

# **OHV-Sand Camping Project**

## **Preliminary Analysis**

**Siuslaw National Forest  
South Zone District  
Lane, Douglas, and Coos Counties, Oregon**

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## Contents

<b>Chapter 1. Why is this project needed, and what evidence established this need?</b>	<b>1</b>
[“Purpose of and Need for Action”]	
The Proposed Project	1
The Planning Area	2
The Problems (Issues) To Be Addressed	2
Evidence Used by the Forest Supervisor in Deciding to Address These Problems	3
Help From Other Agencies and the Public	5
Decision Framework	6
<b>Chapter 2. What alternatives were developed to meet the identified needs?</b>	<b>7</b>
[“Alternatives Including the Preferred Alternative”]	
Alternatives Considered But Eliminated from Detailed Study	7
Alternatives Considered in Detail	8
Alternative 1: No action	9
Alternative 2: Number of campsites based on current high-use periods	9
Alternative 3: Number of campsites based on permits issued in 1998 and 1999	10
Alternative 4: Number of campsites based on the estimated maximum capacity	11
Comparison of Alternatives	12
<b>Chapter 3. What environmental effects are predicted for each alternative?</b>	<b>33</b>
[“Environmental Consequences”]	
Predicted Effects of Designating Dispersed Sand Camping Sites and Increasing Staging Area Capacity on Addressing the Problems	34
Recreation Experience	34
Employee Safety	37
Visitor Safety	38
Ability To Prevent Violations and Enforce Regulations	39
Predicted Effects of Designating Dispersed Sand Camping Sites and Increasing Staging Area Capacity on Other Resources	40
Wildlife Species	40
Botanical Resources	43
Soil Productivity	46
Fish Species and Habitats	47
Water Quality	49
Aquatic Conservation Strategy	51
Heritage Resources	51
Scenery	52
Fire	53
Public and Management Access	53
Other Predicted Effects	55
Cumulative Effects	55
Short-Term Uses and Long-Term Productivity	58
Unavoidable Adverse Effects	58

Irreversible Resource Commitments	
59	
Irretrievable Commitment of Resources	59
Environmental Justice	59
Other Disclosures	59
<b>Chapter 4. Who was consulted about this project?</b>	<b>61</b>
<b>References</b>	<b>65</b>
<b>Glossary</b>	<b>67</b>
<b>Table Titles</b>	
Table 1. Comparing the key quantitative differences of Alternatives 1, 2, 3, and 4	12
Table 2. Comparing likely effects of Alternatives 1, 2, 3, and 4, based on the issues, objectives, and outcomes	13
Table 3. Comparing the Dunes Plan and alternative staging area capacities	36
Table 4. Acres infested by noxious weeds and invasive plants on the ODNRA	46
Table 5. Gamefish present in lakes in OHV riding areas of the ODNRA	47
Table 6. Cost summary for Horsfall staging area	54
<b>Maps</b>	
Project vicinity	
Alternative 2—North, Umpqua, South	
Alternative 3—North, Umpqua, South	
Alternative 4—North, Umpqua, South	
<b>Appendices</b>	
Appendix A. Design Criteria for OHV-Sand Camping Project	
Appendix B. List of Preparers	

## Why is the project needed, and what evidence established these needs?

## CHAPTER 1

Chapter titles are framed as questions intended to focus the writing and to alert readers to judge whether the answers provided are adequate. For readers accustomed to earlier environmental documents, chapter 1 is equivalent to the "Purpose and Need for Action" section.

### The Proposed Project

*Introduction*—The Forest Supervisor proposed the OHV-Sand Camping Project (the Project) to designate the quantity and locations of dispersed sand camping sites in the off-highway vehicle (OHV) areas (Management Areas 10B and 10C) of the Oregon Dunes National Recreation Area (ODNRA). The Forest Supervisor also proposed to build a new staging area facility in the Horsfall area (Bark Road; Management Area 10D). Implementation of the permit system for designated sand-camping sites is expected to begin January 2005. Building the staging area will occur when funding is secured, possibly three years from now.

Sand camping and the staging area activities are connected actions because the proposed staging area facility occupies sites that have been used as sand camps in the past. In addition, both of these uses affect the Recreation Opportunity Spectrum (ROS) class of semi-primitive motorized recreation experience, serve the needs of off-highway vehicle users, and affect the natural resources of the area.

The proposed project is designed to address the problems discussed in The Problems To Be Addressed. As mitigation for changes to existing dispersed camping and staging area opportunities, the capacity of the staging area would be greater than that described in the Management Plan for the Oregon Dunes National Recreation Area (Dunes Plan; USDA 1994), requiring a non-significant amendment to the Dunes Plan. Alternative 4 is considered and displayed as the proposed project. Descriptions of the proposed project and other alternatives are located in chapter 2, pages 8 to 11.

*Relationship to the Siuslaw Forest Plan*—Congress passed legislation establishing the Oregon Dunes National Recreation Area for the purposes of "...public outdoor recreation use and enjoyment ... and the conservation of scenic, scientific, historic, and other values contributing to public enjoyment of such lands and waters, ..." (PL92-260). The Siuslaw Forest Land and Resource Management Plan (Siuslaw Forest Plan; USDA 1990), as amended by the Northwest Forest Plan (USDA, USDI 1994b) and the Dunes Plan, described the resource management practices, levels of management, and suitability of Forest lands for resource management. On the Oregon Dunes National Recreation Area, it established:

- Multiple-use goals and ecosystem management objectives;
- Standards and guidelines to fulfill requirements of the National Forest Management Act of 1976;
- Separate management areas with different resource emphases; and

## Why is the project needed?

- Management area direction, including management area prescriptions and standards and guidelines for management activities in specific management areas.

All relevant aspects of the amended Siuslaw Forest Plan—such as management area standards and guidelines—apply to this project. Thus, this assessment is tiered to the Final Environmental Impact Statement for the Siuslaw National Forest Land and Resource Management Plan (USDA 1990), as amended by the Final Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forests Related Species Within the Range of the Northern Spotted Owl (Northwest Forest Plan; USDA, USDI 1994a), and the Final EIS and Management Plan for the Oregon Dunes National Recreation Area (USDA 1994). Riparian reserve, as prescribed by the Northwest Forest Plan, is located in the project area.

### **The Planning Area**

The Project area is located on the ODNRA between Florence and North Bend, Oregon and is about 55 air miles southwest of Eugene, Oregon (map 1). It involves about 12,440 acres of land managed by U.S. Forest Service. The project area is located in portions of Township 19 South, Range 12 West, sections 3-5, 7-10, 15, 16, 20-22, 27-29, 32, and 33; Township 22 South, Range 12 West, sections 24-26, 28, 35, and 36; Township 23 South, Range 13 West, sections 22, 23, 26, 27, 33, and 34; and Township 24 South, Range 13 West, sections 3, 4, 9, 10, 15-17, 20-22, and 27-29; Lane, Douglas, and Coos Counties, Oregon.

### **The Problems (Issues) To Be Addressed**

Based on direction from the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan; and information from the Coastal Lakes Watershed Analysis (USDA 1999), the Oregon Dunes Management Plan Watershed Analysis (USDA 1995a), and employee observations, the Forest Supervisor identified the following need and associated problems:

In 1994, the Dunes Plan identified control mechanisms to maintain a quality semi-primitive, motorized recreation experience for users in the planning area. However:

- Implementation of the Standard and Guidelines 10B-6, and 10C-5 in the Dunes Plan that directs ODNRA managers to “Allow dispersed camping by permit in designated sites only” has not occurred.
- The Dunes Plan did not designate the number, location, and capacity of the designated sites.

Because the permit system has not been implemented and the number, location, and capacity of campsites have not been designated, the following problems exist:

- The presence of large camps changes the semi-primitive motorized recreation experience to one more resembling an urban setting.
- Large camps can create unsafe working conditions for agency personnel and law enforcement officers.
- Concentrated campsites, and camps sometimes placed in designated OHV routes, create unsafe conditions for campers and riders.

## Why is the project needed?

- It is difficult to prevent violations and enforce regulations under the current sand camping system because visitors are not associated with specific designated sites and therefore, there is little visitor accountability for problems or damages.
- There is a shortage of developed day-use staging for OHV recreation in this portion of the ODNRA.

### **Evidence Used by the Forest Supervisor in Deciding to Address These Problems**

The standards and guidelines of the Siuslaw Forest Plan (USDA 1990), as amended by the Northwest Forest Plan (USDA 1994) and the Dunes Plan (USDA 1994), established the Recreation Opportunity Spectrum (ROS) class of semi-primitive motorized for the open riding areas (MA10B and 10C) and the ROS class of roaded natural for developed corridors (MA10D). Additional evidence used by the Forest Supervisor included Oregon Dunes NRA employees' observations, sand camping permit data, and reports from law enforcement personnel.

### **For needing to restore the semi-primitive motorized recreation experience**

The Dunes Plan direction is to protect and preserve semi-primitive motorized recreation opportunities where they exist at the ODNRA because such opportunities are scarce due to high demand and low supply. The semi-primitive motorized recreation experience should be prevalent throughout the project area. Semi-primitive motorized settings are characterized by the following conditions (USDA 1994):

- High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge, and risk;
- Predominantly a natural appearing environment, usually at least 2,500 acres in size;
- Low concentration of users, but often evidence of others on trails and in riding areas;
- Low to moderate frequency of contacts with other users; and
- On-site controls and restrictions present, but subtle (e.g., permits).

Based on observations from ODNRA employees and permit data the past few years, the semi-primitive motorized recreation experience has not been met in the riding areas and the trend is moving further away from the required conditions:

- Over the years, an increase in OHV recreation and improvements in the equipment used for sand camping, have lead to an increase in dispersed sand camping on the ODNRA. This increase in use has reduced the semi-primitive motorized recreation riding experience by exceeding the desired concentration of users for this recreation setting, and experience characteristics.
- During moderate- to high-use periods, concentration of users is moderate to high, especially in popular areas where large groups are prevalent. Current use levels substantially modify the appearance of the natural environment. Moderate to high-density recreation vehicle parking also substantially modifies the natural setting.

### Why is the project needed?

- Use is increasing, and without a permit system and designated sites, the semi-primitive motorized riding experience will continue to degrade.
- Information collected for sand camping permits issued on the ODNRA indicates off-highway vehicle (OHV) dispersed camping increased 150% from 1998 to 2002.

### **For needing to address the shortage of developed day-use staging capacity for OHV recreation in the southern riding area and to reallocate developed day-use capacity with a non-significant amendment to the Dunes Plan**

- Day-use staging meets the needs of OHV visitors that do not want to or cannot camp overnight on the sand or in a developed campground (with direct sand access). In the almost 10 years since the Dunes Plan decision was signed, various changes and administrative actions have occurred that justify evaluating changes in the staging area capacities from those shown in the Dunes Plan. For example, the Dunes Plan called for the development of the Driftwood Overflow parking and staging lot to provide staging capacity for 50 people at one time in the northern riding area. This staging capacity could be shifted to the current project planning area. The Driftwood facility was not developed after the plan because the funding was not available to build it initially and there were environmental concerns with building a road and facility in a roadless area.
- The Dunes Plan provided for the development of a day-use staging area facility at Horsfall.

### **For needing to address unsafe working conditions for agency personnel and law enforcement officers**

Based on observations by law enforcement personnel and by ODNRA employees, camps are often large extended groups camped adjacent to each other. Overcrowding in small geographical locations in the off-road environment has contributed to “out-of-control” conditions in the areas of these large camps. Often a crowd mentality takes over leading to group efforts at intentional violation of laws and regulations. The crowds can be so large that it is unsafe to send even 3 or 4 officers in at one time. With the limited number of law enforcement resources that are responsible for the entire ODNRA, it can be impossible to safely deal with issues in this environment. The crowding conditions can also make it unsafe for unarmed employees to make courtesy or enforcement contacts, even during daylight hours.

Based on past experiences of law enforcement personnel:

- The large crowd, or sometimes gang-like mentality that develops in these situations cannot be controlled by even a large number of officers. The only solution to limiting this type of behavior is to remove, or dissolve, the crowding condition.
- The behaviors coming from the conditions described are often more violent in nature than when individuals are involved because a crowded condition can give the members of the crowd a feeling of anonymity, leading to bolder and more violent behavior and more hazardous contacts.

## Why is the project needed?

- Most calls for assistance, particularly where assault-like behaviors are involved, have originated from overcrowded camps where the “lawless” perception is more evident.
- While hard statistical numbers are difficult to retrieve from past records, all officers who have worked on the ODNRA state that the conditions in these camps can be unsafe, both for employees and law enforcement officers.

### **For needing to address unsafe conditions for campers and riders**

Currently, campsites are often located by campers without regard to OHV riding areas, including designated or commonly used OHV routes. Campsite locations can change day to day. These practices have led to the following unsafe conditions:

- Campsites that are close to designated routes and popular travel corridors have created hazards for both riders and campers. Campers sometime post their sites with yellow caution tape to reduce the potential for vehicles riding through campsites.
- Large groups of sand campers and a lack of spatial separation between camps have led to an increase in conflicts between groups.

### **For needing to prevent violations and enforce regulations**

The current sand camping system does not link users to specific sites. As a result, when resource damage or other infractions occur, it is often difficult to identify the responsible party and take enforcement action.

