

Sixes River Special Recreation Management Area

*Approved
Recreation Area Management Plan
Decision Record*

**U.S. Department of the Interior
Bureau of Land Management
Coos Bay District
1300 Airport Lane
North Bend, OR 97459**

Signed September 2000

Decision Record

for

Sixes River Special Recreation Area Management Area Recreation Area Management Plan Environmental Assessment OR128-99-13

Background

The Bureau of Land Management (BLM), Coos Bay District, prepared an Environmental Assessment (EA OR128-99-13) to analyze a proposal for implementing a Recreation Area Management Plan (RAMP) for the Sixes River Special Recreation Management Area (SRMA). The EA analyzed No Action and Proposed Action alternatives along with two other action alternatives. See attached EA for details of the analysis. The EA concluded in a Finding Of No Significant Impact (FONSI).

On Monday, June 26, 2000, the Coos Bay District announced (via Public Notice published in The World newspaper) the availability of the Draft RAMP (June 2000), EA and FONSI for a thirty-day public review period beginning on June 26, 2000 and ending July 26, 2000. Copies of the Draft RAMP, EA, and FONSI were sent to the appropriate government agencies, public interest groups, and individuals on our District mailing list. These documents were also available on the District's website. The District received no formal written comments from any interested parties involving the Draft RAMP, EA or FONSI. The District received one comment regarding some of the actions in the Draft RAMP via telephone. Documentation of this telephone conversation is on record in the District's National Environmental Policy Act (NEPA) files.

The Draft RAMP addresses seven major issues identified within the Sixes River SRMA: safety, resource protection, recreation opportunity, visitor services, facilities and development, recreation resource access, and cost management.

Decision

Based on the information described in the Draft RAMP (June 2000) and the analysis documented in the attached Environmental Assessment OR128-99-13, it is my decision is to adopt the proposed plan hereto after referred to as the RAMP (August 2000), subject to a modified version of the Proposed Action alternative, as described in this Decision Record (DR). The RAMP, as amended below, will apply to the Sixes River SRMA located within Township 32 South; Range 14 West; portions of Sections 6, 7, 10, 11, and 12; Willamette Meridian; Curry County, Oregon. The modified version of the Proposed Action alternative is a mixed array of alternatives for five management actions from the analyzed range of alternatives in the EA (Table 1, beginning on page 7). Subject to subsequent project planning and NEPA processes identified in Appendix D of the EA (beginning on page 52), and suggested/recommended design features and mitigation measures identified in Chapter 4 of the EA (beginning on page 16), the five management actions will be implemented as follows:

Facilities and Development

Action 5-4	Walk-in Tent Sites - Edson	As described under the No Action alternative
Action 5-5	Boat Ramp - Edson	As described under Alternative 1

Action 5-7	Secondary Use area - Edson	As described under Alternative 1
Action 5-8	Day Use - Sixes Recreation Resource Access	As described under the No Action alternative
Action 6-7	River Footpath - Sixes	As described under Alternative 1

The remaining 41 management actions will be implemented as described under the Proposed Action alternative, subject to subsequent project planning, the NEPA processes identified in Appendix D of the EA (beginning on page 52), and suggested/recommended design features and mitigation measures identified in Chapter 4 of the EA (beginning on page 16).

Decision Rationale

I have determined that a modified version of the Proposed Action alternative would be the best management program to adopt. It would meet the management objectives for the SRMA while providing the best balance between resources and visitor use to sustain recreational and natural resource values. The RAMP, as amended, is needed to address the existing issues and future recreational opportunities. It will provide guidelines for: management of the existing recreation sites, the function and design of specific projects within the SRMA, integration of other recreational opportunities within and adjacent to the SRMA, and establish priority levels of identified actions as phases for implementation.

Permanent closure of the area would be too impractical to enforce since the area, especially the existing recreation sites, has historically served public recreational needs of local citizens and tourists along the southwestern Oregon Coast.

While the Proposed Action alternative was found to cause no significant impacts to the human environment, implementation of the modified Proposed Action alternative is expected to have even less. There would be no impacts on:

- Air Quality
- Areas of Critical Environmental Concern
- Prime or Unique Farm Lands
- Native American Religious Concerns
- Solid/Hazardous Waste
- Threatened and Endangered Botanical Species
- Wild and Scenic Rivers, Wilderness Values
- Environmental Justice

Some minor impacts to Cultural Resources, Flood Plains, Threatened and Endangered Fish and Wildlife Species, Water Quality, Wetlands and Riparian Zones, Noxious Weeds, and Port Orford Cedar Management may occur. However, these are minimal and mitigation measures are addressed in the EA. The design features, mitigation measures, and conservation practices incorporated into the modified Proposed Action ensure that no significant impacts to the human environment will arise.

The RAMP, as amended in this DR, is consistent with the:

- *Coos Bay District Resource Management Plan (RMP), Environmental Impact Statement (EIS), the accompanying Record of Decision (ROD) (BLM, 1995)*

- *Coos Bay District Outdoor Recreation Program Plan: A Strategic Plan for the Year 2000 and Beyond* (BLM, 1995)
- *Federal Land Policy and Management Act of 1976* (FLPMA)
- *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl and its Record of Decision* (Interagency, 1994)
- Aquatic Conservation Strategy objectives as outlined in the *Record of Decision/Standards and Guidelines* (Interagency, 1994)
- *Sixes River Watershed Analysis* (USFS, 1997)
- *Oregon Coastal Zone Management*

Monitoring

Compliance and effectiveness monitoring will be performed through periodic inspections of portions of the SRMA and routine inspections during the implementation phases. Periodic inspections will be performed by a variety of specialists, including but not limited to the District Archeologist, District Hazard Tree Management Coordinator, District Noxious Weeds Coordinator, Area Wildlife Biologist, and Area Outdoor Recreation Planner.

Appeals

This decision may be appealed to the Interior Board of Land Appeals (IBLA), Office of the Secretary, in accordance with regulations contained in 43 CFR, Part 4. If an appeal is taken, your notice of appeal must be filed in this office at: BLM - Myrtlewood Resource Area, 1300 Airport Lane, North Bend, Oregon 97459, within 30-days of the approved signature date below. The appellant has the burden of showing that the decision appealed from is in error.

Decision recommended by:

NRSA: Gregg B. Nelson	Date: 9/7/00
NRSA: Raymond J Orazem	Date: 9/7/00
NRSA: Darrin McLeod Acting	Date: 9/7/00

Decision Approved by:

<u>Karla Bird</u> Karla Bird Field Manager Myrtlewood Resource Area	Date 9/13/2000
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Design Features and Mitigation Measures

The following design features and mitigation measures were suggested/recommended in EA OR128-99-13 and are incorporated into this plan by the corresponding Decision Record.

- If any potential cultural resources are encountered during the course of project or other actions, all work in the vicinity should stop and the District Archeologist must be notified at once.
- Seed and mulch all bare and disturbed soil from construction activities.
- Surface layer of rock is recommended on exposed bare soil where seed and mulch is not a viable option. Limit surface rock to areas above the high water mark.
- All proposed actions at the Edson Recreation Site are subject to rare periods of flooding and should be designed appropriately.
- Proper erosion control practices should be used when sediment and surface erosion is possible. Situations such as lack of vegetation for filtering of sediment and steep grades adjacent to the stream are in definite need of erosion control plans.
- At the Edson campground, BLM should provide approximately 2 artificial cavity structures (i.e., 1 bat box in main campground and 1 bat box in the reservation area) to mitigate the past loss of snags or cavity-providing trees.
- At the undeveloped West End of Sixes campground, manage to reduce incidental human use of the area through signage that does not encourage additional use.
- At the Edson campground, artificial habitat structures are to be placed in the main existing camping areas where standing cavity structures are eliminated through continuous hazard tree management practices.
- Coordinate site-specific hazard tree management between the hazard tree management coordinator(s) and the appropriate wildlife biologist(s).
- Provide firewood collection permits for concessionaire and campground patrons for designated firewood cutting areas outside of Riparian Reserves.
- Ensure that boulder barricades are installed above the ordinary high-water line.
- Install/establish panels, interpretive signs, maps, kiosks, and picnic tables in existing openings.
- Control (reduce or eliminate) and annually monitor non-native plants, including Himalayan blackberry, to prevent their spread into neighboring sites.
- Use natural barriers to reduce traffic on the foot path adjacent to the pink fawn lily. This would reduce the risk of damaging the fence and/or plant.
- When hazard trees are removed, plant native trees to provide future substrate and snag recruitment; consider placement, recognizing that these trees would also be subject to removal if they pose a hazard in the future.
- Waterbar or grade any steep trail, slope, or roadway which may erode or transport sediment to a stream channel.
- When stream channels may be influenced, limit soil and plant disturbance in site preparation and construction to minimize sediment production, protect bank stability, and maintain riparian species composition.
- Revegetate unutilized or disturbed locations with native species when possible, to protect soil, water, or plant and wildlife communities.
- Design road and parking areas for adequate drainage to minimize delivery of water and

- sediment to Edson Creek and Sixes River.
- Evaluate, based on future trends, whether other conservation practices need to be applied for the protection of soil and water resources. Examples include: A) heavy use of trail during the winter season, B) if user-defined access routes continue to be used or developed, or C) if increased runoff of water and sediment from road and parking improvements are adversely affecting the water quality of Edson Creek and Sixes River.
 - Maintenance plans for the area should include mandatory removal of all noxious weeds when detected within the designated site.
 - Use of heavy equipment in and near waterways requires the development and submission of Spill Prevention, Control and Countermeasure Plans (SPCC) for each contract resulting from EA OR128-99-13. Contractors / operators will also be required to furnish and keep Spill Containment Kits on site. Specifications for these requirements have been developed and will be included in any contracts. District Spill Plan is to be followed in the event of a spill or release. (References: 40 CFR 100-149, 260-299, and 300-399; Oregon Revised Statutes Chapters 466 and 468; Oregon Administrative Rules 340-108 (DEQ Spill and Cleanup); OAR 629-57-3600 (Oregon Forest Practices)).
 - Pre-work meetings shall include the submission and review of required plans where applicable. Contract administration shall include compliance check for spill kits, and monitoring for releases.
 - Storage and use of chemicals and petroleum products on site shall be in accordance with applicable federal and state standards and codes, in approved containers, and subject to spill plans.
 - Cut all green Port Orford Cedar (POC) 25 feet up slope and 30 feet down slope from roads, campsites, and trails in the developed Sixes Recreation Site and Edson Creek Recreation Site. This will reduce the likelihood of *Phytophthora lateralis* infection centers becoming established on BLM lands. Cut all dead POC to reduce potential hazards to the public.
 - Require washing of all construction equipment prior to entering BLM lands to prevent the spread of disease.

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Executive Summary

The Sixes River Special Recreation Management Area (SRMA), located approximately 10 miles east of Cape Blanco along the Sixes River in Oregon, is most widely known for the discovery of gold in the 1850's. Portions of the management area have been public land since 1846 including what is now Sixes River Recreation Site, a riverside campground, which is popular among many visitors today and especially recreational miners. Edson Creek Recreation Site, a creekside open expanse campground, is popular for group camping and is the only other site that offers developed public recreation opportunities along the Sixes River in the management area.

This Recreation Area Management Plan was prepared to guide management of recreation in the Sixes River SRMA while protecting resource values. It is consistent with: the 1994 *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl, and Standard and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (referred to as the Northwest Forest Plan or NWFP-ROD), Bureau of Land Management's Recreation Management Policy (BLM Manual 8300), the 1995 *Coos Bay District Record of Decision and Resource Management Plan*, the 1995 *Coos Bay District Outdoor Recreation Program Plan: A Strategic Plan for the Year 2000 and Beyond*, and it compliments the 1997 *Sixes River Watershed Analysis*.

The focus of this plan is on Edson Creek and Sixes River Recreation Sites, and integrating recreation opportunities in the immediate surrounding area. The foundation for the management program stems from issues and opportunities identified through public and BLM staff planning meetings.

Key features of this plan include actions intended to resolve safety, resource protection, recreation opportunity, visitor services, facility and development, recreation resource access, and cost management issues.

This plan will reasonably accommodate public recreation needs and demands projected for the next 10 years. Specific project plans and associated environmental analyses within the recreation sites will be prepared prior to implementing some of the actions contained in this Recreation Area Management Plan.

Part 1. Introduction

The Sixes River Recreation Area Management Plan (RAMP) is a 10-year plan of recreation management actions for the portion of the Bureau of Land Management's (BLM's) Myrtlewood Resource Area which is designated the Sixes River Special Recreation Management Area (SRMA) (see page 46 for the Sixes River SRMA & Planning Area Boundary map in Appendix B of this plan).

The SRMA and Planning Area Boundary

An SRMA is defined under BLM Manual 8320 - Planning for Recreation Resources as follows:

“Recreation Management Areas ... where significant public recreation issues or management concerns occur. Special or more intensive types of management are typically needed. Detailed recreation planning is required in these areas and greater managerial investment (e.g. facilities, supervision, etc.) is likely. There may be none to several of these areas within a resource area. The size of these management units is typically over 1,000 acres , but exceptions can occur for smaller sites (e.g. very large campground units, trail segments, historical sites, etc.).” (BLM, 1981).

The SRMA designation does not apply to private or other non-BLM lands. It applies only to BLM-administered lands within a geographical planning area. The purpose of the SRMA designation and boundary is for planning only; it defines the area which the plan will consider and determine how recreation use will be managed. Neither the SRMA designation nor the planning area boundary impair or impose additional constraints on existing land use allocations (e.g., Riparian Reserves, Late-Successional Reserves, and Matrix). The SRMA designation is not a land use allocation. It does not indicate that all public lands within the SRMA are designated for recreation and it does not establish recreation as the priority use for an area.

However, the Sixes River SRMA includes the existing Edson Creek and Sixes River Recreation Sites, which have been allocated to recreation as the primary use in the Coos Bay District Resource Management Plan.

Location

Located in the Southern Oregon Coastal area, the Sixes River SRMA is approximately 50 miles south of Coos Bay, 20 miles south of Bandon, and 10 miles north of Port Orford. The SRMA is approximately 400 acres of public land (Public Domain) administered by the BLM (consistent with the Federal Land Policy and Management Act of 1976) within an approximate 5600 acre planning area (majority of which is privately owned). It includes scattered parcels of BLM-administered land and two BLM Recreation Sites - Edson Creek and Sixes River Recreation Sites. Edson Creek and Sixes River Recreation Sites are 4 and 12 miles, respectively, east of US Highway 101 along Sixes River Road. Edson Creek Recreation Site includes 45 acres on Edson Creek at the confluence of Edson Creek and Sixes River. Sixes River Recreation Site includes 120 acres around part of the mainstem and the South Fork of Sixes River.

