OHV-Sand Camping Project

Environmental Assessment

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

Lead Agency:	**USDA Forest Service**
Responsible Official:	**Jose Linares, Forest Supervisor** Siuslaw National Forest 4077 Research Way Corvallis, OR 97333
For Information Contact:	**Paul Thomas, South Zone Team Leader** South Zone District 4480 Hwy. 101, Building G. Florence, Oregon 97439 (541) 902-6985 pgthomas@fs.fed.us

Comments received in response to this solicitation, including names and addresses of those who comment, will be considered part of the public record on this proposed action and will be available for public inspection. Comments submitted anonymously will be accepted and considered; however, those who only submit anonymous comments will not have standing to appeal the subsequent decision under 36 CFR part 215. Additionally, pursuant to 7 CFR 1.27 (d), any person may request the agency to withhold a submission from the public record by showing how the Freedom of Information Act (FOIA) permits such confidentiality. Person requesting such confidentiality should be aware that, under the FOIA, confidentiality may be granted in only very limited circumstances, such as to protect trade secrets.

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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

- 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.

- ➢ 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.

- 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.

- 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

Anticipating the need for analyzing designated campsites, about 3,000 comment cards were distributed to sand campers in 2002 with questions about group size, number of vehicles, types of vehicles, and additional comments on designated sites. About 3 percent (95) were returned with comments.

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 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.

The notice of availability for OHV-Sand Camping Project Preliminary Analysis was published in the Eugene Register-Guard (paper of record) on October 8, 2004, informing the public that the preliminary analysis is available for a 30-day review and comment period. News releases—with content similar to that contained in the notice of availability—were sent to the various newspapers used to solicit public comment on the proposed project. Copies of the preliminary analysis were made available at the Siuslaw National Forest Headquarters in Corvallis, and the District offices in Reedsport, Florence, and Waldport. Copies of the preliminary analysis, with cover letters, were mailed to those who commented on the proposed project or who requested a copy of the preliminary analysis. The legal notice and cover letters described the comment process, indicated the beginning and end of the comment period (the comment period ended at the close-of-business on November 8, 2004), and identified Forest Service contact persons. The legal notice and letters also informed the public where they could find the preliminary analysis and its appendices on the Forest website. These requests for comments resulted in 15 persons commenting on the preliminary analysis. Comments are summarized with Forest Service responses in appendix C.

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.

Why is the project needed?

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 pages 2, implementing a non-significant amendment to the Dunes Plan**,** and observations 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.

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

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 (modified from the preliminary analysis): Number of campsites based on current high-use periods; developed staging capacity higher than that identified in the Dunes Plan

Note: In the OHV-Sand Camping Preliminary Analysis, the figures in table1 for Alternative 2, northern riding area should have been 26/520, not 25/500.

Responding to public comments on the OHV-Sand Camping Preliminary Analysis regarding the need for additional sand-camping sites, seven (7) additional campsites were added to Alternative 2—four (4) in the north riding area and three (3) in the Umpqua riding area. All sites were analyzed as part of Alternative 4 in the preliminary analysis. Based on public comments, five (5) sites would be designated as group sites, each accommodating up to 10 primary vehicles and 40 people. Three (3) of the sites were analyzed under Alternative 2 and 4 of the preliminary analysis. Two (2) of the sites were analyzed as part of Alternative 4 in the preliminary analysis. Based on additional review, four sites have been moved away from vegetated areas onto open sand or near to designated routes.

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 2,860 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 138 dispersed campsites—133 sites, each accommodating up to five primary vehicles and up to 20 people; and five (5) group sites, each accommodating up to 10 primary vehicles and 40 people;
- Of the five group sites, two would be located in the northern OHV riding area, one in the Umpqua riding area, and two in the southern riding area;
- 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;
- 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, such as service contract preparation and solicitation of bids would begin in January 2005. Most project work would be completed in five 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

Note: In the OHV-Sand Camping Preliminary Analysis, the figures in table1 for Alternative 3, northern riding area should have been 25/500, not 26/520.

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 1,940 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 97 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, such as service contract preparation and solicitation of bids would begin in January 2005. Most project work would be completed in five years.

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, such as service contract preparation and solicitation of bids would begin in January 2005. Most project work would be completed in five years.

