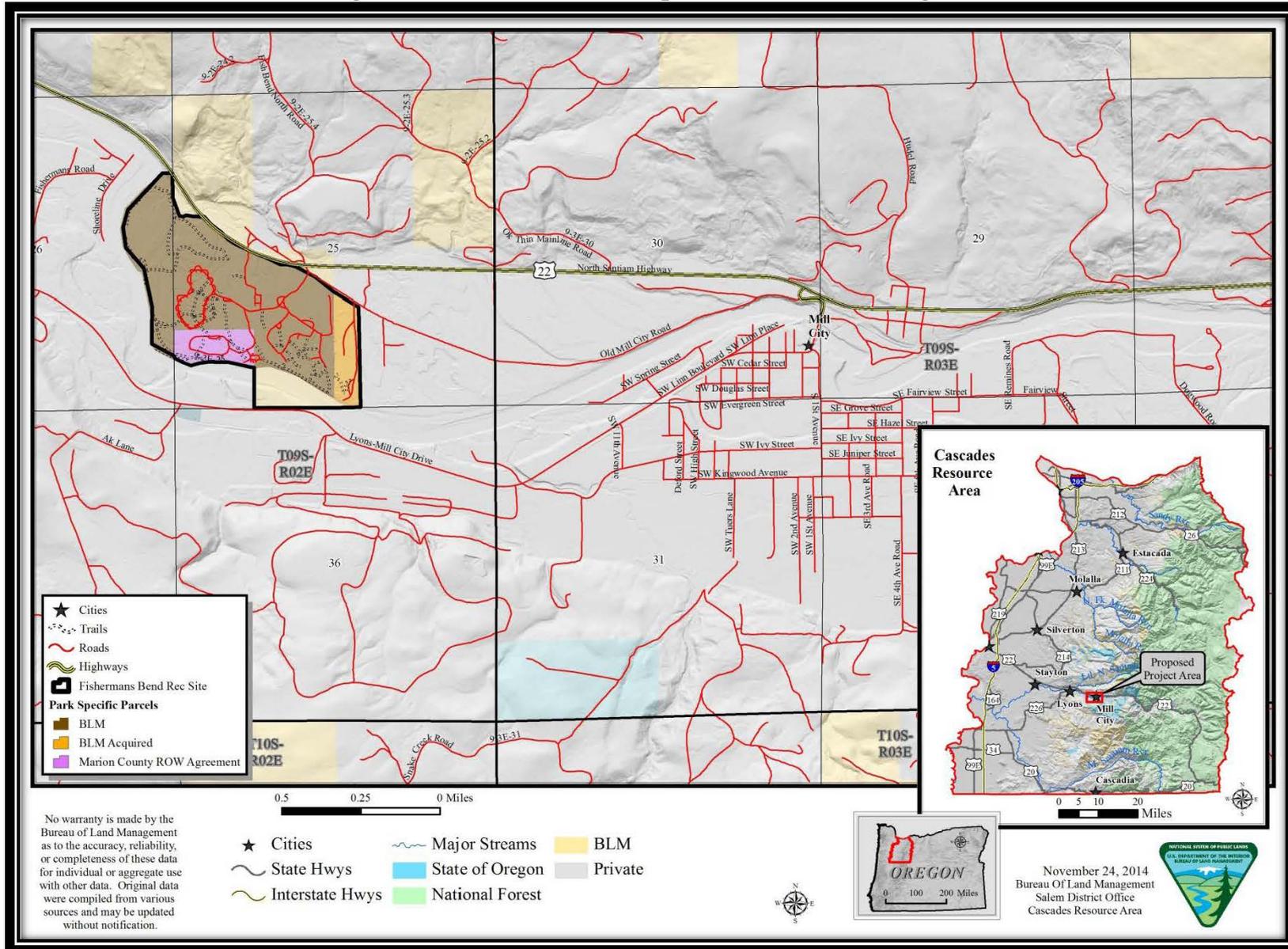
Within the scope of this plan:	Outside the scope of this plan:
<p>Define BLM's role in offering diverse, high quality recreation opportunities that contribute to meeting demand for recreation.</p> <p>Determine appropriate recreation activities and facilities to offer within the SRMA while preventing resource degradation and contributing to the long-term health of lands.</p> <p>Identify specific on-the-ground development or modification actions to manage recreation use, protect resources, and provide for a beneficial visitor experience.</p> <p>Determine appropriate administrative procedures to increase site efficiency and decrease operations costs.</p>	<p>Analyze or provide management direction for resources other than recreation such as timber, wildlife, and fisheries.</p> <p>Establish new fees or increase fees without the proper public process.</p> <p>Establish new regulations without the proper public process and posted in the Federal Register.</p> <p>Outline visitor use management policies such as the use of reservation systems and fees.</p>

1.1 Purpose of and Need for Action

Fishermen’s Bend SRMA is one of the most popular federal recreation facilities in the Willamette Valley, hosting an estimated 80,000 visitors each year. The BLM is expending resources to manage and maintain the facility without a long-term, comprehensive vision in place to guide the site’s operations and development. The purpose of the proposed action is to establish a framework that would determine how recreation opportunities are provided and managed within the Fishermen’s Bend SRMA. The goals of this effort are to develop an all-inclusive, site-specific recreation plan that would outline and describe appropriate recreation development, allowable activities, and associated management at Fishermen's Bend to alleviate relevant issues (EA Section 1.5.3).

There is a need to provide resource protection while increasing site accessibility, safety, availability of amenities, and site environmental education/interpretation in a managed natural environment to provide for high quality recreation experiences. The site’s demand for camping exceeds current capacity, the site has aging infrastructure, forest stand health is declining, river erosion continues to threaten infrastructure, and the acquired land presents an opportunity for expansion. The Recreation and Visitor Services policy recommends the local BLM officer develop Recreation Area Management Plans (RAMP) that address implementation level management, administration, information, and monitoring actions.

Figure 1: Fishermen's Bend Special Recreation Management Area



1.2 Description and Map of Planning Area

Nestled along a forested curve of the North Santiam River, Fishermen's Bend SRMA is Salem District's most developed and highly used campground. The planning area is located 30 miles east of Salem and 1.5 miles west of Mill City, Oregon in Marion County on Highway 22. The park is within 195 acres in Township 9 South, Range 2 East, sections 25 and 26. Additional information about Fishermen's Bend SRMA can be found in EA Sections 3.1 and 3.2.

1.3 Summary of the Proposed Action

Under the Proposed Action or recommended Recreation Area Management Plan, the BLM would provide a management framework that expands the capacity of Fishermen's Bend SRMA. The BLM would construct additional camping locations, trail and road linkages, and visitor services facilities to increase Fishermen's Bend SRMA capacity to serve the high volume of visitors over the next 10 to 15 years. Construction using contracts or park staff would occur in phases focusing on actions that have a higher return on investments such as new campsites/cabins as discussed in this EA and decided in a subsequent Decision Record (DR). Seeking additional funding would assist in the development of larger structures such as additional restroom/shower facilities. Fishermen's Bend would become a full reservation site. For detailed description of the proposed action, see Alternative C: Overnight Recreation Emphasis (EA Section 2.6).

1.4 Conformance with Land Use Plan, Statutes, Regulations, and other Plans

Management actions identified in this plan would be designed to conform to the following documents, which direct and provide the legal framework for management of BLM lands within the Salem District:

- Salem District Record of Decision and Resource Management Plan, May 1995 (RMP) which states that BLM-administered lands contribute to local, state, national and international economies through sustainable use of lands and resources; provide amenities (recreation facilities) that enhance communities as places to live, work, and visit; provide a wide range of developed and dispersed recreation opportunities that contribute to meeting projected demand for recreation within the planning area; manage scenic, natural and cultural resources to enhance visitor recreation and satisfy public land users; and manage recreation use in a manner that prevents resource degradation.
- Revised Planning for Recreation and Visitor Services (R&VS) Manual 8320, March 2011, which provides general policy, direction, and guidance for planning for recreation and visitor services on the public lands and associated waters under the administration of the Bureau of Land Management. This revised Manual provides recreation and visitor services policy direction to supplement the planning and resource management planning regulations set forth in 43 CFR Part 1600. Under the policy, the BLM only designates SRMAs where it recognizes recreation management as the predominant land use plan focus and where it intends to manage and protect specific recreation opportunities and setting characteristics on a long-term basis.

- This RAMP incorporates the H-8320-1 Planning for Recreation and Visitor Services handbook (8/22/2014), which supports policies in the BLM Manual 8320 Planning for R&VS to assist in the planning and management of recreation and visitor services on public lands and related waters. Identified during the Land Use Planning process, recreation management areas, objectives, and allowable uses for those areas would guide subsequent implementation planning documents. During the implementation plan, this RAMP, planners identify particular recreation setting characteristics to assist visitors with receiving benefits expected from a recreation activity.
- Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species within the Range of the Northern Spotted Owl, April 1994 (the Northwest Forest Plan, or NWFP).
- Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines, January 2001, as amended by July 2011 Settlement Agreement.

The above documents are available for review in the Salem District Office. Additional information about the proposed activities is available in the Fishermen's Bend Recreation Area Management Plan EA Analysis File, also available at the Salem District Office.

1.4.1 Related Plans and Reports

The following reports provide important background information for producing this draft plan:

- The 2014 BLM Recreation Strategy for Connecting with Communities provides direction to help communities produce greater socioeconomic health and deliver outstanding recreation experiences to visitors while sustaining the distinctive character of public recreation settings through collaboration with community networks of service providers.
- The North Santiam Watershed Analysis (1999) presents a watershed-level perspective on the physical, social, and environmental conditions and trends within the watershed.
- The Oregon/Washington BLM is revising all Westside District RMPs to address separate issues. The revisions of the RMPs for Western Oregon would conform to the new Planning for Recreation and Visitor Services Manual and Handbook, mentioned in the introduction (EA Section 1), which requires a Land Use Plan (LUP) to identify SRMAs or ERMAs, sets goals, objectives, and allowable uses for each designated area. The Fishermen's Bend Recreation Area Management Plan, as much as possible, will conform to the final Environmental Impact Statement (EIS) set for completion after the decision on this EA.

The above documents are available, or will be available once completed, for review in the Salem District Office. For a full overview of plan conformance, consultation, and supplemental authorities associated with this document, see Chapter 5.

1.4.2 Relevant Statutes and Authorities

This section is a summary of the relevant statutes and authorities that apply to this effort. Additional Statutes and Executive Orders that guide the BLM are available at http://www.blm.gov/wo/st/en/prog/planning/planning_overview/guidance/statutes_and_executive.html.

- **Federal Land Policy and Management Act (FLPMA) 1976** – Defines BLM’s organization and provides the basic policy guidance for BLM’s management of public lands.
- **National Environmental Policy Act (NEPA) of 1969** – Requires the preparation of EAs or EISs on federal actions. These documents describe the environmental effects of these actions and determine whether the actions have a significant effect on the human environment.
- **Endangered Species Act (ESA) 1973** – Directs Federal agencies to ensure their actions do not jeopardize threatened and endangered species.
- **Clean Air Act (CAA) 1990** – Provides the principal framework for national, state, and local efforts to protect air quality.
- **Archaeological Resources Protection Act (ARPA) 1979** – Protects archeological resources and sites on federally-administered lands. Imposes criminal and civil penalties for removing archaeological items from federal lands without a permit.
- **Clean Water Act (CWA) 1987** – Establishes objectives to restore and maintain the chemical, physical, and biological integrity of the nation’s water.
- **Federal Lands Recreation Enhancement Act** – Establishes authority to charge and collect fees for services and amenities at developed recreation sites and for issuing a special recreation permit.

1.5 Scoping and Identification of Issues

1.5.1 Public Involvement and External Scoping

The BLM Cascades Resource Area launched the Fishermen’s Bend planning process in the summer of 2013 through the initiation of public scoping. The planning effort has relied extensively on feedback from site users and stakeholders. Multiple phases of public feedback included:

- The BLM began notifying the public during the summer of 2013. Prior to notifying the public, park staff asked visitors about their stay to determine what they wanted to see while visiting Fishermen’s Bend. Summarized results of this informal information gathering assisted in developing alternatives and issue statements.
- In July and August of 2013, Fishermen’s Bend was selected to take part in a National Visitor Satisfaction Survey to determine program measures and gauge visitor

satisfaction. Survey results from the 284 forms returned provided demographics and user satisfaction information. Written comments resulted in 62 consolidated requests, park upgrades, or issues.

- On August 27, 2013, a press release went out to local newspapers, which initiated public scoping. As a result, 23 comments were received which assisted the BLM in identifying issues and developing alternatives that were incorporated into the plan. Subsequently, the park's webpage was updated to reflect this information.
- April 2014 marked the official 30-day public comment period for this EA and RAMP. Ninety-seven letters were mailed to federal, state, local, and interested public. The BLM received 5 comments.
- The RAMP has also been included in the Salem District's quarterly Project Update publication since 2013. The publication provides information regarding BLM's current project work and provides contact information for public involvement.

1.5.2 Interdisciplinary Team Involvement and Internal Scoping

Planning for the Fishermen's Bend RAMP has been ongoing since an internal scoping meeting with the Cascades Interdisciplinary Team (IDT) in December 2012. The IDT, through record searches, field reviews, and the project planning process conducted internal scoping to help refine goals and objectives, analyze the area's resources, predict the potential impacts of the management alternatives, and produce planning documents.

1.5.3 Relevant Issues and Concerns

The issues identified during internal and external scoping led to refining the proposed action, formulating alternatives, identifying appropriate design features, and analyzing environmental effects of proposed management actions. The definition of a planning issue is a matter of disagreement, debate, dispute, or general concern over resource management activities, the environment, or land uses. Issues identified below are those that the BLM has the authority to address and are specific to the planning area. These issues provide a basis for comparing the environmental effects of the proposed project and aid in the decision-making process. The goal of this planning effort is to effectively address these issues through a comprehensive recreation management strategy.

Issue: *Site Capacity and Utilization*

Would the Proposed Action address the high number of users turned away? Would additional sites be developed to accommodate high demand? What changes would be made to maximize utilization of day-use? What changes would be made to campsite availability?

Issue: *Long-term Management and Administration*

How would appropriate long-term management of the park be accomplished? How would public safety be improved?

Issue: Overnight Camping Demand

How would the Proposed Action modify camping? How would overnight recreational use of the SRMA change? To what degree and in which locations are additional campsites appropriate? Should additional campsites be constructed within the park? How would recreation-related impacts to other resources be minimized?

Issue: Community Contributions

How would management of the SRMA enhance its role as a community resource? What possibilities exist for partnerships that can boost appropriate travel and tourism?

Issue: River Access and Bank Erosion

Would river access be provided and improved under this plan? What amenities or level of development would be provided along the North Santiam River? Would river erosion be controlled in a way to protect park development and infrastructure? Would erosion continue to threaten park amenities? What can be done to prevent additional erosion that threatens park amenities?

Issue: Trail System

How would unsustainable portions of the trail system be addressed? Would there be changes to the trail system at the site?

Issue: Acquired 17-acre site

What alternatives exist for the 17-acre park addition? What development alternatives exist for these 17 acres?

Issue: Park's Financial Stewardship

How can the site continue to be maintained with current staffing levels and projected flat or declining budgets? What changes would the BLM propose to increase occupancy mid-week? Would there be changes to the site's fee schedule? Would there be changes in the reservation system?

Issue: Aging Facilities

How would the BLM address the deterioration of aging facilities at the site? What costs are expected during the life of this plan?

Issue: Visitor Services

What environmental education or interpretation services would be offered at the site? Who would provide these visitor services?

Issue: Special Recreation Permits

How would the BLM address demand for commercial services at Fishermen's Bend? What restrictions would be placed on special recreation permits within the park? Would additional permit types be allowed within the park?

Issue: Vegetation Management

What management actions would assist in improving forest health? What invasive weed treatments are proposed to decrease or eliminate infestations within the park?

Issue: Fuel Loading, Fire Risk, Air Quality

What effects would the proposed actions have on fuel loading, fire risk, and air quality?

1.5.4 Issue Not Analyzed Further in This EA

The BLM cannot take action to address certain issues outside its authority or jurisdiction, i.e., fishing regulations, or actions that are infeasible. In addition, the BLM would not implement an action that creates additional issues such as removing speed bumps, creating a designated wading area, or allowing pets in cabins. These issues identified during public scoping will receive no further analysis and are not included in EA.

1.6 Decisions to be Made

- Which alternative or mix of alternatives best meet the purpose of and need for action?
- What level of development best meets the projected demand?

1.7 Ownership

1.7.1 BLM-Administered Lands

Land use allocations (LUA) are designations that determine what land management actions are appropriate in a given area. Established during district-level planning processes such as the Salem District Resource Management Plan (RMP), LUAs guide all resource management actions including timber, wildlife, fisheries, and recreation. Fishermen's Bend land is classified as Oregon and California Railroad Grant (O&C) Lands (see Table 2).

1.7.2 Additions to or Acquired BLM-Administered Lands

Marion County transferred 32 acres of tax-foreclosed county lands in section 26 to the BLM (case file OR3468) in 1971 for expansion of Fishermen's Bend. This land provides river access from the trail system and the acreage included in O&C Lands, Table 2.

In 2001, the BLM purchased the 17-acre parcel to the east of Fishermen's Bend as potential for future recreational expansion and development. The 17-acre parcel is located in Township 9 South, Range 2 East, section 25. An Environmental Assessment, Finding of No Significant Impact, and Decision Record were completed in 2001 (EA-OR-080-01-12) covering this purchase; it did not analyze site-specific development actions. This land currently provides periodic dispersed day-use and overflow parking for large events. The site has also undergone restoration attempts since becoming BLM-administered land.

1.7.3 Other Land Classifications

Within the area known as River Loop, Marion County granted the BLM a permanent easement (RE S-331) for 17 acres in the southwest quarter of the southwest quarter of Section 25, Township 9 South, Range 2 East, for full recreational development, public use, and to provide access for the benefit of Fishermen's Bend. New construction requires Marion County's

concurrence prior to developments. Under this agreement, Marion County reserves all rights to merchantable timber, minerals, and the removal of both. The easement has been in place since June 19, 1963 and shall continue as long as the land is used for recreational purposes.

Table 2: Fishermen’s Bend Land Use Allocations	
LUA	Acres
O&C Lands	160
Marion County	17
Acquired Land	17.75*
Total Acres	195

*The acquired land of 17.74 acres is the 17-acre addition referenced throughout this EA.

Chapter 2 Alternatives

The expected outcome of this effort is a comprehensive Recreation Area Management Plan (RAMP) that would outline and describe appropriate recreational development locations, allowable activities, and associated management for the next 15 years. Proposed actions would provide facilities and infrastructure that cater to existing visitors and expand camping and non-motorized day-use opportunities while minimizing environmental resource damage. All proposed developments are subject to funds availability. Increasing site utilization through alterations, modifications, or expansion would meet the needs of present and expected future visitor demand. Chapter 2 describes overall management goals and objectives and describes each of the alternatives.

2.1 Management Goals and Objectives

The following goals and objectives are common to all management alternatives.

- Manage public lands for recreation experience and improved quality of life under the Benefits Based Management framework.
- Resolve identified issues associated with public safety.
- Establish an adaptive structure that would allow the BLM to adjust to new conditions and trends.
- Comply with relevant agency goals and directives including those found in the 1995 Salem District Resource Management Plan.
- Identify specific actions the BLM would take to implement these strategies.

- Establish a recreation “niche” for the SRMA and effectively market this strategy to capitalize on local travel and tourism-related spending.

Table 3: Management Goals and Objectives

Management Goals
Manage Fishermen’s Bend SRMA to provide recreational opportunities, visitor safety, and resource protection; and to address resource conflicts.
Manage the recreational opportunities within the Fishermen’s Bend SRMA to provide for the use, enjoyment, and safety of present and future generations.
Manage recreation use in a manner that prevents resource degradation and impacts on the resources within the SRMA.
Administer the SRMA consistent with its identified ‘niche’ in order to maximize community and economic benefits.
Identify specific actions the BLM would take to implement these strategies.
Develop a management strategy that is reasonable, cost-effective, and implementable.
Management Objectives
Supply recreation opportunities in a manner that is sustainable, environmentally responsible, and satisfying to existing and expected demand.
Maintain or increase the current level of reported visitor satisfaction.
Engage in collaborative land management by working in partnership with private and public entities, organizations, and recreational user groups to provide environmental education and interpretive opportunities.
Publicize available recreational opportunities by utilizing technological advances in marketing information to communicate rules, regulations, and relevant natural and human history effectively.
Improve site utilization and management efficiency of existing assets while decreasing staff’s involvement and visitor wait time at check-in/registration.
Increase accessible recreation opportunities for a wide range of visiting public.

2.2 Summary of Alternatives

Three alternatives were developed in response to the purpose and need. These alternatives include the No Action Alternative (Alternative A) and two action alternatives (Alternatives B and C). Each alternative described in this section and analyzed in Chapter 3 represents a different strategy for addressing the issues outlined in EA Section 1.5.3. The alternatives were developed to reflect that emphasis on one activity or theme (e.g., new recreation sites) would result in fewer resources available for others (e.g., new trails). The question is not what actions should be taken to fix the identified issues, but rather what is the best mix of actions that can be taken given the resources available.

Implementation of any of the alternatives is dependent on the availability of funds, staff time and other resources. Any facility, trail, and amenity development would be completed in a manner that minimizes long-term operations and maintenance costs.

Direct impacts on recreation are those that allow, restrict, or prohibit a visitor's recreational opportunity; including both the opportunity for access (e.g., public closure) and opportunity to engage in specific activities (e.g., participation in camping, picnicking, and non-motorized boating). Indirect impacts are considered those that alter the physical, social, or administrative settings.

Some proposed decisions are a benefit for targeted recreation activities and a negative impact to non-targeted recreational activities (i.e. special recreation management area designations). In addition, proposed recreation and visitor services program actions may restrict recreation use in order to protect public health and safety, reduce user conflicts, or protect natural and cultural resources. Existing management and operation practices would continue to provide a safe and secure site.

Alternative A – Continuation of Existing Management (No Action Alternative) proposes continuing current management practices and maintains the current fee structure. Fishermen's Bend provides high quality overnight camping and free day-use. High facility amenities including but not limited to group shelters, cabins, shower restrooms, and playgrounds allow for a structured experience and allow visitors to realize sought-after experiences. No large-scale site development or alteration would occur. The amount of facilities or sites available to visitors through first come-first serve and reservations would not change. Campsites and shelters would remain and be managed under current rules and regulations. Day-use and river access would continue at their present locations, with action taken only to address the most severe resource concerns.

Alternative B – Day-Use Recreation Emphasis proposes site alterations and development actions that utilize existing facilities and maximize efficient use of Fishermen's Bend. This alternative focuses on increasing environmental education and interpretation programs through differing delivery methods and day-use activities. The site would continue to provide the same amount of high quality overnight opportunities as with the No Action Alternative. The new kiosk for visitor registration would maintain the current mix of first come-first serve and reservable sites. The BLM proposes changes to the fee structure including a new standard amenity/day-use fee. No new campsite or trail construction would occur. Construction of a fenced, off-leash dog park would occur on the 17-acre parcel. A few minor safety actions such as new egress road delineation, removing unsafe bank concrete, and installing natural structures to protect the fishing platform would occur. The boat launch would receive an update to current design standards.

Alternative C – Overnight Recreation Emphasis (Proposed Action) proposes to increase site capacity with the construction of new campsites, access road, self-registration area, self-guided interpretation, and riverbank stabilization. A few connecting trails would be developed to create better flow of site visitors. Visitor information improvements would include an additional volunteer host site to assist with maximizing site utilization and a full reservation system. Restroom buildings would expand to include showers. The acquired 17-acre site would receive the addition of planting soil to accommodate native vegetation planting in addition to a new egress road.

2.3 Description of Alternatives

Each alternative varies by five management themes:

- **Overnight Use:** Includes all components of overnight use within the site such as rules and regulations, facilities, reservations, and management strategies, and appropriate locations.
- **Day-Use:** Includes the rules and regulations, facilities, and management strategies that concern non-overnight activities including swimming, picnicking, boating, fishing, and hiking.
- **Environmental Education and Interpretation:** All the public information related to the site including information kiosks, environmental education/ interpretative materials and programs, wayfinding signage, brochures, and websites.
- **17-Acre Addition:** Includes actions taken on land to the east of the highly developed areas of the park. These actions include development of rules and regulations, facilities, and management strategies.
- **River Access and Bank Stabilization:** Includes actions to address issues with erosion immediately adjacent to site infrastructure such as the Americans with Disabilities Act (ADA) accessible fishing platform, riverside trail, and access points whether hardened or not.

Management direction related to fees, the trail system, vegetation management, noxious/non-native plant management, travel and transportation management, visual resource management, and special recreation permitting applies to action alternatives (B and C) and can be found in EA Section 2.7. These actions would occur throughout the SRMA including the 17-acre addition. These actions do not vary or have enough differences between alternatives to warrant another theme.

Table 4: Potential Ground Disturbance¹ by Alternative

Alternative A (No Action Alternative)	<ul style="list-style-type: none"> • No new ground disturbance.
Alternative B (2.52 acres)	<ul style="list-style-type: none"> • Trenching for electric to group picnic shelters and water to interior Camp Loop campsites (0.17 acres). • Asphalt cutting and patching where utilities cross roads and where self-registration kiosk is constructed. • One new camp host site and central self-registration kiosk (0.04 acres). • Area for off-leash dog park with perimeter fencing, restroom, and water (1 acre). • New trails throughout the SRMA (0.67 acres). • Vegetation and small tree removal in construction locations and deepening parking spaces near boat launch. • On 17-acre addition, site compaction in location of dog park (1 acre), trails (0.19), and egress road (0.45 acres). • River and bank disturbance with boat launch upgrade (unknown). • Riverbank stabilization around accessible fishing platform (unknown).
Alternative C (Proposed Action) (1.94 acres)	<ul style="list-style-type: none"> • 10 campsites, yurts or cabins in Group Loop and 8 campsites in River Loop (0.66 acres). • One new camp host site and central self-registration kiosk (0.04 acres). • New camp gravel road (0.22 acres). • Trenching for new utilities (0.09 acres). • Asphalt cutting and patching where utilities cross roads and where self-registration kiosk is constructed. • New trails to connect facilities and areas (0.48 acres). • Vegetation and small tree removal in construction locations. • Site compaction in new site locations and on 17-acre addition in location of egress road (0.45 acres). • Riverbank stabilization project (unknown).