The SRMA is accessible from Highway 184, commonly known as Sixes River Road. This road is owned by Curry County from US Highway 101 to the bridge at Elephant Rock Creek where the road transitions from an asphalt to a gravel surface. The Timber Company, formerly known as Georgia Pacific, owns land between the end of the county road and the BLM property boundary. Siskiyou National Forest has historically maintained the portion of the road through BLM land (Sections 11 and 12).

Setting

The physical, social, and managerial settings of the recreation sites within the Sixes River SRMA can be classified using the Recreation Opportunity Spectrum (ROS), which was developed for recreation planning and management purposes and is used by the United States Forest Service (USFS) and the BLM. The ROS describes six broad classes of opportunities ranging from Primitive to Urban. Each class defines existing opportunities and experiences available on a site. Under this classification most BLM lands in the Coos Bay District generally fall into the Roaded Natural class. Edson Creek and Sixes River Recreation Sites can be classified within the range of Roaded Natural to Roaded Modified.

Background Information

In the mid 1850's, mining began on the South Fork of the Sixes River with Jake Summer's discovery of gold. There was enough gold found to support a small community called Summersville, which was near the current Sixes River Recreation Site. Later, a renewed interest brought miners to the same area in the 1870's, 1914, 1920's (when the Inman Mine was active), and 1930's. It was during the later decade when the current Edson Creek Recreation Site saw the impacts caused by the discovery of gold. In fact, Gilbert Gable built a camp at Edson Creek in 1933 (Masterson 1994). The current Sixes River Road follows historic Eckley Trail which was once used to travel and transport goods from the mines to Port Orford.

Edson Creek Recreation Site has been managed as a recreation site since 1966. However, several contacts with repeat visitors to the area indicate that recreational use occurred on-site as early as the 1950's. Edson Creek Recreation Site was acquired by the BLM in August of 1995 through a donation Quit Claim Deed from Curry County. The deed was granted with the understanding that the park would continue to be managed for recreation. In 1997, it was withdrawn to protect the recreation site from settlement, sale, location, and entry (including mining, but not leasing). The land surrounding Edson Creek Recreation Site is privately owned.

The area that is now the Sixes River Recreation Site has been public land since 1846 when records show ownership by the General Land Office. Records indicate that the development of six camping units with parking, sanitary, and water improvements was proposed in 1963. The site was then known as Elephant Rock Recreation Area. It was withdrawn from all forms of appropriation under public land laws (including mining, but not leasing) and was reserved for public recreation sites in 1965. The 40 acres along the western border and the

40 acres adjacent to the southeast corner of the recreation withdrawal are BLM lands withdrawn for potential hydropower generation; they do allow for mineral entry and an active mining claim has recently been filed on half of the 40-acre Power Site Reserve to the west of Sixes River Recreation Site. One 40-acre lot, adjacent to the northwest portion of Sixes River Recreation Site, is privately owned. The rest of the land bordering the recreational site is owned by The Timber Company.

Both recreation sites are withdrawn from mineral entry, meaning no mining claims can be filed. However, recreational mining (i.e., panning, sluicing, and dredging) is not excluded along the Sixes River. The Oregon Division of State Lands regulations currently confine surface dredging to an "Instream Work Period" July 15 - September 30. Recreational mining activities must be consistent with Oregon Division of State Lands, Department of Environmental Quality, and Army Corps of Engineers regulations and requirements. General Authorization removal-fill permits are obtained through Oregon Division of State Lands. The BLM does not issue permits for recreational mining.

Planning Process

The planning process for Sixes River SRMA began with BLM Recreation Staff identifying problems related to management and visitation at Edson Creek and Sixes River Recreation Sites. An interdisciplinary team of resource specialists was formed to identify potential and significant environmental issues. Members of this team, that changed over time, were involved in the early stages of planning as well as preparing the Environmental Assessment.

The public was invited to offer input to the issues (within the SRMA) and objectives that this plan addresses, either by public meeting, letter, phone, e-mail, or fax. An announcement was mailed in April of 1998 to adjacent landowners, local governmental bodies, civic groups, Chamber of Commerce and others who expressed an interest in participating in the planning process. Enclosed with the announcement was a list of broad recreation program goals and objectives, a list of identified management problems and known user conflicts at the recreation sites, and a schedule of public meetings. Public meetings were announced in the *Port Orford Today*, the *Port Orford Newspaper*, and *The World*, a regional newspaper published in Coos Bay, Oregon. Meetings were held at Port Orford, Bandon, and North Bend in April of 1998. The public is also invited to review the draft plan and Environmental Assessment.

Purpose and Scope of the Plan

The purpose of this plan is to:

1. Guide the management of Edson Creek and Sixes River Recreation Sites within the Sixes River SRMA.
2. Guide the function and design of specific projects within the recreation sites and SRMA.
3. Identify actions that BLM would implement to resolve recreation management problems and issues described in the Major Issues section of this plan.

4. Integrate other recreational resource opportunities within and adjacent to the Sixes River SRMA.
5. Establish priority levels of identified actions as phases for implementation.
6. Serve as an intermediate step between the Coos Bay District Resource Management Plan (RMP) and Project Planning.

The scope of this plan is limited to management actions that both resolve the planning issues and provide recreational opportunities presented by the area. Because this plan is issue-oriented, factors outside the scope of the planning issues are not discussed.

Recreational Importance of the Planning Area

The Sixes River has historically served recreational needs of local citizens and tourists along the southwestern Oregon Coast. The pioneer settlements of northern Curry County, early travel routes, and the discovery of gold along the river in the 1850's still draw the attention of curious recreationists. Many of these historical and cultural uses occurred on what is now BLM-administered public land in the planning area. Currently, there are 25 campsites, 4 group reservation sites, and a boat ramp at Edson Creek Recreation Site. At Sixes River Recreation Site there are 19 campsites and 2 individual day use picnic sites. Table 1 on the following page displays a detailed summary of existing or approved recreation site facilities. Edson Creek and Sixes River Recreation Sites offer river access and the only developed public recreational opportunities east of US Highway 101 along the Sixes River. Recreation opportunities outside of the planning area are not discussed in detail in this plan. However, a map is provided in Appendix B (see page 46) to display the relationship of the nearest recreation opportunities to the planning area.

Table 1: Summary of Existing or Approved Recreation Site Facilities 1999

Facilities	Edson Creek Recreation Site	Sixes River Recreation Site
Campground	yes	yes
campsites	25	19
tables	yes	yes
fire/BBQ pits	yes	yes
toilets	3 vault	2 vault
host sites	yes	yes
host utilities	electric, telephone, water, sewer	electric, water, sewer
storage structures	yes	yes
potable water	yes	yes
Reservation Area	yes	no
campsites	4	no
tables	yes	no
fire/BBQ pits	yes	no
toilets	1 vault	no
Developed Day-Use Area	yes	yes
tables	no	2
fire/BBQ pits	no	yes
boat ramp	yes	no
toilets	1 portable	1 vault
Undeveloped Use Area	yes	yes

Physical and Biological Resources in the Management Area Sixes River SRMA

The following resource descriptions are a general overview of the existing physical and biological resource conditions within the SRMA.

Climate

The climate in and around the Sixes River SRMA is typical of western Oregon, which is characterized by moderate temperatures and humidities and high precipitation in the winter. The annual precipitation can vary greatly, average annual precipitation ranges from 70 inches at sea level to 110 inches at higher elevations. The majority of this precipitation comes in the form of rain and fog drip, since snow is light and short lived in this area.

Water Quality

The State of Oregon Department of Environmental Quality's "Final 1998 Water Quality Limited Streams-303(d) List" designates the mainstem Sixes River as well as the South Fork Sixes River as exceeding temperature standards from their mouths to headwaters (OR-DEQ, 1998).

Water Rights

In Oregon, the Water Resources Department and the local Watermaster administer all water laws and water rights procedures in the state. Water is utilized predominantly for livestock production and public and private domestic consumption.

The State of Oregon, under the guidelines of the Oregon Department of Fish and Wildlife (ODFW), also has in-stream flow water rights for fish protection in this SRMA. These rights are from river mile 10.1 to 28.4 on the mainstem Sixes River, from Benson Creek to river mile 0.0 (mouth) on the South Fork Sixes River, and also on Edson Creek from river mile 5.0 to 0.0 (mouth). Information on specific water right allocations, sources, and priority dates can be obtained from the local Watermaster's office in Coquille, Oregon.

Geology

The Sixes River SRMA is located in the Klamath Mountains Geologic Province. The geological materials associated with the soils of the area are developed from Jurassic Otter Point, Cretaceous Humbug Mountain, and Tertiary Flournoy Formations. East-west trending faults divide the Sixes River area into different geologic eras.

Noxious Weeds

The site is located off of Highway 101, which provides the weed source for all visitors, fishermen, and principal users of the area. A great concern is the presence of at least 80 non-native species (USFS, 1997) with significant populations in the area of several noxious weed species such as: Scotch and French Broom (*Cytisus* sp.), Gorse (*Ulex europaeus*), Tansy Ragwort (*Senecio jacobaea*). Populations of noxious weeds within the designated site are light. However, the priority designation is high to keep any additional spread or populations

out of the area. The biggest problem is going to be keeping the high populations of noxious weeds that surround the site out.

Oregon Department of Agriculture (ODA) and the U.S. Forest Service (USFS) have had aggressive Gorse eradication programs in place for several years, however, large populations remain in the immediate area. For example, in cooperation with ODA, the USFS and BLM have biologically treated local Gorse populations with the gorse spider mite (*Tetranychus lintearius*). Additionally, tansy ragwort has been inoculated with the tansey flea beetle (*Longitarsus jacobaeae*).

Other aggressive non-native species of the area include: Foxglove (*Digitalis purpurea*), Himalayan Blackberry (*Rubus discolor*), Beach Grass (*Ammophila arenaria*), Japanese Fleecflower (*Polygonum cuspidatum*). The fertile soils and forgiving climate are very conducive to these fast-growing, non-native species. Most of these species have been introduced in the area through vehicle travel, construction equipment, historic overgrazing, timber harvest and other ground-disturbing activities.

Forest Stands and Port Orford Cedar

The entire area (Edson Creek and Sixes River Recreation Sites) is in the Western Hemlock vegetation series. The Western Hemlock/Swordfern plant association and Western Hemlock/Salmonberry plant association are the primary plant associations. This drainage contains a dominant overstory of Douglas-fir. The other minor species found in the overstory are Western Hemlock, Grand fir, Western red cedar, Red alder, Bigleaf maple, madrone, and tanoak.

Port-Orford Cedar (POC) is found predominately as an understory species. The understory includes POC as well as the following shrub and herb species: vine maple, rhododendron, Oregon-grape, Ocean-spray, Ceanothus, Oxalis, Poison Oak, evergreen huckleberry, salmonberry, thimbleberry, and ferns.

Port-Orford cedar root rot *Phytophthora lateralis* occurs throughout the drainage primarily along streams, the Sixes River Road, Moon Mt. road, Plum Tree road, Otter Creek road, on USFS lands, and other private roads. These infection sites occur both above and below the Sixes Recreation Site and the Edson Creek Campground. There are numerous areas of healthy POC trees along these roads and throughout the drainage.

The spread of the disease is influenced by human activities and natural events. Such natural events include rainfall, saturated water flow, movement of animals, and movement of soils by natural erosion. The probability of POC becoming extinct due to the disease is low. Even in areas of heavy disease occurrence, POC exists. POC is a prolific seeder and produces seeds early, between 5 and 9 years of age. Also seeds may lie dormant for up to 5 years and its population exhibits some resistance to the disease.

Aquatic Habitat/Fisheries

Both anadromous and resident fish populations extend throughout the SRMA.

The aquatic habitats within the SRMA show evidence of adverse modification from past management practices; including logging, mining, and manipulation of the riparian vegetation. Stream temperatures throughout the SRMA tend to be higher than optimal for salmonids in the summer.

Both the Edson Creek and Sixes River Recreation Sites are within the Oregon Coast coho salmon Evolutionary Significant Unit (ESU) (listed as Threatened under the Endangered Species Act), the Oregon Coast steelhead trout ESU (federal candidate), and the Oregon Coastal cutthroat trout ESU (federal candidate).

Wildlife

Bald Eagles, a Federally Threatened species, are not known to nest in the area at this time, but have been observed periodically along the Sixes River downstream.

Although a complete wildlife species or wildlife habitat inventory has not been completed, the forests and riparian areas of the SRMA are likely to contain a wide variety of wildlife species. There are approximately 58 old-growth related vertebrate species (Interagency, 1994) which may occur within the area. In addition there are numerous other species of wildlife such as Black-tailed deer, black bear, mountain lion, skunks, raccoons and a variety of birds (including jays) which are known to occur within the area. Riparian-associated species are likely to include special status species such as Yuma Myotis bats, Dunn's salamanders, and others. Generally speaking, the habitats of the lands within the SRMA vary greatly in the types and qualities of wildlife habitats. The River corridor has a long history of disturbance from resource extraction activities and much of the land is privately owned.

Hydrology

The Sixes River flows approximately 9 miles through the SRMA. At the lower end, near the confluence with Edson Creek (river mile 10.1), the river is a wide floodplain channel with large gravel bars. This reach is a low-gradient C4 stream type under the Rosgen classification system (Rosgen, 1994). The river carries a high sediment load with substrates dominated by gravels, with some cobbles and sands. Stored sediment in the active channel comprises the majority of the sediment transport budget. Recovery in the Sixes River from previous major aggradational events will continue into the future with a gradual decrease of stored sediment. Only a small amount of sediment remains stored in the tributaries compared to the mainstem (USFS, 1997).

At approximately river mile 12, the channel begins increasing in gradient and becomes confined by the surrounding hillslopes. From this point, to the confluence of the South Fork Sixes River at river mile 18.5, the stream changes to a B4/3 stream type (Rosgen, 1994). The increased number of boulders and courser bed materials create a stable channel with deep pools along this reach.

Placer mining began in the latter part of the 1800's with five hydraulic mines in operation. The use of hydraulic giants concentrated powerful streams of water to wash material from stream banks. This type of operation can cause significant change to a stream. Without accurate historical documentation, it is unknown how the years of mining on the Sixes affected the channel along this reach (USFS, 1997).

Edson Creek Recreation Site

The following resource descriptions are the existing physical and biological conditions specific to Edson Creek Recreation Site.