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
Northern OHV Area (Lane County)	Number of designated dispersed campsites /maximum people	0/No limits	30/640[a]	25/500	42/840
Umpqua OHV Area (Douglas County)	Number of designated dispersed campsites /maximum people	0/No limits	27/560[b]	11/220	27/540
Southern OHV Area (Coos County)	Number of designated dispersed campsites /maximum people	0/No limits	81/1,660[c]	61/1,220	111/2,220
	Horsfall staging area capacity (35-foot parking spaces)	0	70[d]	42[e]	70[d]
	Incorporate the existing Horsfall staging area into the Horsfall campground as a group or overflow site	No	Yes	Yes	Yes
Total Campsite Capacities	Total number of designated dispersed campsites /maximum people	0/No limits	138/2,860	97/1,940	180/3,600

[a] Increases the preliminary analysis numbers by 4 sites and 120 people; includes two group campsites, each accommodating up to 40 people.
[b] Increases the preliminary analysis numbers by 3 sites and 80 people; includes one group campsite, accommodating up to 40 people.
[c] Increases the preliminary analysis numbers by 40 people (no change in the number of sites) by changing two 20-person campsites into two group campsites, each accommodating up to 40 people.
[d] Staging area capacity requires a non-significant amendment to the Dunes Plan.
[e] Staging area capacity based on levels identified in the Dunes Plan.

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

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

What alternatives were developed?

Alternative 2 North (Map 2a)

Alternative 2 North (Map 2a)

Alternative 2 Umpqua (Map 2b)

Alternative 2 Umpqua (Map 2b)

Alternative 2 South (Map 2c)

Alternative 2 South (Map 2c)

Alternative 3 North (Map 3a)

Alternative 3 North (Map 3a)

Alternative 3 Umpqua (Map 3b)

Alternative 3 Umpqua (Map 3b)

Alternative 3 South (Map 3c)

Alternative 3 South (Map 3c)

Alternative 4 North (Map 4a)

Alternative 4 North (Map 4a)

Alternative 4 Umpqua (Map 4b)

Alternative 4 Umpqua (Map 4b)

Alternative 4 South (Map 4c)

Alternative 4 South (Map 4c)

Dunes Plan Management Area Map (North)

Dunes Plan Management Area Map (North)

Dunes Plan Management Area Map (Umpqua)

Dunes Plan Management Area Map (Umpqua)

Dunes Plan Management Area Map (South)

Dunes Plan Management Area Map (South)

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 Roaded 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.

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

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

	Total number of parking sites	**Variation from Dunes Plan**	
		Sites	**Percentage (%)**
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

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.

Inventoried roadless areas—There are four inventoried roadless areas inside the boundary of the ODNRA, encompassing about two-thirds of the ODNRA. Two of the areas (Threemile Lake and Umpqua Spit) are closed to OHV use. The remaining two areas (Woahink and Tenmile) have a mixture of areas designated as open to OHV use, restricted to OHV use on trails, or closed to OHV use (USDA 1994). All designated dispersed sand-camping sites that are located in the inventory roadless areas are within areas that allow OHV use as described in the Siuslaw Forest Plan and the Dunes Plan. The Horsfall staging area is located outside of all inventoried roadless areas. Since there is no road construction, reconstruction, or timber removal, and considering the dynamic movement of sand in the planning area, none of the alternatives affect the potential wilderness character of the planning area.

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.

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.

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.

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 fore dunes 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.

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.

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 shoreline 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).

The Record of Decision to Remove or Modify and the Survey and Manage Mitigation Measure Standards and Guidelines took effect on April 22, 2004. This Decision included a section titled, *Application of this Decision to Ongoing and Current Management Activities."* Since analysis of effects to survey and manage species was completed prior April 22, 2004 the District Ranger concluded 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.

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 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 shore pine, 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 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[a]	Non-OHV[b]	ODNRA Total[c]
European beachgrass	6,486	4,739	11,225
Scotch broom	7,207	6,346	13,553
Portugese broom	473	710	1,183
Himalayan 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: [a]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). [b]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). [c]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.

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
North Riding Area									
Bear Lake (no gamefish)									
Cleawox Lake	X		X		X	X		X	X
Siltcoos "Lagoon"	X	X			X	X		X	
Umpqua Riding Area									
none									
South Riding Area									
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
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, redside 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, 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 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 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.

Riparian Reserves and Aquatic Conservation Strategy (*District Hydrologist/Fish Biologist/Forest Botanist; USDA 2004b*)

While the majority of the Siuslaw NF is being managed for species associated with mature and late-seral forest habitats, the ODNRA also manages those processes associated with ocean shorelines and dunes. Unlike the rest of the Forest, it is the supply, movement (instability), chemistry, and exposure of sand that dominates the terrestrial and aquatic ecosystems of the ODNRA. Introductions of non-native plant species along with some interruption on natural fire cycles affects sand movement. Lacking disturbance processes, the ODNRA is expected to eventually develop mature forest habitats (USDA 1998).