2.4 ALTERNATIVE A: CONTINUATION OF EXISTING MANAGEMENT (NO ACTION ALTERNATIVE)

The No Action Alternative proposes continuing current management practices with no additional development or change in the management of Fishermen’s Bend. The BLM would continue to maintain existing developments. The fee structure and amount of available facilities or sites would not change. Day-use outside of the shelters would remain free. Campsites and shelters would remain and be managed under current rules and regulations. Day-use and river access would continue at their present locations, with action taken only to address the most severe resource concerns. This section also provides information about the affected environment for recreation, further detailed in EA Section 3.2.1.

¹ ¹ Acreage calculations were from GIS length and area input into an online conversion calculator (<http://www.onlineconversion.com/>). Numbers were rounded for highest total acres of ground disturbance.

2.4.1 Overnight Use

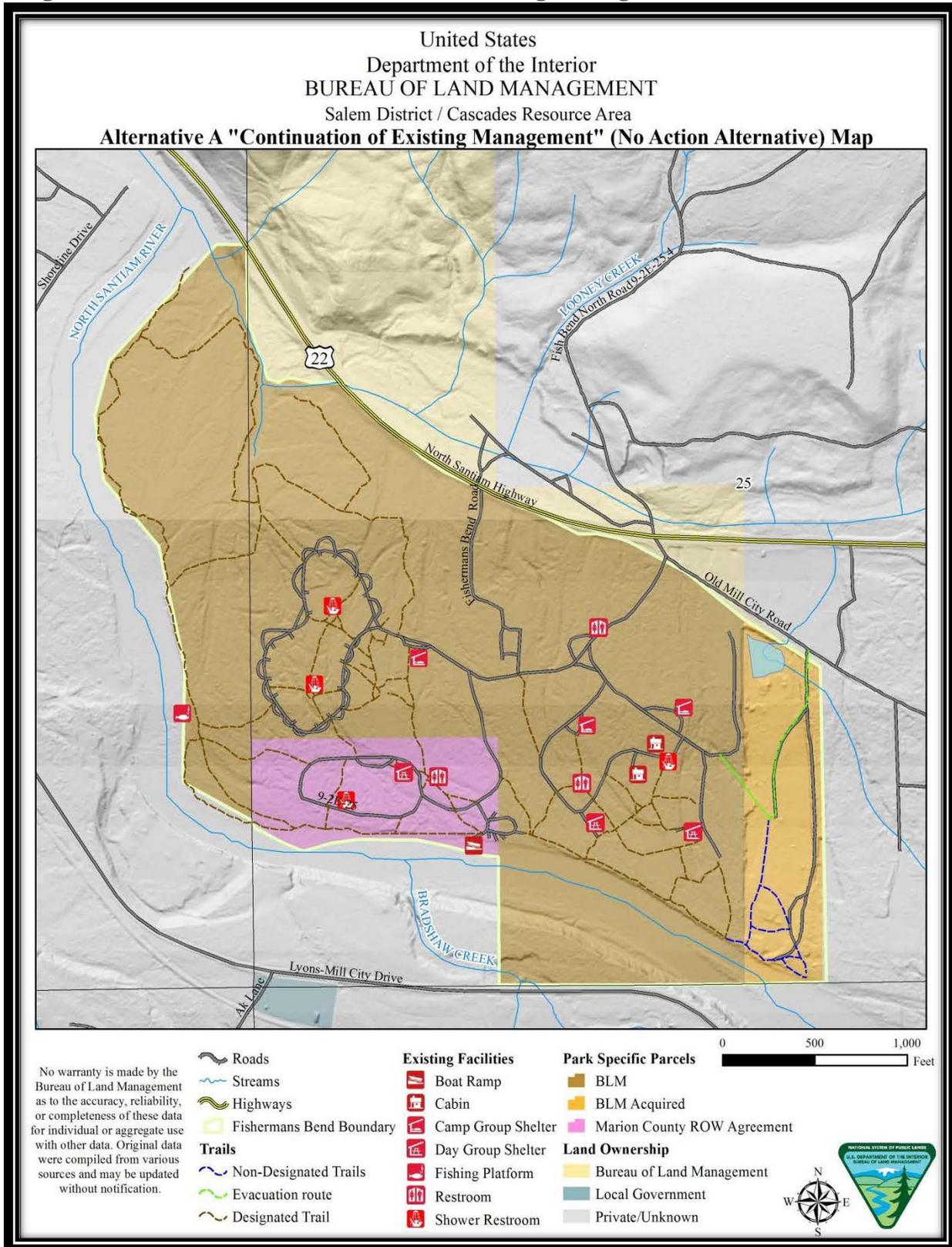
Available overnight opportunities in three separate overnight loops, Camp Loop, River Loop, and Group Loop, provide a total of 54 single-family campsites, 2 cabins, and 3 group camping shelters. The camping season is from May 1 through October 31. Each loop provides guests with access to restroom and shower facilities. Additionally, 6 campsites are dedicated to volunteer camp hosts who provide an administrative presence. Some sites within the River and Camp Loops have small shelters over picnic tables. Vegetation screening within overnight loops provides privacy for guests.

Table 5: Alternative A: Available Camping Opportunities			
Amenity	Camp Loop	River Loop	Group Loop
Single-Family Campsites	40	14	
Camp Host Sites	2	1	3
Restrooms		1	1
Shower Restrooms	2	1	1
Group Camp Shelter	1		2
Cabins			2
Maximum Visitor Occupancy	472	112	132

The site offers first come-first serve single-family campsites as well as reservable campsites. Sixty percent of those campsites are available on a first come-first serve basis. Reservations are made online through the National Recreation Reservation Service (NRRS) Recreation.gov website (<http://www.Recreation.gov>), Call Center (1-877-444-6777), at Fishermen’s Bend during camping season, or by calling Fishermen’s Bend main office (503-897-2406). Reservable sites not already reserved are available for walkup occupancy as a first come-first serve site. The reservation system allows overnight visitors to plan camping trips for cabins and group shelters 12 months in advance while single-family campsite reservations are allowed 6 months in advance. Guests must check-in at the office to confirm occupation of their site. Total number of visitors provided overnight use would be 716 per night.

If a campsite is unoccupied, whether reservable or not, office staff assist in placing visitors in a campsite that best suits their need. Any particular site’s availability is determined the previous day based on its occupancy and the occupant’s intended departure date. Campsite occupants may stay up to 14 consecutive days before leaving. Office staff and camp hosts work collectively at providing a site availability list. The list assists staff in meeting any potential camper’s need based on camping type and required or desired hookups. Once the gate opens at 7:00 am, office staff gives a sequential ticket to the next available site meeting that need to a line of potential camping visitors.

Figure 2: Alternative A: Continuation of Existing Management (No Action Alternative)



2.4.2 Day-Use

Day-use facilities include three group picnic shelters, seven picnic sites in the day-use area near the boat launch, and a rest stop with restroom just off Highway 22. Reservations are available for the River Loop and the Group Loop picnic shelters up to 12 months in advance using the same system previously mentioned. Visitors must check-in at the office to confirm occupation of reserved group picnic shelters. The group picnic shelters may be used for overnight camping, however visitors must reserve and pay for both the arrival and departure days. Group picnic shelters are available for occupancy from May 1 through October 31.

The rest stop, picnic area, and day-use parking is free and open year round through an automated entrance gate; gate open hours vary with the camping season. The boat launch area has parking for 6 trailered vehicles and 18 single vehicles. Also available for day-users is the environmental education, interpretation, trail system, river access, playgrounds, and play fields if not used by visitors reserving the shelters. An RV dump station is located near the rest stop and is available for a fee to visitors not camping at Fishermen's Bend via a self-service fee tube.

2.4.3 Environmental Education and Interpretation

Environmental education and interpretation efforts help enhance the character of the recreation setting and deliver the desired recreation opportunities. Fishermen's Bend offers a nature center and amphitheater for nature oriented programs and activities. The nature center also offers self-guided interpretation of site or region specific information. Site education and interpretive information about Fishermen's Bend can be found at <http://www.Recreation.gov>, the Salem District BLM website, and various other non-BLM websites.

Volunteers and staff offer environmental education programs as time and season allow. The highest program offerings was in 2012 with 50 different programs offers such as star gazing and constructing bat boxes. Due to declining budgets, the number of programs offered has declined in recent years to the current rate of two per month. The BLM would continue offering a few selected low-complexity programs based on funding levels and interested volunteers.

In addition to program offerings, other nature-oriented activities that focus on engaging youth include the Junior Explorer Program specifically developed for Fishermen's Bend. A mix of interpretive signage, kiosks, and bulletin boards located throughout the park provide information about the unique attributes of the park as well as rules and regulations. Brochures, maps, and pamphlets located in the office also provide site and region specific information; office hours dictate availability of this information.

2.4.4 17-Acre Addition

This area is a largely undeveloped parcel to the east of and adjacent to Fishermen's Bend. It has the potential for additional river access and park development. A gate just off River Road SE and a boundary fence limits access to the parcel.

Parcel amenities include a gravel parking area with a bulletin board in front of the gate, dispersed non-designated non-motorized trails, and undeveloped river access. No other amenities such as

restrooms, water, or power exist. An old gravel road, also used as a trail, follows the parcel's eastern property boundary. The parcel provides overflow parking during large permitted events.

2.4.5 River Access and Bank Stabilization

A trail that follows the North Santiam River provides river access for visitors to fish, swim, and view nature. The BLM does not provide a designated swimming area; however, visitors have adopted one particular area near River Loop. A hardened accessible fishing platform and stairs on the riverbank provide additional access points and opportunities.

The North Santiam River erodes the bank and deteriorates the concreted bank stabilization near the platform that protects infrastructure. Stabilization would remain onsite and only safety fencing would be placed to protect visitors from hazardous areas.

2.5 ALTERNATIVE B: DAY-USE RECREATION EMPHASIS

This alternative seeks to expand and improve environmental education and interpretive opportunities available at Fishermen's Bend for visitors and members of the local community and increase site utilization.

2.5.1 Overnight Use

Camping would remain the same as in the No Action Alternative. No additional campsite construction would occur. Expanded amenity fees for campsites and shelters would be adjusted to account for inflation and additional services (EA Section 2.7.1). Fees collected are used exclusively for management, maintenance, and operations of the site. Enhancement of existing structures would include adding water hookups to 24 single-family campsites in Camp Loop and 17 electrical hookups spread between the three group picnic shelters. Other campsites would receive modifications to parking to accommodate a greater range of vehicles. Converted picnic shelters provide an option for additional single-family campsites if not reserved. Total number of visitors provided overnight use would remain the same up to a maximum number of 1,046 per night with the additional overnight picnic shelter opportunity.

The existing office-involved registration process would change to self-registration at a new kiosk constructed near the Fishermen's Bend entrance. Site availability would be posted by staff or volunteer camp hosts daily. A new camp host site would be constructed near the kiosk to assist visitors. The main park office would only assist in reservations during full staffing periods, i.e., the high use season. The BLM would provide no reservation assistance during the off-season.

Table 6: Alternative B: Available Camping Opportunities			
Amenity	Camp Loop	River Loop	Group Loop
Single-family Campsites	40	14	
Camp Host Sites	2	1	4*
Restrooms		1	1
Shower Restrooms	2	1	1
Group Camp Shelter	1		2
Group Picnic Shelter Overnight Availability		1	2
Cabins			2
Maximum Visitor Occupancy	472	222	352

*Camp host site includes one for the self-registration kiosk.

2.5.2 Day-Use

Day-use opportunities would increase. The BLM would propose to begin charging a standard amenity (day-use) fee and extending the hours of operation/site access. In order to improve the safety and availability of recreational opportunities to visitors, the BLM would update the boat ramp to modern standards and delineate, deepen, and adjust locations of existing day-use area parking spaces. Other themes providing day-use related opportunities (EA Sections 2.5.3 and 2.5.4) list additional development actions specific for day-use activities or locations.

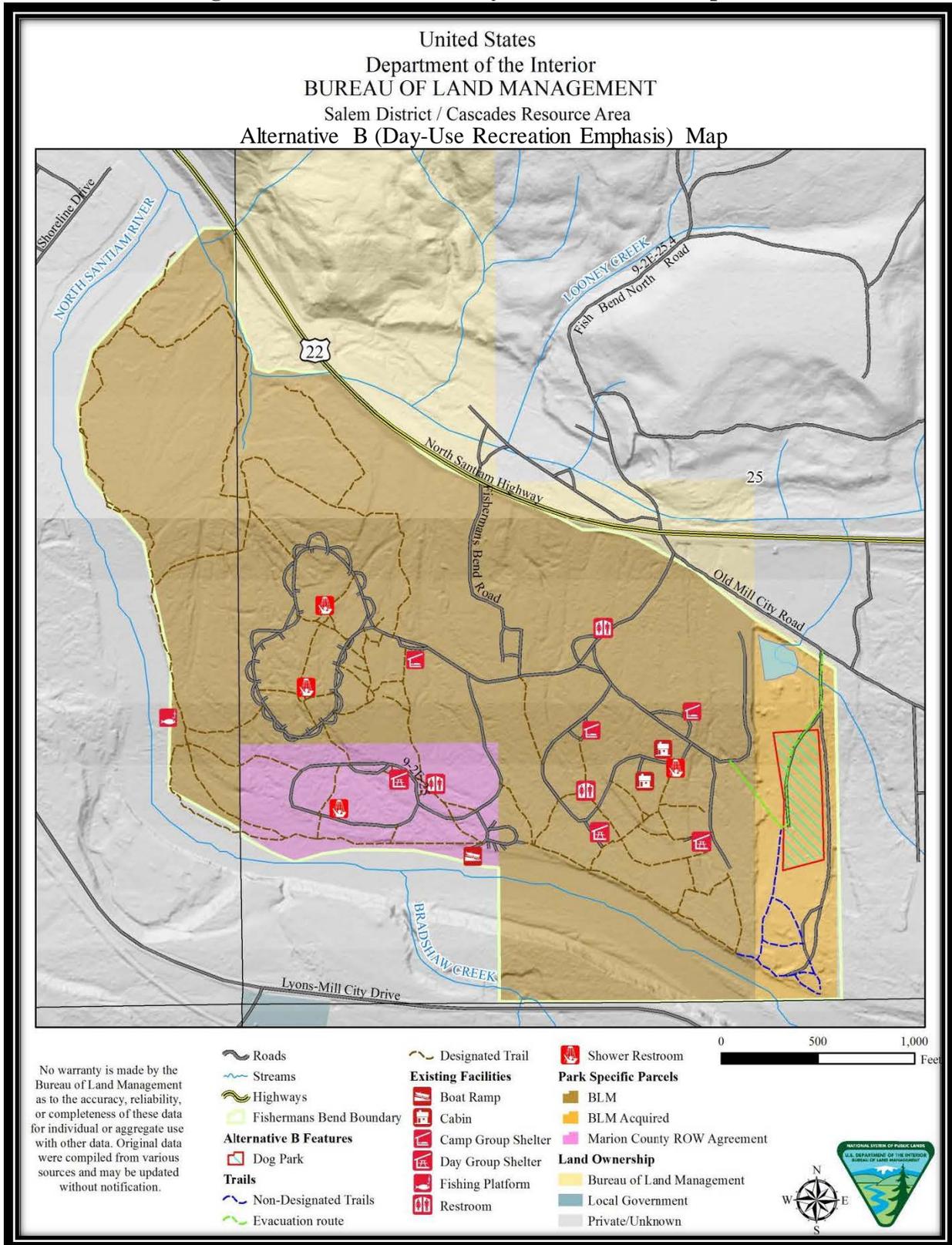
2.5.3 Environmental Education and Interpretation

Environmental education and interpretation programming would increase from its current frequency to daily programs led by staff, volunteers, or outside partners, local government or schools. An interactive self-guided tour using Quick Response (QR²) codes would be developed and changed periodically. Themed interpretive programs would be developed to provide self-guided interpretation, for example information about migratory birds.

New uniform signage throughout the site would be developed from and follow a sign plan which would include site-specific interpretive information of interest to visitors such as botanic and historical facts. A dedicated individual would maintain an off-the-shelf suite of interpretive programs. The BLM would explore requiring visitors to register for activities/programs through the reservation system or the site office.

² QR code (abbreviated from Quick Response Code) is the trademark for a type of matrix barcode (or two-dimensional barcode). A barcode is a machine-readable optical label that contains information about the item. The QR code system has become popular due to its fast readability and greater storage capacity.

Figure 3: Alternative B: Day-Use Recreation Emphasis



2.5.4 17-Acre Addition

The acquired property on the park's eastern boundary would be developed to provide additional day-use recreation opportunities including formal trails and a new off-leash dog park. Existing dispersed social trails would be designated in stable locations; additional tread work may be needed to increase trail stability. Newly established trails would be included in the trail system and shown on maps. The one acre fenced off-leash dog park would be constructed as close as possible to the existing parking area located just off River Road SE. Dog park amenities would include fencing with gates, benches, water, shade, toilet, and grass. Construction would utilize best management practices and development guidelines in the American Kennel Club's (AKC) *Establishing a Dog Park in Your Community (10/2008)*; including rules and regulations for management and operation of a dog park. The BLM would collaborate with local government or interest group partners to assist in developing the dog park. Staff, volunteers, or community partners would complete dog park monitoring and maintenance. Site compatible native vegetation and trees would be planted to provide shade for the dog park. Topsoil would amend the ground immediately around the plantings and under the grass.

An emergency egress gravel road would be constructed through the northern portion of the addition. The existing property fencing would be removed if it were determined to be unsafe to visitors and unnecessary for continued security for visitors. Signage would be installed per the sign plan mentioned in EA Section 2.5.3. Native vegetation and trees would be planted to assist in restoring the site and to provide shade for dog park users.

2.5.5 River Access and Bank Stabilization

There would be fewer river access points because of trail condition monitoring for potential closures and restoration in locations not compatible with such use. Portions of the failing concrete bank stabilization deemed unsafe to visitors would be removed as funds allow. Stairs would remain in place as long as site safety is maintained. The fishing platform would be protected from river erosion, as needed, through the construction of bank stabilization structures (comprised of natural materials, e.g., logs, trees, boulders).

2.6 ALTERNATIVE C: OVERNIGHT RECREATION EMPHASIS (PROPOSED ACTION)

This alternative seeks to increase opportunities for overnight use at Fishermen's Bend by constructing additional campsites. The camping fee structure would change. Day-use parking would remain free.

2.6.1 Overnight Use

The majority of campsites and shelters would be full hookup sites with electric, water, and sewer services. Where adding of these services is infeasible, the park would continue to offer the current level of services. Expanded amenity fees for campsites and shelters would be adjusted to account for inflation and additional services (see EA Section 2.7.1). Additional camping opportunities would be strategically placed in the park where the current level of vegetative

screening between sites can be maintained. Total number of visitors provided overnight use would be change from 716 to 840 per night.

Up to ten new camping opportunities such as cabins, yurts, or single-family campsites would be constructed in the Group Loop. A new access road would be constructed between the main office and Group Loop to accommodate the majority of new camping opportunities. Up to eight new single-family campsites would be constructed in River Loop, four of which would be walk-in tent campsites. Parking would be provided for all new camping opportunities. Existing restroom facilities would be expanded to provide shower facilities to accommodate additional overnight use.

Table 7: Alternative C (Proposed Action): Available Camping Opportunities			
Amenity	Camp Loop	River Loop	Group Loop
Single-Family Campsites	40	22	
Camp Host Sites	2	1	4
Shower Restrooms	2	2	2
Group Camp Shelter	1		2
Group Picnic Shelter Overnight Availability		Not Included	Not included
Cabins			12
Maximum Visitor Occupancy	472	176	192

The camping season of May 1 through October 31 would be monitored and adjusted based on site demand and funding levels. All camping sites and shelters would be available for reservation via the NRRS website or phone number only; no BLM staff assistance in making reservations would be available to visitors. All camping facilities would be available for reservations 12 months in advance. Sites not reserved would remain available on a first come-first serve basis using the self-registration kiosk, as described in Alternative B.

2.6.1 Day-Use

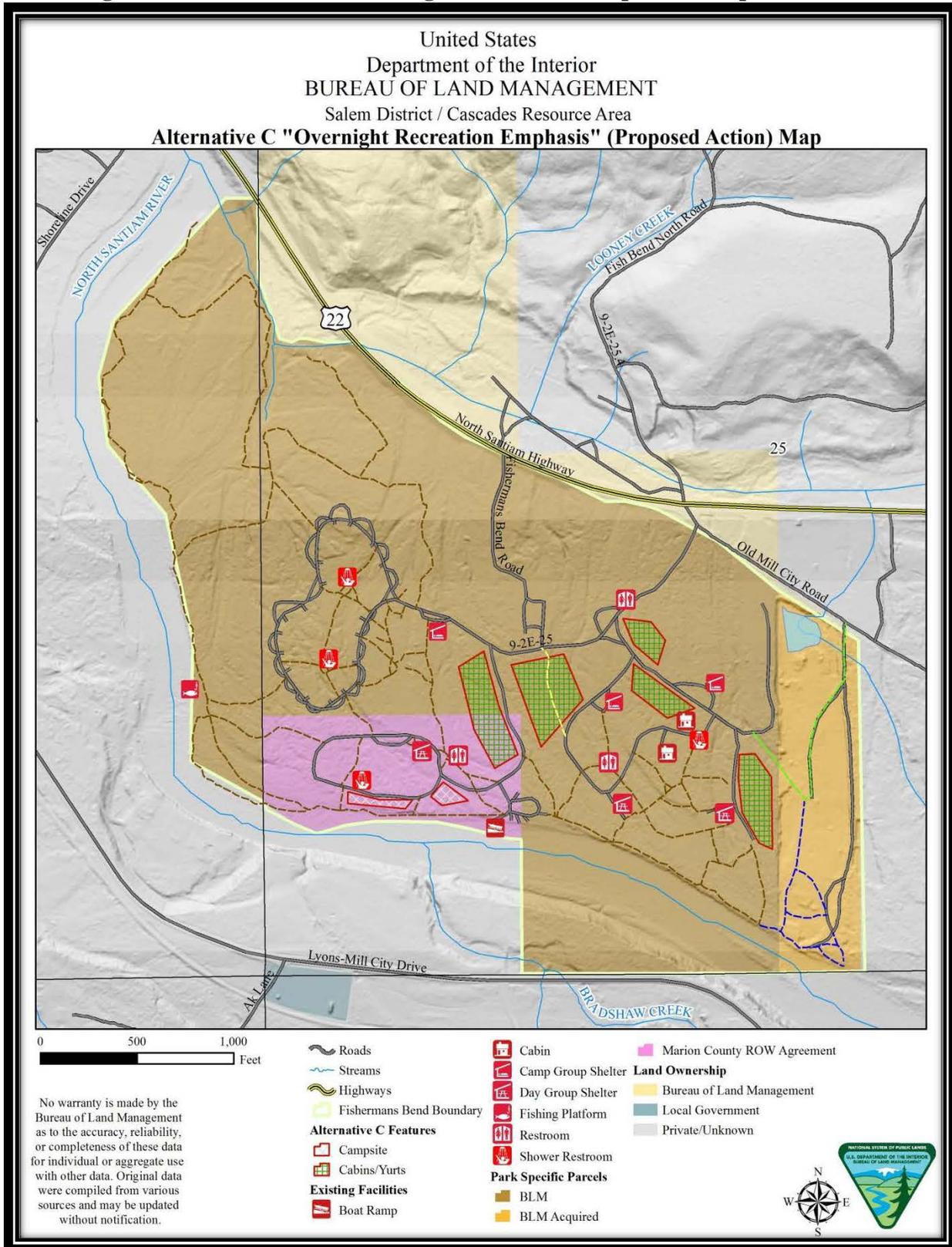
The BLM would increase the hours of site access to the rest stop and boat ramp/picnic area after addressing site security of infrastructure and visitors.

2.6.4 provide additional development actions specific for day-use activities or locations.

2.6.2 Environmental Education and Interpretation

The BLM would eliminate environmental education and interpretation programs and presentations altogether or reduce these services to monthly offerings without assistance from volunteer groups or partnerships. Programs would be available as staffing and other partnerships allow. Instead, self-guided information in the form of signage or additional brochures would become the primary means for distributing information about the park’s natural history and resources. The signage throughout the park would change frequently. The BLM would actively seek partnerships to lead these programs at Fishermen’s Bend.

Figure 4: Alternative C: Overnight Recreation Emphasis (Proposed Action)



2.6.3 17-Acre Addition

This alternative does not provide a dog park. The additional 17 acres would be returned to a natural condition but would continue to provide dispersed day-use activities including use on non-designated social trails. An emergency egress gravel road would be constructed through the northern portion. The BLM would work towards full site restoration by planting native vegetation and trees after breaking up the rocks and adding topsoil in planting locations. No widespread topsoil would be placed to assist in full site restoration.

2.6.4 River Access and Bank Stabilization

Fewer improved river access points would be maintained in stable locations while other less ideal locations causing resource damage would be removed to improve bank stability while continuing to allow access for river users. Existing concrete would be removed and a long-term bank stabilization project would be developed in coordination with a BLM fisheries biologist and other cooperating agencies. Site specifics of bank stabilization would be analyzed in further detail in another environmental document. Bank stabilization would assess how best to prevent additional facility and infrastructure damage.