Soils

The Soil Survey of Curry County identified the Logsdon soil series (167A) to encompass the Edson Creek Recreation Site. The Logsdon silt loam is a very deep, well-drained soil formed in alluvium. This soil type is located on the low stream terrace of Edson Creek at 0-3% slopes where it is subject to rare periods of flooding. The suitability of this soil for recreation use is limited by duration, intensity, and season of flooding.

Geology

The Edson Creek Recreation Site is underlain by the younger Otter Point Formation, a complex association of variable rocks from diverse origins. The Otter Point Formation consists of a highly disrupted and sheared melange of mudstone, sandstone, subordinate chert, volcanic rock, serpentinite, and blueshist (USFS, 1997).

Forest Stands and Port Orford Cedar

No active (recent) Port-Orford cedar root rot *Phytophthora lateralis* (PL) infections were found in this site. One dead POC is located on private land near the junction of the road to the low water crossing. Port-Orford cedar root rot infections were found to exist up slope on private lands from the recreation site. Scattered POC seedlings and saplings were found along the road past this road junction and next to an old landing in the southeast portion of the recreation site. No more than 10 POC trees were observed. Forested vegetation is dominated by myrtlewood, big leaf maple, red alder, and Douglas-fir. Most of the site lies within a riparian vegetation zone. Tree ages range from 15 to 140 years old.

Vegetation

The Edson Creek campground is located in a large, open, grassy lawn with no existing habitat for Special Status or Survey and Manage plant species. This lawn is bordered by a grove of red alder (*Alnus rubra*) and the January 14, 1999 survey did not find any Survey and Manage epiphytic bryophytes or lichens. The group campsites and undeveloped Day Use Area occur within the riparian vegetation which is dominated by myrtlewood (*Umbellularia californica*), big leaf maple (*Acer macrophyllum*), and Douglas-fir (*Pseudotsuga menziesii*) trees with an understory of swordfern (*Polystichum munitum*) and Himalayan blackberry (*Rubus discolor*). No Survey and Manage plant species or Special Status Vascular Plants were found on the May 3, 1999 botanical survey.

Aquatic Habitat/Fisheries

The condition of the aquatic habitat and salmonid fish populations in Edson Creek are described in the Sixes River Watershed Analysis (1997) on pp. A-32 to A-34. In summary, this information indicates that the lower reach of Edson Creek (which includes the BLM Recreation Site) was heavily inundated by sediments during the 1964 flood, and has been in a very gradual recovery [cutting through the sediment deposits to establish a stable meander pattern] since 1980. Aquatic habitat within the BLM Recreation site is characterized by deep gravel/cobble substrates, wide low-gradient riffles, and shallow pools and glides with sparse large woody debris cover. Edson Creek supports populations of fall chinook, coho, winter steelhead, resident rainbow trout, and cutthroat trout, in addition to pacific lamprey, three-spine stickleback, and sculpins. Anadromous fish habitat is limited to the lower 2.5 miles; the highest quality spawning habitat occurs within the lower mile (including the recreation site). The portion of Edson Creek which flows through the Recreation Site offers excellent overwintering habitat and high-water refugia in the form of side channels, meander cutoffs, and vegetated floodplains (willow, alder and myrtle). Successive pass/removal electro-fishing conducted in conjunction with the erosion-control project during the summer of 1999 indicates that the portion of Edson Creek within the Recreation Site supports very high densities of young-of-the-year steelhead.

Edson Creek is not currently listed (303d) as water-quality limited. However, the Sixes River Watershed Analysis (1997) cites Southcoast Watershed Council monitoring data from 1995 indicating a 7-day average maximum water temperature of 67.3° F. Although a definitive long-term trend cannot be established because the historic temperature data is limited, evidence from the Sixes River Watershed Analysis (1997) suggests that summertime water temperatures in Edson Creek may still be recovering from logging upstream which removed “all vegetation down to the stream.”

Wildlife

Bald Eagles and Peregrine Falcons occur within the range of the recreation site, although neither of these species is known to nest or regularly occupy the area. A more complete list of potential vertebrate wildlife is in the appendices of this plan. Generally the recreation site consists of habitats with a long history of habitat disturbances (aerial photos from the 1930's). The general area has small pockets of suitable Marbled Murrelet habitat and some Del Norte salamander, Blue-grey tail-dropper, Papilose tail-dopper and the Megomphix habitats throughout. This area is planned to be inventoried for Marbled Murrelets within the next few years.

Hydrology

The Edson Creek sub-watershed has a drainage area of 10.8 square miles (6,912 acres). The lower one mile flows through a low gradient valley section with a C4-bar braided stream type under the Rosgen classification system (Rosgen, 1994). The creek meanders through alluvial deposits with substrates consisting of fines, small and medium gravels, and cobbles. There is very little structure with most of the pools being formed by meander bends and artificial structures placed by the BLM to manage the stream. This stream reach is very sensitive to

disturbance and has slow recovery potential. During the high flows associated with winters storms, the channel's shape and dimension are susceptible to change as the gravel deposits migrate, shifting the position of the stream's thalweg. Erosion of streambanks is most evident in those areas where the channel flows through alluvium, and stabilizing vegetation is absent.

Streambank erosion is evident in the upstream section of the Edson Creek campground, where a flood event on November 18, 1996, combined with bank destabilization, caused the channel's energy to shift. This shift caused bank failure and channel widening (of up to 50 feet in some areas) to occur along the group camping sites and in particular campsite #20. Consequently, a rapid change in the channel's dimension, pattern, and profile occurred due to these factors, and the stream type is evolving from a C4 (previous) to a C4-bar braided (current) to a D4 (future). Without management intervention, this stream reach would continue to aggrade resulting in increased bar deposition, accelerated bank erosion, increased sediment supply, increased width to depth ratio, increased solar radiation exposure and temperature, and loss of fish habitat. In 1999, a Streambank Erosion Control Project (EA OR 128-99-14) was completed.

The Edson Creek Recreation Site lies almost entirely within the 100-year floodplain of Edson Creek and its associated Riparian Reserve as described on page C-30 of the Northwest Forest Plan-Record of Decision (Interagency, 1994).

Cultural

There are prehistoric cultural resources in the vicinity of the Edson Creek Recreation Site.

Sixes River Recreation Site

The following resource descriptions are the existing physical and biological conditions specific to Sixes River Recreation Site.

Soils

Curry County Soil Survey indicates that the Etelka-Whobrey-Remote (109F) and Preacher-Digger-Bohannon (200F) soil units encompass the developed portion of the Sixes River Recreation Site. In general, these soil types are well to poorly drained loams derived sedimentary rock and sandstone. Recreational development according to the Soil Survey classification system shows a severe limitation on all soil types in the Sixes River Recreational Site. This severe limitation is based more on slope than any other factor and can be avoided by careful placement of camp areas, picnic areas, playgrounds and trails on the landscape to minimize gradient.

The intensive historical mining background of Sixes River Recreation Site plays a major role in how the landscape looks and functions today. A field and historical investigation revealed that the character of the soil within the recreation site is largely a product of mining activity. The soil material is a combination of mine tailings, rock and the natural soil component described above. In turn, basing decisions on mapped soil types only may result in error and specific on-site review for actions is necessary.

Geology

The geology of the Sixes River Recreation Site consists of sedimentary rocks from the Cretaceous age, the Humbug Mountain Formation conglomerates and sandstones, and Tertiary sediments. The Cretaceous age rocks include metamorphosed sedimentary and volcanic members of the Galice Formation which have been intruded by diorites (USFS, 1997). The diorite intrusion is the source of gold mineralization in the area. The Tertiary sediments are composed of rhythmically bedded sandstone and shale with pillow basalts from the Cenozoic period. These young sediments, which comprise a small, undeveloped portion of the recreation area are weakly resistant to weathering (USFS, 1997).

Forest Stands and Port Orford Cedar

Port-Orford cedar root rot *Phytophthora lateralis* (PL) infections were found above and below BLM controlled lands along the Sixes Road traveling through this site. One PL infection was found within the Sixes Recreation Site next to the trail by Campground Site # 18. Green POC was found adjacent to Site # 4, Site # 17, # 18, and along the west portion of the recreation site. Approximately 10 POC trees were observed throughout the recreation site, these were all understory trees from seedling size to 14" diameter.

One large infection was detected in the area south of the Sixes River along stream-adjacent slopes. This area is outside of the developed recreation site. The likely source of infection was from up slope tractor logging on private lands. Port-Orford cedar root rot infections were observed in the private clearcut above the west portion of the BLM ownership. There

is no access to this area on BLM land by road. POC is likely to exist as a understory tree in this stand.

A root disease pocket affecting Douglas-fir (Laminated Root rot or Black Stain Root rot) was found next Sites #9, #10, and #11. Several dead Douglas-fir are in this area. Surrounding green Douglas-fir trees are likely to become infected and die. The control of the disease can be achieved by breaking the root to root transmission of the disease from infected trees to healthy trees.

Timber stands within the developed portion of the Sixes Recreation Site include scattered old-growth (300+ years) Douglas-fir, 60-80 year-old Douglas-fir, and 40-80 year-old hardwood stands. The understory trees are much younger and range from seedlings to 40 years old.

BLM-owned timber stands adjacent to the developed Sixes Recreation Site range from 500 year-old Douglas-fir, 100 year old mixed conifer (Douglas-fir, hemlock, Grand Fir, Western Red Cedar) to 60 year old tanoak and red alder stands. Hardwoods found immediately adjacent to the Sixes River are 40 years old. The understory trees are much younger and range from seedlings to 40 years old. Disturbances to these stands occurred naturally and from gold mining activities.

Vegetation

The Sixes River Recreation Site is dominated by myrtlewood, red alder, big leaf maple, and Douglas-fir trees with an understory of swordfern and Himalayan blackberry (in portions). Due to a long history of mining, the topography of the Sixes River recreation area has been altered significantly. This may be one reason why the pink fawn lily *Erythronium revolutum* grows within a small area in the campground. *Erythronium revolutum* is a BLM tracking species, which means that the BLM is encouraged to collect occurrence data to help determine its status and that special protection is discretionary; it is not considered threatened or endangered. Poison oak is also abundant within the site. The January 14, 1999 preliminary survey revealed no presence of Survey and Manage lichens and bryophytes. No Survey and Manage species or Special Status Vascular Plants were found on the May 3, 1999 survey.

Aquatic Habitat/Fisheries

The condition of the aquatic habitat and salmonid fish populations in Sixes River are described in the Sixes River Watershed Analysis (SRWA)(1997) on pp. A-25 to A-29. In summary, this information indicates that the lower reach of South Fork Sixes River and mainstem Sixes River (in the vicinity of the BLM Recreation Site) support populations of fall chinook, coho, winter steelhead, resident rainbow trout, and cutthroat trout, in addition to pacific lamprey, three-spine stickleback, and sculpins. Aquatic habitat within the BLM Recreation site is characterized by gravel/cobble substrates over bedrock, high-gradient riffles, and moderately deep pools and glides with sparse large woody debris cover. This

habitat accommodates limited spawning and summer rearing. Anadromous fish habitat extends upstream of the Recreation Site on both the mainstem and South Fork Sixes River.

The Sixes River is a 303d listed stream for high summertime water temperature. However, as stated on page A-28 of the SRWA, temperatures within the South Fork of the Sixes River (which flows into the BLM Recreation Site) are among the lowest in the upper river, having a 7-day maximum range at the mouth from 61.1 to 65.1 degrees F. (USFS, 1991-1994).

Wildlife

The majority of the forest acreage is an occupied Marbled Murrelet site, meaning that the area contains nesting populations of this Federally Threatened bird. Bald Eagles, another Federally Threatened species, are not known to nest in the area at this time, but have been observed periodically along the Sixes River downstream.

The campground contains habitat for some special status species such as the Red tree vole, Del Norte Salamander, Blue-grey tail dropper, papilose tail-dropper, and the Oregon Megomphix snail. Specimens of the salamander and at least one of the slugs have been observed within the disturbed habitats of the campground and relative densities of any of these species appears to be extremely low, due in part to the lack of high quality habitat remaining within the campground.

Much of the habitat within the recreation site is of a late seral condition. However the habitats within the campground include only remnants of old conifer trees and have numerous smaller diameter conifers and many hardwoods. The campground shows evidence of being a disturbed habitat site.

Hydrology

The Sixes River Recreation Site is located partially within the 100-year floodplain of the Sixes River and entirely within its Riparian Reserve as outlined in the NWFP-ROD. This campground was established on old tailing deposits from historical hydro-mining in this area, and is dissected by several man-made draws which were used as flumes to settle out gold (Fritz, 1999).

Cultural

There are both recorded prehistoric and historic resources in the vicinity of the Sixes River Recreation Site. Other unrecorded prehistoric cultural resources also are reported in the vicinity.

An historic travel route passes through the recreation site (Eckley Trail), although specific evidence has not been located. Largely, this is because the recreation site was also the former site of historic placer mining, which substantially altered the land in the recreation site. Remnants from this placer mining period include a masonry sluice box in the campground, and the adjacent town site of Summersville (Beckham, 1995).

Recreation Use in the Management Area

Table 2 below, displays the most current annual visitor data at Edson Creek and Sixes River Recreation Sites.

Table 2: Visitor Estimate From Fee Envelopes*

Recreation Site	1996	1997	1998	1999
Edson Creek	No fees	No fees	2791	2511
Sixes River	1370	1278	1487	1208

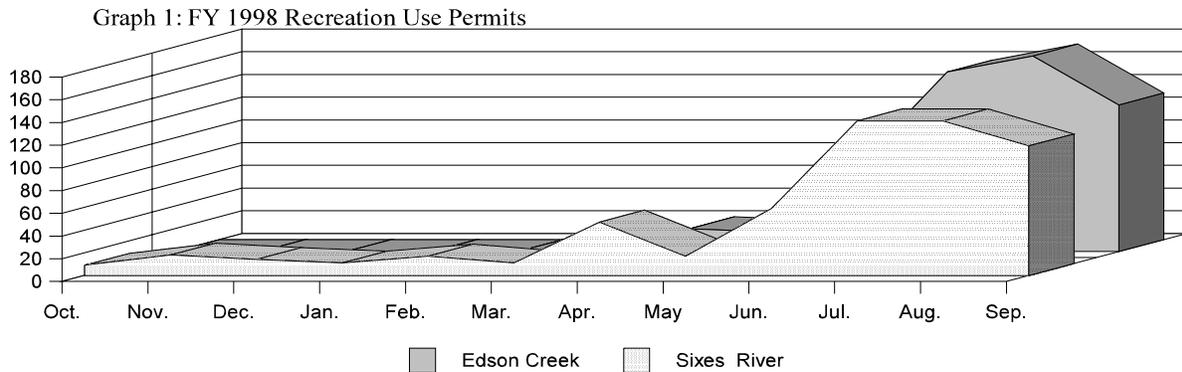
* 1 visit = 1 person regardless of the length of stay

Visitors who do not camp in the campground at Edson Creek Recreation Site, but use the boat ramp and secondary use area are not included in the above visitor estimate from fee envelopes. Fees are not presently charged at the boat ramp and secondary use area since these areas are not accessed through the campground where the fee tube is located.