Observations by ODNRA employees over the past few years indicate that without designated sand-camping sites:

- Sand-camp locations are selected at random by the public and often change over time.
- Management is difficult when sites are constantly moving and employees are not sure where camps are located.
- Campers often select sites in vegetated areas, rather than in open sand as required, impacting native vegetation.
- Fire pits and refuse degrade natural resources.
- Visitor violations of regulations, such as littering, dumping human waste, damaging resources, and creating illegal campfires, are occurring throughout sand camping areas.

### **Help From Other Agencies and the Public**

After identifying the problems to be addressed with this project, and developing a proposal to correct those problems, letters describing the proposed OHV-Sand Camping Project were mailed to 199 individuals, agencies, and organizations identified as potentially interested in the proposed project and analysis. The Siuslaw National Forest’s web site was referenced for additional information. Also, about 4,282 postcards were sent to those who registered to sand camp on the

## Why is the project needed?

Oregon Dunes NRA in previous years. The letters and postcards were mailed on October 15, 2003. Comments were requested by November 14, 2003. News releases, soliciting public comment on the proposal, were published in the Corvallis Gazette-Times, the Newport News-Times, the Siuslaw News, the Umpqua Post, the Roseburg News Review, The Bend Bulletin, the Medford Mail Tribune, the Albany Democrat Herald, the Register Guard (Eugene), the Seattle Post Intelligencer, the Seattle Times, the Statesman Journal (Salem), and the Oregonian (Portland).

In response to these scoping efforts, 23 letters (including e-mails) and 40 postcards were received. Public comments contained a wide variety of suggestions to consider. Comments, not outside the scope of this project and not covered by previous environmental review or existing regulations, were reviewed for substantive content related to the project. After reviewing the comments, it was determined that no issues were raised that were not already identified as problems. Thus, the issues related to this project are limited to addressing the need and associated problems identified on page 2. Based largely on public comment, some alternatives were considered but eliminated from detailed study. These are discussed in chapter 2. Comments, relevant to clarifying how the project will be implemented or disclosing the effects of implementing the project, are addressed in chapters 2, 3, or 4; the project design criteria (appendix A); or the project file.

### **Decision Framework**

The Responsible Official for this project is the Forest Supervisor for the Siuslaw National Forest. The environmental assessment for this project—to be completed after public comment on the preliminary analysis—will provide the alternatives, the environmental effects of implementation, and public comments upon which a decision will be made by the Forest Supervisor. The Forest Supervisor will determine through a Decision Notice:

- To what extent, if any, will activities called for in the proposed project or management alternatives be implemented?
- What management requirements and mitigation measures (project design criteria) will be applied to these activities?

Depending on the alternative selected, part of the decision may include implementing a non-significant amendment to the Dunes Plan. The primary factors that will influence the Forest Supervisor's decision are based on how well the problems on page 2 are addressed. The Decision Notice will document this decision and describe what activities will be implemented to address the problems. The decision will be consistent with the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan; and will incorporate the associated project design criteria (appendix A), including the management requirements and mitigation measures.

**What alternatives were developed to meet the identified needs?**

**CHAPTER 2**

In chapter 2, the Forest Supervisor considered alternative proposals that were not fully developed for reasons disclosed, and guided the development of alternative proposals for meeting the need and resolving the problems identified in chapter 1. These fully developed alternatives are described in this chapter; it is equivalent to the traditional section, "Alternatives, Including the Proposed Action".

To meet the identified need and associated problems, alternatives were developed to be consistent with the standards and guidelines associated with management areas 10b, 10c and 10d (USDA 1994) of the ODNRA. The range of alternatives considered, including those that were considered but eliminated from detailed study, reflects comments received during public scoping for this project, public involvement with the Dunes Plan, the problems identified on page 2, implementing a non-significant amendment to the Dunes Plan, and concerns raised during monitoring of past projects affecting dune-like environments.

**Alternatives Considered But Eliminated from Detailed Study**

The following alternatives represent those that were considered by the Forest Supervisor, but for various reasons, were eliminated from detailed study. These alternatives were considered either to address public comments on the proposed project or to address additional information gathered by the interdisciplinary team (ID Team):

*Proposed Hauser staging area facility*—Since public comment was received on the proposed project, the ID Team collected additional information on the proposed Hauser facility. Based on this information, the ID Team concluded that developing a new Hauser staging area facility was not ripe for analysis at this time. In concurring with this conclusion, the Forest Supervisor considered the following:

- The level of development (paved 70-unit parking facility with paved access road) required to support the facility would alter the corridor class of the Hauser corridor, which is contrary to plan standard and guideline 10 D-4 of the Dunes Plan;
- The most suitable location of the staging area is managed for a visual quality objective of retention. Though the site does not currently meet this criterion, the new facility would move the site further away from meeting the objective;
- The physical location of county and Forest Service easements continues to remain uncertain; and
- Considering that Coos County is evaluating the opportunity to develop their lands in support of OHV activities, and private businesses have continued to develop services that use the existing access, it is more appropriate to evaluate the development of federally provided facilities at Hauser in conjunction with county and private opportunities.

## What alternatives were developed?

*At least 400 designated sand camping sites will be needed, especially for an annual event like Dunes Fest*—All uses of National Forest System lands not related to disposal of timber, minerals or grazing livestock are designated a special use. Special uses that charge an entry or participation fee are considered a commercial use or activity. Prior to engaging in a special use, a proponent must apply for and obtain a special-use authorization from the Forest Service. Prior to authorizing a special use, the Forest Service must conduct an environmental analysis following its NEPA procedures. This includes providing adequate notice and an opportunity for agencies and the public to comment (36 CFR 251.50).

The problems being addressed by this analysis are related to Forest Service management of sand camping and off-highway vehicle staging areas as directed by the Dunes Plan. Since the procedure described above exists to consider special-use activities, fully developing an alternative that specifically benefits one proponent is outside the scope of this analysis.

*The staging area at Umpqua Parking Lot #2 should be expanded*—Douglas County, in conjunction with Oregon Parks and Recreation Department, has opened a 40-site staging area and is proposing to build a 50-site campground north of the Umpqua Beach riding area. Considering these new facilities along with the riding area served, and that ODNRA facilities at Umpqua have been built to Dunes Plan levels, additional Forest Service managed/owned facilities are not required to meet Dunes Plan direction.

### **Alternatives Considered in Detail**

*Management requirements, mitigation measures, and monitoring*—Design criteria (appendix A) outline the practices to be used and their timing and duration when planned activities under Alternatives 2, 3, and 4 are implemented. The management requirements and mitigation measures to avoid or minimize impacts associated with implementing these alternatives have been incorporated into the design criteria. Monitoring and observations of past similar actions indicate that the design criteria are effective in protecting natural resources. Monitoring for this project has been identified in appendix A for project implementation and effectiveness of design criteria.

*Proposed project*—The proposed project, upon which scoping was initiated, identified a broad range (130 to 180) of designated dispersed sand camping sites and proposed to build two day-use staging areas with 70 parking spaces each. Further analysis indicated that 180 sand camping sites reflect the maximum dispersed sand camping capacity that could be designated in the project area and still meet the Recreation Opportunity Spectrum (ROS) class of semi-primitive motorized experience, as defined in the Dunes Plan. The analysis also indicated that 130 sites represent the average visitor capacity typically experienced during current high-use periods. Based on this analysis, the Team recommended that the proposed project be split into two different alternatives—Alternative 2, representing the average number of sites during current high-use periods; and Alternative 4, representing the estimated maximum number of sites that would meet the established standard and guideline to manage for the semi-primitive motorized experience in Management Areas 10b and 10c. By eliminating the broad range of sand camping sites identified under the proposed project and making them more specific under Alternatives 2 and 4, a better analysis could be conducted. Since Alternative 4 represents the upper range of

## What alternatives were developed?

effects that would have been evaluated under the project as initially presented to the public, the Forest Supervisor designated Alternative 4 as the proposed project.

### Alternative 1: No action

The no-action alternative is required by Council of Environmental Quality regulations (40 CFR 1502.14(d)). The no-action alternative forms the basis for a comparison between meeting the project needs and **not** meeting the project needs. This alternative provides baseline information for understanding changes associated with the action alternatives and expected environmental and recreational responses as a result of the current management strategy. Selecting this alternative would continue the following conditions:

- Sand-camping sites will not be designated;
- Visitors will continue to randomly select campsites;
- There will be no restrictions on the location and number of campsites;
- There will be no limit to the size of individual campsites or concentration of campsites;
- There will be no immediate decision made regarding the building of the Horsfall staging area. Therefore, there is no need for a non-significant amendment to the Dunes Plan to expand developed staging capacity at the Horsfall area.

Because the existing environment is not static, environmental and recreational consequences from selecting this alternative are expected. The environmental conditions and the recreation experience, as described in chapter 1 in “The Problems To Be Addressed”, would continue to degrade.

### Alternative 2: Number of campsites based on current high-use periods; developed staging capacity higher than that identified in the Dunes Plan

Actions included in this alternative are designed to address the problems identified by the Forest Supervisor in chapter 1 by basing the number of designated campsites at a level that approximates current high-use periods. Based on the Recreation Opportunity Spectrum (ROS) class objective of a semi-primitive motorized experience, the sites were identified and arranged to spatially distribute up to 2,600 sand campers over about 5,930 acres of open sand. The actions incorporate the standards and guides established by the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan; and the design criteria and monitoring protocols outlined in appendix A. Selecting this alternative would result in implementing the following management activities (map 2):

- Designate 130 dispersed campsites that each accommodate up to five primary vehicles and up to 20 people;
- Prohibit camping outside of designated sites;
- Campers would be required to register for their sand-camping site, thereby creating a record of use;
- Implement a non-significant amendment to the Dunes Plan to authorize an increase in the capacity of the Horsfall staging area from 42 to 70 sites;

## What alternatives were developed?

- Build a new staging area north of the Horsfall Road, in the area currently accessed by the Bark Sand Road. Similar in size to Umpqua Beach #3, the new staging area will include 70 parking spaces, each 35 feet long. These parking spaces will be configured such that many will be back-to-back to accommodate vehicles (including trailers) up to 70 feet long. Restroom capacity will be based on the staging area's designed capacity. The staging area, including the restroom and drain field, will be about 5.5 acres in size; and
- Incorporate the existing Horsfall staging area (21 parking spaces) into the Horsfall campground as a group or overflow site.

The actions of Alternative 2 are summarized by camping area in table 1. Activities would begin in January 2005, with most completed in 5 years.

### Alternative 3: Number of campsites based on permits issued in 1998 and 1999; developed staging capacity at the level identified in the Dunes Plan

Actions included in this alternative are designed to address the problems identified by the Forest Supervisor in chapter 1 by basing the number of designated campsites on permits issued in 1998 and 1999—when large and concentrated campsites began to create safety and enforcement problems. Based on the semi-primitive motorized experience, the sites were identified and arranged to spatially distribute up to 1,960 sand campers over about 5,930 acres of open sand. The actions incorporate the standards and guidelines established by the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan; and the design criteria and monitoring protocols outlined in appendix A. Selecting this alternative would result in implementing the following management activities (map 3):

- Designate 98 dispersed campsites that each accommodate up to five primary vehicles and up to 20 people;
- Prohibit camping outside of designated sites;
- Campers would be required to register for their sand-camping site, thereby creating a record of use;
- Build a new staging area north of the Horsfall Road, in the area currently accessed by the Bark Sand Road. The new staging area will include 42 parking spaces, each 35 feet long. These parking spaces will be configured such that many will be back-to-back to accommodate vehicles (including trailers) up to 70 feet long. Restroom capacity will be based on the staging area's designed capacity. The staging area, including the restroom and drain field, will be about 3.1 acres in size; and
- Incorporate the existing Horsfall staging area into the Horsfall campground as a group or overflow site.

The actions of Alternative 3 are summarized by camping area in table 1. Activities would begin in January 2005, with most completed in 5 years.

## What alternatives were developed?

### Alternative 4: Number of campsites based on the estimated maximum capacity (proposed project); developed staging capacity higher than that identified in the Dunes Plan

Actions included in this alternative are designed to address the problems identified by the Forest Supervisor in chapter 1 by basing designated campsite numbers on the estimated maximum concentration of users, while still meeting the objective of a semi-primitive motorized experience. Based on the semi-primitive motorized experience, the sites were identified and arranged to spatially distribute up to 3,600 sand campers over about 5,930 acres of open sand. The actions incorporate the standards and guidelines established by the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan; and the design criteria and monitoring protocols outlined in appendix A. Selecting this alternative would result in implementing the following management activities (map 4):

- Designate 180 dispersed campsites that each accommodate up to five primary vehicles and up to 20 people;
- Prohibit camping outside of designated sites;
- Campers would be required to register for their site, thereby creating a record of use;
- Implement a non-significant amendment to the Dunes Plan to authorize an increase in the capacity of the Horsfall staging area from 42 to 70 sites;
- Build a new staging area north of the Horsfall Road, in the area currently accessed by the Bark Sand Road. Similar in size to Umpqua Beach #3, the new staging area will include 70 parking spaces, each 35 feet long. These parking spaces will be configured such that many will be back-to-back to accommodate vehicles (including trailers) up to 70 feet long. Restroom capacity will be based on the staging area's designed capacity. The staging area, including the restroom and drain field, will be about 5.5 acres in size; and
- Incorporate the existing Horsfall staging area into the Horsfall campground as a group or overflow site.

The actions of Alternative 4 are summarized by camping area in table 1. Activities would begin in January 2005, with most completed in 5 years.

What alternatives were developed?