2.7 Management Actions Common to All Action Alternatives

The following management direction applies to all action alternatives (B and C).

2.7.1 Fees

The BLM authorizes recreation use of the public lands and related waters through the issuance of special recreation permits (see EA Section 2.7.7), and recreation use permits. The BLM's authority to issue permits is described in the Federal Land Policy and Management Act of 1976 and 43 Code of Federal Regulations (CFR) 2930. The authority to collect and retain recreation fees is specified in the Federal Lands Recreation Enhancement Act (REA) of 2004. The issuance and administration of permits must adhere to the BLM policy contained in Manual (2930 Recreation Permits and Fees) and Handbook (H-2930-1 Recreation Permit Administration).

The BLM plans to seek changes to the existing fee structure at the site. Potential changes include increasing camping fees, implementing a new day-use fee, and charging for services or amenities. Under Alternative B, the BLM would seek to charge a standard amenity (day-use) fee. Under the Proposed Action, Alternative C, the BLM would not seek a day-use fee. Expanded amenity fees for campsites and shelters would be adjusted to account for inflation and additional services. Any change in the fee structure requires a presentation to the Recreation Resource Advisory Committee and recommendation for approval before going to the BLM State Director for concurrence and final approval prior to implementing. This would likely occur within two years of the final RAMP decision and follow 2930 manual and handbook for public notification of fees. The goal of fee changes is to move Fishermen's Bend towards becoming a self-sustaining recreation site.

Fees collected at Fishermen's Bend supplement allocated recreation funds to maintain and operate the park. At least 85 percent of fee receipts must be used for recreation facilities,

services, and programs that impact visitors such as maintenance and enhancement projects, interpretation and signage, and direct costs related to fee collection. No more than an average of 15 percent of the total revenue collected may be used for administration, overhead, and indirect costs related to fee collection (H-2930-1, Chapter 2, III Expenditures).

A recent study completed by CHM Government Services outlined the costs and benefits of proposed actions and expected fee revenue over various development scenarios. The study indicated a new day-use fee, increased camping fees, and additional cabins could increase site revenue by as much as \$80,000 per year. The BLM would use this study to update Fishermen’s Bend Business Plan and present those changes to the Recreation Resource Advisory Committee.

An automated fee station would be installed to collect fees not already paid through the online reservation system, for example walk-up campers or non-park visitors using the dump station. A centralized registration kiosk would be constructed similar to that of Linn County’s River Bend Recreation Site (Figures 5 and 6).



Figure 5: River Bend Registration Kiosk

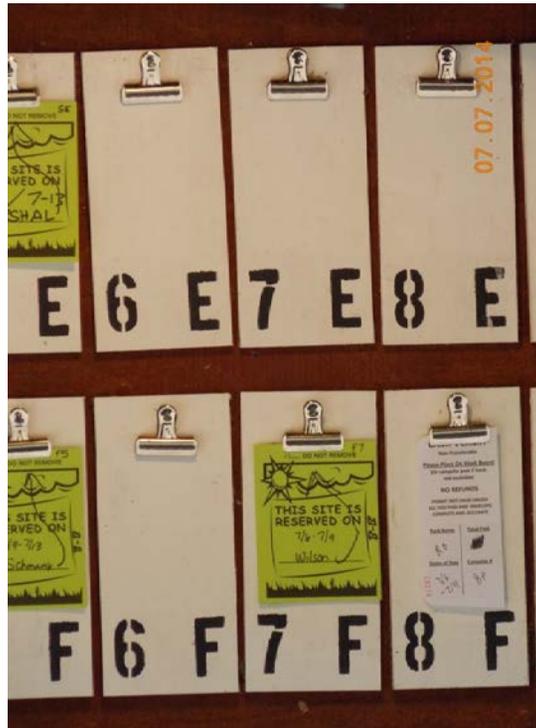


Figure 6: Close up of Reservable (green) versus First Come-First Serve Sites (white)

2.7.2 Trail System

No motorized off road vehicle or equestrian use would occur at Fishermen’s Bend on the trail system which is comprised of park roads (4.1 miles) and natural and paved trails (5.6). Physical barriers such as posts or boulders would be installed or placed to prevent motorized use on the trails. The trail system would continue to be open for hiking year-round, with wet areas temporarily signed to notify visitors. Biking would occur on paved roads and trails as designated and signed. Administrative and emergency motorized access would be allowed on all trails.

Trails would be maintained, monitored, and problem areas corrected to protect natural resources. Trail location would determine tread surfaces, i.e., natural, gravel, or paved. Trail maintenance would include tread work, re-routing, or closing problem trails, and vegetation trimming. Trail signage to guide, inform, and protect visitors would improve per the sign plan for the site. The BLM would seek volunteer groups to assist with trail maintenance.

Additional trails, up to one mile in length, would be constructed to provide linkages between campground loops and other areas of interest. Current locations include from the office towards the River Loop, Cottonwoods shelter and other smaller trails to restroom facilities from camping areas thereby reducing the need for additional restrooms. Exact locations for additional trails have not been determined but would follow all design features to protect natural resources.

2.7.3 Vegetation Management

The hazard tree program would continue to identify and remove hazardous, diseased, or dying trees that threaten human safety or the park's infrastructure, campsites, or shelters. All other trees would be allowed to fall naturally.

Vegetation and trees within or adjacent to trails, roads, campsites, and shelters would be trimmed to allow these developments to function normally. New construction locations would remove vegetation as needed for the development.

Native vegetation and trees would be planted in disturbed areas to lessen recovery time while maintaining the site's recreation setting characteristics and visual resource management class. Soil additions or amendments may be needed in poor soil or site locations. All vegetation management actions would continue to provide a forested setting for visitors.

2.7.4 Noxious/Non-Native Plant Management

Development of a site-specific comprehensive noxious/non-native plant management plan would occur within five years of the final RAMP decision. Volunteers and youth crews would continue to assist the BLM by removing and eradicating the various noxious/non-native plants within the SRMA. Assistance agreements funding youth crews would be renewed and continue as funding allows. Signage explaining the BLM management actions would be developed and placed throughout the park.

2.7.5 Travel and Transportation Management

Existing road and trail usage would continue as in the No Action Alternative; campground loop gates would restrict access seasonally. A new egress gravel road through the northern portion of the 17-acre addition and an additional road and spurs for new campsites would be constructed. Expansions of parking areas would occur in select locations to accommodate a larger selection of recreational vehicles. New or expanded areas may remain gravel or receive an asphalt treatment depending on funding prioritization.

2.7.6 Visual Resource Management (VRM)

There would be no change in VRM class as part of any action alternative. Changes are determined at the Land Use Plan level. Vegetation management and hazard tree management (EA Section 2.7.3) within the site would continue to comply with current VRM class and maintain the site's character and vegetative screening between sites.

2.7.7 Permitting of Commercial Activities and Special Events

Issuance of Special Recreation Permits (SRP) for commercial, competitive, vending, and group activities on BLM-administered lands and related waters must adhere to the BLM policy contained in Manual (2930 Recreation Permits and Fees) and Handbook (H-2930-1 Recreation Permit Administration). All commercial activities and competitive events require an SRP. Group events, including but not limited to family reunions, scout camps, school outings, or

weddings, may require a permit on a case-by-case basis. Vending permits, such as firewood sales or shuttle services, would be considered on a case-by-case basis as appropriate to support or enhance recreation experience at the site.

Many activities such as guided fishing, weddings, or other commercial events require a SRP. Typically, competitive events proposed within the park are not issued due to the potential for user conflict. Most permits are for day-use activities; however, commercial outfitters have utilized the park for overnight camping.

2.8 Comparison of Management Actions by Alternative

Table 8: Comparison of Management Actions by Alternatives			
	Alternative A – Continuation of Existing Management (No Action)	Alternative B – Day-Use Recreation Emphasis	Alternative C – Overnight Recreation Emphasis (Proposed Action)
	<u>Goal and Intent:</u> Continue existing management and operations of the recreation site. Allow existing mix of first come first serve and reservable campsites. Continue to allow walk-up reservations at the main office.	<u>Goal and Intent:</u> Focus on environmental education, interpretation, and day-use activities at the site. Minimize changes at the recreation site to maximize utilization. Overall better use/efficiency of existing facilities.	<u>Goal and Intent:</u> Increase the number of campsites available to visitors. Strategically place additional camping opportunities within the current site footprint.
Management Theme			
Overnight Use	<ul style="list-style-type: none"> • Maximum number of overnight visitors is 716. • 54 single-family campsites (22 reservable). • Two reservable cabins. • Three reservable group camp shelters. • Reservation window for group shelter and cabins is 12 months; 6 months for single-family campsites. • RV dump station free for campers; \$5 per use for non-campers. • Reservations made via NRRS website, NRRS phone number, or main office making the reservation (walk-up/over the phone). • Office staff involvement to maximize site occupancy. • Office staff makes contact with each visitor upon arriving and registering for a site. 	<ul style="list-style-type: none"> • Maximum number of overnight visitors is 716 and up to 1,046 with day-use shelters for overnight use. • Addition of electrical hookups at day-use shelters to provide for increased opportunities for overnight use (17 hookups). • No additional campsites. • Reduced staff involvement in registration with central kiosk for site availability and self-registration; new camp host site near kiosk. • Addition of 24 water hookups for interior Camp Loop campsites. • Office assisting in reservations during full staffing only. • Camping fee structure changes. 	<ul style="list-style-type: none"> • Maximum number of overnight visitors is 840. • Up to ten new campsites/cabins/yurts in Group Loop. • Full hookups at most campsites. • New access road between Main Office and Group Loop. • Expand existing restrooms with showers near Cedars and Cottonwoods shelters. • All sites would be reservable via online or NRRS phone, no assistance from Main Office. • Increase the reservation window for single-family campsites to 12 months. • Add up to eight walk-in/tent campsites in River Loop. • Camping fee structure changes.

Table 8: Comparison of Management Actions by Alternatives

	Alternative A – Continuation of Existing Management (No Action)	Alternative B – Day-Use Recreation Emphasis	Alternative C – Overnight Recreation Emphasis (Proposed Action)
Day-Use	<ul style="list-style-type: none"> • Three reservable group picnic shelters. • Seven picnic sites near boat launch. • Reservation window for group shelter is 12 months. • Rest stop near entrance with parking and restroom. • Boat launch site for 6 trailered vehicles and 18 single vehicles. • Free day-use at entrance rest stop or boat launch area. 	<ul style="list-style-type: none"> • Seek day-use fee for parking at shelters and at day-use areas; new standard amenity fee. • Upgrade boat ramp. • Deepen trailered boat parking spots. • Explore increasing hours of operation to accommodate early morning boat ramp use. 	<ul style="list-style-type: none"> • Improved river access points. • Increased hours of park access after security upgrade.
Environmental Education and Interpretation	<ul style="list-style-type: none"> • Bulletin boards and kiosks provide interpretation. • Site interpretation/area information posted at bulletin boards/kiosks and online; brochures and pamphlets. • Nature Center and amphitheater for programs and activities as well as self-guided interpretation. • Volunteers and site seasonal staff lead minimal environmental education and interpretation activities and programs. • Interpretation along trails with self-guided brochure. • Junior Ranger program. • Movies shown at amphitheater periodically. 	<ul style="list-style-type: none"> • Provide and maintain a full suite of daily scheduled educational or interpretive programs available. • Dedicate staff to coordinate and collaborate with local environmental education/interpretation providers to offer programs to site visitors. • Potential for registration similar to that of USFS programs. • Develop self-guided QR coded signage for smart phone devices. • Increase site interpretation by developing new products. • Develop a sign plan. 	<ul style="list-style-type: none"> • Develop a sign plan. • Rotate kiosk interpretive materials. • Focus on self-guided interpretation and brochures.

Table 8: Comparison of Management Actions by Alternatives

	Alternative A – Continuation of Existing Management (No Action)	Alternative B – Day-Use Recreation Emphasis	Alternative C – Overnight Recreation Emphasis (Proposed Action)
17-Acre Addition	<ul style="list-style-type: none"> • Large gravel parking area near River Road SE, restricted access. • Fenced perimeter. • Overflow parking for large events. • Dispersed day-use activities including undesignated river access. • Bulletin Board for information. • Vegetation restoration and non-native plant removal. • No restroom. • Occasional monitoring. 	<ul style="list-style-type: none"> • Delineate existing social/dispersed trails. • Rock egress road through the addition. • Construct a 1-acre off-leash dog park near River Road SE, utilizing existing parking as much as possible. • Provide a restroom, water, shade, and perimeter fencing; add topsoil. • Plant native trees and vegetation to assist with site restoration and provide shade to dog park; add topsoil. 	<ul style="list-style-type: none"> • Move towards site restoration. • Rock egress road through the addition. • Amend ground, break up rocks then add topsoil to base of vegetation and tree plantings only. • Continue to allow dispersed use of the area.
River Access and Bank Stabilization	<ul style="list-style-type: none"> • Many river access points along the river frontage; some provide hardened stair access, others more casual/social paths for fishing. • Monitor erosion. • Temporary fencing of safety concern areas only; no removal of deteriorating concrete or stairs. 	<ul style="list-style-type: none"> • Fewer river access points. • Removal of rough concrete stabilizing material, leave stairs. • Protect fishing platform only; place sufficient natural structures up and down stream to provide protection. 	<ul style="list-style-type: none"> • Fewer river access points. • Limited river access points near fishing platform. • Long-term bank stabilization to prevent facility/infrastructure damage.

2.9 Alternatives Considered but Not Analyzed in Detail

An alternative to add another group overnight shelter was found economically infeasible. The CHM Government Services study found the cost to build the site balanced with the amount of use anticipated would take too long for the government to recoup those costs. The required investment of \$140,000 would potentially only bring in \$12,000 annually.

Other alternatives focus on utilizing the 17-acre addition to expand recreational opportunities at Fishermen's Bend. Moving the boat launch, non-reserved day-use activities, or adding more camping to the 17-acre addition were found economically, operationally, and environmentally infeasible. Operationally, having an additional location to monitor and maintain would pull at an already stretched recreation staff and the potential increase of use could bring unwanted vandalism and trash dumping.

Moving the boat launch was brought up by the boating community as an option to provide early morning access, mostly commercial use, to the North Santiam River. An onsite visit by Oregon State Marine Board representatives looked at the feasibility of moving the existing boat launch from its current location near River Loop. River velocity at this location is not conducive to non-motorized boating usage. Slack waters are required to provide safe launching and takeout, which would require developing an expensive jetty into the river.

Moving all non-reserved day-use activities to provide early morning access to boaters would require development of a separate entrance and parking system, which is cost prohibitive and would remove trail opportunities. New picnic site locations would be located near the river, which would exclude trail designation near the river. Adding more camping opportunities near the river would also eliminate a connecting trail.

Chapter 3 Affected Environment and Environmental Effects

This chapter provides an overview of the social, recreational, physical, and biological resources analyzed or the Affected Environment of the BLM administered lands within the Fishermen's Bend SRMA. This provides a basis from which to assess the environmental effects of the established management alternatives outlined in Chapter 2. It then describes the environmental effects that would occur under the implementation of each alternative (Environmental Effects).

3.1 Socioeconomics³

Three scales were used in the analyses for this document:

- *State*: Provides the larger demographics and economic diversity that drive visitors to the recreation site.
- *Regional*: Marion County entirely contains the SRMA, captures the majority of visitors, and provides an adequate description of regional social and economic conditions. Linn County does not contain any of the SRMA, however with proximity of the SRMA on the shared county line, Linn County information is addressed.
- *Local*: Mill City is the closest municipality. However, most of the city lies in Linn County. The City of Stayton is within Marion County. The larger City of Salem provides another comparison and is the hub of the Willamette Valley.

3.1.1 Affected Environment

Population and Demographics

Population growth has a direct influence on management and usage of public lands throughout the state, county and planning area. This growth translates into increased demand for recreation opportunities, potential for crowding, and greater possibility of user conflict. Census⁴ population estimates ranked Marion County the fifth most populous county and nearest to the planning area, Linn County ranked eighth most populous in Oregon (see Table 9).

Since 1950, Oregon's population has increased at a faster pace than the U.S. population as a whole. Although Oregon's growth rate has slowed in recent years, in the coming years, Oregon's growth rate is expected to be higher than the national growth rate and its population is expected to reach 4.3 million by the year 2020. When conducting park system planning, recreation providers need to identify which facilities/services are important to community members, and as populations grow, available parklands need to increase with the greater outdoor recreation demand.

³The social science that studies how economic activity affects and is shaped by social processes. In general, it analyzes how societies progress, stagnate, or regress because of their local or regional economy, or the global economy. Income, education, occupation, wealth, health, as well as other factors are used to develop a community's socioeconomic status.

⁴ Census data is collected every decade, most recently collected in 2010. The next census should happen in 2020. The non-census year data is estimated through the American Community Surveys annually.

A population's race, ethnicity, wealth, and education have a role in recreation activity preferences, nature and timing of recreation use, and the values members of the public attach to the Fishermen's Bend SRMA. Education statistics gathered during the 2008-2012 annual American Community Surveys indicate that county and city populations had lower percentages receiving a high school diploma or higher than the State of Oregon (see Table 10). Fishermen's Bend SRMA provides environmental education and interpretation programs and activities to residents, which strengthens curriculum in public schooling bringing youth closer to nature.

Table 9: Census Population Statistics (City, County, and State)			
Census Area	2000 Census Population	2012 Census Population Estimates	Increase Over 12 Years
Mill City	1,537	1,625	5.7%
Stayton	6,816	7,637	12.0%
Salem	136,924	154,835	13.1%
Marion County	284,834	315,391	10.7%
Linn County	103,069	116,871	13.4%
Oregon	3,421,399	3,836,628	12.1%

Table 10: Percent Over Age 16 with High School Diploma or Greater Education	
Census Area	Percent
Mill City	73.3%
Stayton	85.2%
Salem	86.1%
Marion County	83.1%
Linn County	88.7%
Oregon	89.2%

Mill City residents have lower mean household income at \$47,859 and higher poverty levels (24.6 percent) than Marion County (\$59,880 and 18 percent poverty). Fishermen's Bend is less than a mile from the center of town and provides an area to participate in outdoor education activities and exercise near home. An undetermined number of residents walk to the site for recreation.

Economy and Employment

Fishermen's Bend SRMA is located in the larger North Santiam travel corridor leading to Detroit Lake Recreation Area and Central Oregon from the Willamette Valley. While the SRMA does not specifically provide for industry jobs, Fishermen's Bend provides entertainment, education, recreation, and health outlets. Trails allow visitors to hike or bike providing outlets for a healthy lifestyle. Environmental education and interpretation programs and activities provide visitors with entertaining education. Group sites provide locations for large events and gatherings such as weddings and family reunions. Recreation related spending does not end at the boundary of

Fishermen's Bend. An indirect benefit of recreation opportunities is that visitors spend before, during, and after utilizing the site.

In 2012, the education, health care, and social services industry had the highest percentages of all industry employment in Oregon, Linn and Marion Counties, and Salem. Mill City and Stayton ranked education, health care, and social services second only to the manufacturing industry. The retail industry had the second highest employment rate in Oregon, Marion County, and Salem. Linn County had highest employment in the manufacturing industry.

Travel and Tourism

Travel and tourism includes sectors that provide goods and services to visitors as well as the local population. These industries are retail trade; passenger transportation; arts, entertainment and recreation; and accommodation and food services. Some researchers refer to these sectors as "tourism-sensitive." They could also be called "travel and tourism-potential sectors" because they have the potential of being influenced by expenditures by non-locals.

Public lands can also play an important role in stimulating local employment by providing opportunities for recreation. Communities adjacent to public lands can benefit economically from visitors who spend money in hotels, restaurants, ski resorts, gift shops, and elsewhere. While the information in this report is not an exact measure of the size of travel and tourism sectors, and it does not measure the type and amount of recreation on public lands, it can be used to understand whether travel and tourism-related economic activity is present and if there are differences between geographies.

Permitted outfitters and guides authorized to use Fishermen's Bend provide additional services and revenue to the economy. With Mill City providing the closest services to visitors such as gas, banking, post office, restaurant, and groceries, visitor spending adds to the local economy.

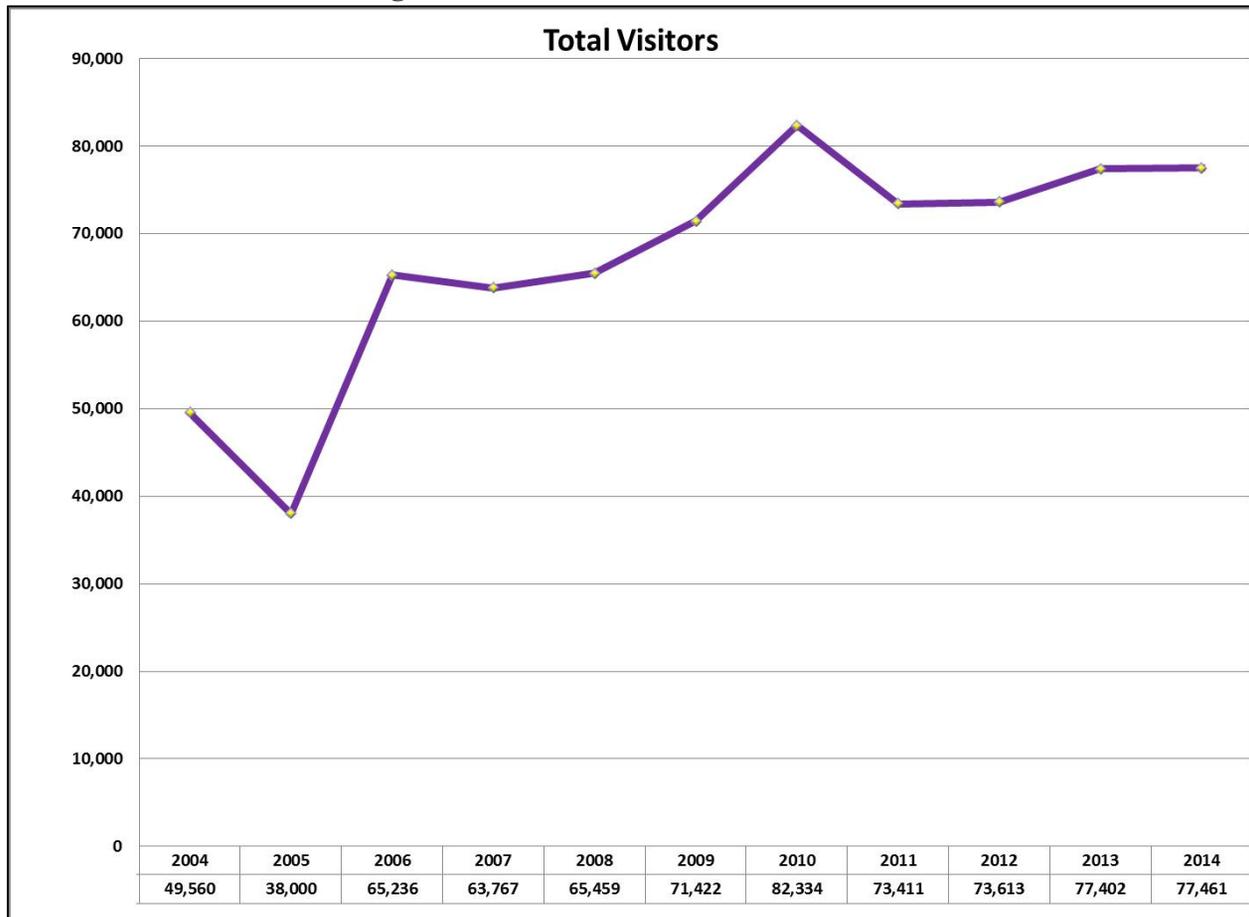
Oregon State University completed a report to Oregon State Parks on spending and economic activity their parks provide to communities near their facilities in 2014. The study found that local day trip residents spend an average of \$26 per party, and non-local overnight residents spend nearly \$263 per party. Local area expenses include gasoline, groceries, and purchases in restaurants/bars. Using those numbers and the total days the site is open per season of 184 days, it is estimated that Fishermen's Bend could provide nearly \$2.8 million to the economy.

3.1.2 Socioeconomic Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

The No Action Alternative would continue current business opportunities and economic spending to communities in Marion County along the Highway 22 travel corridor. No additional economic activity such as job creation is projected from the No Action Alternative. With nearly 80,000 visitors and an operating season of 184 days, it is estimated that Fishermen's Bend currently generates \$2.8 million in overnight related spending and \$47,000 in day-use related spending to the local economy.

Figure 7: Fishermen’s Bend Visitation



Alternative B: Day-Use Recreation Emphasis

Enhancing existing opportunities by adding electrical hookups to group picnic shelters and water hookups to Camp Loop sites could result in a slight increase to the overnight use of the site. Fishermen’s Bend would contribute about the same at nearly \$2.9 million from overnight spending to the economy in the travel corridor. The majority of visitors would continue to come from Oregon, primarily the Willamette Valley and North Santiam River Corridor.

This slight increase is due to the potential of renting group day shelters for overnight use approximately 50 percent of the time throughout the season, which could contribute \$72,000 from overnight visitors as well as potential reduction of \$7,000 from day-use to the community in tourism spending. This range is a result of using group picnic shelters for camping instead of for day-use. This alternative has the potential to increase camping by 330 individuals per night.

Annually, approximately 12,000 visitor days currently use picnic sites near the boat launch, not including day-use of group shelters. Day-use may decrease with a new standard amenity fee. It is unknown how much day-use would decrease but an estimate of one fifth of visitors would not use the site. However, with a new dog park proposed near Mill City, that development might provide an additional opportunity for travel and tourism spending to the area. With a potential change in hours of operation, early morning access to the upgraded boat launch would increase

day-use and revenue with the new required fee. Charging a day-use fee could potentially bring an additional \$15,000 in revenue to the BLM for site maintenance.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Increasing camping opportunities by 18 sites would potentially accommodate 454 more individuals per night within the SRMA resulting in nearly \$3.3 million in area and community spending; an increase of over \$500,000. However, visitors in Group and River Loops would notice more neighboring visitors.