The long-term goal of the of the Aquatic Conservation Strategy (including the riparian reserve land allocation) was to develop watersheds that functioned properly ecologically and supported acceptable populations of fish and other aquatic and riparian dependent organisms across the region covered by the Northwest Forest Plan. Aquatic ecosystems on the Siuslaw National Forest are dynamic as a result of the physical characteristics, natural disturbance events, and climatic features of the region. Most of the watersheds are generally in steep, mountainous terrain that is inherently unstable and receives large amounts of precipitation. The unstable terrain, coupled with the random nature of storm and disturbance events, resulted in pulses of sediment and wood being delivered to stream channels. The specific alternatives, land allocations, standards and guidelines, ecological effects, and species evaluated under the Northwest Forest Plan were primarily focused on these terrestrial and aquatic ecosystems.

While the Northwest Forest Plan did not include any delineation, analysis, or documentation of riparian reserves on the ODNRA, the standards and guidelines associated with the Northwest Forest Plan apply to the ODNRA. The Oregon Dunes Management Plan Watershed Analysis estimated that riparian reserves overlap about 60% of the recreation area (USDA 1995a). Sand camping as occurs throughout the riparian reserve areas open to OHV use. Since sand movement primarily influences vegetative development in the open sand, disturbances associated with sand camping has no effect on the vegetation in these locations. The level of the water table and sand movement dominates aquatic and vegetative development in the deflation plains, and lakes. In these locations as water levels drop, sand camping is expected to compact emerging vegetation. Under Alternative 1, the quantity, location and intensity of this disturbance would not be controlled. Under Alternatives 2, 3, and 4, the location of designated sites would limit the amount and intensity of the areas affected. Sand camping is not expected to affect the amount of water or movement of sand. Based on the size and location of the staging area and that water runoff from the hardened surfaces would rapidly re-enter the porous dune environment, the facility would have minimal effects on the amount of water or sand movement. Thus, the influence of the water table and sand in the riparian reserves will not be measurably affected.

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^{th} 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 (USDA 1995a) documents that the environmental analysis and information used to develop the Oregon Dunes National Recreation Area Management Plan (Dunes Plan) met the intent of the ACS. The watershed analysis disclosed the expectation that most activities authorized in the Dunes Plan would take place in riparian reserves due to the large percentage of land base (60%) in this land allocation. The Oregon Dunes NRA is land allocation Management Area 10 (MA10) in the Siuslaw Forest Plan. The Dunes Plan subdivided MA10 and each of the subdivisions is treated as a new management area (ODNRA FEIS pages II-31 to II-47). Some of these subdivisions permit OHV use, some allow a limited use, and some do not permit OHV use. The land allocations helped define the recreation experiences as defined in the recreation opportunity spectrum (ROS). The ROS classes are distributed as following: 43 percent is semi-primitive non-motorized, 43 percent is semi-primitive motorized, 13 percent roaded natural, and 1 percent rural—along with associated standards and guidelines (including dispersed camping by permit at designated sites), the watershed analysis concluded that the implementation of the Dunes Plan would be consistent with ACS objectives. As appeal-reviewing officer for the Dunes Plan Record of Decision

(USDA 1994), Deputy Regional Forester Richard A. Ferraro, concluded that the net effect of standards and guidelines included in the Dunes Plan is greater protection and enhancement of riparian reserves as required by the Aquatic Conservation Strategy (USDA 1995c).

Context for the OHV-Sand Camping Project analysis was provided by the land allocations and standards and guidelines in the Dunes 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.

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 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 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 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.

Economic analysis (*Project Engineer, Recreation Planner*)—The economic effects of implementing the Dunes Plan, including those associated with designated sand camping, were

addressed in the Dunes Plan FEIS. Since the Project is tiered to the Management Plan for the Oregon Dunes National Recreation Area FEIS (USDA 1994), there is no change in the economic effects or impacts to the communities disclosed in the FEIS.

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[a]	0	$519,765 (70 spaces, paved)	$317,530 (42 spaces, paved)	$519,765 (70 spaces, paved)
Restroom facility[b]	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
Total	**0**	**$893,717**	**$621,036**	**$893,717**

[a] Costs include those associated with access road upgrading and hauling material to raise the level of the parking area.

[b] 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 1st to April 30th. 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 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.