**Comparison of Alternatives**

Key quantitative differences of Alternatives 1, 2, 3, and 4 are compared in table 1. How well the alternatives address the issues is compared in table 2. Maps 2 through 10 follow and show where proposed designated sand camping sites and day-use staging areas are located for Alternatives 2, 3, and 4. Three maps each are used to illustrate these alternatives.

Table 1. Comparing the key quantitative differences of Alternatives 1, 2, 3, and 4

Camping Area	Action	Alt. 1, No action	Alt. 2, Approximate current high-use periods	Alt. 3, Based on permits issued in 1998 & 1999	Alt. 4, Estimated maximum capacity
<b>Northern OHV Area (Lane County)</b>	Number of designated dispersed campsites /maximum people	0	25/500	26/520	42/840
<b>Umpqua OHV Area (Douglas County)</b>	Number of designated dispersed campsites /maximum people	0	24/480	11/220	27/540
<b>Southern OHV Area (Coos County)</b>	Number of designated dispersed campsites /maximum people	0	81/1,620	61/1,220	111/2,220
	Horsfall staging area capacity (35-foot parking spaces)	0	70 <sup>a</sup>	42 <sup>b</sup>	70 <sup>a</sup>
	Incorporate the existing Horsfall staging area into the Horsfall campground as a group or overflow site	No	Yes	Yes	Yes

<sup>a</sup> Staging area capacity requires a non-significant amendment to the Dunes Plan.

<sup>b</sup> Staging area capacity based on levels identified in the Dunes Plan.

What alternatives were developed?

Table 2. Comparing likely effects of Alternatives 1, 2, 3, and 4, based on how well they address the need and associated problems

<b>Need or problem to be addressed (Issues)</b>	<b>Alternative 1, (no action)</b>	<b>Alternative 2</b>	<b>Alternative 3</b>	<b>Alternative 4</b>
<b>Meet the Dunes Plan standard and guideline that directs ODNRA managers to “Allow dispersed camping by permit in designated sites only”</b>	<b>Does not meet</b> the Dunes Plan standard and guideline	<b>Meets</b> the Dunes Plan standard and guideline	<b>Meets</b> the Dunes Plan standard and guideline	<b>Meets</b> the Dunes Plan standard and guideline
<b>Meet the semi-primitive motorized experience objective</b>	<b>Does not meet</b> the semi-primitive motorized objective	<b>Meets</b> the semi-primitive motorized objective	<b>Meets</b> the semi-primitive motorized objective	<b>Marginally meets</b> the semi-primitive motorized objective
<b>Provide developed day-use opportunities in the southern riding area by building a new OHV staging facility, as per Dunes Plan direction</b>	<b>Does not build</b> a new OHV staging area. Total developed day-use capacity 11% below plan level.	<b>Builds</b> a new OHV staging area 60% larger than identified in the plan. Total day-use capacity developed to plan level.	<b>Builds</b> a new OHV staging area at plan level. Total developed day-use capacity 6% below plan level.	<b>Builds</b> a new OHV staging area 60% larger than identified in the plan. Total day-use capacity developed to plan level.
<b>Improve safety for employees</b>	<b>Does not improve</b> safety for employees	<b>Improves</b> safety for employees	<b>Improves</b> safety for employees	<b>Improves</b> safety for employees
<b>Improve safety for visitors</b>	<b>Does not improve</b> visitor safety	<b>Improves</b> safety for visitors	<b>Improves</b> safety for visitors	<b>Slightly improves</b> safety for visitors
<b>Improve ability to prevent violations and enforce regulations</b>	<b>Does not improve</b> ability to prevent violations and enforce regulations	<b>Improves</b> ability to prevent violations and enforce regulations by a high degree	<b>Improves</b> ability to prevent violations and enforce regulations by a high degree	<b>Improves</b> ability to prevent violations and enforce regulations by a high degree

What alternatives were developed?

What alternatives were developed?

Alternative 2 North (Map 2a)

What alternatives were developed?

Alternative 2 North (Map 2a)

What alternatives were developed?

Alternative 2 Umpqua (Map 2b)

What alternatives were developed?

Alternative 2 Umpqua (Map 2b)

What alternatives were developed?

Alternative 2 South (Map 2c)

What alternatives were developed?

Alternative 2 South (Map 2c)

What alternatives were developed?

Alternative 3 North (Map 3a)

What alternatives were developed?

Alternative 3 North (Map 3a)

What alternatives were developed?

Alternative 3 Umpqua (Map 3b)

What alternatives were developed?

Alternative 3 Umpqua (Map 3b)

What alternatives were developed?

Alternative 3 South (Map 3c)

What alternatives were developed?

Alternative 3 South (Map 3c)

What alternatives were developed?

Alternative 4 North (Map 4a)

What alternatives were developed?

Alternative 4 North (Map 4a)

What alternatives were developed?

Alternative 4 Umpqua (Map 4b)

What alternatives were developed?

Alternative 4 Umpqua (Map 4b)

What alternatives were developed?

Alternative 4 South (Map 4c)

What alternatives were developed?

Alternative 4 South (Map 4c)

**What environmental effects are predicted for each alternative?**

**CHAPTER 3**

In chapter 3, we predict the likely effects of each action under each alternative; it is equivalent to the traditional section "Environmental Consequences". The Northwest Forest Plan and the Dunes Plan provide evidence for baseline environmental conditions from which direct, indirect, and cumulative effects are analyzed in chapter 3. Cumulative effects are disclosed under the section titled "Other Predicted Effects" and describe how all actions, including those expected from other landowners, affect each resource.

In this chapter, we predict the likely environmental effects of the proposed alternatives, whose outcomes are based on the assumption that the project design criteria (appendix A) have been followed.

Based on the science literature and our collective educational and professional experience as land managers, we are confident in the accuracy of our analysis of the **current** conditions discussed in chapter 1. In chapter 3, when we describe the environmental effects of each alternative, we are **predicting** those effects based also on the literature and our collective educational and professional experience as land managers; however, we recognize that predictions are inherently uncertain, some just a little and some highly.

Because of the similarities of environmental conditions and ecological processes found in the planning area, we expect site-specific effects and environmental responses to the proposed actions to be fairly uniform throughout. In the following pages, therefore, we expect our generalized discussions on effects can be applied to any given location in the landscape with a high degree of confidence that the effects described will fit the site.

When the Forest Supervisor chose the members of the interdisciplinary team, possible scenarios for this environmental assessment were considered and the disciplines that would illuminate decisions about them were determined. Relying on professional judgment and expertise, the Forest Supervisor chose the disciplines and formed the team of Forest experts in those disciplines. Team members reviewed areas where actions are proposed, reviewed relevant refereed literature and Forest assessments for this planning area, and consulted disciplinary colleagues in the Forest Service, other agencies, universities, and elsewhere. Often, literature reviewed by team members was deemed incomplete and, though studies of similar environments and similar scenarios were reviewed, the expert's professional judgment was required to determine what information can be appropriately used here—and how strongly it supports predictions about what the environmental effects of proposed actions will be. Although team members benefit from the array of research information and the insights of colleagues, they are valued most highly for their experience in and knowledge about the project planning area.

Consultation with other experts helps assure that the literature review did not miss a valuable resource, and it provides opportunity to debate and strengthen the team expert's conclusions

about how proposed actions are likely to affect the environment. After several team meetings and one-on-one discussions among team members on how each one's predictions might affect or be affected by all of the others, each team member wrote a section of this chapter. Then all of them reviewed the whole chapter to be sure they find the others' predictions clear and supportable.

In this chapter, team members' position titles accompany their written contributions to indicate that they believe the cited references are relevant, the inferences drawn from them are appropriate, and the predictions are supported by the cited literature and their own professional judgment. In this section, when "we" is used, it means one or more other team members concur.

## **Predicted Effects of Designating Dispersed Sand Camping Sites and Increasing Staging Area Capacity on Addressing the Problems**

### **Recreation Experience** (*District Recreation Planner*)

*Maintaining the Recreation Opportunity Spectrum (ROS) of semi-primitive motorized experience*—The areas where designated sand-camping sites are proposed at the Oregon Dunes National Recreation Area (ODNRA) are in the semi-primitive motorized ROS class (USDA 1994). The Dunes Plan and the State Comprehensive Outdoor Recreation Plan (OPRD 1991) recognize the semi-primitive motorized recreation setting as one that is in short supply in Oregon. Demand for recreation opportunities and experiences routinely exceed supply in this ROS class (OPRD 1991). The Dunes Plan direction is to protect and preserve semi-primitive motorized recreation opportunities where they exist at the ODNRA, because of its relative scarcity (high demand and low supply). Designating sites to maintain some degree of control over the location and number of sand camps and the off-highway vehicle (OHV) riding associated with these camps is part of an effort to maintain the semi-primitive motorized character in the ODNRA OHV riding areas. Three areas—totaling 12,440 acres, including 5,930 acres of open sand—are currently open to motorized recreation and are managed as semi-primitive motorized.

The semi-primitive motorized recreation setting on the ODNRA is characterized by the following conditions (USDA 1994):

- High probability of experiencing solitude, closeness to nature, tranquility, self-reliance, challenge, and risk;
- Predominantly a natural appearing environment;
- Low concentration of users, but often evidence of others on trails and in riding areas (the Dunes Plan identifies a target average of 1 to 2 OHV riders per acre, assuming perfect distribution across all acres available for riding);
- Frequency of encounters with other users in the semi-primitive motorized ROS class would be low to moderate relative to that in other ROS classes such as Rodeo Natural, Rural, and Urban (as individual tolerances for other people are highly variable, an exact number or range of encounters is undefined);
- On-site controls and restrictions are present, but subtle (e.g. permits); and
- Usually at least 2,500 acres in size.

## What are the environmental effects?

Based on the Dunes Plan, the semi-primitive motorized recreation experience for areas being considered in this analysis is premised on the OHV riding experience, not the sand camping experience. Currently, Forest Service recreation managers recognize that the sand camping experience does not meet the objectives of the semi-primitive motorized recreation experience, nor can it be returned to that experience. However, the amount and distribution of sand camps can affect the number and distribution of OHV riders, where managing for the semi-primitive motorized experience is feasible. While managing the number and distribution of sand camps is aimed primarily at preserving the semi-primitive motorized riding experience, it also serves to move the sand camping experience towards the desired semi-primitive motorized experience by lowering camp densities, creating greater spatial separation between camps, and maintaining smaller group sizes within camps.

Alternative 1 would maintain the current sand camping system that allows visitors to select campsites in any location open to OHV riding. A locally administered reservation system is implemented for three holiday weekends and controls numbers of camps in popular areas during these periods. Sand camping capacities are 40 vehicles for Hauser and 600 vehicles for Horsfall. However, there is no control on the:

- number of camps outside the reservation areas;
- location of camps in either the reservation or non-reservation areas; and
- number of campers in either the non-reservation or reservation areas (only the number of permits is limited, not the number of people per permit).

This often leads to large groups of campsites located in close proximity to each other, no limit to the number of vehicles per camp, and no spatial separation of campsites. This is not consistent with the semi-primitive motorized experience. Current trends show that the number of people sand camping is increasing in OHV riding areas, resulting in a greater degradation of the semi-primitive motorized recreation experience. Thus, Alternative 1 does not move sand camping experiences toward the semi-primitive motorized recreation experience and does nothing to protect the semi-primitive motorized riding experience by limiting the total number of sand camps and associated OHV riders.

Alternatives 2 and 3 would designate campsites to reduce the capacity and concentration of campers compared to Alternative 1. This lower concentration of camps and campers, placing a limit on the number of vehicles per site, and the spatial separation of campsites moves sand camping experiences closer to semi-primitive motorized guidelines and helps maintain the semi-primitive motorized riding experience by limiting the number of sand camps and associated OHV riders.

Alternative 4 establishes the highest number of designated campsites of the three action alternatives. It is based on the maximum practical capacity based on the existing landforms, vegetation, and social dynamics associated with OHV dispersed camping and patterns of use. Because there are more camps, the spatial distance between camps is much less under this alternative, compared to Alternatives 2 and 3. As a result, feelings of remoteness and opportunities for solitude—while higher than under the no-action alternative—are less than those associated with Alternatives 2 and 3. Therefore, Alternative 4 does not move sand camping

What are the environmental effects?

experiences toward semi-primitive motorized guidelines as much as Alternatives 2 and 3, and only marginally meets the semi-primitive motorized recreation experience. Alternative 4 still helps maintain a lower-level semi-primitive motorized riding experience by limiting the number of sand campers and associated OHV riders.

*Developed day-use opportunities*—The Dunes Plan calls for expanding the developed day-use staging already existing at Horsfall in the southern riding area. Day-use staging provides opportunities for people to trailer their OHVs to the edge of the riding area, off-load them, and ride their OHV onto the sand. Bull Run staging, at the west end of the Horsfall corridor, was recently completed and opened for public use. That facility was also identified for development in the Dunes Plan and was analyzed under an earlier environmental assessment.

The proposal to build day-use staging meets the needs of OHV visitors that do not want to or cannot camp overnight on the sand or in a developed campground (with direct sand access). In the almost 10 years since the Dunes Plan has been completed, various changes and administrative actions have occurred that warrant evaluating changes in the staging area capacities from those shown in the Dunes Plan. For example, an alcohol prohibition in the sand areas makes staging from developed areas (where alcohol is permitted) more desirable for some visitors. In addition, some Dunes Plan staging capacity, targeted for the northern riding area, was not developed and could be shifted to this area. Additional staging capacity identified in the Dunes Plan, and considered in this analysis, was intended to mitigate this loss in capacity.

Table 3 reflects the staging area capacity disclosed in the Dunes Plan as well as the total capacity proposed under each alternative.