Day-use visitation would remain as with the No Action Alternative. Camp Loop and group picnic shelters would receive no hookup upgrades. Day-use, excluding picnic shelter use, would remain free and dog owners would have no off-leash area to run their dogs resulting in no increase in area spending.

3.2 Recreation

Visitors seek a diverse range of setting-dependent outdoor recreation opportunities. They choose different areas in which to recreate based on the qualities and conditions of the area and because they want to realize a specific set of recreation experiences and benefits.

3.2.1 Affected Environment

Fishermen's Bend Special Recreation Management Area (SRMA)

Fishermen's Bend has highly developed facilities with large buildings and shelters and is located within a forested landscape. Development is comparable to state and county parks. The site encompasses undeveloped and developed areas including group picnic shelters, individual picnic sites, cabins, and individual and group campsites. Amenities available to all site visitors include garbage and recycling service, a boat ramp, an assortment of trails, ADA accessible facilities, camp hosts, and shower-equipped restrooms. Overnight amenities include a varying mix of campsite hookups, an RV dump station, individual fire rings and grills, and picnic tables. Additional amenities include ball fields, open play areas, two playgrounds, horseshoe pits, volleyball/basketball courts, and an amphitheater and nature center to provide environmental education and interpretation programs.

Fishermen's Bend SRMA provides a wide variety of recreational activities including camping, picnicking, boating, walking, bicycle riding, nature study and environmental education, fishing, swimming, and other recreational activities associated with the use of the facilities described above. Local residents of Mill City use Fishermen's Bend SRMA amenities to recreate including the trail system for dog walking. Visitors can take a leisurely stroll on the small trail system, which offers views of river and wetland habitats and provides fishing access. A nature center and an amphitheater provide information and programs for visitors. Both commercial and non-commercial visitors of the North Santiam River use the day-use area picnic sites and boat ramp regularly. Commercial use is authorized only by obtaining a special recreation permit. Locals and site visitors attend environmental education programs offered by park staff.

The North Santiam River is popular for fishing, non-motorized boating, and swimming. A large majority of users report engaging in river-related recreation. Much of this use happens from the designated trail system, which provides access. Even though spur trails to the river dot the bank along the recreation site, these trail locations do not take into account the attributes and durability of each location. The potential exists to identify more appropriate access points and minimize undesirable resource impacts.

Fishermen's Bend is easily accessed from Highway 22, which is a major travel route from the Willamette Valley to Detroit Recreation Area and Central Oregon. The site is open to day-use year-round and for camping and group facility use May 1 through October 31. Vehicle access is limited to one road during the winter season of November 1 through April 30, while the remainder of the site is open to pedestrians and bicyclists. One entrance and exit serve the potential 716 expanded amenity visitors. No large catastrophe has required testing of an orderly evacuation on the one egress route. The park's Emergency/Evacuation Procedure Plan (Baldwin, 2012) describes an orderly evacuation of staff and visitors, which does not include using the 17-acre addition.

The South Cascades recreation staff, which includes one full-time park manager, a term maintenance worker, and a mix of seasonal recreation technicians and volunteers, manages Fishermen's Bend as one of the sites within the South Cascades Recreation Zone or fee project OR25. The fee project area consists of Fishermen's Bend, Elkhorn Valley, and Yellowbottom campgrounds, Old Miner's Meadow group campsite, and Dogwood and Canyon Creek day-use sites. Fees are required for use of overnight and group facilities, but currently no fee is charged for day-use picnicking or use of the boat ramp.

Vegetation screening between sites is highly valued by visitors. Current forest stand conditions are deteriorating due to poor soil and/or site conditions for growth, which have led to shallow roots stressing trees and leaving them susceptible to insects and disease. A few large trees exist along the trail system. Depending on the season of use, a visitor has a moderate to high chance of encountering other visitors while recreating at the park.

Overnight camping is a popular activity within the park, engaged in by nearly three-fourths of all visitors. A campsite at Fishermen's Bend is highly sought (demand exceeds supply). The maximum number of individuals for overnight use is 716 based on total capacity of all overnight campsites and shelters. Not included is the group picnic shelters occasionally used for overnight use. Approximately 2,000 potential overnight visitors that check in at the main office are turned away annually due to inadequate supply of campsites.

Fishermen's Bend provides opportunities for individual, family, and group camping with tents, trailer, recreational vehicles, and within cabins. The site is consistently full during the camping season, generally Memorial Day to Labor Day. Nearly half of individual campsites are first come-first serve availability. The remaining sites are available by the reservation process described in the No Action Alternative, EA Section 2.4.

Other recreation providers nearby include Marion County, US Forest Service, and State recreation sites and parks (EA Section 7.2). Those recreation opportunities generally operate May through October for campgrounds and year round for day-use sites; few exceptions exist.

Schools and education groups may arrange for off-season vehicle access by following the Cascades Fee Waiver Policy.

Type of Site	Electric and Sewer	Electric, Sewer, and Water	Electric and Water	Sewer and Water	Electric Only – no hookups	Water Only – no hookups	No Amenities	Total
Reservable* Campsites	9	6		2			5	22
Non-Reservable Campsites	20	13						33
Group* Picnic Shelters						3		3
Group* Camp Shelters			2		1			3
Cabins*					2			2

*These are reservation sites.

The figure below shows an average season for each reservable site out of the 184-day operating season for camping. Data indicates potential expansion of camping season for cabins, Kingfisher and Osprey, with 80 percent occupancy in May and 77 percent in September.

Figure 8: Reservation Only Sites – Average Days Occupancy

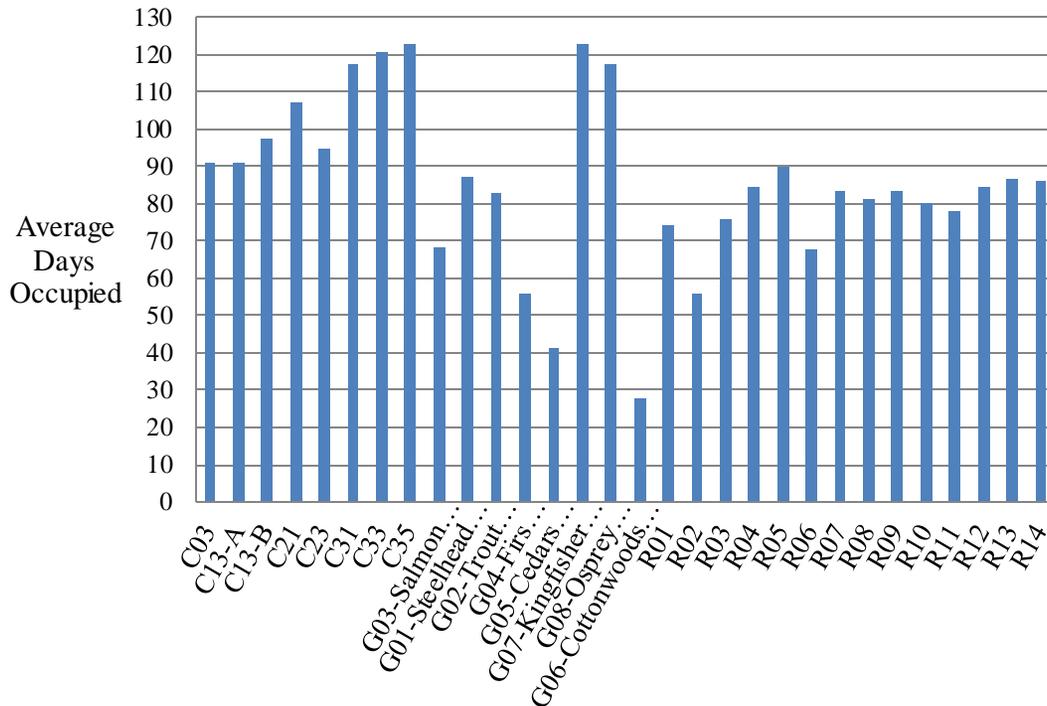
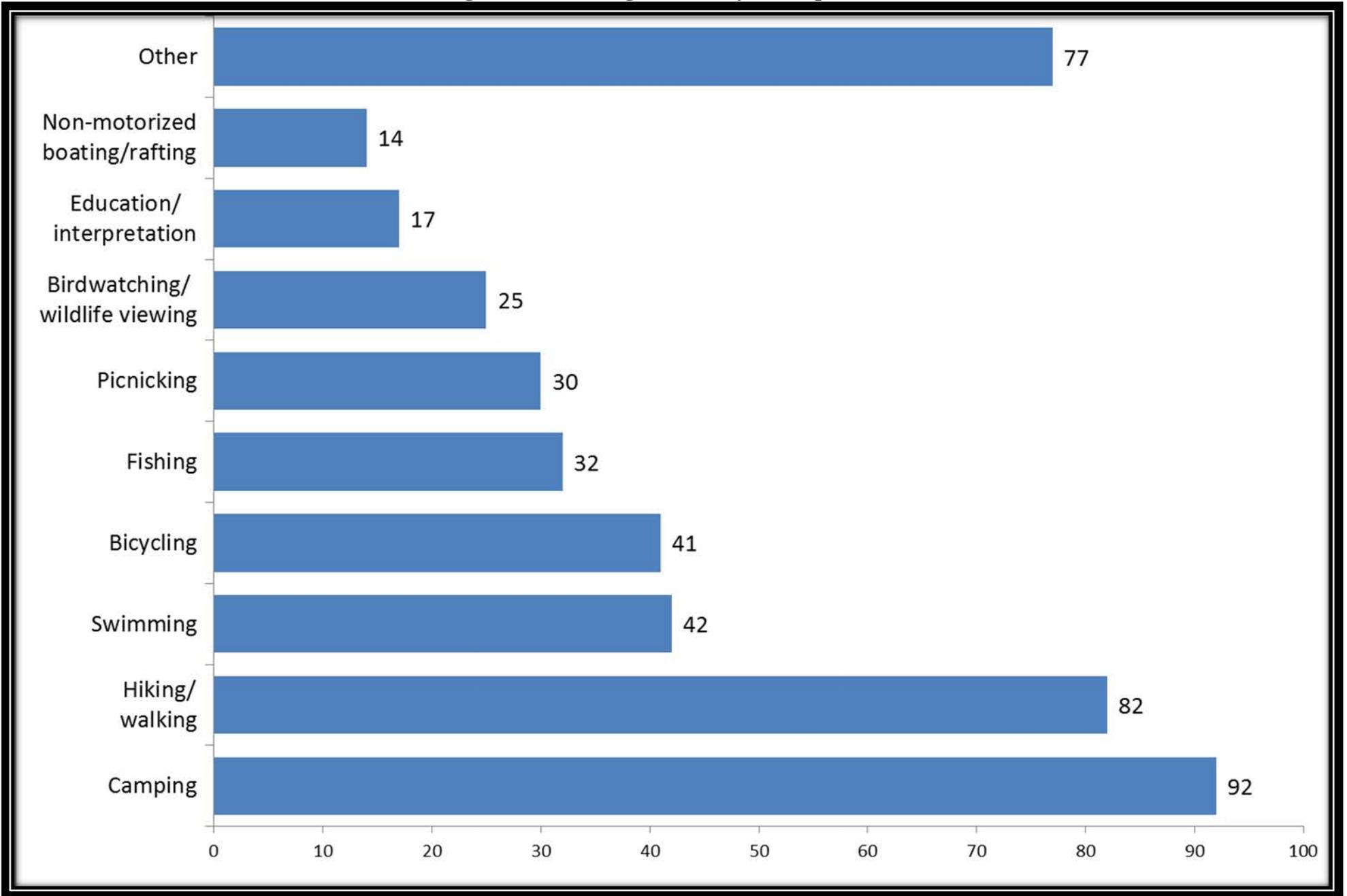


Figure 9: Percentage of Activity Participation



In 1998, Fishermen’s Bend became part a federal Fee Demonstration Program. Over the past decade and a half, fee revenue from Fishermen’s Bend has been used for a variety of needs including improving accessibility at Fishermen’s Bend, installing two cabins, replacing fire rings and picnic tables, and helping retain volunteer staff. A majority of work at the site has included fixes when needed for immediate safety or overall park appearance. Site maintenance occurs periodically; however, some costlier projects were deferred until funding could be secured. Past high cost fixes/repairs/maintenance projects include the 2007 sewer/septic replacement and electrical upgrade (\$1 million), 2009 roof replacement (\$77,000), 2010-11 waterline replacement (\$750,000), 2011 restroom/shower interior renovation (\$46,000), and 2014 bridge removal, trail reroute, and accessible trail resurfacing (\$180,000). Future large periodic projects would include chip-sealing roadways while a smaller project would be sweeping of roadways to remove moss buildup.

2013 Visitor Satisfaction Survey

In order for the Bureau of Land Management (BLM) to comply with the Government Performance and Results Act (GPRA), and better meet the needs of the public; a visitor satisfaction survey was conducted at Fishermen’s Bend during the 2013 summer season. The survey collected visitor satisfaction data regarding visitor information (e.g., use of maps, signs, brochures), developed facilities, managing recreation use, resource management, BLM staff and customer service, and educational and interpretive materials.

Survey results summarized that 98 percent of visitors were satisfied overall with appropriate facilities, services, recreational opportunities, and overall quality of recreation experience at Fishermen’s Bend; 82 percent rated their experience as very good. Eighty seven percent of visitors reported being satisfied with availability of useful information on the internet. Results indicated the need for greater law enforcement presence to prevent crime. The ability of Fishermen’s Bend to provide educational and interpretive materials about the site rated below 90 percent satisfaction, which indicates the need for increasing environmental education and interpretation at Fishermen’s Bend.

Table 12: Visitor Origin

State or Country		Oregon Areas	
%		%	
0.35%	Colorado	0.35%	Columbia County
0.35%	Idaho	0.70%	Medford-Ashland Area
0.35%	New York	1.06%	Oregon Coast
0.35%	Germany	2.46%	Bend-Redmond-Prineville Area
0.70%	Arizona	2.46%	Eugene-Springfield Area
0.70%	Utah	5.28%	Albany-Corvallis-Lebanon Area
2.46%	California	29.23%	Portland-Vancouver-Hillsboro Metro Area
6.69%	Washington	46.48%	Salem Metro Area
88.03%	Oregon	88.03%	Total From Oregon

The majority of visitors were from Oregon. The top three areas include the Salem-Metro area (46 percent), the Portland-Metro area (29 percent), and the Albany/Corvallis/Lebanon area (5 percent).

2013-2017 Statewide Comprehensive Outdoor Recreation Plan (SCORP)⁵

Fishermen's Bend SRMA is within SCORP planning region 2, which includes Marion County. The 2013-2017 Oregon SCORP survey gathered data from Oregon residents, such as the outdoor recreation activities in which they participate, their wants and desires, recreation trends, and recommendations for managers. Results from SCORP show that 92 percent of Oregonians participated in at least one outdoor recreation activity in Oregon during the past year. Close-to-home activities dominate the total user occasions for Oregon residents since these activities can occur on a daily basis with limited travel time. Besides walking, bicycling and jogging on local streets/sidewalks; top outdoor activities include walking on local trails/paths, dog walking, and bicycling on paved trails. Within Marion County, participation in at least one outdoor recreation activity during 2011 was two points lower than that of Oregon.

Top priority needs for development are for soft surface walking trails, access to waterways, nature and wildlife viewing areas, playgrounds with natural materials (natural play areas), picnic areas for small groups and off-street bicycle trails. Drive-in tent camping sites had the highest likelihood of use and the highest priority need for overnight camping facilities in the state. The benefits from participating in recreation that rated the highest on value and delivery include improving physical health and fitness, making your community a more desirable place to live and preserving open space and the environment. As reported by non-participants, being disabled and too old were the top two reasons they did not participate in outdoor recreation activities in Oregon in 2011.

Oregon's parks, public places, natural areas, and open spaces give life and beauty to our state. These essential assets connect people to the natural environment, community, and to themselves. While Oregon's residents treasure and care for this legacy, they are dedicated to ensuring resources are utilized with fiscal, social, and environmental responsibility, building on the past to provide for future generations.

The top statewide issues affecting outdoor recreation as they relate to Fishermen's Bend include:

- Provide adequate funds for routine and preventative maintenance and repair of facilities.
- Fund major rehabilitation of existing outdoor recreation facilities at the end of their useful life.
- Add more recreational trails and better trail connectivity between parks and communities.

⁵ The 2013-2017 SCORP – Ensuring Oregon's Outdoor Legacy, is Oregon's five-year plan for outdoor recreation. The plan provides recommendations to guide in making park policy and planning decisions. A statewide survey of Oregon residents asked about their outdoor recreation participation in Oregon, as well as their opinions about parks and recreation management. The SCORP identifies recreational needs, trends, and recommends actions to reduce the gap in recreation.

Trends in Recreation and Opportunities for Expansion

Visitors continue to come to Fishermen's Bend for the camping. In recent years, environmental education and interpretation have enriched visitor experiences for both day and overnight users. With a declining or flat budget to maintain existing recreation sites, there is a trend to find innovative ways to get the work done using volunteers and partners. Based on the BLM's National guidance and strategy should continue to develop facilities that have a high utilization and move away from underutilized facilities. Renting group picnic shelters for group or individual overnight use would provide greater utilization to these sites.

In addition, the CHM Government Services market analysis of the site showed that the fee structure is not in line with what other agencies are charging for group and cabin usage. Other sites charge for day-use parking and/or a per person overnight fee.

3.2.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

There would be no change to affected environment and existing recreation opportunities offered at Fishermen's Bend (EA Sections 2.4 and 3.2.1). The same number of campsites, cabins, picnic sites, and shelters would remain available. There would be no change in visitor services expected, e.g., hours of operation or camping season. Available facilities would continue to accommodate 716 visitors each night, which provides 10,488 camping and 1,840 picnic opportunities per season. One main road system would provide ingress and egress to the 80,000 annual visitors. No new construction of roads, trails, or facilities would occur.

Group picnic shelters would continue to be utilized for camping as reservations allow with no hookups provided. Day-use parking would remain free. Site visitors and community residents enjoy environmental education and interpretation programs as staff and funding allow. Existing dispersed use on the 17-acre addition would continue. Annual river scour would continue to erode the riverbank trail and fishing platform. Dogs would continue to be required to stay on leashes while at Fishermen's Bend SRMA; there would be no off-leash area to exercise dogs.

Alternative B: Day-Use Recreation Emphasis

Overnight Use

Facility and site improvements would provide visitors with an enhanced day-use experience and increased recreational activity opportunities. Proposed development actions of adding electrical hookups to group picnic shelters and water hookups to interior Camp Loop campsites would cause minimal ground disturbing actions such as trenching for additional utilities and hookups (Table 13). Vegetation and small tree removal would be visible until plantings of native vegetation regrow in disturbed areas.

Enhancing existing opportunities by adding 17 electrical hookups to group picnic shelters and water hookups to Camp Loop sites would add 330 additional visit opportunities per night or day.

This slight increase is due to the potential to rent group picnic shelters for overnight use approximately 50 percent of the time throughout the season. This alternative would potentially move 276 available sites per season from day-use to overnight use. If a fee structure change such as a per person charge were implemented, visitors would require at least a season of notice for the change to reduce potential issues; this would be after the Recreation Resource Advisory Committee approves and recommends a fee change.

Visitors would receive less interaction with staff during their visit after the new self-registration kiosk construction near the entrance. Visitors would be required to use the self-registration kiosk to check in to their site(s). There would likely be some initial confusion on which sites are available and paid for if information is not kept current. A camp host stationed near the kiosk would decrease this confusion. As visitors become accustomed to this new registration process, confusion would decline. In addition to self-registration, the BLM would only assist with reservations during full staffing times during the high-use season. The net result of reduced staff registration duties and involvement during the winter season of November 1 through April 30 may leave an undetermined number of visitors less satisfied with their experience; based on current assistance with reservations, 20 percent of users would be affected. Park hosts would play a larger role in assisting visitors and maximizing the park's occupancy. Some of those visitors may never return to Fishermen's Bend; however, other waiting visitors would fill that void. Unoccupied sites would continue to provide overnight opportunities of at least one night when visitors fit into the existing reservations

Day-Use, 17-Acre Addition, and River Access and Bank Stabilization

A new day-use or standard amenity fee could affect nearly 12,000 visitors annually. These users as well as group picnic shelter users would be required to pay a per vehicle charge for use of the site, services, and amenities. Day-use may decrease with a new fee. It is unknown how much day-use would decrease but an estimate of one fifth of day-use visitors would not use the site. However, with a new dog park proposed near Mill City, the potential increase in those day-users might provide an additional opportunity for travel and tourism spending to the area. With a potential change in hours of operation, early morning access to the upgraded boat launch would also increase day-use and the associated fee revenue. Charging a day-use fee could potentially bring an additional \$15,000 in revenue to the BLM for site maintenance.

A new gravel egress road constructed on the 17-acre addition would provide a secondary evacuation route for SRMA staff, volunteers, and visitors. New designated trails would provide additional opportunities for visitors and residents. The boat launch would receive a much-needed upgrade would also improve recreational opportunities within the SRMA.

The dog park would enhance the visitor experience by providing a location where dogs can be off-leash without violating rules and regulations. Visitor safety would also improve and reduce the number of dog-visitor incidents. Travel corridor users would potentially use the dog park thus increasing day-use visitation for the SRMA. The potential increase in those day-users might provide an additional opportunity for travel and tourism spending to the area.

The North Santiam River would continue to erode the bank of the SRMA. Approximately 270 meters of unsafe concrete bank hardening would be removed. Visitors would have fewer access points due to potential path closures and rehabilitation. Natural structures would be utilized in protecting the accessible fishing platform both up and downstream from river flow. Stairs would remain as long as they provide safe river access; unsafe structures would be removed.

Environmental Education and Interpretation

Increasing environmental education and interpretation opportunities with a larger offering of programs geared toward getting youth outdoors and connecting families with nature would create better livability in the communities. A coordinated sign plan and self-guided interpretation using Quick Response (QR) codes would reach additional visitor groups that are technologically connected. A dedicated education staff would collaborate and coordinate with community schools and volunteers to assist in the development of relevant programs to supplement youth education. The BLM may implement reservations for programming offered at Fishermen's Bend, which may include a small fee. Increases in environmental education and interpretation program would enrich visitors' experience and provide youth a connection to the natural environment.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Overnight Use

The Proposed Action would provide visitors with increased number of available overnight activity opportunities. Proposed development actions identified in the description of the alternative and in tables below would cause less than two acres of ground disturbance. Seven potential new construction locations for new overnight opportunities were identified (see Figure 4); however, initial construction locations would occur in River Loop, along the new road from the main office towards Group Loop, and across from Firs shelter. The expansion of existing restroom facilities would accommodate additional overnight use. Vegetation and small tree removal would be visible until plantings of native vegetation regrow in disturbed areas; the BLM would focus plantings to provide site screening.

Enhancing existing opportunities by adding 18 overnight opportunities to the SRMA would increase overnight occupancy potential by 124 each night. This is an almost 50 percent decrease from Alternative B, which used group picnic shelters to increase overnight opportunities. Additional dedicated overnight sites would increase the number of sites available per season by 3,312. Any fee increase, once approved, would be implemented immediately. All new overnight opportunities would become available by reservation only. Reservations may become available 12 months in advance, which could potentially increase the SRMA utilization. Unoccupied sites would continue to provide overnight opportunities of at least one night when visitors fit into the existing reservations.

Visitors would receive less interaction with staff during their visit with the construction of the new self-registration kiosk near the entrance. Visitors would be required to use the self-registration kiosk to check in to their site(s). There would likely be some initial confusion on

which sites are available and paid for if information is not kept current. However, a camp host stationed near the kiosk would decrease this confusion. As visitors become accustomed to this new registration process confusion would decline. In addition to self-registration, under the Proposed Action, the BLM would not assist with making reservations. This may leave an undetermined number of visitors less satisfied with their experience; based on current assistance with reservations, that would be 20 percent of users. Park hosts would play a larger role in assisting visitors and maximizing the park's occupancy. Some of those visitors may never return to Fishermen's Bend; however, other waiting visitors would fill that void.

Day-Use, 17-Acres, and River Access and Bank Stabilization

The 12,000 day-users would continue to enjoy free use of Fishermen's Bend standard amenities and services with no fee charged. Day-use within the SRMA would remain constant, including recreation on the 17-acre addition. The BLM would not provide new day-use recreation opportunities. However, earlier morning access to the boat launch and picnic sites have a potential to increase day-use visitation. A new gravel egress road constructed on the 17-acre addition would provide a secondary evacuation route for SRMA staff, volunteers, and visitors. The BLM would move the 17-acre addition towards full site restoration with native plantings. New connector trails would provide additional opportunities and trail flow for visitors and residents.

The North Santiam River would receive natural material along the SRMA riverbank to armor facilities and amenities from erosion. Existing concrete bank hardening would be removed. Visitors would have less river access points due to potential path closure and rehabilitation. The accessible fishing platform would be protected. Stairs would remain as long as they provide safe river access; unsafe structures would be removed. Bank stabilization will require additional environmental analysis and project planning. Dogs would continue to be required to stay on leashes while at Fishermen's Bend SRMA; there would be no off-leash area to exercise dogs.

Environmental Education and Interpretation

Existing levels of environmental education and interpretation would continue to provide a few programs geared towards getting youth outdoors and connecting families with nature, increasing community livability. No additional staff time would be allocated to improving programs offered at Fishermen's Bend. A coordinated sign plan and self-guided interpretation would reach additional visitor groups through the development of brochures and rotating signage messages. As time allows, the BLM would collaborate and coordinate with community schools and volunteers, assisting in the development of relevant programs to supplement youth education. The current minimal environmental education and interpretation programs would continue to enrich visitors' experience and provide youth a connection to the natural environment in the same way as the No Action Alternative. Improvements in delivering environmental education and interpretation messages would improve the site's connection to the community.