Capacity analysis—Some comments on the preliminary analysis stated that the alternatives underestimated current use. However, no source was identified that supported those conclusions. Based on sand-camping permits collected in the field by ODNRA employees,

Alternative 2 reflects current use during peak periods, while not exceeding the identified capacity for the dunes riding area.

In analyzing the capacity, people at one time (PAOT) is used. Based on visitor-use monitoring for the Dunes Plan, an average of 5 people per campsite and 2.4 people per day-use site was determined. These numbers were used to estimate the maximum capacity of people that could access the dunes riding area at one time. All facilities (existing and known planned developments) with direct dunes access (Forest Service, private, state, and county) were considered in this analysis, and were identified as the available capacity. In accounting for all available capacity on the dunes riding area, including the designated sand-camping sites, it has been determined that if every site was full, and if every person from all those sites were on the dunes riding area at the same time, the average number of people per acre would not exceed the capacity identified in the Dunes Plan. The maximum capacity based on two people per open sand acre would equal 11,860 people at one time (PAOT). The total available capacity in PAOT under alternative 2 equals 7,899, under alternative 3 equals 6,912, and under alternative 4 equals 8,639.

These capacity figures do not account for users who drive onto the dunes riding area directly, without using a facility. Based on the observations of ODNRA employees, this use is less than 10 percent of the available capacity. With these observations, it is concluded that the use directly accessing the dunes riding area, including capacity from ATV rental companies and guided rides, would not account for the remaining capacity of 3,221 to 4,948 people at any moment in time under the range of the action alternatives (table 7).

Table 7. Alternative capacity analysis summary

	Open Sand (Acres)	**Maximum Capacity* (PAOTs)**	**Available Capacity** (PAOTs)**	**Remaining Capacity (PAOTs)**
Alternative 2	5,930	11,860	7,899	3,961
Alternative 3	5,930	11,860	6,912	4,948
Alternative 4	5,930	11,860	8,639	3,221

*Maximum capacity equals two people per open-sand acre

**Available capacity equals all developed and dispersed capacity adjacent to and including the motorized recreation areas.

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).

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.

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:

- 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 trees because some will be removed as a result of building the staging area.

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 the loss of some dispersed campsites due to the construction of the staging area facility, would be associated with the action 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.
- 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 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 During Scoping

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

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.

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?

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Glossary

Most definitions of the terms in this glossary were taken from, or adapted from, the glossaries of the following documents:

- Management Plan for the Oregon Dunes National Recreation Area (USDA 1994);
- Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (USDA, USDI 1994); and
- Siuslaw National Forest Road Analysis (USDA 2003).

Borrowed sand – This would come from a borrow pit. A borrow pit is an area where material (sand) is used as fill at another location.

Code of Federal Regulations (CFR) - A codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the federal government.

Critical habitat - For listed species, specific parts of the geographic area occupied by a federally listed species that have physical and biological features essential to conserving the species, and that may require special management consideration or protection; also specific areas outside the geographical area occupied by a species but essential for its conservation. Designated critical habitats are described in 50 CFR 17 and 226.

Cultural resource - Remains of sites, structures or objects used by humans in the near (historical) or distant (archaeological) past.

Developed recreation - Recreation that requires facilities, resulting in concentrated use of an area, such as for a campground or staging area. Facilities might include roads, parking lots, picnic tables, toilets, drinking water, and buildings.

Designated route - Specially marked trails for OHVs to use for touring or travel in existing vegetated habitats. The routes reach the beach and other areas open to OHVs.

Designated campsites – Sites identified by a physical improvement, such as a numbered post; and occupancy is tracked through a permit system.

Dispersed recreation - Recreation use outside developed recreation sites, including activities like hunting, fishing, scenic driving, hiking, bicycling, horseback riding, and recreation in primitive environments.

Foredune – Large, continuous, stabilized sand ridge near the beach high-tide line. The foredune is formed from sand that accumulates in European beachgrass.

Heritage resource - The remains of sites, structures, or objects resulting from past human activity that have important socio-cultural value, whether historic, prehistoric, archaeological, or architectural. For this project, "heritage resource" refers only to actual physical things - places, structures, or artifacts that are material evidence of a past way of life - rather than to traditions, customs, or modern life styles. Heritage resources are fragile and nonrenewable; their values, once destroyed, cannot be recreated.