Table 3. Comparing the Dunes Plan and alternative staging area capacities

	<b>Total number of parking sites</b>	<b>Variation from Dunes Plan</b>	
		<b>Sites</b>	<b>Percentage (%)</b>
Dunes Plan	476	NA	NA
Alternative 1	425	-51	-11
Alternative 2	475	-1	0
Alternative 3	447	-29	-6
Alternative 4	475	-1	0

Under Alternative 1, the opportunity to expand developed day-use staging in the southern riding area would be deferred at least 2 to 3 years. In the meantime, staging area capacity would be maintained at current levels, about 11 percent below that prescribed in the Dunes Plan.

Under Alternatives 2 and 4, the number of parking sites on the ODNRA for developed day-use staging, including 70 parking sites at Horsfall, would be at the Dunes Plan total capacity (table 3). Alternatives 2 and 4 would account for changes that have occurred since the Dunes Plan was completed in 1994. It is anticipated that the planned facility capacity in these alternatives would adequately meet current demand, except for perhaps during heavy-use periods and holiday-weekend periods. The expansion of day-use staging would accommodate OHV users displaced by sand-camping site designation; and those no longer allowed to stage in inappropriate

## What are the environmental effects?

locations, such as near wellheads, along road sides, and from developed areas not managed for OHV staging.

Under Alternative 3, the number of parking sites for developed day-use staging, including 42 parking sites at Horsfall, would fall about 6 percent short of the Dunes Plan total capacity (table 3). This would address much of the need for day-use staging, but would not account for changes that have occurred since the Dunes Plan was completed, such as not developing the Driftwood II day-use staging area called for in the Plan. As a result, demand would sometimes exceed supply and this could increase day-use staging in inappropriate locations, such as along the Trans-Pacific Highway, near wellheads, and in other developed areas not managed for OHV use. This, in turn, can lead to resource damage, unacceptable impacts to non-OHV visitors, and safety issues.

Based on the changes that have occurred since the Dunes Plan was completed, Alternatives 2, 3, and 4, are not expected to increase day-use recreation above existing conditions in the project planning area.

*Other recreation opportunities*—Other camping opportunities may be found in fully developed facilities provided in private or Forest Service campgrounds. These facilities provide services such as water, electricity, or sewer hookups. Sand camping is a different recreational experience than what is experienced in developed campgrounds or RV parks and is not expected to directly compete with developed facilities for visitors.

### **Employee Safety** (*Forest Law Enforcement Officer*)

Alternative 1 will maintain the existing dispersed sand camping practices, resulting in no restrictions on location and number of campsites and no limit to the size of individual sites or the concentration of sites. These conditions have often resulted in large groups of visitors located in concentrated areas. Group behavior at these large campsites tends to be more confrontational than those experienced at smaller campsites and can result in greater risks to non-law enforcement and law enforcement employee safety. Thousands of contacts have been made by law enforcement officers from varying jurisdictions over the last few years. Those officers' experiences have told us that peer behavior in large groups, particularly where violations are occurring or have occurred, are much more confrontational and less safe. These confrontational situations tend to make it more difficult to enforce regulations and require a much greater commitment of time and resources to maintain control because voluntary compliance is less likely. OHV use has increased dramatically over the last few years, growing a rate that far outpaces law enforcement's staffing capability. By maintaining the existing off-road camping conditions, Alternative 1 falls short of providing adequate employee safety.

Alternatives 2, 3, and 4 will designate location and size of sand camping sites. This will limit group size and increase distance between sites, substantially reducing the likelihood of large visitor concentrations and confrontational behavior. When violator contacts are necessary, smaller peer groups are generally much less confrontational, creating a safer situation for employees. Under these conditions, voluntary compliance is more likely and less commitment of time and resources are needed to enforce regulations and maintain control. Thus, the potential for improving overall safety exists under Alternatives 2, 3, and 4.

## What are the environmental effects?

Alternative 3 would implement the fewest number of designated campsites. While this is desirable for total crowd control, it may have a negative result in gaining acceptance from users. A lack of acceptance almost always leads to confrontational situations when compliance enforcement is necessary, making enforcement more difficult and creating greater risks to employee safety.

Alternative 4 would implement the greatest number of designated campsites. This will likely garner the largest acceptance by the normal off-road camper. While this acceptance is better for enforcement and therefore typically leads to overall greater safety, it may approach a number that creates some borderline crowded conditions.

While there may be acceptance issues with any action alternative that is implemented, the overall conditions for employee safety and law enforcement would be preferable to maintaining the current situation under Alternative 1.

### **Visitor Safety** (*District Recreation Planner*)

*Campsite locations*—The current sand camping system allows for campers to choose to camp anywhere open to OHV riding. Some campers choose to camp in designated OHV routes and popular riding areas. Camping in these areas creates unsafe situations for both campers and riders. Two examples of unsafe situations include campers building fire pits in these areas, creating hazardous debris for riders; or by locating camps in high-traffic areas.

Alternative 1 would still allow for campers to choose to camp anywhere open to OHV riding. The safety of riders and campers would continue to be an issue as long as campers have the ability to choose campsites in designated riding routes. Campers in designated routes would have OHV riders driving by, who often do not slow down around camps, and riders would continue to be surprised by camps located in routes designated for riding.

Alternatives 2 and 3 would locate designated campsites outside of designated OHV routes and popular riding and play areas. This would improve safety for campers and for riders, who will no longer find camps in designated OHV routes. Once sites are established, visitors would become accustomed to site locations and avoid developing riding routes through recognized sites.

Alternative 4 would also locate sites off of designated OHV routes. However, several sites would be located in popular riding areas due to the number of proposed designated sites (180). Thus, this alternative would only slightly improve existing safety conditions because it does not address rider and camper safety as well as Alternatives 2 and 3.

*Separation of users*—Currently, campsites are not designated and visitors can establish new camps right next to occupied sites. There is no system to spatially separate campsites. The lack of spatial separation of camps leads to conflict between users and territorialism. Spatial separation of users also relates back to the issues of maintaining the semi-primitive motorized experience, providing for visitor and employee safety, and improving visitor accountability.

## What are the environmental effects?

In Alternative 1, there would be no required separation of campsites. The conflicts that occur between campsites will continue to be an issue for the user's safety when disputes arise from territorialism among campers. By not maintaining the separation of users, this alternative would not meet the ROS guidelines for the semi-primitive motorized experience or provide the visitor and employee safety that results from spreading campsites.

In Alternatives 2, 3, and 4, sites would be designated to separate users by space, topography, and vegetation. The spatial separation of campers will improve the current condition of the semi-primitive motorized recreation experience, and improve the environment for visitor safety.

### **Ability To Prevent Violations and Enforce Regulations** (*Recreation Planner, Forest Law Enforcement Officer*)

*Ability to prevent violations*—Personal contacts between Forest Service employees and visitors coupled with making educational materials available to visitors are key components to the prevention of violations. Under current management, there is a self-registration system for sand campers, where they select their campsite anywhere in the open-sand areas. This system does not link users to specific sites unless they happen to be contacted by a Forest Service employee and a record is kept. Staffing and time constraints usually preclude such contacts and record keeping. As a result, resource damage or other infractions are more likely to occur, and it is often difficult to identify the responsible party. At current staffing levels, as the number of people sand camping increases in an area, the ability to prevent violations decreases.

Alternative 1 would continue the current management system that is heavily dependant upon individual contacts to prevent violations. The current staffing level, combined with undesignated sites, greatly limits the agency's ability to make contact with campers and inform them of regulations. Consequently, the ability prevent violations would continue to be very low.

Alternatives 2, 3, and 4 would improve the ability for Forest Service employees to make personal contact with visitors in sand camps; build an approved staging area facility, resulting in better employee-visitor contact; and make educational materials available to visitors as part of the registration process. By implementing these changes to the existing management system, Alternatives 2, 3, and 4 would substantially improve the ability of the Forest Service employees to prevent violations.

*Ability to enforce regulations*—The ability for employees to enforce regulations is related to the number of campers, the number of camps, and the concentration of users in an area. Managing these factors can create an environment where employees can safely and effectively contact visitors to enforce regulations. Under current conditions, during peak-use periods and holiday weekends, the concentration of sand camps is extremely high, and some of these camps can have up to 50 or more people. This high concentration of camps and campers makes it difficult to impossible for employees to enforce regulations. As concentrations decrease, along with the number of campers and camps, the ability of employees to enforce regulations through visitor contacts increases. When existing regulations are not enforced, violations increase, resource damage increases, and the safety of visitors and employees decreases.

## What are the environmental effects?

Alternative 1 would maintain the current management system for dispersed sand camping sites. The number of campers, camps, or the concentration of campers would not be limited. The ability for employees to link campers and vehicles to camp areas would be low, making it difficult to identify the responsible party, should a violation occur. Thus, the ability to enforce regulations under Alternative 1 would continue to be very low.

Alternatives 2, 3, and 4 would distribute campsites to reduce camper concentrations, and place an upper limit on the number of vehicles and people per campsite. By managing the number of campers, the number of camps, and the concentration of campers, these alternatives would create an environment where employees would have a greater ability to enforce regulations compared to Alternative 1. In comparing Alternatives 2, 3, and 4, Alternative 3 would offer the employees the greatest ability because of the lowest number of proposed designated campsites; Alternative 4 would offer the least ability because of the greatest number of proposed sites.

## **Predicted Effects of Designating Dispersed Sand Camping Sites and Increasing Staging Area Capacity on Other Resources**

### **Wildlife Species** (*District Wildlife Biologist; USDA 2004c*)

Wildlife habitats in the project area include inland dunes; small-diameter, young shore pine forests; and isolated ephemeral wetlands. Project activities would occur in an area separated from shoreline and active-shoreline dunes by foredunes and deflation plains.

*Listed species*—Forest Service policy requires that all actions be taken to “assure that management activities do not jeopardize the continued existence of sensitive species or result in an adverse modification of their essential habitat” (FSM 2670.3). Section 7 of the Endangered Species Act of 1973 (as amended in 1978, 1979, and 1982) directs Federal agencies to assure that actions authorized, funded, and/or conducted by them are not likely to jeopardize the continued existence of any threatened or endangered species or result in destruction or adverse modification of their critical habitat. The Act also directs each Federal agency to confer or consult with the appropriate Secretary on any action that is likely to jeopardize or affect the continued existence of any species or its habitat. All Forest Service projects, programs and activities require review and documentation of possible effects on Proposed, Endangered, Threatened or Sensitive (PETS) species (FSM 2672.4). In compliance with these directions and policies, a biological evaluation was conducted for all proposed ground disturbing activities.

Because the project area is outside the range or contains no suitable habitat for the marbled murrelet, northern spotted owl, and Oregon silverspot butterfly, none of the alternatives affect these listed species. The western snow plover occurs in scattered locations west of the project area in areas of open sand with beach influence. Northern bald eagles are known to nest north and east of the project area, and forage along beaches and creeks. California brown pelicans have been sighted using the ocean west of the project area, but are not expected to occur in areas affected by proposed activities. Based on the Biological Evaluation (USDA 2004b) prepared for this project, no other listed species known to occur or potentially occurring on the Siuslaw National Forest are expected to occur in the project area.

## What are the environmental effects?

Western snowy plover (*Charadrius alexandrinus nivosus*)—Under Alternative 1, no impacts to the western snowy plover would occur as a result of the no-action alternative. Current open-sand acres affected by OHV use and associated dispersed sand camping occurs east of nesting and rearing areas. In addition, current actions on the Oregon Dunes National Recreation Area are consistent with recovery actions as described in the Draft Snowy Plover Recovery Plan (USDI 1999):

- Monitor plover breeding populations;
- Maintain natural coastal processes that perpetuate high quality breeding habitat;
- Prevent disturbance of breeding plovers by people and domestic animals; and
- Prevent predation.

Under Alternatives 2, 3, and 4, known plover nesting areas are located outside areas proposed for designated dispersed sand camping. No proposed designated sand camping sites are located closer to nesting areas than existing dispersed sites—the closest designated site is 0.30 mile from a known nesting and rearing area. Thus, proposed designated sand camping sites are not expected to impact plover habitat or nesting through noise disturbance.

Increasing the staging capacity is not likely to increase recreation activity on the Oregon Dunes compared to previous high-use periods. In addition, the area proposed for staging area expansion is located over 4 miles from existing nesting areas, with no direct access from the staging area to open riding areas on the beach, thereby avoiding the potential for adverse effects.

Based on designated campsite and staging area locations, existing protection measures, and design criteria for this project, proposed activities under Alternatives 2, 3, and 4 are expected to have no effect on snowy plover nesting habitat, designated critical habitat, or populations.

Northern bald eagle (*Haliaeetus leucocephalus*)—No effects to the northern bald eagle would occur as a result of the no-action alternative because dispersed camping sites are greater than 0.25 miles from two known active bald eagle nest sites. Effects to bald eagles and potential use restrictions related to dispersed camping would be evaluated if new eagle nests become established within 0.25 miles of camping areas. Within this distance, bald eagles can be adversely affected by noise disturbance.

Under Alternatives 2, 3, and 4, proposed activities will also be greater than 0.25 miles from the known nest sites (0.5 mile line-of-sight) and no effects to the nesting bald eagles are expected from noise disturbance. If new bald eagle nests become established, dispersed sites that occur within 0.25 mile (0.5 mile line-of-sight) of nests would be assessed for disturbance potential (appendix A). None of the activities proposed by these alternatives will affect potential bald eagle habitat.