3.2.3 Comparison of Alternatives

Table 13: Summary of Effects to Recreation by Alternative			
Category	Alternative A (No Action Alternative)	Alternative B	Alternative C (Proposed Action)
Overnight Developments and Use	<ul style="list-style-type: none"> • No new facilities. • Reservation assistance year round. • 716 maximum overnight visitors. 	<ul style="list-style-type: none"> • No new facilities. • Reservation assistance during high use season only. • 1,046 maximum overnight visitors with adding group picnic shelters for overnight use. 	<ul style="list-style-type: none"> • New camping opportunities. • Reservations through NRRS website or call number only. • All new camping opportunities reservation only sites. • Additional shower facilities. • 840 maximum overnight visitors.
Day-Use Developments and Use (Trails and 17-Acre Addition)	<ul style="list-style-type: none"> • No new facilities. 	<ul style="list-style-type: none"> • New off leash dog park with parking, restroom, water, shade and fencing. • New designated trails on 17-acre addition. • New trails between facilities and areas. • Additional trees and vegetation plantings with focus near dog park and along trails. • Boat launch upgrade. 	<ul style="list-style-type: none"> • New trails between existing facilities and areas. • No change in use on 17-acre addition. • Additional trees and vegetation plantings throughout the 17-acre addition.
Visitor Displacement and New Visitors	<ul style="list-style-type: none"> • None. 	<ul style="list-style-type: none"> • Minor day-use visitor displacement with new fee. • Overnight visitors using shelters. • Dog park day-use visitors. 	<ul style="list-style-type: none"> • Minor displacement for visitors using the reservation system. • More overnight visitors using a larger number of dedicated overnight sites.

Table 13: Summary of Effects to Recreation by Alternative

Category	Alternative A (No Action Alternative)	Alternative B	Alternative C (Proposed Action)
Proximity to Other Overnight Users	<ul style="list-style-type: none"> No change. 	<ul style="list-style-type: none"> Overnight use of shelters by unrelated visitors. 	<ul style="list-style-type: none"> New campsites fit into developed area of SRMA with focus on maintaining vegetative screening between sites. Increase in number of campsites near River Loop. Increase in number of campsites or cabins in Group Loop.
Environmental Education and Interpretation Programs/Services	<ul style="list-style-type: none"> No change. 	<ul style="list-style-type: none"> Large increase in programs provided. Increase in self-guided programs. 	<ul style="list-style-type: none"> Minor to no change in programs or services provided.
River Access and Bank Stabilization	<ul style="list-style-type: none"> Temporary fencing installation around concrete bank stabilization may reduce access. 	<ul style="list-style-type: none"> Removal of a few river access paths causing resource damage. Removal of concrete bank stabilization. Protect only accessible fishing platform from erosion by stabilizing the riverbank with native materials. 	<ul style="list-style-type: none"> Removal of river access paths to only stable locations. Removal of concrete bank stabilization. Protect facilities and infrastructure from erosion by stabilizing the riverbank with native materials.
Fees	<ul style="list-style-type: none"> No change in fees. Same expanded amenity (overnight) fees. Free standard amenity (day-use); no fee. 	<ul style="list-style-type: none"> Change in expanded amenity (overnight) fees. New standard amenity (day-use) fee. 	<ul style="list-style-type: none"> Change in expanded amenity fees. Free day-use; no fee.

Table 14: Impacts to Selected Recreation Opportunities by Alternative			
Recreation Opportunity	Alternative A (No Action Alternative)	Alternative B	Alternative C (Proposed Action)
Overnight Camping	<ul style="list-style-type: none"> No change. 	<ul style="list-style-type: none"> Low to moderate increase with group picnic shelter use and new hookups. 	<ul style="list-style-type: none"> Increase with new campsites. Potential increase in site utilization with full reservation system.
Day-Use Activities	<ul style="list-style-type: none"> No change. 	<ul style="list-style-type: none"> Off-leash dog park. Increase in trails on 17-acre addition. 	<ul style="list-style-type: none"> Increase in trails connecting facilities and areas.
River Access and Bank Stabilization	<ul style="list-style-type: none"> Safety fence around concrete bank hardened areas. 	<ul style="list-style-type: none"> Fewer access points. Improved boat launch. Look into providing early morning vehicle access to boat launch. 	<ul style="list-style-type: none"> Reduced number of river access points. Early morning vehicle access to boat launch.
Environmental Education and Interpretation Programs/Services	<ul style="list-style-type: none"> No change. 	<ul style="list-style-type: none"> High offering with partner assistance. Moderate self-guided offerings. 	<ul style="list-style-type: none"> Partner and volunteer coordinated and led programs and services.

3.3 Vegetation and Botany

3.3.1 Affected Environment

Fishermen’s Bend was built on a bend in the North Santiam River. The site conditions exhibit shallow and rocky soils. A 1999 site visit with the Forest Insect and Disease Westside Service Center Entomologist did not find disease or insect issues contributing to declining health of the forest stands. A 2014 pathologist site visit determined the soil in the area is very shallow with river rock underneath the soil. The pathologist determined that trees had a shallow flat root structure not reaching any deeper than a foot below the surface. The shallow sandy soil does not hold moisture well, lacks nutrients, and makes the trees susceptible to wind throw. The recommendation from the experts is to continue monitoring the site and to continue aggressive removal of hazard trees.

Fishermen’s Bend recreation area has three distinct stand types. The largest portion is 96 acres. The campsites and improved day-use areas are located within this 96-acre stand. It is a fully stocked mature Douglas-fir stand. In addition to Douglas-fir there are western hemlock, western red cedar, grand fir, incense cedar, black cottonwood and big leaf maple. Understory vegetation includes sword fern, dwarf Oregon grape, tall Oregon grape, salal, bald hip rose, red huckleberry and Indian plum. The presence of incense cedar is noteworthy. It is rarely seen growing naturally this far north.

This stand has a fairly high mortality rate. Many trees have died and others have blown over in wind storms. Park personnel have raised concerns that there may be laminated root rot killing the trees and creating a safety hazard.

The site was surveyed by a plant pathologist and two entomologists from the USDA Forest Service Westside insect and disease service center. The survey determined that there are no significant insect or disease issues in the park. Mortality can be attributed to poor site conditions caused by shallow soils with a lack of moisture holding capacity.

On the west end of the park in section 26 there is a 36-acre parcel, which BLM acquired in 1971. This stand is dominated by black cottonwood with components of Douglas-fir, grand fir, western hemlock, western red cedar and red alder. This stand was originally typed as a red alder type. Examination of the stand revealed that the stand is dominated by black cottonwood but many conifers have seeded in and would eventually overtop the cottonwood. Understory species include tall Oregon grape, Indian plum, snowberry and red huckleberry.

Evaluation of a 1955 aerial photograph revealed that much of the stand was not forested and the rest of it was dominated by black cottonwood with few or no conifers. Conifers in the site are approximately 60 years old. The Detroit dam was finished in 1953 and used for flood control. It can be assumed that the dam held back water and dried out the site enough for the conifers to become established.

On the east edge of the park, there is a 17.7 acre parcel acquired in 2001. This site is an old mill site. Most of the soil has been removed. What remains is sand and rock. Black cottonwood has seeded in naturally and there are a few conifers that have been planted by various youth groups. This area has a high water table. The conifers may have a difficult time surviving. If left alone cottonwood would continue to seed in and eventually reclaim the site.

Threatened and Endangered (T&E)

No suitable habitat to support any T&E species exist within or adjacent to the recreation site.

Special Status Species (SSS)

Although suitable habitat to support some SSS is present within the recreation site, only one SSS is known to occur. The *Pannaria rubiginella* lichen is known to occur in four locations.

Survey and Manage (S&M)

Although suitable habitat to support some S&M species is present within the recreation site, only one S&M species is known to occur. The *Pannaria rubiginella* lichen is known to occur in four locations.

3.3.2 Environmental Effects

With no T&E species or habitat known from within the recreation site, no effects to any T&E species is anticipated as a result of the proposed action.

Although one SSS/S&M species is known to exist within the recreation site, negative impact to this species or its habitat is not anticipated. Prior to any ground or habitat disturbing activities, site specific surveys would be conducted to assure that the overall population of this species would not be negatively impacted.

Invasive non-native species introduction would be prevented using project design features as described in the invasive species section of this document. Certified weed free native seed or other native species would be used where needed for the revegetation of disturbed areas that are a result of any proposed action.

Cumulative Effects of All Alternatives

No effects to T&E, SSS, or S&M species are anticipated regardless of the action alternative chosen.

3.4 Invasive/Non-Native Plants

3.4.1 Affected Environment

Surveys

Two types of surveys were conducted within the proposed harvest areas and vicinities: Known Site Surveys (Data Search) and Field Surveys (Botanical Inventory).

- Known Site Surveys were conducted by Heidi Christensen, Cascade Resource Area Invasive Plant Coordinator.
- Field Surveys were conducted under contract by Heidi Christensen, Cascade Resource Area Invasive Plant Coordinator.

Known Site Surveys

Prior to field surveys, specific recreation areas and vicinities were evaluated for the presence of known Invasive/Non-native Plant Species.

Field Surveys

Botanical inventories of the recreation site were conducted during the summer of 2012 to look for invasive non-native species. Annual visits have occurred each summer since to monitor current populations of concern.

Field Survey Methods

All areas within the site were surveyed using the Intuitive-controlled method. These surveys are performed by traversing through and around the recreation site, visiting areas delineated on topographic maps or aerial photos as having probable habitat for invasive species, such as roadsides, trails, campsites, and other disturbed areas.

Survey Results for Invasive/Non-Native Plant Species

The following invasive/non-native species were found to occur within the recreation area during field surveys: Slender false brome (*Brachypodium sylvaticum*), Scotch Broom (*Cytisus scoparius*), Common and Major Periwinkle (*Vinca minor*, *V. major*), English Ivy (*Hedera helix*), Himalayan blackberry (*Rubus armeniacus*), Meadow Knapweed (*Centaurea pratensis*), Perennial Peavine (*Lathyrus latifolius*), Tansy ragwort (*Senecio jacobaea*), Bull thistle (*Cirsium vulgare*), and St. Johnswort (*Hypericum perforatum*). All species listed are B List Species according to the Oregon Department of Agriculture (ODA) 2014 Noxious Weed Policy, which recommends limited to intensive control on a case-by-case basis.

No Oregon Department of Agriculture A List invasive/non-native species have been identified at or near the recreation site.

3.4.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

Under the no action alternative, no construction or habitat modification would take place and no new ground disturbance would occur. Therefore no impacts to current vegetation condition or native vegetation would occur.

All Action Alternatives

A Noxious Weed Risk Assessment (BLM Manual 9015) of the proposed project area was conducted and the area was found to have a risk assessment rating of moderate. A moderate rating indicates the proposed project should proceed as planned with project design features in place to control the spread of the existing invasive/non-native species populations and prevent the introduction of new invasive/non-native plant species.

Cumulative Effects of All Action Alternatives

Due to project design features, it is not anticipated that any areas of disturbed ground that are the result of the proposed project would become established with invasive/non-native species.

The BLM would continue its work on weed inventories, weed treatments, public outreach and education, and invasive species would continue to be managed and controlled under the authority and direction of BLM Manual 9015 – Integrated Weed Management. All action alternatives would result in an integrated invasive species management approach that would be used to

identify high priority treatments areas, the likely results of management activities and the most appropriate treatment methods for existing populations.

With mitigation measures in place, it is not anticipated that the proposed project would contribute measurably to the cumulative effects of invasive/non-native species in Oregon (see Environmental Effects section).

No negative effect from invasive/non-native species is anticipated as a result of the proposed action.

3.5 Wildlife

3.5.1 Affected Environment

Fishermen's Bend SRMA is located on the edge of the Western Oregon Cascades Physiographic Province adjacent to the Willamette Valley Province, and displays characteristics of both provinces. Fishermen's Bend provides a diverse variety of wildlife habitats utilized by numerous species, including some considered uncommon in the western Oregon Cascade Mountains. Much of the species diversity also results from "edge effects," in which forests of various age classes intersect with a river, a small stream, a pond, brush patches, and intensively managed fields and structural facilities. Forest overstory ranges from 70 to 120 years old, and consists mostly of mixed conifer and hardwood stands. Tree species diversity is good with Douglas-fir, Western hemlock, Western redcedar, Incense cedar, big-leaf maple, red alder, Oregon ash, Oregon white oak and black cottonwood present. Due to the broken canopy throughout much of the site, understory shrubs are diverse and well developed. Snags are scarce due to the need to reduce hazard trees throughout the park over many years. Coarse woody debris (CWD) is sparse, reducing habitat quality for some terrestrial amphibian and invertebrate species. Most of the site is in what was a seasonal flood plain prior to the construction of the flood control dams upstream on the North Santiam River, as reflected by the sandy loam soil present throughout Fishermen's Bend.

The harlequin duck, a Bureau Sensitive species, has been observed at Fishermen's Bend since the early 1990s. Harlequin ducks are more common in the upper reaches of river systems, further east in the Cascade Mountains. Fishermen's Bend is located on the lower segments of the North Santiam River system where harlequin ducks are rarer. They utilize the North Santiam River in the vicinity of Fishermen's Bend primarily during migration between the higher reaches to the east where they breed, and the coast where they winter.

Other bird species associated with rivers, streams and ponds in the park that have been observed during the breeding season include great blue heron, American dipper, spotted sandpiper, belted kingfisher, common merganser, hooded merganser, wood duck, mallard, and Canada goose. Buffleheads and Barrow's goldeneyes have been observed during migration and winter months.

Birds of prey that have been observed in the park include Cooper's hawks, ospreys and bald eagles. Ospreys have nested in and adjacent to Fishermen's Bend, but bald eagles have never been confirmed to be nesting in the vicinity of the park.

The hardwood component and the diverse sub-canopy and shrub layers in the stands at Fishermen's Bend contribute significantly to the overall diversity of the bird community at the site. Birds such as the warbling vireo, black-throated gray warbler, cedar waxwing, and black-headed grosbeak are more abundant as a result of the higher hardwood components in these stands. Hermit warbler, pine siskin, Hammond's flycatcher, Western tanager, and golden-crowned kinglet are common in the conifer-dominated canopy. Brown creeper, Pacific slope flycatcher, Western wood pewee, Swainson's thrush, purple finch, and Wilson's warbler are common in the sub-canopy and shrub layers.

Birds in more open/brushy habitats include song sparrow, Hutton's vireo, bushtit, black-capped chickadee, American goldfinch, spotted towhee, rufous hummingbird, white-crowned sparrow and dark-eyed junco. Five swallow species are easily seen around the park, nesting in snags or structures, and Vaux's Swifts, a snag nester, are frequently seen feeding with the swallows. Five woodpecker species have been seen at Fishermen's Bend, including the downy woodpecker, red-breasted sapsucker, hairy woodpecker, common flicker, and pileated woodpecker. Secondary cavity nesters include red-breasted nuthatch and chestnut-backed chickadee.

Although mammals are more difficult to observe, mink have been seen from the River Trail, and beaver and river otter have been observed. Other mammal species known to occur are black-tailed deer, raccoon, opossum, striped skunk, Douglas' squirrel, and golden-mantled squirrel. Cougars have been observed in the park in recent years. It is thought that they are accessing the North Santiam River, which flows through the park. So far, conflicts with humans have been minimal, but the situation needs continued monitoring and documentation.

Amphibian and reptile species typically associated with aquatic habitats represented at Fishermen's Bend include Rough-skinned Newt, Northwestern Salamander, Pacific Chorus Frog, and Common Garter Snake.

Some surveys have been conducted in the park for Survey and Manage wildlife species. Mollusk surveys were conducted in 2003 and the only Survey and Manage species that was found was the Oregon megomphix snail, which was found to be locally common. The Oregon megomphix is found in the interface between the Willamette Valley and the foothills of the Cascade Mountains and is very common in the Cascades Resource Area. Fishermen's Bend is located outside what is considered to be the range of the red tree vole in the Cascade Mountains. However, some surveys have been conducted and no red tree vole structures were found.

3.5.2 Environmental Effects

There are two major sources of Environmental Effects to wildlife at Fishermen's Bend. They include effects due to human caused disturbance and habitat modification. Current levels of ambient noise and disturbance in the vicinity is already high due to high levels of human use in the park, the presence of rural home sites and Highway 22, which is a major east/west travel route with high levels of traffic noise. Much of the habitat in the vicinity of the park has been modified due to human intrusion and manipulation. Due to current disturbance factors and habitat conditions, the habitat values for wildlife in this area have been degraded and are of low quality. An example of this degradation is the management of hazard trees over the years in the

park. Snags and other danger trees have been removed over the years in order to reduce hazards to provide for visitor safety and reduce potential damage to facilities (targets). As a result, snags and down logs, which provide habitat for many wildlife species is greatly reduced, compared to natural conditions that would occur in forest stands.

There would be no effects to Threatened or Bureau Sensitive Species as a result of any of these alternatives. The park is not within the home range of any spotted owl sites and is not located in critical habitat for the spotted owl.

Negative cumulative effects to wildlife species or habitats would be minimal under all of the alternatives because the proposed activities would not appreciably alter the existing habitat value in the project area.

Alternative A: Continuation of Existing Management (No Action Alternative)

Under this alternative, continuation of existing management would occur. In the short-term under the No Action Alternative, human intrusion and related disturbance factors would continue near current levels. In the long-term, human use and disturbance is expected to increase under the No Action Alternative, as recreational use continues to increase over time.

Alternative B: Day-Use Recreation Emphasis

Alternative B seeks to better utilize the existing facilities at Fishermen's Bend. Various improvements would occur to provide opportunities for more visitor use and efficient use of facilities. Under this alternative, the overall footprint of the site would increase by three acres. Based on this approach, disturbance factors would increase, but very little habitat modification would occur. Hazard tree management is expected to increase slightly over Alternative A, with the addition of the dog park area.

Cumulative Effects of Alternative B

The cumulative effects of this alternative would be slightly higher than Alternatives A and C due to the three acre increase of ground disturbance, and increased human disturbance over time.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Under this alternative, new facilities would be constructed to provide additional overnight camping opportunities, while striving to maintain the same setting. The overall footprint of the site would increase by two acres with the construction of new campsites, cabins/yurts, and road for access. As a result, visitor use would increase resulting in higher disturbance factors than would occur under Alternatives A and B. Under this alternative, hazard tree management is expected to become more aggressive out of necessity to provide for increased visitor safety and to reduce the threat of damage to existing and additional facilities. The increase in the number of facilities would result in an increase in the number of targets that hazard trees could potentially damage.

Cumulative Effects of Alternative C

The cumulative effects of this alternative would be slightly higher than Alternative A and one less acre of disturbance than Alternative B due to removal of the dog park.

As the demand for more recreation opportunities on public land increases, there is a definite need to provide for increased visitor use. Highly developed and well established recreation sites such as Fishermen's Bend are an excellent place to concentrate these activities to reduce the overall disturbance and habitat modification effects across the landscape. Otherwise, these effects would occur elsewhere as a result of increased recreation and new facilities in areas where current disturbance factors are lower, and habitat quality for wildlife is higher. From a wildlife standpoint, Fishermen's Bend is a good location to concentrate recreation activities because disturbance factors are already high and habitat quality is impacted.

Avoid habitat modification activities during the breeding season for birds from April 1 to July 15, especially snag and hazard tree removal. This may not always be practical as some of the breeding season for birds does occur during the early spring months when preparation for campground opening is occurring.

In the past, there have been times when nest boxes were placed throughout the park to provide for cavity nesting birds and other wildlife. It is quite labor intensive, involving construction, placement, monitoring and cleaning of nest boxes. A long-term nest box program would be highly beneficial for nesting birds, and could mitigate the impact of hazard tree removal.

3.6 Fisheries and Aquatic Systems

3.6.1 Affected Environment

The North Santiam River forms the southern boundary of much of Fishermen's Bend SRMA. Resident populations of coastal cutthroat trout (*Oncorhynchus clarki clarki*; Behnke 1992), rainbow trout (*O. mykiss*), and mountain whitefish (*Prosopium williamson*) are common to abundant in the river. Other resident fish known to inhabit the North Santiam River in the vicinity of Fishermen's Bend include speckled dace (*Rhinichthys osculus*) and large-scale sucker (*Catostomus macrocheilus*; North Santiam Watershed Assessment, E & S Environmental Chemistry, Inc. 2002). Anadromous populations of Pacific lamprey (*Lampetra tridentatus*) spawn and rear in the North Santiam River, and introduced runs of coho salmon (*O. kisutch*) and summer steelhead (*O. mykiss*) return to the river in and adjacent to Fishermen's Bend.

Threatened and Endangered Species

The North Santiam River also supports populations of Upper Willamette River (UWR) winter run steelhead trout (*O. mykiss*), and UWR spring Chinook salmon (*O. tshawytscha*). These fish are listed as 'threatened' under the Endangered Species Act of 1973 (ESA). Salmon and steelhead populations in the Upper Willamette River evolutionary significant unit (ESU) are substantially reproductively isolated from other populations and are an important component in the evolutionary legacy of those species (NOAA 2005). Chinook salmon and winter steelhead

trout are distributed the length of the North Santiam River from its confluence with the South Santiam River, upstream to Big Cliff Dam and Reservoir.

Aquatic Habitats

At Fishermen's Bend SRMA, the North Santiam River flows through a broad valley with well-developed floodplains (C-channel type; Rosgen 1994). However, the river now rarely accesses much of its historic floodplain, due to the construction of Detroit Dam and Reservoir upstream. The reservoir is operated to reduce the magnitude of flood flows and frequency of flooding to about 60 percent of pre-dam flows (Risley et al. 2012).

The active channel of the North Santiam River is 40 to 65 meters wide at Fishermen's Bend Recreation Area. Gravels and cobbles dominate stream substrates. Riffles and runs are the predominant habitat types present in Fishermen's Bend. Pool habitat is lacking, and instream habitat complexity is greatly simplified from that of the potential natural condition due to a wide range of land and water use activities including: log drives (transport of logs by splash-damming in the late 1800s and early 1900s), removal of large wood (individual trees and complex log jams) from the river and its floodplain, lack of source stands to supply large wood to the river resulting from timber harvest or conversion of riparian forests to areas of agricultural and rural development, and alteration of river flows by the construction of Detroit Dam and reservoir upstream (E & S Environmental Chemistry, Inc. 2002). River temperatures have also been impacted by water releases from Detroit reservoir, with spring Chinook spawning and rearing particularly negatively impacted by warm reservoir water releases in fall.

In general, riverbanks in the SRMA are well vegetated and dominated by black cottonwood, willow, and Douglas-fir trees. However, an approximately 270 meter long section of riverbank in the central portion of the Recreation Area is actively eroding. This bank line was armored in the past with a shallow layer of concrete (rip-rapped) to slow the rate of bank erosion. The concrete layer is failing and much of it has broken up into 1 to 20 meter sections with sharp, broken edges of concrete exposed. The rip-rapped bank greatly simplifies the complexity of this bank line and accelerates near-shore water velocities greatly reducing the complexity and suitability of this area for juvenile and adult fish to use for rearing and hiding habitat, particularly at high river flows.

An unnamed tributary stream joins the North Santiam River in the northwest corner of Fishermen's Bend Recreation area. This low gradient stream and associated wetland ponds provide important off-channel habitat for juvenile salmon and steelhead, especially during high flows in the winter. Juvenile coho salmon likely rear year-round in the wetland ponds.

3.6.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

Fish and aquatic habitats would be unchanged from that of the existing condition. Near shore habitat for juvenile fish in the rip-rap bank area would continue to degrade under this alternative.

Alternative B: Day-Use Recreation Emphasis

Little new ground disturbance would occur under this alternative, and most of it would be located at a distance from the river such that there would be no mechanism for aquatic habitats to be affected.

The rip-rapped bank line would continue to erode. Portions of the concrete rip-rap that are deemed unsafe to recreationists would be removed, but work would be done during low flow conditions when the riprap is outside of the wetted channel, with no impacts to fish or aquatic habitats. Disturbance associated with the construction of bank habitat structures (comprised of logs, trees, boulders) on the eroding bank line adjacent to the fishing platform would temporarily displace juvenile fish and adult resident fish from the construction area. The habitat structure work would be unlikely to generate turbidity, as construction would occur outside the wetted channel on the upper bank. Near shore habitat for juvenile fish in the majority of the rip-rap bank area would continue to be degraded under this alternative.

The existing boat ramp would be replaced with a new ramp that meets current State of Oregon requirements. Juvenile salmon and steelhead, and adult and juvenile resident fish species (e.g., rainbow and cutthroat trout, mountain whitefish, etc.) would be temporarily displaced from the boat ramp area due to the disturbance associated with the ramp replacement; their foraging efficiency would be reduced by the turbidity resulting from the ramp removal and construction. Impacts would be short-term and cease once demolition and construction is completed.

Threatened and Endangered Species

Replacement of the boat ramp and construction of the bank line habitat structures is likely to adversely affect juvenile winter steelhead and spring Chinook salmon by either displacing them from a portion of their rearing habitat or reducing their foraging efficiency. The BLM would complete consultation with National Marine Fisheries Service (NMFS) regarding project effects to ESA listed fish and habitats prior to initiating the bank and boat ramp work. Removal of unsafe portions of the concrete rip-rap would have no effect on ESA-listed fish because the rip-rap would be removed during low flow periods when the rip-rap is outside of the wetted channel. Concrete would primarily be removed by hand and any machinery used would remain on the flat upper floodplain surface above the sloping bank line.

Cumulative Effects of Alternative B

This alternative would have almost no direct impacts to river channel morphology (channel shape and form). The small amount of bank stabilized with wood or boulder habitat structures adjacent to the fishing platform would slightly reduce cumulative impacts to instream fish habitat (e.g., pool habitat, instream cover, stream depth, etc.).