Heritage site - Any definite place of past human activity with important socio-cultural value - historic, prehistoric, archaeological, or architectural - identifiable through field survey, historical documentation, or oral evidence

Knutson-Vandenberg (KV) Act--This act--created in 1930 and later amended by the National Forest Management Act of 1976--is the authority for requiring purchasers of National Forest timber to make deposits to finance primary actions (essential KV actions) that ensure reforestation of harvested areas and secondary actions (non-essential KV actions) to enhance tree health and growth in stands, wildlife habitat, watershed health, fish habitat, and recreation.

Landscape - A heterogeneous land area with interacting ecosystems repeated in similar form throughout.

Listed species - Those plant and animal species listed in the Federal Register as threatened or endangered.

Management-indicator species - Species identified in the Siuslaw National Forest Land and Resource Management Plan for special consideration because their population changes are believed to indicate the effects of management activities on the health of mature forests.

Mitigation measures - Modifications of actions to avoid adverse effects by not taking a certain action or parts of an action; minimizing adverse effects by limiting the scope or intensity of the action; rectifying adverse effects by repairing, rehabilitating, or restoring the affected environment; reducing or eliminating adverse effects over time by preserving and maintaining operations during the life of the action; or compensating for adverse effects by replacing or providing substitute resources or environments.

Monitoring - A process of collecting information to evaluate whether the objective and anticipated or assumed results of a management plan or project are being realized or whether projects are being implemented as planned.

National Forest System road - A classified forest road under the jurisdiction of the Forest Service. These roads were formerly called Forest-development roads—the two terms are synonymous.

Noxious weed - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

Off-highway Vehicle (OHV) - Vehicles capable of cross-country travel or travel on low-standard roads and trails such as motorbikes, all-terrain vehicles, and four-wheel drive vehicles.

People at One Time (PAOT) – A term for measuring recreation capacity that indicates the number of people who can use a facility or area at one time.

Primary Vehicle - Any licensed motorized vehicle, meeting Oregon Revised Statutes for operation on public highways.

Proposed, Endangered, Threatened or Sensitive (PETS) Species – Species with federal management status. Included are those species proposed for listing, or currently listed for protection under the Endangered Species Act as Endangered or Threatened. In addition, the Regional Forster provides a list of sensitive species to be analyzed in relation to actions proposed on federal ground.

Recreation Opportunity Spectrum (ROS) - Land delineations that identify a variety of recreation experience opportunities, categorized into six classes on a continuum from primitive to urban. Each class is defined in terms of the degree to which it satisfies certain recreation experience needs, based on the extent to which the natural environment has been modified, the type of facilities provided, the degree of outdoor skills needed to enjoy the area, and the relative density of recreation use. The six classes are:

- **Primitive-** Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

- **Semi-Primitive Non-Motorized -** Area is characterized by a predominately natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management activities may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational opportunities.

- **Semi-Primitive Motorized -** Area is characterized by predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Use of local primitive or collector roads, with predominantly natural surfaces and trails suitable for motorbikes, is permitted.

- **Roaded Natural -** Area is characterized by a natural-appearing environments with moderated evidence of the sights and sounds of man. Such evidence usually harmonizes with the natural environment. Interaction between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

- **Rural -** Area is characterized by natural environment that has been substantially modified by development of structures, vegetation manipulation or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

- **Urban –** Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetative cover is often exotic and manicured. Sights and sounds of humans are predominant on site. Large numbers of users can be expected both on site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to people throughout the site.

Recreation Setting – Combination of physical and social environmental factors that determines what activities people engage in and the nature of their recreation experience.

Road analysis - An integrated ecological, social, and economic science-based approach to transportation planning that addresses existing and future road management options.

Road maintenance - The ongoing upkeep of a road necessary to retain or restore the road to its approved road management objective.

Riparian area - A geographic area containing an aquatic ecosystem and adjacent upland areas that directly affect it; it includes floodplain, woodlands, and all areas within a horizontal distance of about 100 feet from the stream channel's normal high-water line or from the shoreline of a standing body of water.

Scoping – Process by which the Forest Service determines how inclusive and detailed an analysis is necessary to make an informed decision on a proposed action.

Sensitive species - Species mentioned in the Federal Register as proposed for classification or under consideration for official listing as endangered or threatened species, on an official state list, or recognized by the Forest Service or other management agencies as needing special management to prevent their being placed on federal or state lists.

Soil compaction--An increase in bulk density (weight per unit volume) and a decrease in soil porosity resulting from applied loads, vibration, or pressure. The actual physical change is primarily reduction of non-capillary pore space, which in turn reduces infiltration, permeability, and gaseous exchange.