*Regionally sensitive species*—The Biological Evaluation indicates only the Pacific shrew and Pacific fringe-tailed bat may occur in the project area. The remaining species listed as sensitive either do not occur in the project area or suitable habitat elements for these species are lacking in and adjacent to the project area. Therefore, Alternatives 1, 2, 3, and 4 will have no effect on these remaining species or their habitats.

## What are the environmental effects?

**Pacific shrew**—This species is known to occur on the Forest and habitat elements appear to be suitable where native vegetation exists in the project area. Habitats include riparian areas adjacent to or in forested areas. By continuing current sand camping practices under Alternative 1, minor adverse effects to Pacific shrew habitat could occur because camping is occurring in forest edges. Designated sand camping sites, as proposed by Alternatives 2, 3, and 4, will include design criteria (appendix A, section II) to protect native vegetation and riparian areas. Therefore, designated sand camping sites are not expected to adversely affect habitat and local populations of Pacific shrews. Staging-area development at Horsfall will remove some native vegetation, such as shorepine and European beachgrass, but effects to habitat and local populations of Pacific shrews are expected to be minor due to the low habitat suitability of impacted areas.

**Pacific fringe-tailed bat**—Christy and West (1993) describe fringe-tailed bats as utilizing caves, mines, and buildings for hibernation, maternity, and solitary roosts. No caves or mines are in the project area. None of the existing buildings will be affected by proposed activities. Therefore, Alternatives 1, 2, 3, and 4 are not expected to affect fringe-tailed bat populations or their habitat.

*Survey-and-manage species*—The Northwest Forest Plan identified survey-and-manage species based on their close association with late-successional and old growth forest habitat (USDA 1994). No suitable late-successional or old growth forest habitat for survey-and-manage wildlife species occurs where sites are proposed for designated dispersed camping or staging area development. Therefore, pre-disturbance surveys are not needed, and Alternatives 1, 2, 3, and 4 will have no effect on survey-and-manage species or suitable habitat. This project complies with the survey-and-manage mitigation measures standards and guidelines and special status species policies in effect prior to April 22, 2004 (USDA, USDI 2004; page 9, item 1).

*Management-indicator species*—In addition to the listed species previously described, management-indicator species for the Siuslaw National Forest include the marten, pileated woodpecker, and primary cavity nesters (e.g., woodpeckers). Martens and pileated woodpeckers represent species dependent on mature conifer habitats. Primary cavity nesters represent those species associated with dead and defective trees found in mature stands (USDA 1990). Because no suitable habitat exists in the project area for these species, Alternatives 1, 2, 3, and 4 will have no effect on these species or their habitats.

*Land birds*—Land birds, including migrant and resident species, are those that generally use terrestrial and wetland habitats. Some land birds expected in the project area include the olive-sided flycatcher, tree swallow, Swainson's thrush, and black-throated gray warbler. Habitats these species could use in the project area include forest canopies, snags, understories, ground vegetation and structure, and existing openings (USDA 1992).

Alternatives 1, 2, 3, and 4, have the potential to physically disrupt land-bird nesting. Under Alternative 1, existing sand camping practices are expected to further degrade native vegetation; however, overall effects on habitat and land-bird populations are expected to be minor due to the scattered, low quality nature of habitat. By designating sand camping sites and applying design criteria (appendix A) to protect or minimize impacts to native vegetation, adverse effects to existing habitat or land-bird populations under Alternatives 2, 3, and 4 would be reduced and generally limited to the land-bird nesting season.

**Botanical Resources** (*Forest Botanist; USDA 2004c*)

*Listed, sensitive, and survey-and-manage plants*—The Forest botanist has evaluated the potential effects of proposed activities on listed (threatened and endangered), sensitive, and survey-and-manage plants. With the exception of five sensitive plant species, he concluded that none of these plant species are present or suspected in or adjacent to proposed-project sites and no direct or indirect effects are anticipated to any of the special-status plant species. The five sensitive species that occur or have potential habitat in or adjacent to the project area include pink sandverbena, salt marsh bird's beak, water pennywort, northern bog clubmoss, and adder's tongue (USDA, USDI 2001; USDA 1990a).

**Pink sandverbena**—This species grows on open sandy high beach and foredune habitats. One natural site and three re-introduction sites are recorded on the dunes (Kaye 2002 and 2003). All pink sandverbena sites are in areas managed for western snowy plover nesting habitat where no OHV use is allowed. No potential habitat for pink sandverbena occurs in or immediately adjacent to proposed designated sand camping sites and the staging area. Therefore, Alternatives 1, 2, 3, and 4 are not expected to impact pink sandverbena populations or habitat.

**Salt marsh bird's beak**—This species occurs in coastal salt marsh habitats. One site is recorded on the ODNRA adjacent to the project area in Coos County. The site is approximately 600 meters from the nearest proposed designated sand camping site and is not open to OHV use. No potential habitat for Salt marsh bird's beak occurs in or immediately adjacent to proposed project sites. Therefore, Alternatives 1, 2, 3, and 4 are not expected to impact Salt marsh bird's beak populations or habitat.

**Water pennywort**—This species occurs in dune deflation plains and along the edges of lakes and streams. One site is known on the ODNRA occurring in a cut-off oxbow wetland area. The site is not in an area open for OHV use and is not in the project area. Some small pockets of potential habitat for this species exist in areas managed for OHV use. Based on the Dunes Plan standards and guidelines, these potential habitat areas are protected by designated OHV routes. Dispersed camping currently occurs along some designated routes. Because designated sites under the action alternatives were located in an effort to avoid impacts to wetlands and native plant communities, no potential habitat for water pennywort occurs in or immediately adjacent to proposed project sites under any of the action alternatives. Therefore, Alternatives 2, 3, and 4 are not expected to impact water pennywort populations or habitat. Even though routes are designated, Alternative 1 may adversely affect the small pockets of potential habitat in areas managed for OHV use as volume of use increases over time.

**Northern bog clubmoss**—This species occurs in dune deflation plains, coastal bogs and inland lakeshores. One site is known on the ODNRA occurring in deflation plain wetland area. The site is not in an area open for OHV use and is not in the project area. Some scattered areas of potential habitat for this species exists in areas managed for OHV use. Based on the Dunes Plan standards and guidelines, these potential habitat areas are protected by designated OHV routes. Dispersed camping currently occurs along some designated routes. Because designated sites under the action alternatives were located in an effort to avoid impacts to wetlands and native plant communities, no potential habitat for northern bog clubmoss occurs in or immediately adjacent to proposed project sites under any action alternative. Therefore, proposed actions under

## What are the environmental effects?

Alternatives 2, 3, and 4 are not expected to impact northern bog clubmoss populations or habitat. Even though OHV routes are designated, Alternative 1 may adversely affect the scattered areas of potential habitat as volume of use increases over time.

*Adder's tongue*—This species occurs in moist meadows, dune deflation plains and along the edges of lakeshores, marshes, bogs and ponds. Two sites are known on the ODNRA occurring in deflation plain wetland areas and are in the project area. These two sites exist in areas managed for OHV use and are protected by designated OHV routes. One site is managed under a conservation strategy for the species (USDA 1996). No OHV damage or impacts to the conservation strategy population has been recorded during monitoring visits. Some scattered areas of potential habitat for this species exists in areas managed for OHV use and are also protected by designated OHV routes. Dispersed camping currently occurs along some designated routes. Because designated sites under the action alternatives were located in an effort to avoid impacts to wetlands and native plant communities, no potential habitat for adder's tongue occurs in or immediately adjacent to proposed project sites under any action alternative. Therefore, Alternatives 2, 3, and 4 are not expected to impact adder's tongue populations or habitat. Alternative 1 may adversely affect the two known sites and the scattered areas of potential habitat as volume of use increases over time.

*Wetlands and native plant communities*—Many traditional dispersed campsites are located in or immediately adjacent to wetlands or native plant communities. Most of the wetlands on the ODNRA are well established, vegetated, and support other aquatic life. Long-term use of these sites in the project area has degraded habitat of these plant communities through trampling, vehicle use, and the building of fire pits and latrines.

Alternative 1—By maintaining the existing sand camping practices and as OHV use increases, Alternative 1 (no action) is expected to further degrade the habitat conditions of wetlands and native plant communities throughout the project area.

Alternatives 2, 3, and 4—Designated sand camping sites will be located to minimize impacts to wetlands and native plant communities. Where wetlands or native vegetation occurs in the 150-foot radius of designated sites, design criteria (appendix A) will provide protection from camping activities. Based upon past experience on the ODNRA, recovery of degraded wetland vegetation communities would be accomplished within five years. Recovery of upland native plant communities is expected to take about 10 to 15 years.

Some indirect effects to wetlands and native vegetation—from traffic and improper use of OHVs by individuals or groups associated with designated sand camps—would be expected to remain at current levels under Alternative 2, slightly less than current levels under Alternative 3, and slightly more than current levels under Alternative 4.

The proposed staging area will be located away from wetlands in upland dune areas where a mix of open sand and vegetation (such as young shorepine, and European beachgrass) hummocks exist. No direct effects to wetlands or native plant communities are expected from developing the staging area. Indirectly, the increase in OHV use associated with the staging area may likely result in some additional impacts to wetlands and areas of native vegetation from improper OHV

## What are the environmental effects?

use in this area. Compared to Alternative 3, these indirect effects would be slightly greater under Alternatives 2 and 4 because of the larger staging area proposed.

Even with the adverse effects of the additional staging area, Alternatives 2, 3, and 4 are expected to improve conditions in wetlands and areas of native vegetation by closing traditional dispersed camps in or adjacent to wetlands and areas of native vegetation. Designating and managing campsites will allow currently degraded plant communities to recover.

*Noxious weeds and invasive plants*—Noxious weeds and invasive plant species have substantially impacted many natural features and habitats of the ODNRA. Current (2002) invasive plant inventories indicate about 16,204 acres of the ODNRA are impacted. While OHV use is often identified as a vector for the spread of weeds, inventory data indicates that this may not be the case in the dune environment of the ODNRA where most new invaders (purple loosestrife, spotted knapweed, flag iris, gorse, knotweeds) are found in non-OHV areas (table 4). This is likely due to the sand substrate not sticking to the vehicles and acting as a carrier of weed propagules (like mud does) and weed species—transported in from other OHV riding areas—are not adapted to the dune environment. Rates of spread of well established weed species (European beachgrass, *Ammophila arenaria*; Scotch broom, *Cytisus scoparius*; and Portugese broom, *Cystisus striatus*) in OHV riding areas of the ODNRA do not appear to be accelerated. This assessment is based on weed inventories conducted for the ODNRA, similar project work accomplished in the past, and experience working on invasive plant projects on the dunes.

Alternative 1 (no action)—Established noxious weeds and invasive plants would continue to spread at about current rates. The current program of casual detection monitoring, limited inventories, and treatment of highest priority infestations would continue. No specific prevention, detection, or treatment programs for noxious weeds and invasive plants would be implemented in association with the dispersed camping program. Although the risk of new invaders associated with dispersed camping appears low, the likelihood of early detection and treatment of new invaders is also low under this alternative.

Alternatives 2, 3, and 4—Established noxious weeds and invasive plants would continue to spread at about current rates. A program of detection monitoring associated with administration of the designated sand camping program would be implemented. This monitoring program would compliment current programs that treat highest priority infestations. Although the relative risk of new invaders associated with dispersed camping appears low, a high likelihood of early detection and treatment would be present.

Developing the staging area poses a moderate risk of new invader introduction due to potential soil and debris contamination of heavy equipment with weed propagules (heavy equipment is suspected as the vector in establishing gorse and purple loosestrife on the dunes). Design criteria (appendix A), requiring cleaning of equipment prior to entering National Forest lands, is expected to reduce this risk to low. Detection monitoring should provide a high likelihood of early detection and treatment, if required.

Following the design criteria (appendix A, section III, #1), none of action alternatives are expected to exacerbate the spread of European beachgrass in the project area.

Table 4. Acres infested by noxious weeds and invasive plants on the ODNRA

Noxious weeds and invasive plant species	OHV-open <sup>a</sup>	Non-OHV <sup>b</sup>	ODNRA Total <sup>c</sup>
European beachgrass	6,486	4,739	11,225
Scotch broom	7,207	6,346	13,553
Portugese broom	473	710	1,183
Himalaya blackberry	0	84	84
English ivy	0	35	35
English holly	0	16	16
Spotted knapweed	0	14	14
Flag iris	0	10	10
Gorse	2	6	8
Purple loosestrife	0	2	2
Clematis	0	2	2
Himalayan knotweed	0	2	2

From the Dunes Plan: <sup>a</sup>OHV-open areas include management area (MA) 10(B), Off-Road Vehicle Open; MA 10(C), ORVs Restricted to Designated Routes; and portions of MAs 10(D, F, G, J, L), (about 12,740 acres total). <sup>b</sup>Non-OHV areas include MA 10(A), Non-Motorized Undeveloped; MA 10(E), Snowy Plover Habitat; MA 10(K), Research Natural Area; and portions of MAs 10(D, F, G, H, J, L) (about 16,160 acres). <sup>c</sup>Note—Many of the inventoried weed infestation acres overlap (i.e., European beachgrass, Scotch broom, and Portugese broom are distributed over much of the same acres).

*Commercial mushroom harvesting*—Commercial mushroom harvesting has been occurring in the project area for several years. Under Alternative 1, habitat suitable for growing mushrooms that are commercially harvested will continue to degrade. The proposed staging area facility under Alternatives 2/4 and 3 will impact 5.5 acres and 3.1 acres, respectively of suitable mushroom habitat. However, this minor adverse effect will be outweighed by the additional protection the habitat would receive by designating sand-camping sites.