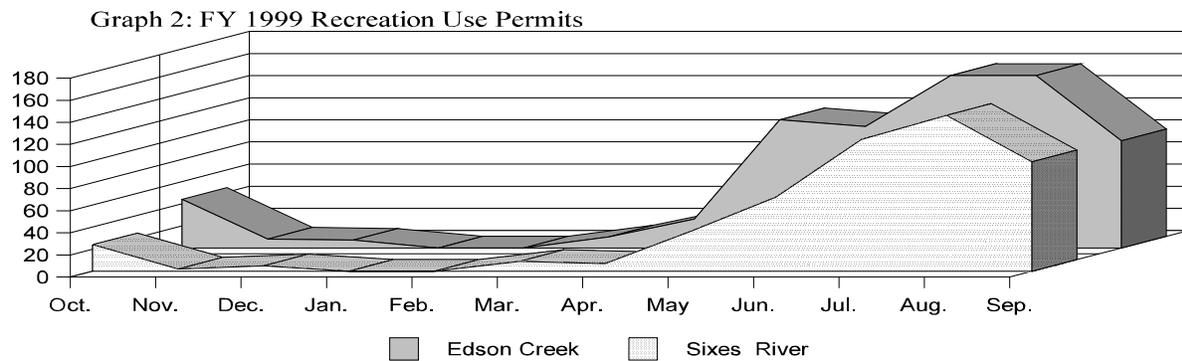
Although visitor data for previous years have been collected over time, they are inconclusive for the purpose of projecting annual visitor estimates due to several factors. First, data were taken from various sources during different time periods; site register counts taken by various camp hosts before fees were charged. Second, the data was not validated. Finally, fees were initiated in 1996 at Sixes River Recreation Site and in 1998 at Edson Creek Recreation Site, so visitor counts were discontinued and Recreation Use Permits (RUPs) became the source for data collection.

Until more visitor use data are collected and/or alternative methods of data collection are implemented, recreation staff rely on information (on-site observations and visitor/public contact) in addition to the annual visitor data collected from RUPs to describe and determine visitor use trends for planning purposes.

Graphs 1 and 2 below, display an estimated number of Recreation Use Permits (RUPs) (fee envelopes) collected monthly in fiscal years 1998 and 1999 at Edson Creek and Sixes River Recreation Sites.



Note: RUPs were not initiated at Edson Creek prior to April 1998. The average group size (number of visitors) per RUP in FY 1998 was 4.8 at Edson Creek and 2.5 at Sixes River.



Note: The average group size (number of visitors) per RUP in FY 1999 was 3.5 at Edson Creek and 2.5 at Sixes River.

Based on the number of Recreation Use Permits (fee envelopes) collected and on-site observations over the last two fiscal years, visitation levels generally start increasing and continue to increase from April to July. The visitation levels generally peak in August and by September, they typically start to decline.

Peak visitor use days, when visitation levels typically reach maximum capacity for the facilities provided at each recreation site, generally occur on or around Memorial Day, the Fourth of July, and Labor Day.

The Edson Creek and Sixes River Recreation Site use information (on the next page) is based on fee envelope input, on-site observations, and visitor/public contact.

Edson Creek Recreation Site

This recreation site is popular for camping, group camping, and swimming from late spring to early fall. Local families and groups make up most of the users. However, tourists traveling US Highway 101 from out of state and around the world also camp here. Some out-of-state visitors spend several nights at Edson Creek Recreation Site once they have stopped. Fishermen, boaters, forest product collectors, and visitors participating in other forms of dispersed recreation have been observed using the campground throughout the year.

The most popular activities among Edson Creek Recreation Site visitors are social gathering, (60% of all visitors), camping (55% of all visitors), and picnicking (45% of all visitors). Fishing, swimming and water play are all important activities for 10% of all users. Half of all the users come from local origin, 30% of all users are from less than 10 hours away, 18% of all users are from more than 10 hours away, and 2% of all users are from other nations.

The boat ramp is used from early October to the beginning of March. Most of this activity is concentrated in November and December when salmon and steelhead begin their spawning runs. At peak times during fishing seasons, this area of Sixes River becomes congested. People fishing the Sixes River are most often Oregonians from both the southwestern portion of the state and the Willamette Valley. Local river tour operators feel that there has been an increase in use from out-of-town visitors in the last few years. At key times during the fish runs, certain sections of the river get congested around the few good spots to launch a boat.

The boat ramp at Edson Creek Recreation Site is one of just a few launch areas along the Sixes River. Most of the land along the river is privately owned, which limits access. Boaters put in at Elephant Rock Creek, Dry Creek, and Edson Creek and drift down to take out at the Sixes Grange or the Day Use Area at Cape Blanco State Park. Some anglers also launch or take out on a gravel bar accessed through Oregon Department of Fish and Wildlife land, which is located between Edson Creek Recreation Site and the Sixes Grange.

Sixes River Recreation Site

This site is predominantly used for camping and recreational gold mining (dredging, sluicing and panning) from late spring to early fall. Recreational dredging is administered by the State of Oregon and has been authorized since 1970. Currently dredging is authorized only during the “In-stream Work Period”: July 15 through September 30. Panning and sluicing is allowed year-round. Commercial mining is prohibited.

Half of all the Sixes Recreation Site users are also of local origin, 25% of all users are from less than 10 hours away, 23% of all users are from more than 10 hours away and 2% of all users are from other nations. Sixes River Recreation Site is most popular for camping (70% of all visitors), specialized sports or recreational mining (60% of all visitors), picnicking (25% of all visitors), and fishing and swimming (15% of all visitors).

Projected Demand

The demand for outdoor recreation is expressed both on a national and regional (local) level. It is discussed in a number of ways which include: levels of participation, growth of activities, and preferred quality and setting. Factors influencing recreational use in the future are also discussed in this section.

Results of a Market Opinion Research Survey, conducted in 1986 for the President's Commission on Americans Outdoors (PCAO), indicate the following (BLM, 1990):

- More than 90 percent of the respondents expressed some desire to participate in outdoor recreation activities.
- Americans indicated they want quality recreation and perceive that resources are under stress.
- The American public clearly indicated they desire natural areas to be available for future generations and consider the natural environment as an important source for recreation.
- Americans indicated that they want access to these areas (provide roads, parking, and facilities).
- The public views the American government as an important provider of access, places priority on maintaining what public land and parks we now have over new establishments, and is willing to pay to offset the costs of operation and maintenance.

The Oregon Parks and Recreation Division publishes the *Statewide Comprehensive Outdoor Recreation Plan* (SCORP) approximately every five years, for the purpose of estimating the need for recreational lands and facilities within the state. Table 3 displays the most popular activities (according to the 1994-1999 SCORP survey respondents) in Oregon, ranked by the percentage of households participating in each activity.

Table 3: Most Popular Activities in Oregon by Percent of Participation (OPRD, 1994)

Activity	% of Participation
Sightseeing	69.3
Swimming (ocean, lake, or river)	58.7
Boat fishing	40.6
Tent camping	39.1
Wildlife viewing	38.5

The latest SCORP (1994-1999) refers to the 1988-1993 SCORP regarding demand for dispersed recreation. The 1988-1993 SCORP divided the State of Oregon into 8 regions. Curry County falls within Region 6. Table 4 displays the major activities Region 6 ranked by percent of participation (OPRD, 1998).

Table 4: Major Activities within SCORP Region 6 (OPRD, 1988)

Activity	% of Participation
Fishing	13
Water Activities	11
Sightseeing and Picnicking	10
Camping	9

The 1988-1993 SCORP summarizes recreation activities into the following three growth categories (projections made through the year 2010):

Low	Projected to grow less than 2.5% per year
Moderate	Projected to grow between 2.5 and 6% per year
High	Projected to grow 6% or more per year

Activities with moderate and high growth rates, which are likely to occur within the planning area are displayed in tables 5 and 6 below.

Table 5: Moderate Growth Activities in Oregon (OPRD, 1988)

Activity	% of Annual Growth
Freshwater boat fishing	5.5
Sightseeing/exploring	4.9
Picnicking	3.8
Non-motor river boating	3.7
Tent camping/motor vehicle	3.7
Freshwater bank/doc fishing	2.5
Big game hunting	2.5

Table 6: High Growth Activities in Oregon (OPRD, 1988)

Activity	% of Annual Growth
Biking on roads	12
Day hiking on trails	11.9
Outdoor photography	9.3
Nature study/wildlife observation	8.6
Recreation vehicle camping	6.1

According to the 1994-1999 SCORP, more survey respondents used and preferred to use Roaded Natural over other settings for dispersed fishing, swimming, boating, and camping activities. The Roaded Natural setting as it is defined in the 1988 SCORP follows:

“This includes forest, range, and coastal settings which generally appear natural or slightly altered. Access is by trail, road, and highway. One can expect to meet moderate amounts of other people. Recreation facilities such as developed campgrounds may exist, but there may also be some opportunities to camp away from others with no facilities.” (OPRD, 1998).

The results of the Market Opinion Research Survey for the PCOA as well as the SCORP results support the idea that a public desire exists to participate in outdoor recreational activities within natural areas. Edson Creek and Sixes River Recreation Sites are both considered within the range of Roaded Natural to Roaded Modified setting. Since camping, swimming, picnicking, and fishing are currently popular activities at Edson Creek and Sixes River Recreation Sites, the SCORP findings and projections are directly related to the projected demand. There were no projections for recreational mining.

More recent studies indicate that there is generally no immediate need to develop additional campgrounds, but individual dispersed campsites may be appropriate. In other words, the demand for the existing forms of camping are generally satisfied, but the demand for camping facilities or other (non-existing) forms of camping that may support other recreational activities is likely to remain unmet (BLM, 1995).

In 1990 a survey was conducted by the Oregon Department of Transportation Bike Program. The results support the idea that Oregon Coast Bike Route travelers tend to prefer walk-in tent sites. The survey results were: 58% (107 out of 184) of these travelers stayed in hiker/biker campsites and 43% (80 out of 184) used conventional campsites (ODOT, 1990). Oregon Department of Transportation estimates that 7,000 to 9,000 bikers travel the Oregon Coast each year (ODOT, 1990).

Factors influencing the type and extent of recreation use in the future include: agency funding, personnel resources, and demographics.

In order to maintain and provide quality recreation opportunities with limited agency funding and personnel resources, recreational uses, facilities, and design features that require or lead to minimal maintenance and supervision over time are likely to be considered.

Census figures projected significant increases (50 percent from 1984 to 2010) in persons 55 years and older (BLM, 1990). The general population is also estimated to increase (15 percent) over the same period of time. It may be stated that Americans will be healthier, living longer, and seeking to engage in recreational opportunities. The 65 years of age and older segment of the American population will have more discretionary time for recreation and higher per capita pensions or retirement income to devote to travel and leisure activities (BLM, 1990). Recreation opportunities that appeal to this group and universal design

features to facilitate recreation for older Americans, as well as disabled and very young visitors, are deliberately considered within the planning area. This is consistent with the Americans with Disabilities Act of 1990, which captures a commitment to full and equal opportunity for all Americans.

Major Issues

The following issues were identified on the basis of input from the public and by BLM resource specialist staff. Each issue asks a question related to specific problems that BLM must contend with in order to manage recreation at Edson Creek and Sixes River Recreation Sites. The recreation management strategies selected to resolve these issues are described by the Management Objectives presented in Part 2, and the detailed actions in the Management Program in Part 3 of this plan.

Issue 1 - Safety

What should BLM do to improve safety at the recreation sites?

Some of the current conditions near the recreation sites create potential safety hazards to recreational visitors, BLM personnel, and private landowners.

Examples include:

- pedestrians crossing Highway 184 from campground to the boat ramp at Edson Creek
- mercury levels in Sixes River and campground generated by mining process
- irregular surface, grade, etc. of user-defined river access pathways at Sixes River
- hazardous wildlife (pests and scavengers)
- hazardous trees

Issue 2 - Resource Protection

What steps should BLM take to keep resource impacts to an acceptable level?

The Sixes River Special Recreation Management Area is used year-round for many different recreational uses. These uses and development associated with managing for these uses may affect soils, Riparian Reserve vegetation, wildlife populations, cultural, and other resources.

Examples include:

- Continuous vehicle and Off-Highway Vehicle (OHV) use within the undeveloped area and the main campground at Edson Creek Recreation Site during the wet season can affect vegetation composition and soil stability.
- Collecting firewood and no fuelwood removal enforcement can adversely impact stream stability in the flood plain (including recently completed bank stabilization), wildlife, and live or dead riparian vegetation at both recreation sites.

- Activities associated with visitor use could affect cultural resources.
- proliferation of user-defined pathways can affect vegetation and create soil erosion problems, as well as disturb wildlife habitat.
- Mistaken location of mining claim boundaries may result in erosion problems and loss of cultural and recreation resources.
- Introduction of noxious weeds can affect native vegetation populations.
- Fishing methods may influence fish populations.

Issue 3 - Recreation Opportunity

What Recreation Opportunity Spectrum (ROS) class/setting should BLM manage Edson Creek and Sixes River Recreation Site to achieve an availability of desired or appropriate recreation opportunities?

The current ROS class assignments for the recreation sites are based on an inventory of current conditions and class indicators. Identification of ROS class/setting under which each recreation site will be managed provides a basic guide for making future facility improvement decisions, as well as allocating site maintenance and management resources. Establishing the desired or appropriate ROS class/setting for managing these recreation sites is influenced also by opportunities available on-site, other recreation opportunities available in the surrounding area, and the role of BLM versus other recreation providers.

For example:

- An inventory of the current conditions at Edson Creek and Sixes River Recreation Site places both recreation sites on the ROS between Roaded Natural and Roaded Modified. Considering that Cape Blanco State Park (which can be classified as Rural) is to the west and the Forest Service's Grassy Knob Wilderness (which can be classified as Primitive) is to the south, it may be desirable and appropriate to continue managing the recreation sites at a mid-range ROS classification between Roaded Natural to Roaded Modified.