Soil displacement--The removal and horizontal movement of soil from one place to another by mechanical forces such as a bulldozer blade.

Stand (tree stand) - An aggregation of trees occupying a specific area and sufficiently uniform in composition, age, arrangement, and condition to be distinguishable from the forest in adjoining areas.

Standards and guides - The primary instructions for public land managers. Standards address mandatory actions, and guides are recommended actions necessary to a land management decision.

Structure - The various horizontal and vertical physical elements of the forest including trees, canopy layers, snags, and coarse woody debris.

Survey-and-manage species - Species that are closely associated with late-successional or old-growth forests whose long-term persistence is a concern; in this document. Species are listed in the record of decision (table C-3) for the Northwest Forest Plan. Mitigation measures and standards and guidelines for managing survey-and-manage species are amended by the Record of Decision and Standards and Guidelines for Amendments to the Survey and Manage, Protection Buffer, and Other Mitigation Measures Standards and Guidelines (USDI, USDA 2001).

System road - A classified road in the National Forest necessary to protect, administer, or use the Forest or its resources.

Threatened species - Those plant or animal species likely to become endangered throughout all or a significant portion of their range in the near future. A plant or animal identified and defined in accordance with the 1973 Endangered Species Act and published in the Federal Register.

Understory - Trees and other woody species growing under the canopies of larger adjacent trees and other woody growth.

Visual Quality Objectives (VQOs) – Categories of acceptable landscape alteration measured in degrees of deviation from the natural-appearing landscape.

- **Preservation** – Human activities do not change the natural appearance.
- **Retention** – Human activities are not evident to the casual forest visitor.
- **Partial Retention** – Human activity may be evident, but must remain subordinate to the characteristic.
- **Modification** – Human activity may dominate the characteristic landscape, but must, at the same time, follow naturally established form, line, color, and texture. It should appear as a natural occurrence when viewed in foreground or middleground.
- **Maximum Modification** – Human activity may dominate the characteristic landscape, but should appear as natural occurrence when viewed as background.

- **Enhancement** – A short-term management alternative which is done with the express purpose of increasing positive visual variety where little variety now exists.

Watershed - The drainage basin contributing water, organic matter, dissolved nutrients, and sediments to a stream or lake.

Watershed analysis - A systematic procedure for characterizing watershed and ecological processes to meet specific management and social objectives. Watershed analysis provides a basis for ecosystem management planning to be applied to watersheds of about 20 to 200 square miles.

Wetland – Area that is inundated by surface water or groundwater with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas.

Appendix A

OHV-Sand Camping Project
Design Criteria

These design criteria for the OHV-Sand Camping Project, which incorporate the management requirements and mitigation measures, were developed to ensure that standards and guides of the 1990 Siuslaw Forest Plan (SFP), as amended by the 1994 Northwest Forest Plan (NFP), and the 1994 Management Plan for the Oregon Dunes National Recreation Area are met. Where applicable, pertinent standards and guides from these Plans are cited. The design criteria apply to all action alternatives, unless otherwise specified. Appropriate specialists will be consulted before any design criteria for proposed activities are changed.

I. Design Criteria Common To All Activities

a. The literature was searched for possible heritage resources (historical or archaeological sites) in the project planning area. No known sites were identified that could be affected by this project. Field surveys were conducted to determine presence of sites; no sites were found. To avoid impacts to unknown sites, monitor locations of designated sand camping sites and staging areas. Should any heritage resources be discovered during the course of any project activities, cease work in that area and consult with the Forest Archaeologist. Protect, preserve, and treat sites in accordance with the National Historic Preservation Act.

b. Forest Service direction, regulations, and standards and guides for resource protection may change over time. Should changes occur prior to completion of any actions under this project, complete an addendum to the project EA and modify contract(s) to reflect mandatory changes.

c. Follow Siuslaw Plan standards and guides (FW-114 through FW-118) to meet water-quality standards outlined in the Clean Water Act for protecting Oregon waters, and apply practices as described in General Water Quality Best Management Practices, Pacific Northwest Region, November 1988. Design criteria, including these practices, are incorporated throughout the project, such as in project location, design, contract language, implementation, and monitoring. The State has agreed that compliance with these practices will ensure compliance with State Water Quality Standards (Forest Service Manual 1561.5, R-6 Supplement 1500-90-12).