**Soil Productivity** (*Forest Botanist, District Hydrologist*)

The riding areas are predominately covered by dune sand underlain by marine sand of Holocene origin. Underlying the sand is Tertiary-aged bedrock of the Tyee formation (northern and central) and Coaledo formation (southern), and Bastendorff Shale (extreme southern). The dune sands are loosely compacted and un-cemented and have a fine- to medium-grained texture. Thin lenses of silt and clay—remnants of soils from previous vegetation—can be interspersed through the sands at various depths. The dune sands are typically 100 to 200 feet thick with the sand-bedrock interface being anywhere from about 60 feet below sea level to 100 feet above sea level.

Because the soils in the project area are comprised primarily of sand, soil compaction from ongoing activities under Alternative 1 and proposed activities under Alternatives 2, 3, and 4 is expected to be minor and short term.

What are the environmental effects?

Building the staging area is expected to disturb the soil column at the Horsfall site. Vegetation will be planted in areas surrounding the facility at the site where open sand is exposed to limit wind erosion adjacent to and sand accumulation on the facility.

A portion of the ground elevation where the staging area would be located needs to be raised by about two feet to avoid conflicts during high-water years. This area is not considered a jurisdictional wetland because there are no hydric soils present and there is no hydrophytic vegetation—two of the three criteria that must be met for an area to be considered a wetland. In addition, the observed inundation of the area does not necessarily characterize wetland hydrology. Many areas having “irregular inundation patterns”, such as those observed at the Horsfall site, are not wetlands (USDA 2004b). The sand used to raise the ground elevation will likely come from open sand just east of the proposed staging area. About 5,400 cubic yards of sand will be needed. Other than minor disturbances to the soil column, no effects to soil productivity are expected.

**Fish Species and Habitats** (*District Fish Biologist; USDA 2004a*)

Fish species present in the OHV riding areas include predominately warm-water species present in lakes. These include brown bullhead (*Ictalurus nebulosus*), cutthroat trout, hatchery rainbow trout (*Oncorhynchus mykiss*), generic crappie (*Pomoxis sp.*), black crappie (*Pomoxis nigromaculatus*), bluegill (*Lepomis macrochirus*), pumpkinseed (*Lepomis gibbosus*), largemouth bass (*Micropterus salmoides*), and yellow perch (*Perca flavescens*), (table 5). Generic sculpins (*Cottus sp.*) are also present in the lakes.

Table 5. Gamefish present in lakes in OHV riding areas of the ODNRA

Lake	Brown bullhead	Cutthroat trout	Hatchery rainbow	Generic crappie	Black crappie	Bluegill	Pumpkinseed	Largemouth bass	Yellow perch
<b>North Riding Area</b>									
Bear Lake (no gamefish)									
Cleawox Lake	X		X		X	X		X	X
Siltcoos “Lagoon”	X	X			X	X		X	
<b>Umpqua Riding Area</b>									
none									
<b>South Riding Area</b>									
Clear Lake (Coos County)		X							X
Saunders Lake			X	X		X		X	X
Butterfield Lake		X			X	X	X	X	
Beale Lake						X		X	X
McKeown Reservoir (no data)									
Snag Lake	X							X	X

What are the environmental effects?

Lake	Brown bullhead	Cutthroat trout	Hatchery rainbow	Generic crappie	Black crappie	Bluegill	Pumpkinseed	Largemouth bass	Yellow perch
Teal Lake (no data)									
Sandpoint Lake (no data)									
Spirit Lake (no data)									
Horsfall Lake	X							X	X

Fish are also present in the Siltcoos River, which bounds the northern riding area, and in the North Slough of Coos Bay, which bounds the southern riding area. The Siltcoos River contains western brook lamprey (*Lampetra richardsoni*), Pacific lamprey (*L. tridentata*), white sturgeon (*Acipenser transmontanus*), green sturgeon (*A. medirostris*), coho salmon, cutthroat trout (*O. clarki clarki*), steelhead trout, redbreast shiner (*Rhichardsonius balteatus*), speckled dace (*Rhinichthys osculus*), three-spine stickleback (*Gasterosteus aculeatus*), sculpins (*Cottus ssp.*), and groundfish, especially starry flounder. The North Slough of Coos Bay contains Pacific lamprey, white sturgeon, green sturgeon, American shad (*Alosa sapidissima*), coho salmon, cutthroat trout, steelhead trout, striped bass (*Morone saxatilis*), three-spine stickleback, sculpins, and groundfish, especially starry flounder.

*Listed, management-indicator species, and groundfish*—The Oregon coast coho salmon is currently proposed for listing as a threatened species by NOAA Fisheries (formerly the National Marine Fisheries Service) and is located near the project area. (USDA 2004b). There are no other listed fish species in the project area. Groundfish such as the starry flounder also exists near the project area. Because observations have indicated that existing vegetation and topography provide effective barriers between coho and groundfish habitats and OHV riding areas, Alternative 1 is not expected to affect these species or their habitats. Project activities proposed by the action alternatives would not alter these effective barriers. Thus, Alternatives 2, 3, and 4 would have no effect on these species or their habitats.

*Sensitive species*—Sensitive fish species include the Umpqua dace, Oregon coast chinook salmon, Pacific coast chum salmon, Oregon coast steelhead, and Oregon coast cutthroat trout. Umpqua dace, Oregon coast chinook salmon, Pacific coast chum salmon, and coho salmon (recently added to the Regional Forester’s sensitive species list) and their habitats do not exist in or adjacent to the project area. Therefore, none of the alternatives would affect these species or their habitats. Oregon coast steelhead and cutthroat trout exist near the project area in the Siltcoos River and the North Slough of Coos Bay. Based on monitoring of ongoing activities and because proposed project activities are not expected to affect their habitats, Alternatives 1, 2, 3, and 4 would have no effect on these species.

*Warm-water game fish*—There are about 13 warm-water lakes in the project area, including the lagoon and reservoir. Game-fish populations such as brown bullhead, bluegill, largemouth bass,

## What are the environmental effects?

and yellow perch exist in several of these lakes. Many of these lakes receive angler use, with the most popular being Beale Lake.

Alternatives 1, 2, 3, and 4—Under Alternative 1, ongoing activities are not adversely affecting habitats of warm-water game fish, based on monitoring. Therefore, Alternative 1 is not expected to directly affect warm-water game fish or their habitats. Proposed activities near lakes will be limited to the designation of three existing campsites near Beale Lake. Because these three sites are impacting areas near the lake only slightly, Alternatives 2, 3, and 4 are not expected to directly affect warm-water fish habitats. Because warm-water fish populations typically respond favorably to increased fishing pressure, Alternatives 2, 3, and 4 may benefit these fish populations.

The indirect effects to game-fish populations and angler use are somewhat difficult to predict, regardless of the alternative to be implemented. Although Alternative 1 would not restrict the amount of use in the OHV riding areas, only a relatively few OHV enthusiasts use the project area for fishing. It might be expected that an increase in total use would lead to a proportionate increase in fishing. However, because anglers often are looking for a different experience than pure OHV riders, unrestricted OHV use could drive off some anglers that are looking for a less crowded fishing opportunity. Typically, many warm-water species respond favorably to increased fishing pressure and, because the lakes are only lightly fished, any increase in angling would probably improve the fishery.

Alternatives 2, 3, and 4 would insure that some sites are designated near Beale Lake, the most popular of the fishing lakes managed by the ODNRA. Information available through the sand camping reservation system would note that these sites are adjacent to the lake and present a good fishing opportunity. This may lead to increase angling use of Beale Lake. Anglers seeking a less crowded angling experience would be less inclined to go elsewhere than with Alternative 1—especially under Alternative 3 because it proposes the least amount of campsites. Based on the same reasons indicated for Alternative 1, Alternatives 2, 3, and 4 are expected to improve the fishery of the lakes through increases in fishing pressure.

*Essential fish habitat (Magnuson-Stevens Act)*—Habitat listed as essential by the Pacific Fishery Management Council include those for the Oregon coast coho salmon, Oregon coast chinook salmon, and Pacific coast groundfish. Essential fish habitat for Oregon coast coho salmon and Pacific coast groundfish exist adjacent to the project area. Based on monitoring of ongoing activities and because proposed project activities are not expected to affect their habitats, Alternatives 1, 2, 3, and 4 would have no effect on essential fish habitat for these species. Because essential habitat for Oregon coast chinook salmon does not exist in or adjacent to the project area, none of the alternatives would affect essential fish habitat for this species.

### **Water Quality** (*District Hydrologist; USDA 2004a*)

The Clean Water Act delegates surface water-quality management to state governments and requires federal agencies to meet state standards. Water-quality management includes identifying beneficial uses, reviewing parameters that could affect these uses, creating a list of impaired water bodies (commonly referred to as a 303(d) list), developing total maximum daily loads (TMDL's) for parameters considered to be at impairment levels, and formulating management

## What are the environmental effects?

plans. The Oregon Department of Environmental Quality (DEQ) identified beneficial uses and created 303(d) lists for parameters affecting those uses in 2002. No lakes or streams in the planning were included on these 303(d) lists.

The dunes aquifer underlying the NRA south of Tenmile Creek may at times serve as a municipal watershed. The Oregon Dunes National Recreation Area Management Plan (Dunes Plan) and a special-use permit require cooperation with the Coos Bay-North Bend Water Board for projects or activities that may affect the municipal watershed, including planning of recreational activities.

Groundwater in the southern OHV riding area is used as a source for municipal and industrial water. Currently, Forest Service personnel will often find one or two containers of used oil in the OHV riding areas after a busy weekend. The amount of uncontained oil disposal is unknown. Although surface drainage in the OHV riding areas is minimal, and the action alternatives avoid designating new sand campsites next to surface waters, the potential exists for impacts to surface water quality. Therefore, the analysis of the alternatives will focus on changes in the potential for contamination of groundwater and surface water. Although monitoring wells are present in the project area, monitoring is limited to measuring water levels, and concentrations of chloride and iron. Water quantity in the project area should not be measurably affected by any of the alternatives, based on levels of anticipated use.

Alternative 1 would not cap the amount of sand camping use, restrict group size, designate areas for camping, or create a record of users tied to a particular site. All of these factors increase the risk for contamination of ground and surface waters by illicit disposal of petroleum products. Of particular interest is the absence of tracking users to a particular site because, in general, users that know there is no accountability for their actions are much more likely to violate rules than those that believe they may be held accountable. Large group size also tends to contribute to unlawful behaviors, including disposal of petroleum products. Use in the Horsfall and Hauser areas, where most of the production wells are located, would continue to grow along with the risk of contamination of the aquifer used by the Coos Bay-North Bend Water Board. Concerns over human waste would also increase.

Because Alternatives 2, 3, and 4 would cap the amount of sand camping use, restrict group size, designate areas for camping, and create a record of users tied to a particular site, the risk for contamination of ground and surface waters by illicit disposal of petroleum products would decrease. The ability to tie users to a particular site creates accountability and should lead to decreased disposal of used petroleum products in the OHV areas. The reduction in maximum group size should also lead to less potential for disposal of petroleum products. Weekend use in the Horsfall and Hauser areas, where most of the production wells are located, would decrease as campsites are dispersed over other portions of the OHV riding areas. Potential for increased weekday use may maintain total use near current levels under Alternatives 2 and 3, and possibly slightly above current levels under Alternative 4. Concerns over human waste should decrease because campsites could be designated close to vegetation. The natural biological activity in the humus layer associated with the vegetation would lessen human waste contamination.

The leach field associated with the proposed staging area will be designed and located to comply with state regulations to protect wells and will be located at least 1,000 feet from production

## What are the environmental effects?

wells. Construction and use of the leach field may have minor, localized direct effects to ground water. Based on the design criteria (appendix A, sections I and III), Alternatives 2, 3, and 4 are not expected to indirectly affect water quality associated with these wells.

Overall, implementation of Alternatives 2, 3, and 4 should reduce the risk of contamination of the aquifer used by the Coos Bay-North Bend Water Board from current levels. Because of the number of designated sites, Alternative 3 should reduce this risk more than any other action alternative, while Alternative 4 would reduce the risk by the least amount.

### **Aquatic Conservation Strategy** (*District Hydrologist/Fish Biologist; USDA 2004b*)

On March 22, 2004 the USDA Under Secretary for Natural Resources and the Environment signed Record of Decision (ROD) amending the Northwest Forest Plan. The decision clarifies provisions relating to the application of the Aquatic Conservation Strategy (ACS). Specifically, the amendment removes the need for deciding officials to certify that individual projects meet ACS objectives at the site-specific level and short time frames. Instead, the ROD requires individual projects to meet ACS standards and guides and that the ACS objectives be met at watershed or larger scales (5<sup>th</sup> field hydrologic fields or greater) and over longer time periods of decades or more. Project records must also demonstrate how the decision maker used relevant information from watershed analysis to provide context for project planning.

The Water/Fisheries Report and BE contains a section documenting compliance with ACS objectives. This is no longer required. ACS objectives will be met over longer time frames and multiple projects, some of which have yet to be proposed.

The Oregon Dunes Management Plan Watershed Analysis documents that the environmental analysis and information used to develop the Dunes Management Plan met the intent of the watershed analysis. Context for the OHV-Sand Camping Project analysis was provided based on direction contained in the Dunes Management Plan, thereby incorporating relevant information of the watershed analysis.