Issue 4 - Visitor Services

What types and level of visitor services will BLM provide, and how?

Given the frequent and reoccurring public use the recreation sites receive and limited resources available to manage recreation use, the provision of visitor services are required and necessary to ensure that emergency, information, visitor protection, and resource protection needs are adequately met.

For example, there exists a need to:

- enforce laws, regulations, and policies related to the recreation sites and mining
- provide more information on area history, wildlife, and access to other recreation opportunities in the area
- provide orientation information such as an area map with Edson Creek and Sixes River Recreation Site boundaries
- provide Site Hosts for on-site presence and to disseminate information
- collect consistent and accurate visitor use data

Issue 5 - Facilities and Development

What facilities and facility/site improvements should BLM provide to accommodate visitor needs and protect resources?

Given the frequent and reoccurring public use the recreation sites receive and limited resources available to manage the recreation use, the provision of facilities/site improvements would help to ensure management of these uses in a manner that promotes visitor health and safety and protects the resource base.

Examples of the recommended facilities/site improvements include:

- picnic tables, grey water stations, and toilets in common use areas
- universal access where possible and appropriate
- hardened parking and river access in boat launch, common use areas, and Edson Creek Recreation Site
- barriers (fence, boulders, gate, etc.) to manage access

Issue 6 - Recreation Resource Access

What level and type of access should BLM provide at the recreation sites to accommodate visitor needs and protect resources?

Traditional, reoccurring, and a potentially increasing desire for visitor access to common use or primary interest areas within recreation sites may impact some resources. Accordingly, it is important to establish the level and type of access that BLM will permit at the existing developed recreation sites in order to avoid such impacts.

Examples include:

- vehicle access to both recreation sites, including Edson Group Site via a low-water crossing
- vessel or vehicle access to the Sixes River from Edson Creek boat ramp and common use areas
- pedestrian access routes to common use areas

Issue 7 - Cost Management: User Fees/Management Partnerships

What fee structure and, if appropriate, potential operating partnership should BLM implement at Edson Creek and Sixes River Recreation Sites?

Considering the existing recreational use, growth of coastal tourism, budget limitations, and Congressional and Bureau direction to implement user fees, visitor-use fees and the potential to manage the recreation sites through partnerships or a concessionaire should be evaluated in order to meet public recreation demands and sustain quality public recreation sites in the future.

Requirements for evaluation and assessment:

- investigate concessionaire or partnership operation
- investigate optional use-fee structures
- prepare a business plan addressing site operations, maintenance costs, and revenues

Part 2. Management Objectives and Other Decisions

Recreation Management Objectives

Management objectives for the Sixes River SRMA were drawn from recreation management guidelines set out in the BLM's 8300 manuals, the Coos Bay District RMP, and the Coos Bay District Outdoor Recreation Program Plan. Table 7 displays the objectives that were established for resolving the planning issues described under the Major Issues section in Part 1 of this plan. Applicable planning issues in parenthesis indicate the objective applies to those issues as well.

Table 7: Recreation Management Objectives

Objective	Applicable Planning Issues
<ul style="list-style-type: none"> Improve visitor safety and health at the recreation sites. 	1
<ul style="list-style-type: none"> Provide the facilities, services, and administrative designations needed to manage the activities associated with recreational use including: <ul style="list-style-type: none"> a) unacceptable impacts from fuelwood collection within the Riparian Reserve b) unacceptable impacts from tread damage to floodplain c) unacceptable impacts from turbidity originating from vehicle access within Edson Creek active channel d) unacceptable impacts from bank erosion and damage to instream structures due to adverse vehicular and pedestrian traffic e) unacceptable impacts from the introduction of noxious weeds 	2
<ul style="list-style-type: none"> Manage the existing recreation sites consistent with Roaded Natural to Roaded Modified management classes. Continue to provide for a range of public recreation opportunities in the area, including individual to large-sized group camping and picnicking experiences within Edson Creek Recreation Site. 	3
<ul style="list-style-type: none"> Orient the users and provide additional information (considering public input) on existing recreation opportunities, emergency assistance resources, resource values, and management issues within the recreation sites and the surrounding area. 	4
<ul style="list-style-type: none"> Encourage responsible use of the recreation sites/SRMA and provide an appropriate level of law enforcement and site presence necessary to ensure the safety of the visiting public, minimize damage due to vandalism, and protect resource values. 	(1, 2, 4)
<ul style="list-style-type: none"> Provide basic facilities (toilets, potable water, waste disposal, picnic tables, firerings/grills, etc.) and make new improvements (considering public input) within the recreation sites that correspond to the ROS management class for each area and are consistent with the resource protection objective. 	(1, 2, 3), 5
<ul style="list-style-type: none"> Define and manage public access on developed and undeveloped portions of the existing recreation sites in a manner that corresponds to the ROS management class for each area and is consistent with the resource protection objective. 	(2), 6
<ul style="list-style-type: none"> Adjust user fees to help support the cost of operating the sites or reach Fair Market Value, and consider partnerships with local citizens, groups, and other agencies or concessionaires to assist in the management of the area. 	(All), 7

Other Decisions

Sixes River Watershed Analysis

In many ways the proposed plan complements the *Sixes River Watershed Analysis* (SRWA). The SRWA includes comments specific to patterns of recreation use along Sixes River, and particular activities such as recreational dredging, fishing, camping and growing trends in other dispersed activities. The SRWA is hereby incorporated in this plan by reference (USFS, 1997).

Regarding recreational mining and dredging, the Watershed Analysis noted that:

“Small scale or recreational gold mining with suction dredges will continue. Short term effects to the aquatic system (such as increases in turbidity) during the summer low flows will be likely. Impacts on salmonids are generally limiting in both extent and intensity.”(USFS, 1997, p. S-15).

The watershed analysis recommends the following: “Maintain or increase mineral administration of mining activity to protect resource values.” (USFS, 1997, p. S-17). Although BLM does not administer recreational mining (i.e. surface dredging) regulations and requirements, the BLM provides contact information for the Oregon Division of State Lands and other federal regulations and requirements. The BLM also supports compliance with these regulations and requirements within the Sixes River SRMA.

Recreational use, including guided sport fishing, was reported to have increased in the watershed analysis. This increase is expected to continue. There were no recommendations made regarding fishing, but the benefits to employment were noted, as well as limited access to the river due to private property ownership (USFS, 1997, p. S-8). The watershed analysis expects an increase in demand for biking, hiking and interpretation (USFS, 1997, p. S-10).

Riparian Reserves and Aquatic Conservation Strategy

As addressed in the Northwest Forest Plan-Record of Decision (NWFP-ROD) and the District ROD/RMP, impacts of existing recreation facilities within Riparian Reserves will be evaluated and mitigated to ensure they do not prevent attainment of Aquatic Conservation Strategy (ACS) objectives. ACS objectives are stated within the NWFP-ROD and the Coos Bay District ROD/RMP. The ACS objectives are hereby incorporated in this plan by reference (Interagency, 1994).

Late Successional Reserves (LSR)

As addressed in the NWFP-ROD (Interagency, 1994, p. C-18) and the management direction of the District ROD/RMP, recreational uses that retard or prevent attainment of LSR objectives will require use adjustment measures—such as education, use limitations, traffic control devices, or increased maintenance. The objectives for LSR’s are stated in the NWFP-ROD and summarized in the Coos Bay District ROD/RMP. The LSR objectives are hereby incorporated in this plan by reference (Interagency, 1994).

Visual Resource Management (VRM)

As addressed in the management direction of the Coos Bay District ROD/RMP, BLM-administered lands will be managed to meet visual quality objectives. Forest land adjacent (within 0.25 mile) to developed recreation sites would be managed as inventoried. Lands adjacent to county roads in rural residential areas are primarily Class III areas, which are managed to partially retain the existing character of landscapes. The visual resource contrast rating system will be used during project level planning to determine whether or not proposed activities will meet VRM objectives. The objectives for VRM are stated in the Coos Bay District ROD/RMP and are hereby incorporated in this plan by reference (BLM, 1995).

Part 3. Management Program

This part describes BLM's plan for managing recreational use of the Sixes River SRMA. Each of the seven planning issues and an administrative heading, Site Supervision and Monitoring, is addressed by an objective and one or more recreation management program actions below.

Issue 1 - Safety

Objective: Improve visitor safety and health at the recreation sites.

Common to Both Recreation Sites

Action 1-1: Coordinate with DEQ to determine the course of action for conducting a comprehensive study on mercury levels in the Sixes River.

Rationale: Effects of mercury on water quality and the river ecosystem are a subject of concern. DEQ has determined from tissue samples that mercury is bio-accumulating in fish. What is unclear is the level of mercury and rate of bio-accumulation. The mercury is located primarily in the river sediment. The theory is that dredging stirs up this mercury and increases the rate of bio-accumulation (McArthur, 1998). This is a resource concern as well as a public safety concern. An examination of existing research and historical data determined the need for a more structured and comprehensive study to test this hypothesis and obtain more statistically valid data.

Any new research would need to address at least two questions: 1) What is the level of mercury and rate of bio-accumulation in older fish that may be caught and eaten by humans? 2) Does recreational mining increase the level of mercury above the natural erosional process?

Specific to Edson Creek Recreation Site

Action 1-2: Work with Curry County Road Master on installing (painting) a pedestrian cross walk, speed limit or caution signs from the campground to the primary day-use area.

Rationale: Many people park along Sixes River Road or in the campground and walk across the road to the day-use area. Traffic controls such as posted speed limits, pedestrian signs, or cross walks do not exist.

Issue 2 - Resource Protection

Objective: Provide the facilities, services, and administrative designations needed to manage the activities associated with recreational use.

Common to Both Recreation Sites

Action 2-1: If feasible, provide one of the following: 1) contract with concessionaire to provide pre-cut firewood sources or 2) sources within a designated collection boundary for visitors to collect or obtain firewood at the Sixes River and Edson Creek Recreation Site. Prohibit wood gathering within the recreation site boundaries.

Rationale: Many visitors consider a campfire to be a meaningful part of their outdoor and/or camping experience. Downed trees and brush are scarce, because they have been regarded as sources of firewood. Some campers take living as well as dead vegetation from the riparian area where it is a needed element of survival for fish and wildlife species. They are also taking downed hazard trees, which can serve as coarse woody debris habitat.

Specific to Edson Creek Recreation Site

Action 2-2: Develop a project plan to manage vehicle access by designing and providing hardened parking pads using grate or matted material (concrete and cable) for 6-15 sites. Manage open expanses in the campground and use a set date seasonal closure for unhardened sites (see Edson Creek Recreation Site map in Appendix B).

Action 2-3: Develop a project plan to manage vehicle access by providing parking pads (as in action 2-2) for 2 sites (R1A and R1B) in the reservation area. Use boulder barricades with parking pads to protect vegetation (see Edson Creek Recreation Site map in Appendix B).

Action 2-4: Install gate at the entrance to the campground to ensure resource protection during site/seasonal closures (see Edson Creek Recreation Site map in Appendix B).

Rationale: Soft ground during the wet season has been identified by both the public and BLM staff as a problem. Vehicles get stuck and tear up and create ruts in the main campground at Edson Creek. This usually happens in early spring and late fall when people want to camp, but also during the winter when people drive over the open expanse -- sometimes accidentally and often intentionally. Over time, this could cause negative impacts. The resultant ruts create a significant maintenance workload. Vehicles that use and access the open expanse need to be managed.

Action 2-5: Install (boulder) barricades at the river bank in the secondary use area. Re-vegetate by planting native grass seed on the slope where damage has occurred (see Edson Creek Recreation Site map in Appendix B).

Rationale: Potential for erosion exists along the bank at Sixes River Road in this Day Use Area. Four-wheel drive vehicles have been driving over the bank to access the river and adjacent properties leaving a passage stripped of ground cover.

Action 2-6: Install a fence (post and cable) along the road and a gate at the east entrance to eliminate Off-Highway Vehicle (OHV) use in the undeveloped area east of the Group Reservation Area (see Edson Creek Recreation Site map in Appendix B).

Rationale: This undeveloped area is within the boundary of Edson Creek Recreation Site and is open to the public for day use only. However, its access road is rutted out and several points of access have been stripped of ground cover by user-defined OHV use over a number of years. Continuous OHV use of this area may create a loss of vegetation and erosional problems.

Specific to Sixes River Recreation Site

Action 2-7: In order to avoid potential resource damage and conflicts between mining and recreation use management, request mineral entry withdrawals for the adjacent power site withdrawals.

Rationale: According to recommendations (Appendix J) in the District ROD/RMP, the existing power site withdrawals are to be revoked. These parcels, which are adjacent to the existing recreation site, are currently (and will continue to be) susceptible to the filing of mining claims. Since site boundaries are not clear to visitors, the potential conflict between the use of these public lands is (and will continue to be) confusing to recreational miners, visitors, and claim filers.

Action 2-8: Develop a brochure that makes mining regulations understandable. Provide information on the hazards of mercury generated by the mining process. Distribute via the camp host and at local Chamber of Commerce and Visitor Information Offices.

Rationale: Ambiguous mining regulations are difficult to understand. Five different agencies participate in the management of recreational mining along the Sixes River: Oregon Department of Fish and Wildlife, Oregon Division of State Lands, Oregon Department of Environmental Quality, United States Army Corps of Engineers, and the Bureau of Land Management. Three of these agencies require some type of permit to engage in dredging; ODF&W and BLM do not. Wording in the state legislation and the federal notice differ in their definitions of where extraction is permissible. Miners are overwhelmed by information on the history of the law, the role of each agency, and wordy instructions. Many just want to know what is actually required so they can get on with their activities.

Issue 3 - Recreation Opportunities

Objective: Manage the existing recreation sites consistent with Roaded Natural to Roaded Modified management classes. Continue to provide for a range of public recreation opportunities in the area, including individual to large-sized group camping and picnicking experiences within Edson Creek Recreation Site.

Specific to Edson Creek Recreation Site

Action 3-1 Direct the planning, facility development, operation, and maintenance efforts to provide recreation opportunities within the class/setting range of Roaded Natural to Roaded Modified at Edson Creek and Sixes River Recreation Site. Maintain existing facilities and structures at each recreation site.

Rationale: Identification of ROS class/setting under which each recreation site will be managed provides a basic guide for making future facility improvement decisions, as well as allocating site maintenance and management resources.

Issue 4 - Visitor Services

Objective: Orient the users and provide additional information (considering public input) on existing recreation opportunities, emergency assistance resources, resource values, and management issues within the recreation sites and the surrounding area.