Disturbance to adult and juvenile fish from boat ramp construction would largely replace disturbance levels associated with boater use of the existing boat ramp, as such there would be little if any cumulative impact to fish populations. Short-term (for a period of 1 to 2 days) increases in sediment delivery and turbidity would occur with the boat ramp construction.

Cumulatively, the limited magnitude and duration of sediment effects from the boat ramp replacement would be unlikely to affect spawning and rearing success of fish populations in the North Santiam River.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Most new ground disturbance would be located at a distance from the river such that there would be no mechanism to affect aquatic habitats. Consequently, fish and aquatic habitats would be unchanged over the long-term from that of the existing condition, with the exception that near shore habitats would be improved on the 270-meter long segment of rip-rapped bank. Removal of the concrete rip-rap and restoration of the bank line would increase habitat complexity and cover along the bank for juvenile salmon and steelhead and resident trout. Restoration may include placement of natural materials (boulders and logs) to stabilize the bank. The BLM, in partnership with federal agencies and Oregon Department of Fish and Wildlife, would complete a detailed examination of bank, existing reach conditions, and river processes before developing a restoration plan for the bank area in the park.

Threatened and Endangered Species

Removal of the rip-rap and restoring the eroding riverbank is likely to adversely affect winter steelhead and spring Chinook salmon due to disturbance of fish and generating turbidity during the rip-rap removal and bank restoration work. The BLM would complete consultation with NMFS regarding project effects to ESA listed fish and habitats prior to initiating the restoration project. Depending on the scope of the restoration work, the consultation for the bank stabilization project would likely be covered under BLM's programmatic biological opinion for river restoration work (NOAA 2013).

Cumulative Effects of Alternative C

Fish habitat in the North Santiam River has been greatly reduced and simplified from potential conditions due to historical and current land uses. Restoration of the rip-rapped bank would slightly reduce the cumulative negative impacts to fish habitat in the river.

3.7 Hydrology and Water Quality

3.7.1 Affected Environment

Project Area Precipitation and Basin Hydrology

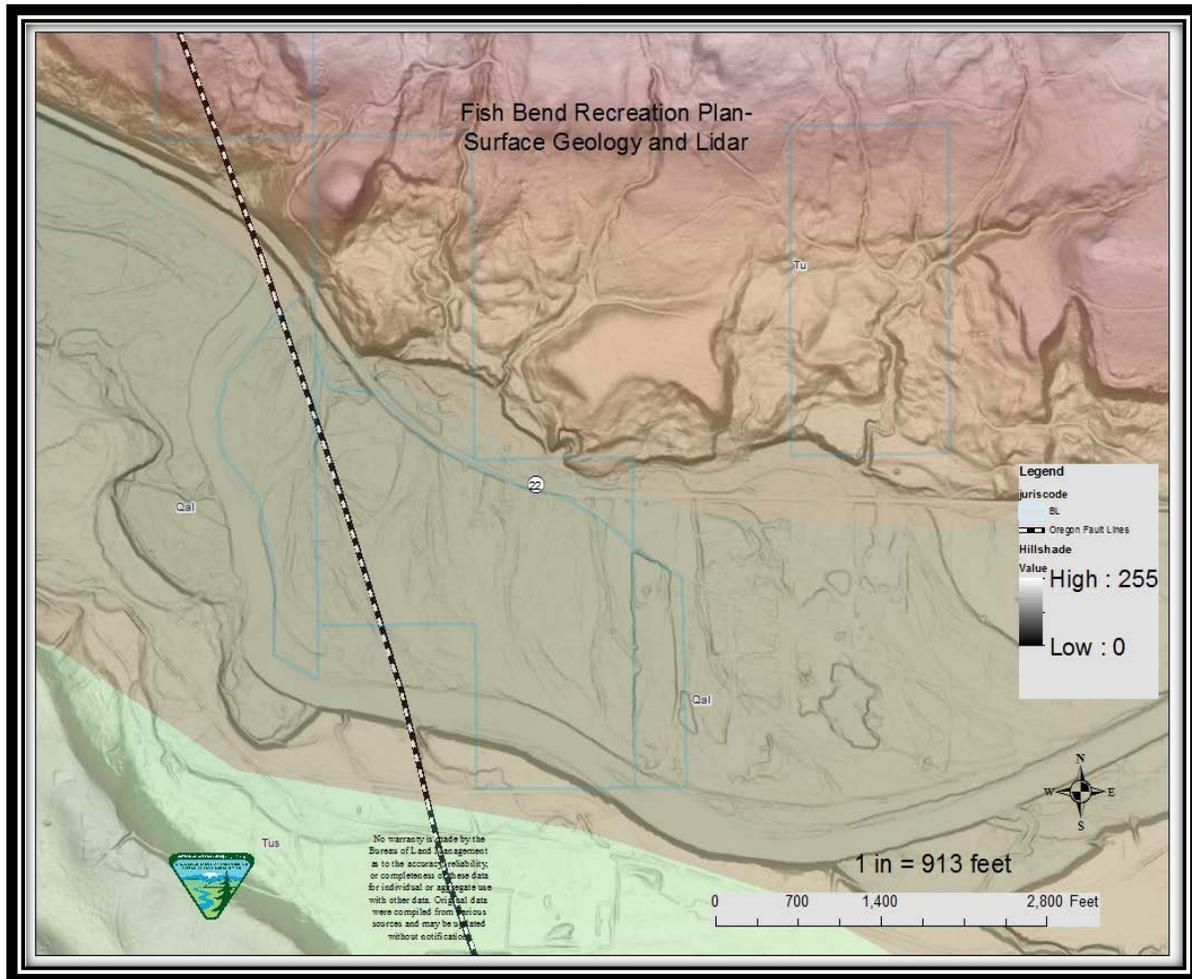
The project area is located in the Oregon Western Cascades range at elevations between 740 to 760 feet. The project area receives approximately 70 inches of rain annually and has a mean 2-year precipitation event of two inches in a 24-hour period (estimated at <http://www.nws.noaa.gov/ohd/hdsc/noaaatlas2.htm>). The project area drains directly to the North Santiam River main channel (North Santiam River 4th field #17090005). The North Santiam is utilized as a drinking water source for the City of Salem and thus the project lies within the municipal watershed.

Project Area Stream Channels

The project area is within the Western Cascades physical province and streams reflect the geologic origin of the area. All of the surfaces in the immediate project area are mapped as Holocene epoch alluvial deposits (Walker, 1991). These deposits formed as a result of overbank flooding by the North Santiam River over the course of the last 10,000 years and the tracks of river meandering are clearly evident in the Lidar mapping surface (see Figure 10). There is a mapped fault line running north-west directly through the west side of the recreation site. The normal fault likely explains the unusually large and abrupt meander “bend” of the main channel, which accounts for part of the site's name.

The only perennial surface water at the recreation site is the main North Santiam channel and a small tributary channel-wetland complex in the far northwest corner where the river makes an abrupt jog to the west.

Figure 10: Fishermen’s Bend site with mapped normal fault, geologic units (Qal=recent alluvium) and Lidar surface



Project Area Stream Flow

There is a United States Geological Service (USGS) gaging station upstream of the project area on the North Santiam River in Mehama (<http://waterdata.usgs.gov/nwis/uv?14183000>). The North Santiam is regulated at the Detroit reservoir, which has altered stream flow patterns of the river from its historic norm: peak flows have been attenuated and the timing and discharge patterns reflect the objectives of reservoir management rather than a natural runoff regime.

Peak flows still tend to occur following a rapid and substantial depletion of the snow-pack during prolonged rain-on-snow periods (ROS) in the transient snow zone (TSZ) above the reservoir estimated to lie between 1,500 and 3,000 feet elevation. The two largest peak flow events in recent history took place in December of 1964 and in February of 1996. The 1964 event was estimated at or above a 100-year flood return interval while the 1996 was approximately a 50-year event; both were in response to substantial snow pack melt-off. Base-flow or low-flow occurs during late summer and early fall when mean stream discharge drops below 20 percent of the mean winter flow.

In “self-formed” stream channels (i.e., streams in alluvial settings that can adjust slope and dimension) such as the North Santiam, channel morphology adjusts to accommodate storm flows ranging from one to two year events, and therefore, change in the size or timing of peak flows can affect channel morphology, sediment supply and transport and aquatic habitat. In the case of the North Santiam, reductions in sediment supply and peak flow discharge has resulted in reduced floodplain inundation at the Fishermen’s Bend SRMA relative to pre-dam conditions. Over time, this has led to changes in vegetation types at the site as plants adapted to wet soils have retreated toward the river. In addition, the wetland complex to the northwest has likely been diminished in size and complexity and side-channels have been progressively reclaimed by vegetation as scouring flows have receded and soils develop.

Project Area Ground Water

The Oregon Water Resources Department (OWRD), together with the Oregon Department of Environmental Quality (DEQ), is responsible for the regulation and protection of ground water quality and quantity. The DEQ has reported that nitrate is the most commonly detected contaminate of ground water in the State of Oregon followed by pesticides, volatile organic compounds, and bacteria (see <http://www.deq.state.or.us/wq/groundwa/wqgw.htm>). The DEQ has not identified any groundwater pollution problems within the project area.

The ground water surface at the recreation site varies directly with river levels as evidenced by the wetland in the north of the 17-acre addition site on the east side of the park. For much of the winter portions of the park surface are likely inundated or within a few feet of the ground water surface. For this reason, some areas are not recommended for septic system drain fields, which have the potential to pollute the North Santiam River with e-coli bacteria.

Wetlands

As indicated, there are two wetlands in the vicinity of the recreation site: a complex in the north west adjacent to the main channel and a smaller wetland at the north end of the 17-acre addition site to the east of the park. The wetland to the east is likely an artifact of gravel excavation at the site and responds directly to ground water levels controlled by river discharge and precipitation. This wetland has no direct surface connection to local streams or the North Santiam River.

The wetland to the northwest developed as a backwater flooded area at the confluence of a small tributary channel from the north east with the main North Santiam channel. Bedrock outcroppings at this location force the North Santiam current to the west and cause a major backwater effect, which has resulted in the formation of a mid-channel island-bar just upstream and an alcove at the tributary junction to the east. The wetland upstream is also likely in response to high water tables and, at least historically, was connected by side channels to the main North Santiam River from the south. This wetland complex is likely heavily used by local aquatic species and anadromous fish.

Oregon Department of Environmental Quality (ODEQ)

The ODEQ, under the Clean Water Act, has been delegated authority to protect the quality of all waters in the State of Oregon. Established water quality standards “not to be exceeded” for all waters of the state are published in the Oregon Administrative Rules, Chapter 340, Division 41. In addition, updated water quality standards have recently been approved by the U.S. Environmental Protection Agency. These standards may be reviewed at <http://www.deq.state.or.us/wq/standards/Temperature/FinalRules340-041.pdf>.

Designated Beneficial Uses and Water Rights

The State of Oregon designates the beneficial uses for which all waters of the state are utilized. Water quality standards are ultimately meant to protect these uses. Some of the site specific uses of surface water from the project area are displayed in Table 15.

Stream (Watershed) Project Action	Beneficial Use	Information Source
North Santiam (Santiam Basin)-recreation site development and use	Salmon rearing and spawning	Adjacent to project area. See fisheries report.
	Resident fish and aquatic life	Adjacent to project area. See fisheries report.
	Irrigation and Municipal Drinking Water	Downstream from the recreation site. See WRIS*.

*WRIS = Water Rights Information System of the Oregon Department of Water Resource:
<http://www.oregon.gov/owrd/pages/wr/wris.aspx>

Both resident and anadromous fish are adjacent to the recreation site (see Fisheries report for more information). Additional beneficial uses include: Industrial Water Supply, Wildlife & Hunting, Fishing, Boating, Anadromous Fish Passage, Water Contact Recreation, Aesthetic Quality. Designated beneficial uses for the Willamette may be viewed on-line at <http://www.deq.state.or.us/wq/standards/uses.htm>.

Municipal Water Providers and Source Water Assessments

Several municipal water providers withdraw water from the Lower North Santiam to treat and provide city residents with drinking water. The City of Salem Public Works (Public Water System (PWS) # 4100731), Mill City Water Department (PWS #4100520), City of Gates (PWS# 4100317) and the Lyons Mehama Water District (PWS #4100493) and Stayton Water Supply (PWS# 4100843) have withdrawals downstream of the project area. A Source Water Assessment for each provider is available on-line at <http://www.deq.state.or.us/wq/dwp/swrpts.asp>. The source water assessment identifies potential sources of contamination within the watershed. In addition to withdrawals for municipal water consumption, there are withdrawals downstream of the project area for domestic use, irrigation, and livestock watering. Maps are available online at <http://www.wrd.state.or.us/OWRD/WR/index.shtml>.

Water Quality Limited Streams

Limited stream temperature data in the project area was located for this assessment. The NSRWA (North Santiam River Watershed Analysis) indicated (pp. 6-19) that stream temperatures on the North Santiam (measured continuously during the summer of 2000) exceeded the state standards at 14 of 15 sites, including the outlet of Stout Creek below the project area. The watershed analysis indicated that the openings in the canopy along portions of the main channel might be contributing to increased stream temperatures.

The ODEQ's 303d List of Water Quality Limited Streams is a compilation of streams that do not meet the state's water quality standards (<http://www.deq.state.or.us/wq/assessment/assessment.htm>). The North Santiam was listed for exceeding summer stream temperature, partly as a result of temperature data collected in 2000. In response, the ODEQ completed the Willamette Basin Total Maximum Daily Load assessment (TMDL) in 2005 (<http://www.deq.state.or.us/wq/TMDLs/docs>). As part of the TMDL, the BLM submitted the Salem and Eugene District Water Quality Restoration Plan (WQRP) for the Willamette Basin, which details how the BLM would implement the TMDL on federal lands. The plan was approved by the DEQ on July 18, 2008. Essentially, the TMDL requires the recovery or maintenance of full potential shade along all perennial streams in the Willamette Basin.

Due to the large size of the river at this location and the fact that the recreation site lies to the north of the river (direct solar radiation is from the south), streamside adjacent riparian vegetation at this site has no measureable influence over water temperatures in the North Santiam River. Nevertheless, no shade producing vegetation in the primary shade zone of the river is permitted to be removed unless it presents a safety hazard.

Turbidity and Sediment

Limited data for stream turbidity or sediment delivery in the project area was located for this assessment. During the 1996 flood, high levels of persistent turbidity in the North Santiam became an issue for the City of Salem water supply (diverted from the North Santiam near Stayton, OR.). Investigations revealed that smectite clays associated with naturally occurring, deep seated rotation earth flows in the headwaters of the river are the likely source for fine sediments, which result in elevated turbidities on the North Santiam (see http://www.watershed.org/news/fall_98/1_turbidity_study.html). The recreation site is not a major source of fine sediment or elevated turbidity to the North Santiam River since there are few source areas in the park for fine sediment delivery to the river: most recreational use is confined to the summer, trails are well maintained, and the riverbanks are not heavily eroded.

Park Infrastructure and Recreational Use Relative to flow, ground water and Water Quality

Salem BLM staff including recreation, engineering, soils, and hydrology toured the recreation site on several occasions in the winter and spring of 2014. There is no evidence that existing park infrastructure or use of facilities has a measureable direct effect on either ground water or surface water flow or the water quality of the North Santiam River. The recreation facilities are commonly located well off the main channel, are well maintained and there is no mechanism for these facilities to affect the river. Wetlands are far outside of the developed area and trail access to the wetlands is limited. The only underground facilities are wastewater holding tanks that are regularly maintained and septic drain fields in the northeast (locations approved by Marion County). All fuel is stored in 50-gallon safety tanks in buildings with concrete floors. No other potential surface or ground water polluting materials are regularly at the recreation site or used by staff.

Bank armoring has occurred throughout the North Santiam River and portions of the river in the Fishermen's Bend Recreation Site are not an exception. The most extensive armoring has occurred on the north bank of the river (along the south extent of the park) downstream of the boat ramp. In this location, approximately 270 meters of riverbank have been hardened with hand poured concrete mixed with cobble sized river rock. The structure has heavily eroded over the years and is now slumping into the river as high-energy flows scour the bank. This rip-rap material would inevitably fail completely and the bank would continue to erode until the energy of the flow is balanced by a resisting force at the bank.

Based on the previous review, the current recreation facilities and use are of minor consequence to river and channel function or water quality in this basin.

3.7.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

Current conditions as described in the previous section would be maintained.

Alternative B: Day-Use Recreation Emphasis

Current conditions as described in the affected environment (EA Section 3.7.1) would be maintained with the exception of additional recreational site development, which would expand the “footprint” to occupy approximately three additional acres of soil surface. With the proper implementation of all project design features (EA Section 7.1), the expansion and use of recreational facilities would have no measureable effect on local hydrology, water quality or wetlands.

Facilities would continue to be well back from any surface water. Any additional run-off from compacted or occupied surfaces would quickly infiltrate into the highly porous soils with little or no erosion or alteration of flows. Wetlands would not be impacted.

Cumulative Effects of Alternative B

There is no direct effect to local hydrology, water quality or wetlands from this alternative so no cumulative effect is possible.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Current conditions as described in the affected environment (EA Section 3.7.1) would be maintained with the exception of additional recreational site development, which would expand the “footprint” to occupy a maximum of approximately two additional acres of soil surface. With the proper implementation of all project design features (EA Section 7.1), the expansion and use of recreational facilities would have no measureable effect on local hydrology, water quality or wetlands.

Facilities would continue to be well back from any surface water. Any additional run-off from compacted or occupied surfaces would quickly infiltrate into the highly porous soils with little or no erosion or alteration of flows. Wetlands would not be impacted.

Cumulative Effects of Alternative C

There is no direct effect to local hydrology, water quality or wetlands from this alternative so no cumulative effect is possible.

3.8 Soils

3.8.1 Affected Environment

Typical soils in this area formed in sandy alluvium deposited onsite during river overbank flooding over the last 10,000 years. These flood deposits are likely several feet in depth and lay above hundreds of feet of glacial till materials left behind during glacial activity in the Pleistocene geologic epoch. The project area has only a single mapped soil series: Camas gravelly sandy loam. Soil maps and descriptions of the Camas soil are available at the Natural Resource Conservation Service web site: <http://websoilsurvey.nrcs.usda.gov/app/>.

Camas gravelly sandy loam is a moderately deep, excessively well-drained soil with coarse texture and an average depth of approximately 60 inches. Engineering classification (Unified) is GM in the first 13 inches (A horizon) and GP in the subsurface horizon. Fragments (particles greater than three inches in diameter) increase with soil depth from 0 to 15 percent in the surface to 5 to 25 percent at depth.

The Camas soil formed on flat floodplain surfaces (0 to 3 percent slope), and hence the erosion hazard is low. The soil is subject to periodic flooding and has limited use for septic tank absorption fields due to the hazard of seepage and pollution of groundwater. This soil contains ample materials for road fill and as a gravel and sand source, hence portions of the project area and surrounding lands (including portions of the disturbed 17-acre addition to the east of the main recreation area) have been mined for these materials historically. This soil is not well suited for growing conifers due to droughty conditions and poor nutrient status. Building site limitations are poor sidewall instability in shallow excavations and flooding risk. Limitations for recreational development include rough textures (small stones in surface) and flooding risk.

Current recreational development on the approximately 200-acre site includes 54 single-family campsites on three separate camp loops, power, water and sewer supplies, over five miles of trails (natural and paved), surfaced roads and parking areas, three group picnic areas and day-use areas along with assorted recreational facilities. The primary effect of these facilities is the obliteration and/or occupation of soil surfaces and the elimination of natural vegetative communities, along with their associated ecological benefits, from these areas. Altogether, a very rough estimate (based on GIS analysis) identified approximately 20 acres (ten percent of the approximately 200-acre site) of surface soils that have been altered by recreational site development and use. These effects are expected to remain as long as the recreational site is maintained and utilized.

In addition to the recreational site development, the 17-acre addition on the east side of the property has been heavily disturbed over the last hundred years during which it was utilized as a gravel source and for a wood mill. Much of the surface soil on this site has been stripped away leaving a cobbly under pavement that no longer functions as natural soil. This site has poor capacity for the support of natural vegetative communities due to droughty conditions, high water tables during winter storm events and poor nutrient status.

3.8.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

Current conditions as described in the previous section would be maintained.

Alternative B: Day-Use Recreation Emphasis

Current conditions as described in the affected environment (EA Section 3.8.1) would be maintained with the exception of an additional camp host site, connecting trails, and one-acre dog park. The current “footprint” of facility development would occupy approximately three additional acres of soil surface.

Cumulative Effects of Alternative B

The three-acre increase in facility development would result in a cumulative increase in soil surface occupation to 23 acres totaling 12.5 percent of the recreation site.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Current conditions as described in the affected environment (EA Section 3.8.1) would be maintained with the exception of additional recreational site development, which would expand the “footprint” to occupy approximately two additional acres of soil surface.

Cumulative Effects of Alternative C

The two-acre increase in facility development would result in a cumulative increase in soil surface occupation to 22 acres for totaling 11 percent of the recreational site.

3.9 Cultural Resources

3.9.1 Affected Environment

Fishermen’s Bend SRMA is composed of two distinct areas, the larger 96 acre portion is composed of predominantly shallow and relatively recent sediment deposits. Aerial photography from 1955 shows this area to be riparian deposits of boulders, cobbles, and sand. The second area is the 17-acre parcel located at the east end of the park that has been highly disturbed due to a logging mill operating on that site.

The BLM conducted cultural resource inventories in 1994, 1995 and 2014 over portions of the planning area. These surveys did not lead to the identification of any prehistoric or historic sites. The BLM archaeologist conducting the survey in 2014 identified one metal fixture, but its age is unknown and was not associated with any other remains, therefore it is considered a possible historic isolated artifact.

3.9.2 Environmental Effects

Common to All Action Alternatives

Cultural Resource inventories conducted to date have not lead to the identification of any archaeological or historic sites that could be impacted by project activities. The isolated metal fixture of unknown age would not be adversely impacted by project activities. The BLM has not conducted inventories across the entirety of the Fishermen’s Bend Planning Area. Therefore, implementation of this plan in areas not previously surveyed or future projects not covered under this plan would need to be reviewed by a professional archaeologist, and cultural resource inventories would be conducted. Effects to cultural resources would be avoided or mitigated through identification by pre-project inventory of all project activities.

3.10 Air Quality, Fire Risk, and Fuels Management

3.10.1 Affected Environment

Air Quality

The major source of air pollutants within the Fishermen's Bend analysis area would come from smoke associated with wildfire starts, from increased campfire smoke, and from associated resource management activities including prescribed burning (swamper burning, hand or machine pile burning), fossil fuel combustion, and dust from the use of natural-surfaced roads associated with increased recreational use.

The Willamette Valley experiences periods of air stagnation. When this occurs, cold air often becomes trapped near the valley floor with slightly warmer air aloft, creating conditions known as temperature inversions. These conditions result in air pollutants concentrated near the ground. Wintertime temperature inversions contribute to high particulate levels, often due to wood burning for home heating and fossil fuel combustion. Stagnant periods contribute to increases in ozone levels, causing the local air quality to deteriorate. The State of Oregon has designated the Willamette Valley as a Smoke Sensitive Receptor Area.

Fire Hazard and Risk

The climate in Northwest Oregon is considered mild and wet in late fall, winter and early spring. In the Oregon Cascades Mountain Range, snowfall accumulation remains at higher elevations (approximately 2,500 feet) for an extended period of time but does not persist for long periods at lower elevations. Summers are warm with periods of dry weather during the months of July, August, and September. Summer mean temperatures during this period average approximately 55 to 60 degrees Fahrenheit for lows and highs of 75 to 80 degrees Fahrenheit. Extreme high temperatures reaching into the mid to upper nineties and occasionally topping 100 degrees Fahrenheit are common, but infrequent and occur for short durations. During average weather years, the conditions under the forest canopy remain relatively moist but do dry with the advent of the summer warming period.

Fire is a natural disturbance process in the analysis area. Fire effects are influenced by habitat type, fire frequency, fire duration, and fire intensity (Van Wagner 1965). These effects vary with forest type, depending on fuel type, fuel structure, topography, and weather. Fire can influence vegetative species, composition, age, and structure, successional pathways, nutrient cycling, fish and wildlife habitat, and insect and disease vulnerability.

Wildfires within the project area have been primarily human-caused. Wildfire risk from humans is higher than compared to lightning because the analysis area is accessible to the public year round via paved and rock roads. Dry lightning (lightning that has no accompanying moisture) that occurs during the summer months is uncommon in Northwest Oregon. Within the Oregon Department of Forestry's Northwest Oregon Area - North Cascades District - Santiam Unit over the last ten years an average of one fire per year is attributed to lightning while twenty fires per year are human caused. The average size of lightning fires is approximately three-

quarters of an acre. The average size of human caused fires is approximately two and one-half acres in size (ODF, 2013).

Fire Regime and Condition Class (FRCC)

The Fishermen’s Bend Management Plan project vicinity occurs within the Pacific Northwest Forested landscape and potential natural vegetation group in the area is Douglas-fir-western hemlock (wet mesic). See Table 16 below.

Table 16: Modeling Predictions of Fire Regimes for the Project Area					
Vegetation Community (<u>Potential Natural Vegetation</u> Group)	Fire severity*	Fire regime characteristics			
		Percent of fires	Mean interval (years)	Minimum interval (years)	Maximum interval (years)
<u>Douglas-fir-western hemlock</u> (<u>wet mesic</u>)	Replacement	71%	400	N/A	N/A
	Mixed	29%	>1000	N/A	N/A
	Mixed	7%	>1000	N/A	N/A
	Mixed	13%	50	N/A	N/A
	Surface or low	82%	8	N/A	N/A

*Fire Severities — **Replacement:** Any fire that causes greater than 75% top removal of a vegetation-fuel type, resulting in general replacement of existing vegetation; may or may not cause a lethal effect on the plants. **Mixed:** Any fire burning more than 5% of an area that does not qualify as a replacement, surface, or low-severity fire; includes mosaic and other fires that are intermediate in effects. **Surface or low:** Any fire that causes less than 25% upper layer replacement and/or removal in a vegetation-fuel class but burns 5% or more of the area.