d. If the total oil or oil products storage at a work site exceeds 1, 320 gallons, or if a single container (e.g., fuel truck or trailer) exceeds a capacity of 660 gallons, the contractor shall prepare and implement a Spill Prevention Control and Countermeasures (SPCC) Plan. The SPCC plan will meet applicable EPA requirements (40 CFR 112), including certification by a registered professional engineer. (SFP: FW-119, 120, 122).

e. If a new bald eagle nest is discovered within 0.25 miles of the project area, immediately evaluate any activity (including those in campgrounds and riding areas) within 0.25 mile of the nest site (0.5 mile line-of-sight for bald eagle nests) for potential effects and if necessary, restrict activities to prevent disturbance.

f. Follow the Visual Quality Objectives (VQOs) (USDA 1994b, chapter II, pages 52 and 53). All semi-primitive motorized areas have a VQO of retention. The major road corridor viewsheds in the project area include South Jetty and Horsfall, which have a VQO of partial retention; and Siltcoos and Umpqua Beach, which have a VQO of retention. The VQOs are define below:

Partial rentention—From the viewing location, management activities are more apparent to the average visitor . These activities are visually subordinate to the natural landscape, except in the first year or so. Lines, colors, forms and textures of the activity are borrowed from the surrounding landscape.
Rentention—To the average visitor, activities are not evident from the viewing location; however, a varitey of roads, viewing platforms, and parking areas may be present. Upon completion of the activity, the viewshed area will only appear slightly altered. Vegetation and landforms are used to screen facilites and unwanted views. A varity of vegetation maniplulation techinques are mantained and increase visual variety.

II. Designated Sand Camping Sites

1. Placement of Campsites

a. Meet the semi-primitive motorized standards under the Recreation Opportunity Spectrum (ROS) when locating campsites.
b. Limit size of a dispersed camping site to a 150-foot radius around designated GPS posts. Adjust boundary of camping site to natural features so that the campsite offers best camping amenity and is most natural appearing.
c. Maintain a minimum distance of 200 feet (outer perimeter to outer perimeter) between campsites.
d. Locate campsites to minimize impacts on natural resources, and avoid special habitats, cultural sites, and unique geological features.
e. Do not place designated campsites in habitat designated as critical for snowy plovers.
f. Identify three sites near Beale Lake that will meet the Dunes Plan objective of an angler camp (estimated maximum capacity of 50 people at one time or 50 PAOT).
g. Locate the outer perimeter of all campsites at least 150 feet from production wells (i.e., at least 300 feet from site-center post to well head).
h. Do not include any monitoring wells inside the perimeter of any campsite (i.e., campsite-center posts will be at least 150 feet from the heads of monitoring wells).
i. Locate and design campsites primarily for channeling and minimizing human impacts rather than for visitor convenience.
j. Maintain vegetation between individual campsites wherever feasible.
k. Locate campsites outside of designated OHV travel routes.
l. Evaluate sites annually to determine the potential need for adjustments to site locations.

Certain sites may be dropped, depending on results of evaluations.

m. Designate five (5) groupsites for Alternative 2, two in the northern riding area, one in the Umpqua riding area, and 2 in the southern riding area. Design these sites to accommodate up to 10 vehicles and 40 people. Locate these sites where camping trailers have been observed in the past. Refer to the OHV-Sand Camping EA maps for site locations.

2. Management of Campsites

a. Allow dispersed camping by permit in designated sites only. Dispersed camping permits do not authorize permit holders to operate equipment or vehicles during curfew, or above approved sound levels (93 decibels).
b. Limit primary vehicles to no more than 5 per site.
c. In designated dispersed campsites (150-foot radius around GPS post) limit parking, camping, and vehicle use to areas of open sand and/or European beachgrass. Prohibit these activities in areas with native shrub and ground cover.
d. Manage sites to ensure that all garbage, including any paper, can, bottle, sewage, waste water or material, or rubbish is properly disposed by either removing it from the site or area, or by depositing it into receptacles or places provided for such purpose (USFS 36 CFR 261.11).
e. Daily contain or remove all litter (especially food products) from areas in and around designated campsites to minimize the risk of attracting snowy plover predators to activity areas.
f. Immediately evaluate any designated campsite that is within 800 feet of a newly discovered snowy plover nest site for potential effects on plovers and restrict activities to prevent disturbance.
g. Evaluate sites annually to determine the potential need for adjustments to site locations. Certain sites may be dropped, depending on results of evaluations.

III. Developed Day-Use Site

Follow Siuslaw Plan standards and guides D 1 through D-10 (USDA 1994a; chapter III, pages 38 and 39).