Common to Both Recreation Sites

Action 4-1: Train volunteer campground hosts and develop brochures on natural resource issues specific to the area such as coarse woody debris retention (fuelwood collecting), bank stabilization at Edson, and garbage removal to discourage wildlife scavengers (crows, jays, racoons, etc.). Provide brochures - consulted upon with the appropriate resource specialists.

Rationale: Volunteer Hosts provide a site presence and a great deal of information to visitors through personal contact. It is essential that these volunteers have (or are able to obtain) the facts to effectively communicate with the public.

Action 4-2: Design a Sixes/Edson area brochure/map and guide to provide recreation visitors with information about the sites and nearby outdoor recreation opportunities, including the Sixes/Elk Loop for driving and biking, Grassy Knob Wilderness, the Elk River, and Cape Blanco. Explore the possibility of jointly producing the brochure, covering the Sixes and Elk River drainages, with the Forest Service. Distribute in local Chamber of Commerce and Visitor Information Offices and through site hosts.

Action 4-3: Assess the need to interpret the natural and cultural resources on or near the recreation sites. If the need exists, prepare an interpretive assessment/plan.

Action 4-4: Maintain and continually update campground web pages. Include consultation with appropriate resource specialists.

Rationale: Although Sixes River and Edson Creek Recreation Sites appear on the Oregon Road Map, there is not an existing brochure or other source with more descriptive information of the setting and surrounding recreational opportunities. Potential visitors may have no idea what kind of setting and activities/opportunities to expect.

Recreational opportunities along the Elk River and in Grassy Knob Wilderness are not currently promoted in the campgrounds or at the BLM, Coos Bay District office. Grassy Knob Trail, Barklow Trail, and recreation sites along the Elk River are within a short driving distance of the campgrounds (see Recreation Opportunities in the Surrounding Area map in Appendix B). Many users of Sixes and Edson Recreation Sites are unaware of these opportunities. In addition, promoting other nearby recreational opportunities and attractions is consistent with Curry County goals to diversify their economy by promoting resource-based tourism. Knowledge of additional activities and opportunities could entice visitors from outside of the County to stay longer.

Action 4-5: Develop and install a series of informational/orientation panels for campground and day use area kiosks using a consistent layout for each

campground and day use area. Maintain a consistent kiosk structure and sign design from site to site (see Appendix C-Signs and Kiosks).

Action 4-6: Design and install detailed recreation site maps for orientation kiosks at each site showing rivers, roads, trails, campsites and day use areas. Designate or name loops and/or spurs for identifying different segments of the campgrounds and day use areas.

Rationale: There are no signs, information boards, or kiosks within the campgrounds, reservation or day use areas that provide clear and easy-to-read maps or listings of nearby services and recreational opportunities.

Specific to Edson Creek Recreation Site

Action 4-7: Sign common use areas such as parking, day use, and boat ramp with signs located to provide adequate visibility from the road at Edson Creek Recreation Site (see Appendix C-Signs and Kiosks).

Action 4-8: Install kiosk in boat ramp/primary day use area at Edson Creek Recreation Site (see Edson Creek Recreation Site map in Appendix B).

Action 4-9: Install kiosk and provide orientation information in the main campground area and on island inside gate to the Group Reservation sites (see Edson Creek Recreation Site map in Appendix B).

Action 4-10: Provide information board in proposed walk-in tent camping area addressing fees and where to pay (see Appendix C-Signs and Kiosks). *Action deleted as a result of Decision Record dated September 13, 2000.*

Rationale: See Rationale for Action 4-5 and 4-6 above.

Action 4-11: Work with Oregon Department of Transportation to have Edson Creek Campground added to the Oregon Coast Bike Route map.

Rationale: An interest in linking and extending BLM service through partnerships or agreements to other recreation opportunities in the area has been identified by some of the public.

Issue 5 - Facilities and Development

Objective: Provide basic facilities (toilets, potable water, waste disposal, picnic tables, firerings/grills, etc.) and make new improvements (considering public input) within the recreation sites that correspond to the ROS management class for each area and are consistent with the resource protection objective.

Common to Both Recreation Sites

Action 5-1: Write a maintenance plan that will: 1) Identify target maintenance levels (work months and dollars) for the recreation site and address issues such as: removal of noxious weeds; removal of litter and garbage to discourage wildlife such as crows, jays, raccoons and bears. Include a schedule that will address annual maintenance needs (pruning, signing, and foot path

maintenance of each site, etc.) as well as routine maintenance needs (cleaning, trash collection, and grounds maintenance). 2) Address hazard tree management.

Rationale: A maintenance plan is intended to guide maintenance activities and include a schedule for annual or periodic maintenance. It serves as a reference document to aid the achievement of thorough and consistent maintenance practices.

Action 5-2: Design campsites, pathways (access routes), and picnic areas for universal access whenever possible. Review sites to determine accessibility improvement needs, if any, and replace or retrofit existing facilities that do not meet universal access standards.

Rationale: Design features of facilities and opportunities to engage in recreation activities must be consistent with the Americans with Disabilities Act of 1990.

Action 5-3: Develop a project plan to manage grey water disposal by designing and installing approximately 3-6 covered or screened grey water disposal stations at Edson Creek Recreation Site, and relocate/replace 3-6 grey water stations at Sixes River Recreation Site (see Edson Creek and Sixes River Recreation Site maps in Appendix B).

Rationale: With the frequent use that the recreation sites receive and need for long term hosting ability, it is necessary to reduce: human health and safety hazards, contamination of the river, and pollution of the environment. There are currently no adequate gray water disposals and visitors draw drinking water from untreated surface sources.

Specific to Edson Creek Recreation Site

Action 5-4: Develop a project plan to provide alternative camping opportunities by establishing 4-8 walk-in tent campsites at the eastern undeveloped portion of the recreation withdrawal. Install artificial habitat structures to alleviate potential wildlife habitat loss (see Edson Creek Recreation Site map in Appendix B). ***No Action selected as a result of Decision Record dated September 13, 2000.***

Rationale: Walk-in tent sites have been observed to be popular among touring cyclists, motorcyclists, young couples, and families. Walk-in tent sites provide an experience that is less expensive and more intimate or primitive in nature than campsites that are developed for RV parking. The current setting of the campground at Edson Creek Recreation Site is open with no screening and is used for social gatherings. There is currently no alternative camping experience at this site.

Action 5-5: Develop a project plan to harden the boat ramp, parking, and entrance road surface to eliminate rutting, reduce sedimentation into the river, and improve access. **Action modified, Decision Record dated September 13, 2000, as follows: Install concrete and cable matting system at or above high water mark.**

Rationale: The existing Edson Creek boat ramp/day use area offers one of only three public boating access points with parking along Sixes River. Periodically, the boat ramp is rutted out making it hard to use by vehicles and launching drift boats. In its current state, resource damage occurs due to wet weather, steep grades, and inadequate surfacing.

Action 5-6: Install 1-2 picnic tables in the primary day use/boat ramp area. (see Edson Creek Recreation Site map in Appendix B).

Rationale: Basic day-use facilities such as picnic tables and orientation signs (for picnicking, fishing, and swimming) at Edson Creek Recreation Site are not provided.

Action 5-7: Develop a project plan to manage day use by hardening the existing vehicle access/entrance road and cutting vegetation that blocks line of site onto Highway 184. Define foot path to the river from parking area. This should happen after installing boulders barricades in action 2-5 (see Edson Creek Recreation Site map in Appendix B). **Action modified, Decision Record dated September 13, 2000, as follows: Manage for day use at this site by defining foot path to river, but eliminate current parking and barricade vehicle access.**

Rationale: The overgrown vegetation within this area and the entrance along the road limit visibility and pose a safety hazard to visitors. Ruts are forming on the entrance road due to user-defined traffic on the steep slope.

Specific to Sixes Recreation Site

Action 5-8: Develop a project plan to manage day-use opportunities by designing and developing a day-use, river-access area with parking and picnic facilities within the existing undeveloped portion at the west end of Sixes Recreation Withdrawal. Install a gate with a pedestrian bypass at the entrance of the existing road leading to this area. Upgrade the existing road for public vehicle access by either rocking or paving to harden the road surface. Utilize the existing openings approximately 2/3 of the way down the road for parking, picnic sites with tables, and a vault or portable toilet. Maintain the existing lower portion of this road to the river for pedestrian access. Install artificial habitat structures to alleviate potential wildlife habitat loss (see Sixes River Recreation Site map in Appendix B). **No Action selected as a result of Decision Record dated September 13, 2000.**

Rationale: Currently, there are only two developed picnic sites, with limited parking space, provided in the existing day-use area. When these two sites are occupied, few day-use

picnicking and river access opportunities exist. Some visitors choose to occupy a camp site for parking purposes, which displaces the camping opportunities. During the summer months over the past few years, staff contacts with visitors indicate a public desire for more designated Day-Use Areas with picnic and parking opportunities/facilities. (Another suggestion from visitors includes creating Reservation Camp Sites.) This desire may be to reduce competition for the existing day-use river-access/facilities. Creating additional picnic sites and parking in the existing developed day-use area is not feasible because the site configuration is limited by steep physical features.

Action 5-9: Research for accuracy and then, if appropriate, develop and install a low level interpretive sign near the sluice box in the campground. If research warrants, protect and repair masonry sluice box both from accidental impact by vehicles and “normal” degradation through age. The potential for repair of this structure, and necessary steps for its continued preservation, should be evaluated by an expert in historic masonry (see Sixes River Recreation Site map in Appendix B).

Rationale: The masonry sluice box has suffered damage, both from accidental impact by vehicles and “normal” degradation through age. Planning for interpretation of existing historic resources should include protection and repair (if needed) of those resources.

Issue 6 - Recreation Resource Access

Objective: Define and manage public access on developed and undeveloped portions of the existing recreation sites in a manner that corresponds to the ROS management class for each area and is consistent with the resource protection objective.

Common to Both Recreation Sites

Action 6-1: Meet with adjacent land owners to examine the possibility for a trail easement to Elephant Rock.

Rationale: An interest in linking public access through partnerships or agreements to other recreation opportunities in the area has been identified by some of the public.

Action 6-2: Work/coordinate with Oregon Department of Fish and Wildlife, the State Marine Board, and other agencies, organizations or private individuals to evaluate boating access along the Sixes River; develop a plan if necessary.

Rationale: Additional launch areas and take-outs that provide functional ramps and parking spaces along Sixes River was a need expressed in public meetings for this plan. The area near Dry Creek and Sixes River Road has been frequently used as a launch site but is outside of public property boundaries and has been fenced. The launching area used at Elephant Rock Creek bridge and Sixes River is also privately owned. The launching area at the ODFW station consists of a gravel bar. Most of these require four wheel-drive and may be undergoing some resource damage due to wet weather, steep grades and inadequate surfacing.

Action 6-3: Meet with Powers Ranger District of the Siskiyou National Forest annually to coordinate and ensure maintenance of Sixes River Road east of Elephant Rock Creek bridge.

Rationale: The frequent and significant public use that this area receives requires constant attention to maintain access to public lands from Sixes River Road. The current road condition needs upgrading to ensure safe visitor access and protect resources.

Specific to Edson Creek Recreation Site

Action 6-4: Develop a project plan to manage for a broader range of vehicle access by modifying the approaches above the bank full mark of the existing low water crossing leading to Edson Creek Group Sites R2 and R3. In the meantime, ensure that Group Site users are aware of the low water crossing's limitations and potential hazard to their vehicles in advance of their arrival (see Edson Creek Recreation Site map in Appendix B).

Rationale: Group Sites R2 and R3 are frequently reserved by visitors with RV's. The entrance to the low water crossing is too steep for many camping units and vehicles with a long wheel base or extended tail ends. These vehicles hang up and drag on the concrete blocks, causing damage to the crossing structure and to the vehicles. In addition, potential damage to vehicles (damaged sewage drains, brake lines, etc.) conceivably presents a hazard to clean water.

Specific to Sixes River Recreation Site

Action 6-5: Provide managed river access route (foot path) to the bank full mark in the existing developed day-use area by designing an access route and installing steps (terraced foot path) where necessary. Decommission non-designated routes (see Sixes River Recreation Site map in Appendix B).

Rationale: Access is not defined from the day-use area to the river. Visitors are cutting down the steep slope to the river from the day-use area at random, creating erosion problems and bank instability. A clearly designated route is needed to eliminate this problem.

Action 6-6: Construct a managed access route (foot path) linking the undeveloped west end area to the campground above the high water mark (see Sixes River Recreation Site map in Appendix B). ***Action deleted as a result of Decision Record dated September 13, 2000.***

Rationale: Pedestrian access only exists along the steep and narrow entrance road to the campground. Since managed access routes are not provided, visitors create random web-like pathways that could cause erosional and bank stability problems in the future. By connecting these pathway segments the managed access route would provide a good walking opportunity and access to all day-use and camping areas.

Action 6-7: Design and construct a managed access route (foot path) above the high water mark, connecting existing pathways where appropriate, from the existing day-use area and end at what is now campsite #10. Maintain access to the river

at site # 16 and site #13. Decommission non-designated routes. Establish a name and post access signs (see Sixes River Recreation Site map in Appendix B). ***Action modified, Decision Record dated September 13, 2000, as follows: Manage point of access routes only. Do not connect existing pathways from existing day use area to campsite 10 and discourage user defined access routes.***

Rationale: The pathway that follows the north bank of the river between the existing day-use area and site #10 is not well defined and in an unsafe condition. It has been blocked in places by debris for years. Visitors are cutting down to the river along this path from the day-use area and starting a system of random, braided pathways.

Issue 7 - Cost Management: User Fees/Management Partnerships

Objective: Adjust user fees to help support the cost of operating the sites or reach Fair Market Value, and consider partnerships with local citizens, groups, and other agencies or concessionaires to assist in the management of the area.

Common to Both Recreation Sites

Action 7-1: Evaluate the potential for concessionaire operation and maintenance of these sites by preparing a business plan that includes a comparison of costs - receipts from fees vs. proposals/estimates for concessionaire operation. Consider entering into a concessionaire agreement if proposal(s) result in cost savings to the BLM without tangible loss of recreation experience quality for visitors.

Rationale: Investigating alternative management approaches, could help to sustain quality recreation sites that are safe for public use.

Specific to Edson Creek Recreation Site

Action 7-2: Charge a boat launch fee at Edson Creek Boat Ramp/Primary Day-Use Area to offset the cost of maintenance and facility improvements. Determine commercial use levels and charge for commercial use of boat ramp if appropriate.

Rationale: See rationale for Actions 5-5 to 5-7.