The Fire Regime classifies the role fire would play across the landscape in the absence of recent human intervention. The area falls within Fire Regime V, which is characterized by a low fire return interval with a high severity and is associated with north facing slopes. More than 70 percent of fires are characterized as stand replacement.

The Condition Class classifies the degree of departure from the natural fire regime. The timber stands in the analysis area generally fall within Condition Class 2 or 3. Forest management on both public and private lands in the Fishermen’s Bend area has altered the natural forest composition and structure and created large tracts of even-aged, overstocked stands, young plantations, and clearcuts.

- Condition Class 2 indicates that fire regimes have been moderately altered from their historical range.
- Condition Class 3 indicates that fire regimes have been significantly altered from their historical range.

Management of the surrounding private land affects the Condition Class to such an extent that actions within the Fishermen's Bend analysis area are unlikely to change the Condition Class rating across the landscape.

Timber Stand and Fire History

The early fire history of the Fishermen's Bend analysis area is not well documented. Although it is known that Native Americans burned within the Willamette Valley, to what extent this burning extended into the Cascade foothills and up the river corridors is not specifically known. Fire does play a major role as a natural disturbance agent, as do people.

The analysis area is included in the North Santiam River 4th field watershed. Within the overall watershed, the fire disturbance history is not well documented; however, in 1951 the Sardine Creek fire burned approximately 25,000 acres just to the northwest of analysis area.

The analysis area has experienced other forestry related management activities in the past. Aerial photos from the 1950s and 1960s clearly show that the area around the road into the recreation site was previously harvested prior to 1955. Many areas adjacent to the analysis area managed by the BLM were previously harvested during the 1990s. Harvest units of this period often had broadcast burning or spot burning associated with them, both for hazard reduction and for site preparation prior to planting.

The average fire return interval increased following the advent of fire suppression in 1910. Although fire has been excluded from the landscape, the analysis area is still well within the range of a normal fire return.

3.10.2 Environmental Effects

Alternative A: Continuation of Existing Management (No Action Alternative)

Air Quality

The analysis area would remain open to the public. Campfire smoke, exhaust fumes, and dust created from existing vehicle traffic on gravel or natural-surface roads would contribute effects to air quality. These effects would be localized to the immediate vicinity of the Fishermen's Bend Recreation Site.

Under the No Action alternative, there would be no large scale site development or alteration and the area would continue to be managed under the current rules and regulations. There would be an occasional need for hazard reduction and little need for site preparation prior to planting native trees and shrubs. In the short-term, there would be no need for prescribed burning and no localized effects to air quality outside the current use of campfires and roads. In the long-term more dispersed camping would be likely as the recreational facilities located at Fishermen's Bend reach their maximum carrying capacity. As the timber stands in the Recreation Site continue to grow, the high stocking density would cause the stands to become more susceptible

to a stand replacement fire event due to increased fuel loading. In the event of a wildfire, poor air quality is expected due to the high volume of smoke produced.

Fire Hazard and Risk

The analysis area would continue on its current trend. The current risk of a fire start would remain low. There would be a slow increase in the coarse woody fuel load (1,000 hour fuel class: 3 plus inch diameters) and in the smaller size fuel classes (one hour fuels: less than ¼ inch diameter, 10 hour fuels: ¼ to 1 inch diameter, and 100 hour fuels: 1 to 3 inch diameter) in these timber stands as stress-induced mortality within the stands increases. The hours correspond to the amount of time it takes the moisture content of individual fuels to reach equilibrium with changes in relative humidity. Ladder fuel densities would increase as trees are suppressed in the understory, shade tolerant species become established, and dominant trees increase in size. The potential for these stands to eventually succumb to a wildfire would continue to increase as they near the maximum fire return interval and the condition class departs further from the natural fire regime.

Alternative B: Day-Use Recreation Emphasis

Air Quality

An increase in vehicle traffic would occur over access roads during the implementation of this project. The increases would be considered short-term while the project is implemented. Fossil fuel combustion and dust created from vehicle traffic from proposed project activities on gravel or natural-surface roads would contribute short-term (during project work) effects to air quality. These effects would be localized to the immediate vicinity of the operations.

The overall effects of smoke on air quality is predicted to be local and of short duration. Prescribed burning would cause short-term impacts to air quality that would persist for one to three days within one-quarter to one mile of the analysis area. Activities associated with this alternative would comply with the provisions of the Clean Air Act. All prescribed burning would require a project level Prescribed Fire Burn Plan that adheres to smoke management and air quality standards, meets the objectives for land use allocations, and maintains or restores ecosystem processes or structure. The burn plan would comply with the Northwest Oregon Fire Management Plan for the Eugene District BLM, Salem District BLM, Siuslaw National Forest, and the Willamette National Forest dated May 20, 2009. All burning would be coordinated with the local Oregon Department of Forestry office in accordance with the Oregon State Implementation Plan and Oregon Smoke Management Plan. The potential for smoke from prescribed fire to intrude into Smoke Sensitive Receptor Areas (SSRA) is low because burning would be done when the prevailing winds are blowing away from SSRAs and under atmospheric conditions that favor good vertical mixing so that smoke and particulate matter is dispersed by upper level atmospheric winds.

The current volume of hazardous fuels within the analysis area is very small. The area has been utilized as a developed recreation site since 1964 and much debris has been burned by campers over the years. Prescribed burning would be utilized sparingly if debris from road delineation or

site preparation were piled to help facilitate tree planting was needed. This would cause short-term impacts to air quality that would persist for one to three days within one-quarter to one mile of the analysis area.

Fire Hazard and Risk

Following projects to enhance existing recreational opportunities all project areas would see a short-term (0 to 5 years) increase in fire ignition potential because of the increase in fine dead fuels. The fuel load and risk of a fire start would increase and would be greatest during the first year following treatment when needles dry but remain attached to tree limbs. The ability to control a fire would decrease during this period resulting from this alternative.

Fuels treatments would be applied in strategic locations within the project areas. Roads that see high public use, property lines adjacent to private land, and other project areas where debris is created would be targeted to reduce the volume of hazardous fuels. Treatments including hand and machine piling, lopping and scattering, and slash pullback would break up the horizontal continuity of the fuel bed.

The modeling predictions for fire behavior (Anderson, April 1982) based on the National Fire Danger Rating System (NFDRS) fuel models would move the project areas from a Fuel Model 8 (Closed timber litter) to Fuel Model 11 (Light logging slash), or Fuel Model 12 (Medium logging slash).

Following project treatment, containment of wildfires less than ten acres in size should continue to be attainable and the ability to successfully control wildfires in the fuels treatment areas would remain high. For the short-term (0 to 5 years), the fire risk would increase in all of the project areas. Decreasing fuel loading in strategic locations such as along roads and property lines would reduce the potential for human caused fire starts and would provide fuel breaks with lower fire intensity, rates of spread and flame lengths where fire can be successfully controlled by initial attack resources. The Oregon Department of Forestry (ODF) through the BLM's Western Oregon Fire Protection Services Contract has responsibility for fire protection and suppression on BLM managed land in western Oregon.

Cumulative Effects of Alternative B

There would be no cumulative effects to air resources, as the direct and indirect effects from the project would be local and of short duration. No other effects in the project area are anticipated. Based on past experience with pile burning within this habitat type and adherence to smoke management plans, there are no expected cumulative effects on air quality from the planned fuels treatment under this proposal.

There would be an increase in fuel loading and resultant fire hazard in the short-term (0 to 5 years). In the project area, along roads and property lines, the hazard and risk of fire would be minimized by the use of fuels reduction treatments. The localized increase in fire risk would diminish over time as slash decomposes. At a watershed scale, the fuels reduction treatments on

small project areas within the recreation site would have very little effect on fire intensity or fire starts.

Alternative C: Overnight Recreation Emphasis (Proposed Action)

Air Quality

Hand or machine pile construction and burning in the recreation site would be targeted for treatment because human activity and the risk of ignition is greatest in these areas. More acres would be treated with prescribed fire than under Alternative B.

Fire Hazard and Risk

Although slightly more acres would be treated under Alternative C, the effects of the proposed project on fire risk would be similar to Alternative B. See Alternative B for a detailed description of the environmental effects of fire.

Cumulative Effects of Alternative C

Cumulative effects would be similar to that of Alternative B.

Chapter 4 Aquatic Conservation Strategy Compliance

Compliance with the Aquatic Conservation Strategy (ACS)

Based on the environmental analysis described in the previous sections of the EA, Cascades Resource Area staff have determined that the project complies with the ACS on the project (site) scale. The project complies with the four components of the ACS, as follows:

- **ACS Component 1 – Riparian Reserves:** Maintaining canopy cover along all streams and wetlands would protect riverbank stability and water temperature. Project design features would maintain riparian habitat, reduce visitor impacts, and improve bank stability.
- **ACS Component 2 – Key Watershed:** The proposed action is not within a key watershed.
- **ACS Component 3 – Watershed Analysis:** A watershed based analysis was completed for the North Santiam River.
- **ACS Component 4 – Watershed Restoration:** The actions proposed in this management plan would help to improve campground facilities and stabilize portions of the day-use and campground areas to reduce potential sediment sources to the North Santiam River. This work is expected to result in long-term improvement in the watershed.

Cascades Resource Area Staff have reviewed this project against the ACS objectives at the project or site scale with the following results. The No Action alternative does not move toward

the attainment of ACSO 3,4, 5, 7 or 8 because it would maintain the current unstable bank conditions near accessible fishing platform and along the river trail, which are located in the floodplain of the North Santiam River. Both action alternatives do not retard or prevent the attainment of any of the nine ACS objectives for the following reasons.

ACSO 1: Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.

No Action Alternative: The No Action alternative would maintain the development of the existing vegetation and associated stand structure at its present rate. The current distribution, diversity, and complexity of watershed and landscape-scale features would be maintained.

All Action Alternatives: Fishermen's Bend improvements and new developments would maintain watershed and landscape features to ensure protection of aquatic systems. Proposed trail construction is not expected to be of a large enough scale to alter any of the items in this objective. The proposed action when combined with other proposed actions in the North Santiam Watershed is unlikely to have detrimental cumulative effects on the hydrologic regime.

ACSO 2: Maintain and restore spatial and temporal connectivity within and between watersheds.

No Action Alternative: The No Action Alternative would have little effect on connectivity except in the long-term within the affected watershed.

All Action Alternatives: Fishermen's Bend improvements and new developments do not include any activities that have the probability of impacting connectivity between watersheds so there is no effect expected in this objective.

ACSO 3: Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.

No Action Alternative: The current condition of physical integrity would be maintained for the majority of the analysis area. The bank along the river trail and near the accessible fishing platform would continue to erode from excessive uncontrolled visitor use and deteriorating concrete stabilization.

All Action Alternatives: The bank stabilization along the river trail and near the accessible fishing platform would use native materials and restrict public access to fewer locations. These actions are expected to restore the physical integrity of the aquatic system.

ACSO 4: Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems.

No Action Alternative: The current water quality would be maintained for the majority of the analysis area. The bank along the river trail and near the accessible fishing platform would continue to erode from excessive uncontrolled visitor use causing short-term and localized water quality concerns.

All Action Alternatives: The bank stabilization along the river trail and near the accessible fishing platform would use native materials and restrict public access to fewer locations. If warranted some rock placement could also be completed to help stabilize the banks. The proposed projects would help restore natural channel conditions leading to improved water quality over the long term.

ACSO 5: Maintain and restore the sediment regime under which aquatic ecosystems evolved.

No Action Alternative: It is assumed that the current levels of sediment into streams would be maintained in the majority of the analysis area. The bank along the river trail and near the accessible fishing platform would continue to erode from excessive uncontrolled visitor use causing short-term and localized sediment inputs that are outside the natural sediment regime for the watershed.

All Action Alternatives: The bank along the river trail and near the accessible fishing platform would be stabilized and access restricted to fewer locations to facilitate bank stabilization with native materials. These actions would help move the sediment regime back towards a more natural level for this aquatic ecosystem.

ACSO 6: Maintain and restore in-stream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing.

No Action Alternative: No change to in-streams flows would be anticipated.

All Action Alternatives: No change to in-streams flows would be anticipated.

ACSO 7: Maintain and restore the timing, variability, and duration of floodplain inundation and water table elevation in meadows and wetlands.

No Action Alternative: The current condition of flood plains and their ability to sustain inundation and the water table elevations in meadows and wetlands is expected to be maintained in the majority of the analysis area. The river trail, trails near the wetland, and accessible fishing platform would remain in the active flood plain of the North Santiam River and impact the functioning of the floodplain due to existing infrastructure.

All Action Alternatives: The removal of paths (trails) from the active floodplain and subsequent replanting is expected to improve the functioning of the floodplain. These

actions would allow the floodplain to function more normally in terms of sediment deposition and water holding capabilities.

ACSO 8: Maintain and restore the species composition and structural diversity of plant communities in riparian areas and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.

No Action Alternative: The current species composition and structural diversity of plant communities would continue along the current trajectory. Diversification would occur over a longer period of time. The existing unrestricted visitor use along the river trail would continue to display higher than desired rates of erosion due to the loss of riparian vegetation in those areas.

All Action Alternatives: Access would be restricted to fewer locations along the river trail so that the bank could be stabilized with native materials. These actions would help reduce the level of bank erosion back towards a more natural level for this aquatic ecosystem.

ACSO 9: Maintain and restore habitat to support well-distributed populations of native plant, invertebrate and vertebrate riparian-dependent species.

No Action Alternative: Habitats would be maintained over the short-term and continue to develop over the long-term with no known impacts on species currently present.

Proposed Action: Habitats would be maintained over the short-term and continue to develop over the long-term with no known impacts on species currently present. Planting activities would use only native species found in the project area.

Chapter 5 Contacts and Consultation

5.1 U.S. Fish and Wildlife Service

Wildlife

There would be no effects to Threatened or Bureau Sensitive Species as a result of any of these alternatives. The park is not within the home range of any spotted owl sites and is not located in critical habitat for the spotted owl. Negative cumulative effects to wildlife species or habitats would be minimal under all of the alternatives because the proposed activities would not appreciably alter the existing habitat value in the project area.

5.2 National Marine Fisheries Service

The proposed actions of removing the rip-rap and restoring the eroding riverbank, and installing a new boat ramp are likely to adversely affect winter steelhead and spring Chinook salmon due to disturbance of fish and generating turbidity during the rip-rap removal, bank restoration, and boat ramp installation work. The BLM will complete consultation with NMFS regarding project

effects to ESA listed fish and habitats prior to initiating the restoration and boat ramp projects. Depending on the scope of the restoration work, the consultation for the bank stabilization project would likely be covered under BLM's programmatic biological opinion for river restoration work (NOAA 2013).

Protection of Essential Fish Habitat (EFH) as described by the Magnuson/Stevens Fisheries Conservation and Management Act and consultation with NOAA NMFS is required for all projects, which may adversely affect EFH of Chinook and Coho Salmon. The proposed action addressed in the EA is likely to adversely affect EFH due to proximity of projects to occupied habitat. The BLM will complete consultation with NMFS regarding project effects to ESA listed fish and habitats prior to initiating the restoration project.

5.3 Cultural Resources - Section 106 Consultation with State Historical Preservation Office

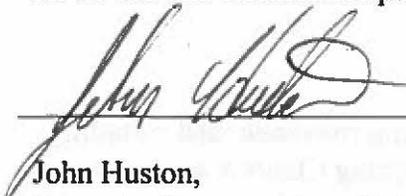
Consultation with the Oregon State Historic Preservation Office will be conducted on individual projects according to the procedures in the Protocol for Managing Cultural Resources on Lands Administered by the Bureau of Land Management in Oregon.

Chapter 6 List of Preparers and Major Sources

6.1 List of Preparers

Traci Meredith.....	Team Lead/Recreation/Visual Resources
Steve Baldwin	Park Manager
Terry Fennell.....	Botany
Heidi Christensen.....	Invasive Plants
Jim England/Corbin Murphy.....	Wildlife
Patrick Hawe.....	Hydrology/Soils
Bruce Zoellick.....	Fisheries/Riparian
Kent Mortenson.....	Fuels/Air Quality
Fred Greatorex/Heather Ulrich	Cultural/Archeology
Adam Milnor (until 11/26/2014).....	District Recreation Planner
Belle Smith.....	Natural Resources Supervisor
David Simons.....	NEPA
Dugan Bonney.....	Silviculture
Janet Myers	Realty/Lands Specialist
Russ Chapman.....	GIS Specialist/Mapping

Reviewed and released for public comment by the Cascades Resource Area Field Manager.



John Huston,
Cascades Resource Area Field Manager

Date: 1/16/2015

6.2 Interdisciplinary Team Reports

Bonney, D. 2014. Silviculture Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

Christensen, H. 2014. Invasive Non-Native Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

England, J. 2014. Wildlife Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

Fennell, T. 2014. Botanical Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

Greatorex, F. 2014. Cultural Report. Resources Staff, Salem District, Bureau of Land Management. Salem. OR.

Hawe, P. 2014. Hydrology and Soils Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

Mortenson, K. 2014. Fuels Report. Cascades Resource Area, Salem District, Bureau of Land Management. Salem. OR.

Ulrich, H. 2014. Cultural Report. Resources Staff, Salem District, Bureau of Land Management. Salem. OR.

6.3 Citations

Agee, J. K. 1996. The influence of forest structure on fire behavior. In: Proceedings of the 17th annual forest vegetation management conference; 1996 January 16-18; Redding, CA: 52-68.

Agee, J. K. 1993. Fire ecology of Pacific Northwest Forests. Island Press, Seattle, WA. 493 p

Agee, James K. 2004. The Complex Nature of Mixed-Severity Fire Regimes. Proceedings of the Conference on Mixed Fire Regimes, Spokane, WA, November 2004.

Behnke, R.J. 1992. Native trout of Western North America. American Fisheries Society Monograph 6. 275 pp.

BLM Manual 9015 – Integrated Weed Management

Available at: <http://www.blm.gov/ca/st/en/prog/weeds/9015.html>

Cascade Resource Area, Salem District Bureau of Land Management, NISIMS geodata base

Cascades Resource Area Invasive Non-Native Plant Management EA and FONSI, 2009. DOI-BLM-OR-S040-2009-0002-EA

Christiansen, E.C. and S.G. Pickford. 1991. Natural Abatement of Fire Hazard in Douglas-fir Blowdown and Thinning Fuel beds. Northwest Science. 65(4):141-148.

Cissel, JH, et al. 1998. A landscape plan based on historical fire regimes for a managed forest ecosystem: the Augusta Creek Study. USDA PNW Gen Tech. Rep PNW-GTR-422. 82 pp.

E & S Environmental Chemistry, Inc. 2002. North Santiam Watershed Analysis.

Executive Order 11990 – Protection of Wetlands. May 24, 1977, appear at 42 FR 26961, 3 CFR, 1977 Comp., p. 121, unless otherwise noted. Available at: <http://www.archives.gov/federal-register/codification/executive-order/11990.html>

Executive Order 11988 – Floodplain Management. May 24, 1977, appear at 42 FR 26951, 3 CFR, 1977 Comp., p. 117, unless otherwise noted. Available at: <http://www.archives.gov/federal-register/codification/executive-order/11988.html>

Executive Order 13112- Invasive Species
Available at: <http://www.invasivespeciesinfo.gov/laws/execorder.shtml>

Fire Regimes and Condition Class Definitions. Available at: <http://www.nwcg.gov/teams/wfewt/archive/message/FrccDefinitions.pdf>

Fleming, J., Dimas, S. 2005. Vehicle Cleaning Technology for Controlling the Spread of Noxious Weeds and Invasive Species. USDA Forest Service Technology & Development Program, San Dimas, California. Available at: http://gacc.nifc.gov/rmcc/administrative/docs/weed_wash_unit.pdf

Franklin, J. F., and C. T. Dyrness. 1973. Natural vegetation of Oregon and Washington. Corvallis OR: Oregon State University Press.

Garza, E.S. 1995. Fire History and Fire Regimes of East Humbug and Scorpion Creeks and their relation to the range of *Pinus lambertiana* Dougl. 75 pp.

Graham, R.T., S. McCaffrey, and T. B. Jain.(tech. eds.). 2004. Science Basis for Changing Forest Structure to Modify Wildfire Behavior and Severity. Gen. Tech. Rep. RMRS-GTR-120. Fort Collins, CO: USDA, Forest Service, Rocky Mountain Research Station. 43 p.

Gordon Creek Thinning Revised EA # OR080-07-05 December 2009 p. 201.

Hardy, Colin C. 1996. Guidelines for estimating volume, biomass, and smoke production for piled slash. Gen. Tech. Rep. PNW-GTR-364. Portland, OR U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.

Healthy Forests Restoration Act of 2003, H.R. 1904

Henderson, J.A., D.H. Peter, R.D. Leshner, and D.C. Shaw. 1989. Forested Plant Associations of the Olympic National Forest. USDA Forest Service, Pacific Northwest Region. R6 ECOL Technical Paper 001-88. 502 p.

Keyes, C. R. and K. L. O'Hara. 2002. Quantifying Stand Targets for Silvicultural Prevention of Crown Fires. Western Journal of American Forestry. 17(2):101-109.

Kitzberger, T., P. M. Brown, E.K. Heyerdahl, T. W. Swetnam, and T. T. Veblen. 2006. Contingent Pacific-Atlantic Ocean influence on multi-century wildfire synchrony over western North America. Proceedings of the National Academy of Sciences of the United States of America. 104(2): 543-548.

Landfire Rapid Assessment Vegetation Models. Available at:
http://www.fs.fed.us/database/feis/fire_regime_table/fire_regime_table.html

Morrison, P. H., and F. J. Swanson. 1990. Fire history and pattern in a Cascade Range landscape. PNW- GTR-254. USDA Forest Service, Pacific Northwest Research Station.

McCain, C. and N. Diaz. 2002. Field Guide to the Forested Plant Associations of the Westside Central Cascades of Northwest Oregon. USDA FS PNW Tech Paper R6-NR-ECOL-TP-02-02

McCain, C. and N. Diaz. 2002. Field Guide to the Forested Plant Associations of the Northern Oregon Coast Range USDA FS PNW Tech Paper.

NOAA. 2005. Endangered and threatened species; designation of critical habitat for 12 evolutionarily significant units of west coast salmon and steelhead in Washington, Oregon, and Idaho; Final Rule. Federal Register 70(170):52630-52858.

NOAA. 2013. Re-initiation of the Endangered Species Act Section 7 Formal Programmatic Conference and Biological Opinion and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for Aquatic Restoration Activities in the States of Oregon and Washington (ARBO II). National Marine Fisheries Service, Northwest Region, Seattle, WA. 217 pp.

Oregon Department of Agriculture Noxious Weed Control Program, 2014. Available at:
www.oregon.gov/ODA/PLANT/WEEDS

Oregon Department of Agriculture Weed Mapper Information Center. Available at:
<http://www.weedmapper.org/index.html>

Oregon Department of Forestry Fire Statistics. Available at:
<http://oregon.gov/ODF/FIRE/HLCause.pdf>

Pojar, J., MacKinnon, A., 1994. Plants of the Pacific Northwest Coast, Washington, Oregon, British Columbia & Alaska. Lone Pine Publishing, Alberta, Canada.
Available at: Most book stores.

Rice, J., J. Kertis, and J. Hawkins. 2007. Fire Regime Condition Class (FRCC) Documentation to accompany Northwest Oregon FRCC grid. Available at: <http://www.reo.gov/ecoshare/news-issues/index-issues.asp>

Risley, J.C., Wallick, J.R., Mangano, J.F., and K.F. Jones. 2012. An environmental streamflow assessment for the Santiam River basin, Oregon: U.S. Geological Survey Open-File Report 2012-1133, 60 p. plus appendixes.

Rosgen, D.L. 1994. A classification of natural rivers. *Catena* 22:169-199.

Salem District Record of Decision and Resource Management Plan, 1995.
Available at: http://www.blm.gov/or/plans/files/salem_rmp.pdf

Scott, J. H. and R. E. Burgan. 2005. Standard Fire Behavior Fuel Models: A Comprehensive Set for Use with Rothermel's Surface Fire Spread Model. Gen. Tech. Rep. RMRS-GTR-153. Fort Collins, CO: USDA, Forest Service, Rocky Mountain Research Station. 72 p.

Snell, J.A. Kendall and J. K. Brown. 1980. Handbook for Predicting Residue Weights of Pacific Northwest Conifers. Gen. Tech. Rep. PNW-103. Portland, OR: USDA, Forest Service, Pacific Northwest forest and Range Experiment Station. 44 p.

Teensma, P. 1987. Fire History and Fire Regimes of the Central Western Cascades of Oregon. Dissertation for Ph.D. in the department of Geography, OSU, Corvallis, OR. 187 p.

Teensma, P.D., J.T. Rienstra, and M.A. Yeiter. 1991. Preliminary reconstruction and analysis of change in forest stand age classes of the Oregon Coast Range from 1850 to 1940. Technical Note OR-9. USDI/Bureau of Land Management. Portland, OR. 10/91.

USDA, USDI, February 2004. The Healthy Forests Initiative and Healthy Forests Restoration Act. Interim Field Guide. 58 p.

Weed Control Program - DOI Department Manual – Part 609
Available at: <http://elips.doi.gov/elips/release/3042.htm>

Weisberg, P.J. 1998. Fire History, Fire Regimes and Development of Forest Structure in the Central Western Oregon Cascades. PhD dissertation. Oregon State University. 256 pp.