Based on the analysis in chapter 3, the project design criteria (appendix A), and the Water/Fisheries Report and BE, this project contributes to maintaining or restoring the Coastal Lakes watershed over the long term, is consistent with Riparian Reserve standards, and will meet ACS objectives.

### **Heritage Resources** (*Forest Archaeologist*)

According to Beckham, et al. (1982), the project area is part of the ancestral homeland of the native Siuslaw, Lower Umpqua, and Hanis Coos Indians, recognized since the treaty period as a confederated tribe. Their territory encompassed extensive estuaries, rugged cliffs and open beaches, as well as the heavily forested slopes of the Coast Range. Based on historic and ethnographic accounts, the margins of estuaries seemed to have been most favored for settlements, and it was from these bases that the people conducted most of their activities. Abundant plant and animal resources were found in diverse environments of estuaries, streams, lakes, mountains, shoreline, and ocean. Hence, hunting, fishing, and resource gathering would have been important subsistence activities. No treaty resources are in the project planning area.

## What are the environmental effects?

To determine if any known archaeological sites would be affected by proposed activities, the joint Tribal-Forest site database was reviewed and compared against the proposed locations for designated dispersed campsites, staging areas, sand borrowing areas, and associated access routes and drain fields. Based on this review, no cultural resource conflicts are anticipated.

Professional field inventories were conducted in the areas of anticipated ground disturbance, including the proposed staging area, sand borrowing areas, and associated access route and drain field. No cultural resources were identified through the course of this on-site investigation.

Based on review of the site database and field inventories, proposed activities are expected to have no effect on cultural resources when implemented according to the project design criteria (appendix A). Monitoring by a certified cultural resource technician or professional archaeologist during implementation of proposed activities will ensure that any previously unidentified cultural sites are protected. Proposed activities will meet the requirements of the National Historic Preservation Act because any sites that may be discovered will be protected by avoidance measures.

### **Scenery** (*Forest Landscape Architect*)

*Sand-camping areas*—The existing landscape is comprised of open-sand areas and sand dunes. The scenery objective for the sand camping areas is retention, where to the average visitor, landscape modifications are not evident in the view. Landscape modifications should borrow form, line, texture, color, and scale from the natural landscape.

Alternative 1 (no action) would allow the current modification to the natural scenery, as a result of camping use, to continue. The landscape setting would continue to have areas of obviously high use, dominated by obvious changes to vegetation and ground surface. Thus, Alternative 1 would not meet the scenery objective of retention.

By designating camping sites, Alternatives 2, 3, and 4 will reduce impacts to vegetation, reduce the area of ground disturbance, lessen obvious human use, and reduce the obvious modification of the sand dunes landscape that is currently occurring. Thus, Alternatives 2, 3, and 4 would likely result in a more natural-appearing setting than under Alternative 1 and would come closer to meeting the scenery objective of retention.

*Staging areas*— At the proposed Horsfall location, the landscape forms a kind of bowl to the north and west, with slope of sand dune and pine-forested edge. The landscape opens to the south to a dune landscape with low hummocks and patches of forest in the view. To the casual forest visitor, the whole view is natural in all directions. An island of pine trees extends into the center of the proposed parking lot site. The site has a focus on the foreground because of the shape of the land and has had a high intensity of use, evident by the wear on the ground and trees. The effects of use are visible, and the access roads are visible as an obvious road, though the section in view is not paved.

The Horsfall site has a scenery objective of partial retention. Under partial retention, modification to the landscape may be apparent as viewed by the casual observer, but is to be

## What are the environmental effects?

subordinate to the natural landscape in view. Line, color, form, texture, and scale of the landscape modifications are to be borrowed from the surrounding landscape.

Alternative 1 would maintain the existing setting at the Horsfall location, where there are currently no buildings or pavement visible. Thus, Alternative 1 meets the scenery objective of partial retention at Horsfall.

By implementing project design criteria (appendix A, section III), the proposed Horsfall staging area under Alternative 3 is expected to meet the partial-retention objective. By placing the facility in the north portion of the proposed location area and retaining existing surrounding trees and ground topography, the facility, as proposed under Alternatives 2 and 4, may meet the partial-retention objective.

### **Fire** (*Fuels/Fire Manager*)

Since 1990, the Oregon Dunes NRA (the Dunes) has had 84 wildfires compared to 95 wildfires for the remainder of the Siuslaw National Forest. The fires at the Dunes are typically much less than an acre in size, but occasionally under dry, windy conditions they reach up to 30 acres in size. These fires are almost entirely human-caused.

By designating dispersed sand camping sites under a reservation system, sand campers will be accountable for their actions. In addition, administrative actions will be taken that will permit one fire pit—to be located away from vegetation—and limit fires to that location. Thus, Alternatives 2, 3, and 4 are expected to reduce the potential for human-caused fire ignition in the project planning area.

### **Public and Management Access** (*Forest Transportation Planner*)

The roads analysis for this proposed project consists of a review of the existing access facilities and recommendations for upgrades to road surfaces where needed (USDA 2003b).

The current traffic in the project area is primarily OHVs and four-wheel drive highway vehicles accessing the open sand for recreation, although peak traffic on summer weekends and holidays often includes users who pull trailers out onto the sand. The majority of current OHV traffic comes from a mix of public and private facilities east of the railroad tracks. Recreation traffic, including OHVs, uses the Hauser Depot county road under a variance that allows OHV's on the public road.

Because the existing road system provides access to proposed designated campsite locations and staging area, no new roads on National Forest System (NFS) lands are needed. Additionally, no existing NFS roads need to be removed in the planning area because they are used to access recognized destinations. Thus, none of the alternatives will change the existing road system that accesses NFS lands in the planning area.

Designating sand camping sites will serve to reduce overall quantity of traffic to and from the open sand recreation areas, resulting in safer conditions for travelers. Based on personal

What are the environmental effects?

observations, existing road conditions are suitable for handling traffic associated with designated sand camps. Thus, no road-surface changes will be required for these roads.

The surface of road that accesses the proposed staging area (paved parking lot) at the Horsfall site will be changed from the existing graveled and/or native sand surface to a paved or improved gravel surface to meet standards applicable to trailer-towing, highway-legal vehicles with an overall combined trailer and vehicle length of up to 70 feet. The primary difference between the action alternatives is based on the capacity of the staging area: Alternatives 2 and 4 have 70 parking spaces and Alternative 3 has 42 parking spaces. Because of the improvements proposed for the access road, the potential increase in traffic is not expected to result in traffic-flow problems. The site will be designed to allow suitable access for vehicles to enter and leave the parking area. A surfaced, two-lane road will be built to access the parking area and will provide adequate width to accommodate design vehicles.

The Horsfall site has a highway-railroad crossing on the existing access road. The highway-railroad crossing is a signalized crossing that is electronically controlled. This access road also serves a number of other recreation sites in the vicinity of Horsfall. Increases in the amount or type of traffic will not generate any requirements to upgrade the traffic controls at the railroad crossing. The current signalized crossing control at Horsfall meets Oregon Department of Transportation (ODOT) Rail Division standards.

*Project Cost Summary (Project Engineer)*—Table 6 below summarizes the estimated costs associated with implementing the staging area. Estimated costs reflect recent experiences associated with building the Bull Run staging area facility.

Table 6. Cost summary for Horsfall staging area

Action	Alt. 1	Alternative 2	Alternative 3	Alternative 4
Parking area <sup>a</sup>	0	\$519,765 (70 spaces, paved)	\$317,530 (42 spaces, paved)	\$519,765 (70 spaces, paved)
Restroom facility <sup>b</sup>	0	\$175,000	\$150,000	\$175,000
Utilities (power, water, telephone, septic)	0	\$50,000	\$50,000	\$50,000
Design, contract, salary, taps	0	\$148,953	\$103,506	\$148,953
<b>Total</b>	<b>0</b>	<b>\$893,717</b>	<b>\$621,036</b>	<b>\$893,717</b>

<sup>a</sup> Costs include those associated with access road upgrading and hauling material to raise the level of the parking area.

<sup>b</sup> Costs include installation of a leach field. Vault toilets are another option, costing about \$20,000 each.

## Other Predicted Effects

### Cumulative Effects (*Team*)

The Council on Environmental Quality defines cumulative effects on the environment as those that result from the incremental actions of a proposal added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes them (40 CFR 1508.7).

For purposes of analyzing cumulative effects, the geographic area potentially affected by the alternatives is the 11,435-acre planning area in the Oregon Dunes NRA that is open for OHV use and sand camping between the Siuslaw River and the North Slough of Coos Bay; and private, state, county, and other federal lands (BLM and Army Corps of Engineers) adjacent to or near the planning area between Highway 101 and the ocean shore. The Team considered the need to extend the geographic area for each of the affected resources, to include the balance of the ODNRA acreage (17,465 acres) that emphasizes the management of other resources that prohibit OHV use by the recreating public. This includes 7,830 acres of non-motorized undeveloped recreation opportunities (MA 10(A)) and 6,670 acres associated with the management of wildlife, fish and plant habitats, including the snowy plover, globally significant plant communities, and wetlands (MA 10(E), (F) and (G)). Since there are no proposed changes in those management areas, we concluded that cumulative effects associated with designating sand camping sites and building a new staging area were not meaningful or measurable beyond the chosen geographic area.

The analyses provided for one no-action and three action alternatives and reflect the sum of most actions planned for federal lands in the near future. Other likely future actions on federal lands in the project planning area include ongoing management of existing campgrounds, trailheads, OHV staging areas, along with road and trail maintenance. Vegetative management of non-native species, using mechanical and prescribed fire treatments, is expected to continue. The Coos Bay-North Bend Water Board is expected to continue to operate its existing wells and may expand the development of the well field. Commercial harvest of mushrooms will continue.

On nonfederal land, there are six private campgrounds with 364 sites that have access to open sand for OHV use. There is also one State Park campground with 67 sites that have access to open sand for OHV use from October 1<sup>st</sup> to April 30<sup>th</sup>. The Team expects these current uses to remain unchanged. There are four businesses that provide guided tours onto the sand as well as rent OHV equipment to the public for use on the ODNRA. County land use allocations are not expected to change, thus we expect no changes in private land development or uses.

On other nonfederal lands, special events occur and there are plans for expanding OHV campground and staging area capacities:

*Special events*—Annually, special events occur adjacent to the Oregon Dunes NRA, including an ATV racing event (Dunes Fest) sponsored by the Reedsport-Winchester Bay Chamber of Commerce. For these events, the Forest Service issues a special-use permit for use of the developed staging capacity and sand camping in the Umpqua Dunes area. For the duration of

## What are the environmental effects?

these events, riding and camping are at levels similar to summer-holiday weekends and likely exceed the maximum capacity level for the semi-primitive motorized riding experience.

*Capacity development from adjacent landowners*—The Oregon Parks and Recreation Department (OPRD) is currently working on their Umpqua Lighthouse State Park Master Plan. The Umpqua Lighthouse State Park is adjacent to Oregon Dunes NRA lands that are open to OHV use. In the January 23, 2004 Addendum to the August 2003 draft (OPRD 2004), OPRD's proposed development concept includes a 50-site OHV campground and a 40-site staging area. The Development Concept (Chapter XI) also outlines Douglas County's proposed 60-site campground that would be located on the newly acquired BLM parcel adjacent to OPRD's state park. If these additional OHV facilities are developed on state and county lands, it will increase the camping and staging capacity that has access to the Oregon Dunes NRA riding area. This may require the Forest Service to reevaluate, during the next Forest planning cycle, its OHV management strategy to maintain the semi-primitive motorized riding experience.

Cumulative effects are measured relative to the baseline conditions described in chapter 1. Where specific effects are not described for a particular resource, cumulative effects are not expected to be measurably different from those under baseline conditions.

### Alternative 1 (No action)

Taking no action, Alternative 1 will maintain current sand camping practices and keep staging area development at current levels. In OHV riding areas and travel corridors we expect:

- The semi-primitive motorized recreation experience would not be maintained;
- Increased frequency of large and concentrated campsites, resulting in greater risks to employee and visitor safety and greater difficulty in enforcing regulations;
- Greater difficulty enforcing regulations related to camp site selection and waste disposal, potentially resulting in increased degradation of native vegetation or water quality; and
- Continued disturbance in the riding areas will help retard the encroachment of vegetation onto open dunes, thereby helping to maintain the open-sand environment.
- Disturbance to wildlife when their habitat is disturbed by management actions or recreation activities.

### Alternatives 2, 3, and 4

Proposed activities under Alternatives 2, 3, and 4 are expected to have the following cumulative effects:

*Recreation experience*—By implementing restrictions for location, size, and number of campsites, and providing additional developed day-use opportunities, proposed activities are expected to maintain the ROS of Semi-Primitive Recreation experience. With parking capacity developed to plan levels, developed corridors can be managed to their designed capacities (Standard and Guideline D-7).

## What are the environmental effects?

**Employee safety**—By limiting the number of campsites and designating their locations, risk to employee safety (non-law enforcement and law enforcement employees) is expected to decline in the project area.

**Visitor safety**—Limiting the number of campsites and designating their locations would reduce the long-term risks to visitor safety as conflicts between users are reduced.

**Visitor accountability and enforcement of regulations**—Design criteria (appendix A) associated with designated sand camping sites and the proposed staging area will cumulatively improve visitor accountability and enforcement of regulations. As less time is spent managing conflicts related to sand camping, the opportunity to enforce other regulations, such as riding in closed areas or measuring decibel levels, should increase.