Site Supervision and Use Monitoring

Objective: Encourage responsible use of the recreation sites/SRMA and provide an appropriate level of law enforcement and site presence necessary to ensure the safety of the visiting public, minimize damage due to vandalism, and protect resource values.

Common to Both Recreation Sites

Action 8-1: Continue Law Enforcement Agreement with Curry County Sheriff.

Action 8-2: Continue patrols with BLM Law Enforcement Officers. Establish site coverage during key times throughout the recreational use season.

Rationale: Regulations compliance and, in particular, public safety has been a challenge to ensure, due to the remoteness of the campgrounds and the limited number of recreation management and law enforcement staff. Problems involving disorderly conduct by campers, though not a constant or even frequent problem, are of particular concern.

Lack of enforcement of mining regulations at Sixes Recreation Site has contributed to erosion particularly along the north bank of the river, due to undercutting and digging by miners.

Action 8-3: Continue to seek qualified hosts by enlarging pool of volunteer applicants. Market Myrtlewood Resource Area campground host opportunities via the BLM homepage, through local newspaper ads or feature stories, and in RV publications such as *WorkKamper*.

Rationale: Volunteer Hosts provide a site presence and a great deal of information to visitors through personal contact. It is essential that these volunteers have the skills and abilities to effectively communicate with the public.

Action 8-4: Schedule weekend patrol teams during the high use season with Myrtlewood Resource Area Recreation Staff. Provide patrol coverage from 11:00 a.m. to 7:00 p.m. during these peak use periods.

Rationale: The recreation sites have been used traditionally as party spots for local area teenagers. In recent years, improvements to facilities and the presence of camp hosts have improved the atmosphere at both Sixes River and Edson Creek Recreation Sites by discouraging illegal activity and significantly reducing the occurrence of obnoxious and offensive behavior in both campgrounds. However, problems still occur on a regular basis, especially on weekends and in the evenings when recreation staff is not present. Although camp hosts can inform and remind visitors of regulations, they are not authorized to enforce regulations.

Action 8-5: Compare visitors' fee envelope stubs with the collected fee envelopes on weekly patrols at Edson Creek and Sixes River Recreation Sites during the high use season.

Rationale: The current fee-collection method does not adequately track fee compliance. Occasionally, fee envelopes are collected containing less than the required amount or no

money at all. Periodic fee compliance checks will decrease the potential for payment discrepancies and provide fee compliance data.

Action 8-6: Develop a visitor use monitoring plan (sampling method), which may include installing traffic counters at entrances to day use areas and campgrounds, to collect consistent and accurate visitor-use data. Continue to distribute customer comment cards.

Rationale: Existing visitor-use data does not lend enough consistency and accuracy to adequately identify and predict trends or patterns of use, which is needed for future planning and decision-making efforts. Traffic counters are relatively inexpensive non-invasive visitor-use data-collection devices and the current customer comment cards provide BLM with voluntary feedback. When analyzed, the resulting information contributes to future decision making and/or a basis for making adjustments to many different aspects of recreation resource management.

Part 4. Implementation Phasing and Costs

Implementation Phasing

Three phases and an ongoing category were determined necessary to fully implement the plan (see Table 8: Cost Estimate and Phasing). Depending on the level of funding and staff availability, each phase could take place over the time period of one year or a series of years. Each phase is prioritized based on the following:

- Phase 1: A series of actions (including prerequisite planning) identified to resolve critical concerns for safety, resource protection, visitor services, facility development, recreation resource access, cost management, and site supervision.
- Phase 2: A series of actions identified to meet and accommodate on-going resource protection, visitor services, facilities and development, recreation resource access, and cost management needs.
- Phase 3: A series of actions identified to meet and accommodate reasonably foreseeable recreation opportunity, visitor services, facility development, and recreation resource access needs. This phase will require additional project planning and assessment.

Actions categorized as ongoing need no further planning and may be integrated into the routine operational workload at any time.

Cost Estimates

Table 8 displays the planned actions, cost estimates, and phasing for the Sixes River management program through Fiscal Year 2009. All 46 actions are scheduled for implementation during the 10-year period. While additional planning, survey and design, and/construction will be necessary to fully implement many of the actions, others can be implemented with relatively little or no prerequisite work. Cost estimates are not shown for some actions as additional funding is not necessary for either their initiation or continued implementation. Below is a summary of the total estimated funding needs shown by fiscal year:

Fiscal Year	Total Estimated Funding Needs
2000	\$ 70,000
2001	\$208,000
2002	\$ 92,000
2003	\$ 38,000
2004	\$ 23,000
2005	\$ 6,000
2006	\$ 11,000
2007	\$ 10,000
2008	\$ 8,000
2009	\$ 7,000
Grand Total	\$473,000

Table 8: Cost Estimate and Phasing Table

Action	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	Total Cost Est.	Phase
1-1 Coordinate with DEQ				No cost							---	ongoing
1-2 Pedestrian crossing				No cost							---	Phase 1
2-1 Firewood source	1,000			1,000			1,000			1,000	4,000	Phase 2
2-2 Campground parking pads Planning Survey Implement	7,000	3,000 4,000 100,000					2,000				116,000	Phase 1
2-3 Res. parking pads Planning Survey Implement	2,000	1,000	2,000 45,000					2,000			52,000	Phase 1
2-4 Edson gate	5,000										5,000	Phase 1
2-5 Install Boulders Barricades and re-vegetate	3,000	2,000									5,000	Phase 1
2-6 Fence/gate undeveloped area	5,000	5,000									10,000	Phase 1
2-7 Pwr./rec. withdrawals	5,000	5,000									10,000	Phase 1
2-8 Mining brochure Design Implement		3,000 2,000			1,000			1,000			7,000	Phase 2
3-1 Manage ROS class/setting				No cost								---
4-1 Train hosts	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000	ongoing
4-2 Area brochure Design Implement		3,000 2,000			1,000			1,000			7,000	Phase 2
4-3 Interp. plan	6,000										6,000	Phase 1
Action	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 1999	Total Cost Est.	Phase

4-4 www pages				No cost							---	ongoing
4-5 Signs and kiosks Design Materials		2,000 5,000	2,000 5,000	2,000 5,000							21,000	Phase 2
4-6 Recreation maps				covered in 4-2							---	Phase 2
4-7 Sign day use	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000	Phase 1
4-8 Boat ramp kiosk				covered in 4-5							---	Phase 2
4-9 Res. orient. info.				covered in 4-5							---	Phase 2
4-10 (Deleted)												
4-11 Coast bike map		1,000				1,000				1,000	3,000	ongoing
5-1 Maintenance plan	1,000	1,000	1,000	1,000	1,000	1,000					6,000	Phase 1
5-2 Universal access	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000	Phase 1
5-3 Grey water stations	12,000	6,000	3,000				1,000	1,000	1,000	1,000	25,000	Phase 1
5-4 (No Action)												
5-5 Hard. boat ramp		20,000	15,000	15,000	10,000						60,000	Phase 2
5-6 Boat ramp tables		1,000									1,000	Phase 3
5-7 Barricade day use entry				covered in 5-5							---	Phase 2
5-8 (No Action)												
5-9 Mason. sluice box		1,000			3,000			1,000			5,000	Phase 3
6-1 Trail easement	2,000	2,000	2,000								6,000	Phase 1
Action	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 1999	Total Cost Est.	Phase
6-2 Boat access				No cost							---	Phase 1

6-3 Road maintenance				No cost							---	ongoing
6-4 Low-water crossing	10,000	10,000	10,000	10,000							40,000	Phase 1
6-5 Day use path/steps		25,000									25,000	Phase 2
6-6 (Deleted)												
6-7 Manage access routes			5,000			5,000			5,000		15,000	Phase 3
7-1 Business plan	4,000										4,000	Phase 1
7-2 Boat ramp fee				No cost							---	Phase 2
8-1 Curry LE agreement				No cost							---	ongoing
8-2 BLM LE patrol				No cost							---	ongoing
8-3 Seek hosts	1,000		1,000		1,000		1,000		1,000		5,000	ongoing
8-4 Staff patrol	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000	ongoing
8-5 Fee compliance				covered in 8-4							---	ongoing
8-6 Collect visitor use data	2,000		2,000		2,000		2,000		2,000		10,000	Phase 1

Part 5. Participants in the Planning Effort

The following individuals are acknowledged for their contributions to the preparation of this plan:

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John Hogue	District Hazard Tree Management Coordinator
Bruce Rittenhouse	District Botanist
Dan Carpenter	District Hydrologist
Stephan Samuels	District Archeologist
Bob Raper	District Noxious Weed Coordinator
Deanna Greco	District Minerals Specialist
Steve Morris	District Environmental Coordinator
Tim Votaw	District Hazardous Materials Coordinator

Appendices

Appendix A-Literature Cited

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Appendix B-Maps

- Sixes River SRMA & Planning Area Boundary
- Recreation Opportunities in the Surrounding Area
- Edson Creek Recreation Site
- Sixes River Recreation Site

Appendix C-Signs and Kiosks

All signs within the Sixes River SRMA will remain consistent with guidelines provided by BLM policy (BLM Manuals: 8362-Interpretive Services, 8371-Use Permits for Developed Sites, 9130-Signs and Posters, 9132- Operational Signs, and 9131- Management Signs).

In general, information and registration sign boards provide an instructional service. Interpretive signs/panels and kiosks provide messages focused on themes or subjects such as historical significance and natural features of the site or area.

Kiosk structures would remain consistent with the Multiple Option Kiosk design, the existing kiosk design at Sixes River Recreation Site. A copy of the Multiple Option Kiosk plan is located in District project files. The overall layout of kiosks within the recreation sites would be as follows:

- A three unit option centrally located within each main campground area. At Edson Creek Recreation Site this structure does not currently exist.
- Single unit options centrally located within peripheral use areas (i.e., boat ramp and reservation area at Edson Creek Recreation Site).

Appendix D-List of Vertebrate Wildlife Species Likely to Occur in the Sixes River SRMA:

The following species list was compiled by BLM Wildlife Biologist Steve Langenstein to represent the possible vertebrate wildlife species to occur within the Sixes River SRMA on BLM administered lands. It is intended to be a comprehensive list of potential wildlife species, but it may not be complete and visitors should not expect all of these species when they visit the recreation sites. The determination of species presence within the Sixes River SRMA was made using a combination of documented sightings, professional knowledge and review of distribution information found in field guides and the Oregon Natural Heritage Database. The codes used for Presence, Federal and State Status are given below.

¹ Present in Sixes River SRMA

N	-	Not thought to be present.
S	-	Suspected to be present, but the species has not been documented and local biologists have no direct evidence of presence.
K	-	Known to be present through observations by trained biologists
D	-	Species which have been documented present.

² Status Federal

FE	-	Federally Endangered Species
FT	-	Federally Threatened Species
FC	-	Federal Candidate Species
BS	-	Bureau Sensitive Species
BT	-	Bureau Tracking Species
BA	-	Bureau Assessment Species

³ Status State

SE	-	State Endangered Species
ST	-	State Threatened Species
SSC	-	State Sensitive- Critical Species
SSV	-	State Sensitive- Vulnerable Species
SSP	-	State Sensitive- Peripheral or Naturally Rare Species
SSU	-	State Sensitive- Undetermined Status Species

⁴ Represents some type of change from the published version of Table C-3 of the Coos Bay District Record of Decision and Resource Management Plan (May 1995). Changes are due to administrative and legal changes in species status by federal and state agencies, changes to lists maintained by the Oregon Natural Heritage Program and correction of errors in the published version of Table C-3. Some species gained special status, others no longer have special status, for others it was the level of status that changed and some were Special Status Species at the time Table C-3 was published but were mistakenly omitted from it.

⁵ Represents change to a common or scientific name for a Special Status Species from the name provided in the published version of Table C-3 of the Coos Bay District Record of Decision and Resource Management Plan (May 1995).

COMMON NAME	LATIN NAME FEDERAL ²	STATUS STATUS PRESENT ¹ STATE ³
AMPHIBIANS		
Northwestern Salamander	<i>Ambystoma gracile</i>	S
Pacific Giant Salamander	<i>Dicamptodon tenebrosus</i>	K
Southern Torrent Salamander	<i>Rhyacotriton variegatus</i>	SBTSSC ⁴
Clouded Salamander	<i>Aneides ferreus</i>	SBTSSU
Ensatina	<i>Ensatina eschscholtzii</i>	S
Dunn's Salamander	<i>Plethodon dunni</i>	S
Del Norte Salamander	<i>Plethodon elogatus</i>	NBS ⁴ SSV
Western Red-backed Salamander	<i>Plethodon vehiculum</i>	K
Rough-skinned Newt	<i>Taricha granulosa</i>	K
Pacific Treefrog	<i>Pseudacris regilla</i>	K
Tailed Frog	<i>Ascaphus truei</i>	SBA ⁴ SSV
Red-legged Frog	<i>Rana aurora</i>	KBS ⁴ SSU
Foothill Yellow Legged Frog	<i>Rana boylei</i>	SBS ⁴ SSV
REPTILES		
Northwestern Pond Turtle ⁵	<i>Clemmys marmorata marmorata</i>	SBS ⁴ SSC
Northern Alligator Lizard	<i>Elgaria coerulea</i>	S
Southern Alligator Lizard	<i>Elgaria multicarinata</i>	S
Western Fence Lizard	<i>Sceloporus occidentalis</i>	S
Western Skink	<i>Eumeces skiltonianus</i>	S
Rubber Boa	<i>Charina bottae</i>	S
Sharptail Snake	<i>Contia tenuis</i>	SBA ⁴ SSV
Ringneck Snake	<i>Diadophis punctatus</i>	S
Common Kingsnake	<i>Lampropeltis getulus</i>	NBA ⁴ SV ⁴
California Mountain Kingsnake	<i>Lampropeltis zonata</i>	NBA ⁴ SSV ⁴
Gopher Snake	<i>Pituophis catenifer</i>	S
Western Aquatic Garter Snake	<i>Thamnophis couchi</i>	N
Western Terrestrial Garter Snake	<i>Thamnophis elegans</i>	S
Northwestern Garter Snake	<i>Thamnophis ordinoides</i>	S
Common Garter Snake	<i>Thamnophis sirtalis</i>	S
Western Rattlesnake	<i>Crotalus viridis</i>	S
BIRDS		
Western Grebe	<i>Aechmophorus occidentalis</i>	N
American Bittern	<i>Botaurus lentiginosus</i>	N
Great Egret	<i>Ardea alba</i>	NBT ⁴
Great Blue Heron	<i>Ardea herodias</i>	D
Green Heron	<i>Butorides virescens</i>	S
Black-crowned Night Heron	<i>Nycticorax nycticorax</i>	N
Canada Goose	<i>Branta canadensis</i>	N
Wood Duck	<i>Aix sponsa</i>	S
Green-winged Teal	<i>Anas crecca</i>	S
Mallard	<i>Anas platyrhynchos</i>	S
Northern Pintail	<i>Anas acuta</i>	S
Blue-winged Teal	<i>Anas discors</i>	N
Cinnamon Teal	<i>Anas cyanoptera</i>	S
Ring-necked Duck	<i>Aythya collaris</i>	N ⁴
Common Goldeneye	<i>Bucephala clangula</i>	S
Barrow's Goldeneye	<i>Bucephala islandica</i>	N
Bufflehead	<i>Bucephala albeola</i>	N ⁴
Hooded Merganser	<i>Lophodytes cucullatus</i>	S
Common Merganser	<i>Mergus merganser</i>	D
Red-breasted Merganser	<i>Mergus serrator</i>	S
Harlequin Duck	<i>Histrionicus histrionicus</i>	NBS ⁴
Turkey Vulture	<i>Cathartes aura</i>	S