Westerling, A.L., H. G. Hidalgo, D. R. Cayan, and T.W. Swetnam. 2006. Warming and Earlier Spring Increase Western U.S. Forest Wildfire Activity. *Science*. 313: 940-943.

Whitlock, C., S.L. Shafer and J. Marlon. 2003. The role of climate and vegetation change in shaping past and future fire regimes in the northwestern UD and the implications for ecosystem management. *Forest Ecology and Management*. 178(2003):5-21.

Chapter 7 Appendixes

7.1 Appendix 1: Project Design Features Common to All Management Actions

These project design features (PDFs), sometimes called best management practices (BMPs), help reduce the effects to the environment and resource damage.

To prevent the introduction or spread invasive/non-native plant species (i.e. noxious weeds) on BLM-administered lands

- All soil disturbing equipment used in the project area would be required to be clean and free of soil, seeds, vegetative matter, or other debris that could contain noxious weed seeds before entering BLM-administered land as directed by the contract administrator. If possible, the BLM would utilize work crews to pull weeds from project area prior to project implementation.
- All soil disturbing equipment would also be cleaned before leaving BLM property to reduce likelihood of spreading known invasive species outside of the project area as designated by the contract administrator.
- Where necessary (e.g., new trails, campsites, cabins, etc.), areas of disturbed and exposed mineral soil that are a result of the proposed project, as determined by the recreation specialist, would be seeded to abate the establishment of invasive/non-native species that are known from the project area(s). Oregon Certified blue wild rye (*Elymus glaucus*) or other approved native seed would be used where seeding takes place.

To protect ESA listed, special status, or Survey and Manage terrestrial animals

- Standards outlined in the applicable letters of concurrence or biological opinions in place at the time of implementation would be followed to prevent or minimize adverse effects to ESA listed terrestrial wildlife species.
- A wildlife biologist shall participate in the planning and design of all implementation activities that may affect any ESA listed, special status, or Survey and Manage species and would include surveys to protocol if required. Appropriate management recommendations would be followed or protection measures undertaken to prevent or minimize adverse effects.
- Required pre-disturbance surveys and known-site management for any special status or Survey and Manage animal species would be accomplished in accordance with BLM Manual 6840 – *Special Status Species Management*, and the *2001 Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines as modified by the 2011 settlement agreement in Conservation Northwest v. Sherman* (Case No.08-CV-1067-JCC) or successive guidance.
- The resource area biologist would be immediately notified if any federally-listed, special status, or Survey and Manage animal species were encountered while implementing proposed project activities so timely protection measures can be incorporated, as deemed feasible.
- *Snag Retention:* Any trees or snags that are felled or otherwise knocked down would be retained on site as coarse woody debris if possible. All old-growth trees would be left

standing and larger snags (above 15-inch diameter breast height) of all decay classes would be left standing to the greatest extent possible. Avoid cutting snags during the nesting season (March 1 to July 31). Avoid habitat modification activities during the breeding season for birds from April 1 to July 15, especially snag and hazard tree removal.

To protect ESA listed, special status, or Survey and Manage plants/fungi

- Prior to any ground disturbing activity, all proposed project sites would be surveyed to determine presence or absence of any SSS/S&M species. If any species that requires protection is identified, appropriate measures will be taken to assure the protection of the site.
- Required pre-disturbance surveys and known-site management for any special status or Survey and Manage plant/fungal species would be accomplished in accordance with BLM Manual 6840 – *Special Status Species Management*, and the *2001 Record of Decision and Standards and Guidelines for Amendment to the Survey & Manage, Protection Buffer, and other Mitigation Measures Standards and Guidelines as modified by the 2011 settlement agreement in Conservation Northwest v. Sherman (Case No.08-CV-1067-JCC)* or successive guidance.
- Pre-disturbance surveys would generally be accomplished through intuitive controlled methods, field clearances, field reconnaissance, inventories, database searches, known site maps and records and/or habitat examinations and in accordance with species survey protocols. Clearances for fungi are considered “not practical” and surveys are not required.
- The resource area botanist would be immediately notified if any federally-listed, special status, or Survey and Manage plant/fungal species were encountered while implementing proposed project activities so timely protection measures can be incorporated, as deemed feasible.
- Any wasting of soil or any large areas of exposed mineral soil would be planted with native plant species if available or otherwise sown with a seed mixture approved by the resource area botanist.

To protect Cultural Resources

- *Archeological survey:* Prior to any ground disturbing activity (including trail construction, facility development, and site restoration) the District Archaeologist would evaluate the activity and location to determine if a Class III archeological field survey would need to be conducted to locate any cultural resources within the project area. If cultural resources are discovered, apply appropriate mitigation measures such as relocating proposed projects to avoid disturbing the site. According to Appendix A of the *Protocol for Managing Cultural Resources on Lands Administered by the Bureau of Land Management in Oregon*, post-project archeological survey would be conducted after all ground disturbing activities.
- If during project implementation any archaeological, paleontological, or historical resources are discovered all project activities would cease until an archaeologist can be present to determine the significance of the discovery.

Fire and Fuels Management

- Hazardous fuels surveys would be conducted and site specific plans for hazard fuels reduction treatments would be implemented by the Authorized Officer.
- A Prescribed Fire Burn Plan would be initiated and signed by the Authorized Officer prior to any prescribed burning activity.
- Burning would be conducted in accordance with the Salem District RMP, *Oregon State Implementation Plan and Oregon Smoke Management Plan* as administered by the Oregon Department of Forestry and would comply with the provisions of the Clean Air Act. It would be conducted under good atmospheric mixing conditions to lessen the impact on air quality in Smoke Sensitive Receptor Areas.
- Swamper burning, or hand/machine pile construction and burning may be used individually or in combination in areas where fuel loading is heavy, the fire risk is determined to be high, or site preparation is required to help facilitate tree planting in recreation management areas.
- When hand or machine piles are identified by the Authorized Officer as the specified fuels treatment the following requirements would apply:
 - ✓ Piles would be located as far as possible from large snags, green trees, or other reserved trees to minimize damage.
 - ✓ Large woody debris greater than six inches in diameter would be retained on site and not piled.
 - ✓ Piles would not be constructed within 25 feet of property lines, recreation site facilities, on roadbeds, on top of stumps or existing coarse woody debris (CWD).
 - ✓ Piles would be covered with .004 millimeter thick black polyethylene plastic. The plastic shall adequately cover the pile to ensure ignition, and would be placed and anchored to help facilitate the consumption of fuels during the high moisture fall/winter burning periods.
- Lopping and scattering of slash would be incorporated in areas where fuel loading is relatively heavy, but not heavy enough to warrant burning.
- Pullback of fuels would be incorporated in areas where fuel loading is relatively light (especially along roads, property lines and hiking trails) instead of piling and burning.
- Utilization of small diameter slash for firewood or energy production from biomass would be incorporated where appropriate.
- Oregon Occupational Safety and Health Administration and the BLM would require the placement of signs, the temporary blocking roads with vehicles or moveable barricades, and/or the use of flaggers to ensure public safety during active fuel treatment operations.

Project Design Features derived from Western Oregon Programmatic covering ESA listed Fish

- Brushing – Leave a ten foot buffer on intermittent and ephemeral channels and leave a 20 foot buffer on perennial streams where brushing is limited to the trail tread width.
- Locate mobile infrastructure away from hazard trees. Rather than felling, consider limbing or topping hazard trees to alleviate hazard.
- Control user activities to alleviate compaction and vegetation loss in recreation areas and facilities.

- Coarse Woody Debris – Protect and retain coarse woody debris on the ground wherever possible. If suitable woody debris must be moved, the section of log within the trail's path would be cut and removed instead of moving the entire log.
- Do not remove downed wood (natural recruitment and as a result of hazard tree treatment) within 100 feet of listed fish streams and 50 feet of all other streams within one mile of listed fish (exception - clearing existing trails and where debris poses a safety risk). Outside these widths within the Riparian Reserve, consider using hazard trees for instream restoration projects.
- Within one site potential tree (SPT) of listed fish, retain the maximum length of down logs possible. Consider relocating trails or provide safe passage over logs in lieu of cutting downed logs.
- Existing trail construction – design and maintain proper drainage, especially near stream crossings.
- Provide erosion control (grass seed/silt fences/hay bales/etc.) to minimize sediment delivery to water bodies. Implement controls prior to wet season.
- Implement soil disturbing activities during the dry season.
- Maintain, operate, and store vehicles and gas-powered equipment to minimize risk of contaminants. 1) Inspect equipment daily if within 150 feet of streams. Repair prior to resuming operations. 2) Refuel, store, conduct maintenance, and repair gas-powered equipment at least 150 feet from streams.
- Pressure treated wood is not to be used below the ordinary high water mark.
- Pressure treated wood must be stored out of contact with water and precipitation.
- Construction with pressure treated wood should be prefabricated away from water to the maximum extent possible. Construction with pressure treated wood over water would include containment (tarps, plastic sheeting, and tubs) to prevent waste material from reaching water surfaces.
- Prevent abrasion by users and place water proofing over pressure treated wood surfaces to prevent chips and dust contaminated with preservative from reaching water surfaces.
- Install drainage features to stable vegetated slopes with low probability of gullyng.
- Do not apply dust abatement within 24 hours of predicted rain. Do not apply dust abatement over stream crossings or road segments immediately adjacent to streams.
- Retain all functional woody debris at stream crossings. Maintenance would move upstream debris and replace debris downstream of crossings.
- Riverbank stabilization activities would be limited to bioengineered solutions (root wads, log toes, coir logs, woody and shrubby plantings). A minimum amount of rock may be used in conjunction with bioengineered materials.
- Stream crossing sites would likely be at least 0.5 mile apart, unless environmental conditions are favorable to accommodating a shorter distance.

Trail Construction

- *Trail tread width:* Allowable width would range from three to six feet down to bare mineral soil. Additional feet of tread would be needed to provide vista, resting, and passing locations.
- Suspend construction or maintenance of trails where erosion and runoff would likely be delivered to water bodies.

- *Average trail grade guideline:* Average trail grade would not exceed ten percent with a maximum grade of 15 percent.
- *Half rule guideline:* Trail grade or steepness would not exceed half the grade or steepness of the hillside.
- *Water crossing structures (culverts, bridges, or fords):* Any new construction of these structures would be designed to accommodate the 100-year flood event, allow unobstructed fish passage, and meet bankfull width.
- *Minimum Vegetation Removal:* Design trails with minimal vegetation removal through route location. Cutting live trees over seven inches in diameter would be avoided wherever possible, except where they present a safety hazard or constriction. Vegetation and stumps would be cut flush to the ground for approximately six feet wide to eight feet high depending on sight distance and trail users. Avoid habitat modification activities during the breeding season for birds from April 1 to July 15, especially snag and hazard tree removal.
- All crossings would have to be hardened with a bridge or other structure to prevent sedimentation into the creek.
- Where feasible, stay at least 100 feet from water and minimize stream crossings, except where necessary to stabilize riverbanks and minimize erosion.

New Facility Development Including Roads, Campsites, and Parking Areas

- *Facility locations:* Locate facilities, where possible, in previously disturbed areas. Avoid stream channels, floodplains, fish spawning sites, and areas that require a high level of vegetation removal.
- *Season of construction:* Facility construction would take place during the dry season (generally May through September) to avoid excess erosion and sediment inputs.
- *Preventing loss of stream shading:* Minimize or eliminate removal of streamside vegetation that provides shading and reduction of stream temperature through carefully locating facilities and trails in areas with lower density of vegetation.
- *Appropriate drainage:* Facility and parking area design would mitigate interference with hydrologic patterns.
- *New roads added to the existing network of roads and trails within the developed campgrounds would include the following mitigation measures:*
 - ✓ Design roads to no more than the minimum width necessary for the intended purpose.
 - ✓ Outslope permanent low volume roads to provide for surface drainage on slopes up to six percent gradient.
 - ✓ Limit road construction, reconstruction, or renovation activities to the dry season. Keep erosion control structures current to allow for immediate storm proofing of the road way if necessary.

7.2 Appendix 2: Other Recreation Providers within Near Fishermen's Bend

Agency	Recreation Site or Area Name	Amenities and Services	Comparison to Fishermen's Bend SRMA
Bureau of Land Management	Canyon Creek	5 picnic sites, beach access, swimming/water play, host	Day-use only site with per vehicle fees charged
	Elkhorn Valley	23 campsites, 4 picnic sites, swimming, picnic area, fishing, trails, wildlife, host, water, firewood sales	Smaller site with hilly terrain, per vehicle day-use fee charged, no group shelters or areas, advised not to bring RVs and trailers, no hookups, shorter season of availability
Forest Service	Upper Arm Day-use Area	1 group and 20 picnic sites, barbeque grills, fishing pier, swimming, trails	Day-use only site, per vehicle fee charged, small site, shorter camping season
	Breitenbush	30 campsites, water, fishing, trails, camping, accessible sites, firewood sales, fire grills	Smaller, first come first serve campground
	Cove Creek	63 basic and 1 group campsite, water, showers, fire rings, barbecue grills, firewood sales, boat launch, group campsite, fishing, swimming, water sports, trails	Slightly more campsites, fewer group campsites, reservation fee, no hookups
	Hoover	37 basic and 1 group campsite, water, firewood sales, boat launch, fire rings, barbecue grills, group campsite, fishing, swimming, water sports, trails, amphitheater programs	Fewer individual and group campsites, reservation fee, nightly environmental education/interpretation programs
	Humbug	22 campsites, water, fire rings, camping, trails, fishing, firewood sales	Fewer campsites, first come first serve, no group sites, no environmental education/interpretation programs
	Riverside	37 campsites, fishing, water	Fewer campsites, first come first serve, no group sites, no environmental education/interpretation programs
	Southshore	30 campsites, picnic area, swimming, fishing, water sports, trails, boating, water, boat launch, firewood sales, host	Fewer campsites, first come first serve, no group sites, no environmental education/interpretation programs

Agency	Recreation Site or Area Name	Amenities and Services	Comparison to Fishermen's Bend SRMA
State Parks	Willamette Mission	Covered shelter, electricity, water faucets, barbeque grills, fire rings, trails, interpretation, camping, nature viewing, historic sites, fishing, boat ramp	Motor boat opportunity, open all year, reservation fee, per person fee over maximum number
	Silver Falls	4 group picnic sites, 97 individual, 14 cabins, and 5 group campsites, hosts, trails, picnic area, nature viewing, cabins, gift store, swimming, playground, water, hookups, historic buildings, interpretation, nature programs, play fields, BBQ grills, fire rings, waterfalls	Larger area, more cabins, campsites, and smaller group day-use sites, stores, more trails, spectacular scenery, many environmental education/interpretation programs, open all year, reservation fee, per person fee over maximum number
	Cascadia	25 basic and 2 group campsites, trails, picnic area, nature viewing, interpretation, swimming, water, evening programs, waterfalls	Smaller site, fewer individual and group campsites, first come first serve
	Detroit Lake	106 full, 72 electric, and 133 tent campsites, showers, interpretation, nature programs, playground, trails, water, swimming, boating, fishing, host, wildlife viewing	Larger area, more sites, reservation fee, fewer vegetation screening between sites, motor boat opportunity
	Maples Rest Area	Picnic sites, water, and a short walking trail	Day-use rest area only, year round availability, no fee charged
	North Santiam	Picnic sites, river access trails, a boat ramp, water	Day-use only site, year round availability, no fee charged
Linn County Parks	John Neal Memorial Park	40 campsites and covered picnic shelter, picnic sites, showers, trails, ball fields, volleyball court, water, electric, barbeque grills, playground, boat ramp, horseshoes	Only one covered shelter, smaller site, reservation fee, refundable shelter deposit, longer camping season, no day-use fee charged
	Lyons/Mehama Boat Ramp	Boat ramp	Day-use only, year round availability, no fee charged
	River Bend	10 basic and 45 full campsites, 5 cabins, 1 shelter, 1 gazebo, host, interpretation, showers, trails, play field, playground, water, swimming, RV hookups, group site, picnic area, fishing, dump station	Comparable site, more cabins, reservation fee, refundable shelter deposit, less space between campsites, entrance self-check in kiosk (see photos), year round availability

Agency	Recreation Site or Area Name	Amenities and Services	Comparison to Fishermen's Bend SRMA
	Sunnyside	2 day-use shelters, 10 basic 7 double, 3 triple, and 130 full campsites Shelters, camping, picnic area, boat ramp, fishing, interpretation, dump station, water sports, playground, volley ball, horseshoes	More campsites packed into a comparable area with little to no vegetative screening between campsites, fewer group shelters, motor boat opportunity, year round availability
	Whitcomb Creek	39 campsites, group camping, trails, swimming, boating, picnic area, water, host	Fewer campsites, comparable vegetative screening between sites, motor boat opportunity
Marion County Parks	Bear Creek	15 campsites, picnic sites, walking/river access trails	Fewer campsites, same season, fee for camping
	Minto Brown	Picnic sites, walking/river access trails	Day-use only site, year round availability, no fee charged
	Packsaddle	Picnic sites, walking/river access trails, boat ramp	Day-use only site, year round availability, no fee charged
	Niagara	Picnic sites, walking/river access trails, historical building, interpretation	Day-use only site, year round availability, no fee charged
Mill City	City Parks	Picnic sites, some reservable shelters, historic activities and interpretation, walking/river access trails	Day-use only
City of Salem	Minto-Brown Island	1 covered shelter, ball fields, tennis court, horseshoe pits, water, electric, barbeque grills, playground, fishing, trails	Small developed day-use only area, one shelter, per hour charge, year round availability, no day-use fee
	Cascades Gateway	1 covered shelter, 2 picnic areas, ball fields, horseshoe pits, water, electric, barbeque grills, playground, fishing	Day-use only site, fewer group areas, Per hour charge, year round availability, no day-use fee

FINDING OF NO SIGNIFICANT IMPACT

Introduction

The Bureau of Land Management (BLM) has prepared an environmental analysis to present a range of potential management strategies for the Fishermen's Bend Special Recreation Management Area (SRMA). This strategy will analyze the potential effects on recreation use and the area's natural resources. Each alternative contains direction for Overnight, Day-Use, Environmental Education and Interpretation, 17-Acre Addition, and River Access and Bank Stabilization management for the next 10 to 15 years. The project area is located on BLM-administered lands in Marion County, Oregon.

The Fishermen's Bend Recreation Area Management Plan Environmental Assessment (EA) (DOI-BLM-OR-S040-2014-0003) documents the environmental analysis of the proposed action. The EA is attached to and incorporated by reference in this Finding of No Significant Impact (FONSI) determination. The EA and FONSI will be made available for public review from January 20, 2015 through February 20, 2015.

Finding of No Significant Impact

Based upon review of the Fishermen's Bend Recreation Area Management Plan EA and supporting documents, I have determined that the proposed action is not a major federal action that would significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR 1508.27. Therefore, supplemental or additional information to the analysis in the RMP/FEIS in the form of a new environmental impact statement is not needed. This finding is based on the following discussion.

Context [40 CFR 1508.27(a)]: Potential effects resulting from the implementation of the proposed action have been analyzed within the context of the project area boundaries and the North Santiam River 4th field watershed. Management actions identified under the proposed management plan would directly affect less than two acres of this watershed.

Intensity refers to severity of impact [40 CFR 1508.27(b)]: The following text shows how the proposed actions would not have significant impacts with regard to ten considerations for evaluating intensity, as described in 40 CFR 1508.27 (b).

1. [40 CFR 1508.27(b) (1)] – *Impacts that may be both beneficial and adverse*: The effects of proposed recreation management actions are unlikely to have significant (beneficial and adverse) impacts (EA Section 3) for the following reasons:
 - Project design features described in EA Section 7.1 would reduce the risk of effects to affected resources to be within RMP standards and guidelines and to be within the effects described in the RMP/EIS.

- *Socioeconomic (EA Section 3.1)*: The proposed recreation management actions are compatible with existing land uses and comply with existing local and regional civic and economic initiatives. The overall effect of these actions on economic activity is minor and likely to be beneficial in nature.
- *Recreation (EA Section 3.2)*: Recreation activities and facilities provided under the proposed recreation management actions are similar to those offered elsewhere in the region, including those on BLM-administered land. These actions are unlikely to result in a large-scale displacement of visitors across a variety of activities. Beneficial impacts to the recreation setting and visitor experience are likely to occur.
- *Vegetation and Botany (EA Section 3.3)*: No overall stand conditions or types would be altered as a result of the proposed recreation management actions. Few trees are likely to be removed as a result of planned management activities. Impacts to native botanical species would be limited and overall beneficial in nature as sites are rehabilitated and native vegetation is re-established. This project complies with the Threatened or Endangered Species (Endangered Species Act of 1983, as amended: 16 USC 1531) because there would be no adverse effects on Threatened or Endangered Species based on the results of the analysis of the proposed project area.
- *Invasive-Non-Native Plants (EA section 3.4)*: No substantial additional spread or introduction of non-native invasive species is expected. With mitigation measures in place, it is not anticipated that the proposed project would contribute measurably to the cumulative effects of invasive/non-native species in Oregon (EA Section 3.4.2).
- *Wildlife (EA Section 3.5)*: Little to no habitat modification would occur as a result of the proposed recreation management actions. Impacts to wildlife would be reduced as sensitive areas are closed to public access.
- *Fisheries and Aquatic Systems (EA Section 3.6)*: The proposed recreation management actions would have little to no impact on spawning and rearing habitat for fisheries within the planning area. Decreased sediment delivery and mitigation of riverbank impacts would result through enhancements to river access points.
- *Hydrology and Water Quality (EA Section 3.7)*: Projects are unlikely to have a measurable impact on overall water quality including bacteria levels, temperature and turbidity. The actions are likely to have overall beneficial impact on water quality by minimizing riverbank erosion.
- *Soils (EA Section 3.8)*: The proposed activities would not create soil compaction from the creation of additional campsites, roads, or trails that would adversely affect soil quality or site productivity. Hence, the proposed activities are not likely to result in measurable effect on soil quality or adverse soil erosion rates.
- *Cultural Resources (EA Section 3.9)*: Nearly all impacts to cultural resources would be reduced or eliminated through the practice of pre-disturbance surveys and use of avoidance and protection measures.
- *Fire Quality, Fire Risk, and Fuels Management (EA Section 3.10)*: Effects to this resource would not have significant impacts because the proposed action would comply with the Clean Air Act and State of Oregon Air Quality Standards by adhering to Oregon Smoke Management guidelines. Fine fuels generated by recreation site construction would decay in the project areas within three to five years, reducing the risk of a surface fire to near current levels. The potential for a human caused wildfire would be reduced by treating the fuels most likely to be ignited by

human activities. Prescribed burning would lessen the fuel load at construction sites, along private property lines and roads that are open to public access.

2. *[40 CFR 1508.27(b) (2)] – The degree to which the proposed recreation management actions affect public health or safety:* The proposed recreation management actions would not adversely affect public health or safety because these actions are expected to reduce illegal activity and reduce the occurrence of theft, vandalism and vehicular accidents. Site development, access restrictions and provision of facilities would likely improve overall public safety. Levels of law enforcement and administrative personnel would remain unchanged (EA Section 3.2).
3. *[40 CFR 1508.27(b) (3)] – Unique characteristics of the geographic area such as proximity to historic or cultural resources, parklands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas:* The proposed project would not affect historical or cultural resources because project design features require pre-disturbance surveys to be completed prior to project implementation (EA Section 7.1). The proposed project would not affect parklands, prime farmlands, wild and scenic rivers or ecologically critical areas because these resources are not located within the project area (EA Section 3).
4. *[40 CFR 1508.27(b) (4)] – The degree to which the effects on the quality of the human environment are likely to be highly controversial:* The proposed recreation management actions include strategies and actions that are similar to actions BLM implements in similar areas without highly controversial effects. These actions are unlikely to be highly controversial based on extensive public scoping, outreach, and stakeholder involvement in the planning process.
5. *[40 CFR 1508.27(b) (5)] – The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks:* Possible effects of the proposed recreation management actions have been analyzed based on reliable data and professional judgment. These effects are reasonably foreseeable and comparable to effects of recreation management actions elsewhere on BLM-administered land (EA Section 3).
6. *[40 CFR 1508.27(b) (6)] – The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration:* The proposed recreation management actions would not establish a precedent for future actions nor would it represent a decision in principle about a further consideration for the following reasons: 1/ The project is in the scope of proposed activities documented in the RMP EIS. 2/ The BLM has experience implementing similar actions in similar areas without setting a precedent for future actions or representing a decision about a further consideration.
7. *[40 CFR 1508.27(b) (7)] – Whether the action is related to other actions with individually insignificant but cumulatively significant impacts:* The Interdisciplinary Team (IDT) evaluated the project area in context of past, present and reasonably

foreseeable actions on each affected resource and determined that the cumulative impact of these actions does not reach the threshold for significance (EA Section 3).

8. *[40 CFR 1508.27(b) (8)] – The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources:* The project would not affect these resources because no sites listed within the National Register of Historic Places are present within the planning area and projects near sites eligible for the National Register would require a pre-disturbance survey and appropriate mitigation or protection measures (EA Section 3.9).
9. *[40 CFR 1508.27(b) (9)] – The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973:* The proposed project is not expected to adversely affect ESA listed species or critical habitat for the following reasons:
 - *ESA Wildlife – (EA Section 3.5):* Effects to the species are not significant because proposed recreation management actions do not have a measurable impact on habitat conditions or wildlife behavior patterns.
 - *ESA Fish – (EA Section 3.6):* Effects to ESA fish are not significant because the proposed recreation management actions would have little to no impact on spawning and rearing habitat within the planning area. ESA Consultation is described in EA Section 5.2.
10. *[40 CFR 1508.27(b) (10)] – Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment:* The proposed recreation management actions have been designed to follow Federal, State, and local laws (EA Section 1.7).

Approved by: _____
John Huston
Cascades Resource Area Field Manager

Date