**Wildlife species (listed, sensitive, survey-and-manage, and management-indicator)**—Proposed activities are designed to regulate existing unregulated sand camping and human concentrations. Restrictions proposed under these alternatives are likely to provide long-term benefits to these species by limiting human-caused disturbances and protecting native vegetation.

**Listed, sensitive, survey-and-manage, wetlands, and native plants**—No adverse cumulative effects on these species are expected. Beneficial cumulative effects are expected because design criteria (appendix A) would reduce sand camping impacts on native plant species and their habitats.

**Noxious and invasive plants**—Current infestation levels and spread will be maintained with no net changes in cumulative effects expected. Detection monitoring associated with administration of the designated sand camping program will increase the likelihood of detecting new invader species in OHV riding areas. With early detection of new invaders, the potential for control or eradication is high, reducing the potential spread of new weed species.

**Commercial mushroom harvest**—Beneficial cumulative effects are expected because designating sand camping sites and design criteria (appendix A) would reduce sand camping impacts on mushroom habitat.

**Fish species (listed, sensitive, and management-indicator)**—There would be no cumulative effects to native cold-water species. Proposed activities may increase angling for introduced warm-water species, potentially resulting in an improved fishery due to changes in fish population structure (i.e., fewer but larger fish).

**Water quality**—In the long term (at least 10 years), contamination to some extent of the aquifer and surface waters would be expected with the implementation of Alternatives 2, 3, and 4, but would be less than maintaining current conditions. Alternative 4 would have the highest magnitude and frequency of contamination, although by a minor amount, because it proposes largest number designated campsites. By proposing the smallest number of designated sites, Alternative 3 would have the lowest potential for contamination.

## What are the environmental effects?

**Soils**—Dunes sand comprises the vast majority of the project planning area; OHV riding routes are designated to avoid impacts to sensitive plants in areas where silt, clay, and other wetland soil types occur; and designated campsites will be located to lessen impacts to wetland and native plant communities. Thus, no adverse cumulative effects to soil productivity (compaction and disturbance) are expected, with some beneficial effects expected in scattered, localized areas.

**Heritage resources**—An overall benefit to heritage resources in the project planning area will be realized because Alternatives 2, 3, and 4 will be designed to reduce the potential for impacting unknown heritage sites.

**Scenery**—By designating sand-camp locations, a reduction in the overall obvious human presence in the project planning area is expected, compared to existing conditions. Thus, implementing the project would have a net result of slightly improving the overall scenic value of the planning area.

**Fire**—Restricting fire pit locations, designating campsite locations, improving visitor accountability, and enhancing the ability to enforce regulations will cumulatively reduce the risk of human-caused fire ignition in the planning area.

**Public and management access**—Access is limited to existing roads; no new roads will be built. Due to designating sand camps, the overall quantity of traffic to and from the open sand recreation areas will be reduced, resulting in safer conditions for travelers.

In summary, considering other ongoing and likely actions on federal, state, county, and private lands in the project area, Alternatives 2, 3, and 4 are expected to reduce the adverse cumulative effects of past recreation use in the project area, thereby accruing net beneficial cumulative effects for the recreation experience and most resources. The cumulative effects are generally beneficial over time and an improvement over existing conditions (Alternative 1).

### **Short-Term Uses and Long-Term Productivity** (*The Team*)

The use or protection of natural resources for long-term, sustained yield is the legislated basis of management and direction for the Forest Service (USDA, USDI 1994a, p. 321). Short-term uses include actions such as building the staging area. The design criteria were developed to incorporate the standards and guides of the Siuslaw Forest Plan, as amended by the Northwest Forest Plan. We expect that applying them to the proposed management actions will reduce the potential for long-term loss in soil productivity that may result from short-term uses.

### **Unavoidable Adverse Effects** (*The Team*)

Implementing any alternative would result in some adverse environmental effects that cannot be avoided. The design criteria, along with Forest standards and guides, are intended to keep the extent and duration of these effects within acceptable rates, but adverse effects cannot be completely eliminated. The following adverse environmental consequences would be associated to some extent with Alternatives 2, 3 and 4:

## What are the environmental effects?

- Short-term, localized reductions in air quality from dust, smoke, and vehicle emissions resulting from management actions and forest users.
- Disturbance to wildlife when their habitat is disturbed by management actions or recreation activities.
- Temporary increase in large vehicle traffic while the staging area is being built.

### **Irreversible Resource Commitments** (*The Team*)

Irreversible commitments of resources are actions that disturb either a non-renewable resource (for example, heritage resources) or other resources to the point that they can only be renewed over 100 years or not at all. The design criteria—along with Forest standards and guides—are intended to reduce these commitments, but adverse effects cannot be completely eliminated. For example, the building of the Horsfall staging area is an irreversible commitment of some native vegetation such as shore pine because some will be removed to prepare the site for paving.

### **Irretrievable Commitment of Resources** (*The Team*)

An irretrievable commitment is the loss of opportunities for producing or using a renewable resource for a period of time. Almost all activities produce varying degrees of irretrievable resource commitments. They parallel the effects for each resource discussed earlier in this chapter. They are not irreversible because they could be reversed by changing management direction. The irretrievable commitment of resources, such as replacement of some historically used dispersed campsites, would be associated to some extent with all alternatives.

### **Environmental Justice** (*Resource Planner*)

Effects of alternatives on the human environment (including minority and low-income populations) are expected to be similar for all human populations regardless of nationality, gender, race, or income. Therefore, no disproportionately high and adverse human health or environmental effects on minority populations and low-income populations are expected as a result of implementing actions described for Alternatives 2, 3, and 4.

### **Other Disclosures** (*The Team*)

Based on the Team's evaluation of the effects, we concluded:

- ⇒ None of the alternatives would affect minority groups, women, and consumers differently from other groups. These groups may benefit from employment opportunities that proposed activities will provide.
- ⇒ None of the alternatives adversely affects civil rights because any contract that may be awarded as a result of implementation would meet equal employment opportunity requirements.
- ⇒ As outlined in the American Indian Religious Freedom Act, no effects are anticipated on American Indian social, economic, or subsistence rights.
- ⇒ No effects on flood plains are anticipated. No farmland, parkland, rangeland, wilderness, or wild and scenic rivers will be affected because none are in the project area. Effects on wetlands are disclosed in chapter 3 under Botanical Resources.

### What are the environmental effects?

- ⇒ This environmental assessment is tiered to the Siuslaw Forest Plan FEIS, as amended by the Northwest Forest Plan, and is consistent with those plans and their requirements.
- ⇒ Proposed activities are not in or adjacent to an inventoried roadless area.
- ⇒ Proposed activities are consistent with the Coastal Zone Management program.
- ⇒ Based on the effects analysis in chapter 3, the proposed activities are expected to reduce risks to human health and safety.
- ⇒ Proposed activities will be consistent with the requirements of the Clean Air Act because effects from activities such as those associated with using heavy equipment (exhaust) and paint sprayers will be localized and short-term.
- ⇒ Because of the design criteria to be applied, this project is expected to be consistent with the Clean Water Act.
- ⇒ The proposed activities are not expected to measurably affect global warming. The USDA Forest Service will continue an active leadership role in agriculture and forestry regarding the reduction of greenhouse gas emissions.
- ⇒ These actions do not set a precedent for future actions because they are guided by the 1994 Oregon Dunes Management Plan.
- ⇒ Required survey-and-manage protocols will follow the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and other Mitigation Measures and Standards and Guidelines (USDA, USDI 2001).

## Who was consulted about about this project?

## CHAPTER 4

### Consultation with Regulatory Agencies

It was determined by the District fish biologist that project activities will have no effect on coho salmon or designated essential fish habitat. Therefore, it was not necessary to consult NOAA Fisheries about effects of proposed actions on federally listed coho salmon.

In their biological opinions of past Siuslaw National Forest programmatic biological assessments, the U.S. Fish and Wildlife Service (FWS) has concurred with our findings that project activities will not jeopardize the existence of bald eagles, northern spotted owls, and marbled murrelets. The FWS terms and conditions applied to the following ongoing consultation will be applied to the project design criteria:

- Programmatic Biological Assessment of Fiscal-Year 2004-2005 Activities in the North Coast Province Which May Disturb Bald Eagles, Northern Spotted Owls, or Marbled Murrelets.

### Consultation with Indian Tribes

Discussions with federally recognized Indian Tribes acknowledged as having cultural interest in the project area were initiated early in the planning process, per Programmatic Agreement (USDA 1995b) and Memorandum of Understanding (USDA 2003a).

The Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians (CTCLUS) and the Coquille Indian Tribe (CIT) were consulted during the initial planning phase prior to general public scoping. Tribal planning and cultural-resource-protection staffs were notified of proposed actions, and a site visitation opportunity was offered to project locales identified as potentially sensitive cultural resource areas. The CIT deferred to their neighboring tribal entity, CTCLUS, as having primary interest in the proposed project area. Review of the shared CTCLUS-Siuslaw National Forest site database identified no known cultural sites. No further comments were received from the Tribes.

### Consultation with Other Agencies and Local Entities

The Coos Bay District of the Bureau of Land Management raised concern about OHV violations in the snowy plover nesting area south of Horsfall Road. They are concerned that if capacity is increased for more vehicles and people, without opening more areas to riding, then violations on their land will increase.

Response—The additional staging being considered at Horsfall is not intended to increase capacity for vehicles or people. It is intended to better accommodate the existing use in the southern ride area of the Oregon Dunes NRA. It was included in the Oregon Dunes Plan as

## Who was consulted?

mitigation for historic developed capacity (e.g. at Bluebill CG) that was lost to OHV use when the paved Horsfall Road was closed to non-street-legal vehicles. Similarly, sand camping capacity being considered in this EA is within the range that is currently occurring. The EA is focused on better managing existing use, not increasing use.

The Coos Bay-North Bend Water Board requested that the Forest Service consider the designation of wellhead protection areas, design and site the restroom facility to minimize impacts to groundwater, and consider waste fuel and oil disposal sites.

Response—Best management practices require protection of potable water. In addition to recreation experience, designation of sites considers geologic and hydrologic features of the area. Action alternatives do not include designated sites within 150 feet of production wells. The design and location of the leach field must meet State standards.

Dumping of fuel and oil on National Forest System lands is prohibited. Forest Service recreation facilities are not designated waste fuel and oil disposal sites. Thus, design features to provide for waste fuel and oil disposal are outside the scope of this project. These services are provided by the public and private sectors.

The Oregon Parks and Recreation Department (OPRD), Central Western Oregon Area, supports the proposal to designate sand camping sites. They suggest that carrying capacity be addressed for current use and for the proposed new staging facility.

Response—The carrying capacity of the areas open to OHV use was analyzed based on the capacity of 1 to 2 people per acre of open sand as stated in the Dunes Plan. Based on the known capacity of adjacent public and private OHV campgrounds and staging areas, the ODNRA would not exceed 2 people per acre of open sand if the following facilities were at capacity:

- Forest Service OHV campgrounds;
- Private OHV campgrounds;
- Existing Forest Service staging areas;
- Proposed Horsfall staging area; and
- Designated sand camps (under all three action alternatives).

Staging development is only in the southern riding area and would not impact the carrying capacity of the Umpqua Dunes riding area. All action alternatives propose designated sand-camping sites in all riding areas, including the Umpqua Dunes, and are based on moving the areas toward the semi-primitive motorized experience through managing capacity. The only exception is during events, such as Dune Fest. In previous years, this event has increased use in the Umpqua Dunes riding area to a level above what is described for semi-primitive motorized recreation.

Winchester Bay Sanitary District, citing the Department of Human Services Public Health's Division 39 Regulation that governs "Health and Safety at Outdoor Mass Gatherings", suggests that camping should not be allowed on Dunes land in the Umpqua Dunes riding area unless adequate restroom facilities are provided.

## Who was consulted?

Response—The Division 39 Regulation states: “Outdoor Mass Gatherings means an actual or reasonably anticipated assembly of more than 3,000 persons which continues or can reasonably be expected to continue for more than 24 consecutive hours ...” Many sand campers have self-contained restrooms in their campers and trailers. Those that do not have self-contained restrooms are required to properly dispose of their human waste. Based on the number and location of designated sand camping sites, none of the action alternatives would allow more than 540 persons to camp in the Umpqua Dunes riding area at the same time. The number of campers may exceed 540 for permitted events such as Dune Fest. In such a case, the permit holder would be required to provide additional restroom facilities.

Winchester Bay Sanitary District is concerned that sand camping in the Umpqua Dunes riding area will take business away from the four RV parks that pay rates to the sanitary district, because sand camping sites are less expensive than these privately owned RV parks. They suggested that to make sand camping more equitable, the Forest Service should increase restroom capacity in the Umpqua area and connect to the new wastewater treatment system. This would require the Forest Service to charge users with fees that cover system-development, and operation and maintenance costs.

Response—Sand camping is a different recreational experience than RV camping and is not expected to directly compete with developed facilities for visitors. In addition, the three action alternatives would create a limit on the number of designated campsites in the sand, including in the Umpqua Dunes. The alternatives propose lower capacities in the Umpqua Dunes area than what has been experienced during historic peak-use periods. This reduction in sand camping capacity may displace some sand campers to these privately owned RV parks.

Based on visitor feedback, the capacity of the existing restroom facility for the Umpqua Dunes area is sufficient to meet current needs. In the future, the Forest Service may determine to increase restroom capacity in this area. At that time, connecting to the Winchester Bay Sanitary District’s new sewage system will likely be considered.

Who was consulted?