Osprey	<i>Pandion haliaetus</i>	S
Bald Eagle	<i>Haliaeetus leucocephalus</i>	NFTST
Golden Eagle	<i>Aquila chrysaetos</i>	N
Northern Harrier	<i>Circus cyaneus</i>	N
Sharp-shinned Hawk	<i>Accipiter striatus</i>	S
Cooper's Hawk	<i>Accipiter cooperii</i>	S
Northern Goshawk	<i>Accipiter gentilis</i>	SBS ⁴ SSC
Red-shouldered Hawk	<i>Buteo lineatus</i>	N
Red-tailed Hawk	<i>Buteo jamaicensis</i>	S
Rough-legged Hawk	<i>Buteo lagopus</i>	N
American Kestrel	<i>Falco sparverius</i>	S
Merlin	<i>Falco columbarius</i>	SBA
American Peregrine Falcon ⁵	<i>Falco peregrinus anatum⁵</i>	NFESE
Blue Grouse	<i>Dendragapus obscurus</i>	S
Ruffed Grouse	<i>Bonasa umbellus</i>	S
Wild Turkey	<i>Meleagris gallopavo</i>	S
California Quail	<i>Callipepla californica</i>	S
Mountain Quail	<i>Oreortyx pictus</i>	S ⁴
Killdeer	<i>Charadrius vociferus</i>	S
Spotted Sandpiper	<i>Actitis macularia</i>	S
Western Sandpiper	<i>Calidris mauri</i>	N
Least Sandpiper	<i>Calidris minutilla</i>	N
Common Snipe	<i>Gallinago gallinago</i>	S
Mew Gull	<i>Larus canus</i>	N
Ring-billed Gull	<i>Larus delawarensis</i>	N
California Gull	<i>Larus californicus</i>	N
Herring Gull	<i>Larus argentatus</i>	N
Western Gull	<i>Larus occidentalis</i>	N
Glaucous-winged Gull	<i>Larus glaucescens</i>	N
Glaucous Gull	<i>Larus hyperboreus</i>	N
Caspian Tern	<i>Sterna caspia</i>	NBT
Common Tern	<i>Sterna hirundo</i>	N
Arctic Tern	<i>Sterna paradisaea</i>	N
Marbled Murrelet	<i>Brachyramphus marmoratus marmoratus</i>	DFTST ⁴
Band-tailed Pigeon	<i>Columba fasciata</i>	D
Rock Dove	<i>Columba livia</i>	S
Mourning Dove	<i>Zenaidura macroura</i>	S
Barn Owl	<i>Tyto alba</i>	S
Western Screech-owl	<i>Otus kennicottii</i>	D
Great Horned Owl	<i>Bubo virginianus</i>	D
Northern Pygmy-owl	<i>Glaucidium gnoma</i>	DBTSSU
Northern Spotted Owl	<i>Strix occidentalis caurina</i>	DFTST
Barred Owl	<i>Strix varia</i>	S
Northern Saw-whet Owl	<i>Aegolius acadicus</i>	DBA ⁴
Common Nighthawk	<i>Chordeiles minor</i>	D
Vaux's Swift	<i>Chaetura vauxi</i>	S
Anna's Hummingbird	<i>Calypte anna</i>	S
Rufous Hummingbird	<i>Selasphorus rufus</i>	D
Allen's Hummingbird	<i>Selasphorus sasin</i>	SBT ⁴
Belted Kingfisher	<i>Ceryle alcyon</i>	S
Red-breasted Sapsucker	<i>Sphyrapicus ruber</i>	S
Downy Woodpecker	<i>Picoides pubescens</i>	S
Hairy Woodpecker	<i>Picoides villosus</i>	D
Black-backed Woodpecker	<i>Picoides arcticus</i>	NBA ⁴ SSC
Northern Flicker	<i>Colaptes auratus</i>	D
Pileated Woodpecker	<i>Dryocopus pileatus</i>	DBA ⁴ SSV ⁴
Olive-sided Flycatcher	<i>Contopus borealis</i>	S
Western Wood-pewee	<i>Contopus sordidulus</i>	N
Willow Flycatcher	<i>Empidonax traillii</i>	S
Hammond's Flycatcher	<i>Empidonax hammondii</i>	D
Dusky Flycatcher	<i>Empidonax oberholseri</i>	S
Pacific Slope Flycatcher	<i>Empidonax difficilis</i>	D
Purple Martin	<i>Progne subis</i>	NBA ⁴ SSC
Tree Swallow	<i>Tachycineta bicolor</i>	S

Violet-green Swallow	<i>Tachycineta thalassina</i>	S
Northern Rough-winged Swallow	<i>Stelgidopteryx serripennis</i>	S
Bank Swallow	<i>Riparia riparia</i>	NBT ⁴ SSU ⁴
Barn Swallow	<i>Hirundo rustica</i>	S
Steller's Jay	<i>Cyanocitta stelleri</i>	D
Scrub Jay	<i>Aphelocoma californica</i>	S
American Crow	<i>Corvus brachyrhynchos</i>	D
Common Raven	<i>Corvus corax</i>	D
Black-capped Chickadee	<i>Parus atricapillus</i>	S
Mountain Chickadee	<i>Parus gambeli</i>	S
Chestnut-backed Chickadee	<i>Parus rufescens</i>	D
Bushtit	<i>Psaltriparus minimus</i>	S
Red-breasted Nuthatch	<i>Sitta canadensis</i>	D
White-breasted Nuthatch	<i>Sitta carolinensis</i>	S
Brown Creeper	<i>Certhia americana</i>	D
Bewick's Wren	<i>Thryomanes bewickii</i>	S
House Wren	<i>Troglodytes aedon</i>	S
Winter Wren	<i>Troglodytes troglodytes</i>	D
Marsh Wren	<i>Cistothorus palustris</i>	S
American Dipper	<i>Cinclus mexicanus</i>	S
Golden-crowned Kinglet	<i>Regulus satrapa</i>	S
Ruby-crowned Kinglet	<i>Regulus calendula</i>	S
Western Bluebird	<i>Sialia mexicana</i>	SBA ⁴ SSV
Townsend's Solitaire	<i>Myadestes townsendi</i>	S
American Robin	<i>Turdus migratorius</i>	D
Swainson's Thrush	<i>Catharus ustulatus</i>	D
Hermit Thrush	<i>Catharus guttatus</i>	S
Varied Thrush	<i>Ixorena naevius</i>	D
Wrentit	<i>Chamaea fasciata</i>	D
Cedar Waxwing	<i>Bombycilla cedrorum</i>	S
Northern Shrike	<i>Lanius excubitor</i>	S
European Starling	<i>Sturnus vulgaris</i>	S
Solitary Vireo	<i>Vireo solitarius</i>	S
Hutton's Vireo	<i>Vireo huttoni</i>	S
Warbling Vireo	<i>Vireo gilvus</i>	S
Orange-crowned Warbler	<i>Vermivora celata</i>	S
Nashville Warbler	<i>Vermivora ruficapilla</i>	S
Yellow Warbler	<i>Dendroica petechia</i>	S
Yellow-rumped Warbler	<i>Dendroica coronata</i>	S
Black-throated Gray Warbler	<i>Dendroica nigrescens</i>	D
Townsend's Warbler	<i>Dendroica townsendi</i>	S
Hermit Warbler	<i>Dendroica occidentalis</i>	S
Palm Warbler	<i>Dendroica palmarum</i>	N
Black-and-white Warbler	<i>Mniotilta varia</i>	N
MacGillivray's Warbler	<i>Oporornis tolmiei</i>	D
Common Yellowthroat	<i>Geothlypis trichas</i>	S
Wilson's Warbler	<i>Wilsonia pusilla</i>	S
Yellow-breasted Chat	<i>Icteria virens</i>	S
Western Tanager	<i>Piranga ludoviciana</i>	D
Black-headed Grosbeak	<i>Pheucticus melanocephalus</i>	S
Rufous-sided Towhee	<i>Pipilo erythrophthalmus</i>	D
Vesper Sparrow	<i>Poocetes gramineus</i>	NBT ⁴ SSC ⁴
Fox Sparrow	<i>Passerella iliaca</i>	S
Song Sparrow	<i>Melospiza melodia</i>	S
Lincoln's Sparrow	<i>Melospiza lincolni</i>	S
Golden-crowned Sparrow	<i>Zonotrichia atricapilla</i>	S
White-crowned Sparrow	<i>Zonotrichia leucophrys</i>	S
Dark-eyed Junco	<i>Junco hyemalis</i>	S
Western Meadowlark	<i>Sturnella neglecta</i>	SBA ⁴
Red-winged Blackbird	<i>Agelaius phoeniceus</i>	S
Brewer's Blackbird	<i>Euphagus cyanocephalus</i>	S
Brown-headed Cowbird	<i>Molothrus ater</i>	S

Bullock's Oriole	<i>Icterus bullockii</i>	S
Purple Finch	<i>Carpodacus purpureus</i>	S
House Finch	<i>Carpodacus mexicanus</i>	S
Pine Siskin	<i>Carduelis pinus</i>	D
American Goldfinch	<i>Carduelis tristis</i>	S
Red Crossbill	<i>Loxia curvirostra</i>	D
Evening Grosbeak	<i>Coccothraustes vespertinus</i>	D
House Sparrow	<i>Passer domesticus</i>	S
MAMMALS		
Virginia Opossum	<i>Didelphis virginiana</i>	S
Pacific Shrew	<i>Sorex pacificus</i>	S
Trowbridge's Shrew	<i>Sorex trowbridgii</i>	S
Vagrant Shrew	<i>Sorex vagrans</i>	S
Shrew-mole	<i>Neurotrichus gibbsii</i>	S
Pacific Mole	<i>Scapanus orarius</i>	S
Townsend's Mole	<i>Scapanus townsendii</i>	S
Big Brown Bat	<i>Eptesicus fuscus</i>	S
Silver-haired Bat	<i>Lasionycteris noctivagans</i>	SBT ⁴ SSU ⁴
Hoary Bat	<i>Lasiurus cinereus</i>	S
California Myotis	<i>Myotis californicus</i>	S
Long-eared Myotis	<i>Myotis evotis</i>	SBT ⁴ SSU ⁴
Little Brown Myotis	<i>Myotis lucifugus</i>	S
Fringed Myotis	<i>Myotis thysanodes</i>	SBSSSV
Long-legged Myotis	<i>Myotis volans</i>	SBT ⁴ SSU ⁴
Yuma Myotis	<i>Myotis yumanensis</i>	SBT ⁴ SSU ⁴
Pacific Western Big-eared Bat	<i>Corynorhinus townsendii townsendii</i> ⁵	SBS ⁴ SSC
Coyote	<i>Canis latrans</i>	S
Gray Fox	<i>Urocyon cinereoargenteus</i>	S
Red Fox	<i>Vulpes vulpes</i>	N
Black Bear	<i>Ursus americanus</i>	K
Ringtail	<i>Bassariscus astutus</i>	NBTSSU
Raccoon	<i>Procyon lotor</i>	S
River Otter	<i>Lutra canadensis</i>	K
American Marten	<i>Martes americana</i>	SBA ⁴ SSV ⁴
Fisher	<i>Martes pennanti</i>	SBS ⁴ SSC
Striped Skunk	<i>Mephitis mephitis</i>	S
Western Spotted Skunk	<i>Spilogale gracilis</i>	S
Short-tailed Weasel	<i>Mustela erminea</i>	S
Long-tailed Weasel	<i>Mustela frenata</i>	S
Mink	<i>Mustela vison</i>	D
Mountain Lion	<i>Felis concolor</i>	D
Bobcat	<i>Felis rufus</i>	D
Roosevelt Elk	<i>Cervus elaphus</i>	K
Black-tailed & Mule Deer	<i>Odocoileus hemionus</i>	K
Mountain Beaver	<i>Aplodontia rufa</i>	S
Northern Flying Squirrel	<i>Glaucomys sabrinus</i>	S
Western Gray Squirrel	<i>Sciurus griseus</i>	NBT ⁴ SSU ⁴
California Ground Squirrel	<i>Spermophilus beecheyi</i>	S
Townsend's Chipmunk	<i>Tamias townsendii</i>	S
Douglas' Squirrel	<i>Tamiasciurus douglasii</i>	D
Western Pocket Gopher	<i>Thomomys mazama</i>	S
Beaver	<i>Castor canadensis</i>	K
Deer Mouse	<i>Peromyscus maniculatus</i>	S
Western Harvest Mouse	<i>Reithrodontomys megalotis</i>	N
House Mouse	<i>Mus musculus</i>	S
White-footed Vole	<i>Arborimus albipes</i>	SBS ⁴ SSU
Red Tree Vole	<i>Arborimus longicaudus</i>	S
Western Red-backed Vole	<i>Clethrionomys californicus</i>	S
Long-tailed Vole	<i>Microtus longicaudus</i>	S
Creeping Vole	<i>Microtus oregoni</i>	S
Townsend's Vole	<i>Microtus townsendii</i>	S

Pacific Jumping Mouse	<i>Zapus trinotatus</i>	S
Bushy-tailed Woodrat	<i>Neotoma cinerea</i>	S
Dusky-footed Woodrat	<i>Neotoma fuscipes</i>	N
Muskrat	<i>Ondatra zibethicus</i>	S
Porcupine	<i>Erethizon dorsatum</i>	K
Brush Rabbit	<i>Sylvilagus bachmani</i>	S