1. Construction of the Horsfall Staging Area

Parking facility

a. Design and construct the Horsfall staging area facility to meet rural ROS and full accessibility standards.
b. Design the staging area with OHV loading ramps.
c. Design the staging area entrance and exit so that they can be effectively closed during periods of nonuse.
d. Construct the Horsfall staging area to include 70 parking spaces (Alternatives 2 and 4) or 42 parking spaces (Alternative 3). Each parking space will be 35 feet long and be configured such that many will be back-to-back to accommodate vehicles (including trailers) up to 70 feet long.
e. Raise the ground elevation of the eastern portion of the proposed Horsfall staging area by about two (2) feet to avoid conflicts with high water.

f. Use sand from an area near the proposed Horsfall staging area to raise the ground elevation. Avoid using sand from areas that are extensively used for OHV riding. A suitable borrow site is located east of the proposed staging area.
g. Daily contain or remove all litter (especially food products) from the construction area during construction to minimize the risk of attracting snowy-plover predators to this area.

Restroom facility

a. Design and construct the Horsfall restroom facility to meet rural ROS and full accessibility standards.
b. Base restroom capacity on the staging area's designed capacity, using 2.4 PAOT per parking space.
c. Meet State standards for sewer and water projects. Based on the Federal Clean Water Act (administered by the EPA), the State has primacy over the Forest Service when implementing these types of projects.
d. Maintain a minimum distance of 1,000 feet between production wells and the leach field.

Access to the facility

a. Change the existing surface of the road that accesses the proposed Horsfall staging area from gravel and/or native sand to a paved or improved gravel surface. This change will meet standards applicable to trailer-towing, highway-legal vehicles with an overall combined trailer and vehicle length of up to 70 feet.
b. Design and build a two-lane road with adequate width to allow design vehicles to enter and leave the parking area.

Sand stabilization and noxious weed control

a. To prevent the spread of noxious and undesirable weeds, clean and free all heavy equipment (including dump trucks) of soil, vegetative matter, or other debris that may contain or hold weed seeds **prior** to entering National Forest System lands.
b. Where hydro-seeding, mulching or broadcast seeding is used for sand stabilization, use **certified weed free straw** or mulch and **certified weed-free native grass and forb seed** to prevent the spread of noxious and undesirable weeds.
c. Where applicable, all activities will comply with the Record of Decision for the Final Environmental Impact Statement for Managing Competing and Unwanted Vegetation published December 1988 and the subsequent Mediated Agreement of May 1989.

Heritage and scenery resources protection

a. Consult Heritage staff in the event of unanticipated changes to design during project implementation.
b. As much as possible, retain the existing variation in topography near the staging area to help screen it from the surrounding landscape and help retain a more natural appearance.
c. As much as is feasible, site the Horsfall staging area west and north of the island of trees to help screen the staging area from the south and southeast.

2. Management of the New Day-Use Facility

a. Apply Siuslaw Forest Plan standard of FW-014 to operate and maintain the Horsfall staging area.

3. Management of Existing Day-Use Facilities

a. Eliminate the existing Horsfall staging area (Alternative 3).
b. Incorporate the existing Horsfall staging area into the Horsfall campground as a group or overflow site (Alternatives 2 and 4).

IV. Monitoring Objectives

Monitoring items include those required for implementation and effectiveness monitoring. Implementation monitoring determines if the project design criteria and Siuslaw Forest Plan standards and guides, as amended by the Northwest Forest Plan, and ODNRA Management Plan were followed. Effectiveness monitoring evaluates whether applying the management activities achieved the desired goals, and if the objectives of the standards and guides were met. Findings resulting from project observations and monitoring are expected to help influence designing future projects and developing future monitoring plans.

1. Implementation Monitoring

Forest Plan Standards and Guides

a. Before the contract is advertised, review project contracts for consistency with the standards and guides of the Siuslaw Forest Plan, as amended by the Northwest Forest Plan and the Dunes Plan, and project design criteria.

Contract and Operations

a. Involve appropriate specialists when developing contracts or conducting District operations work to ensure activities are implemented as designed. The appropriate specialists will also participate periodically during contract work, especially when unusual circumstances arise that may require a contract modification.

b. Involve appropriate specialists at key checkpoints such as plan-in-hand reviews and contract reviews of specifications before the next phase of work begins. This will ensure that key problem situations are addressed in the specifications.

c. Monitor activities such as those required for new campsites, the staging area, sand-borrowing sites, the drain field, and new access routes for exposure of previously unrecorded cultural sites. A certified cultural resource technician will conduct the monitoring. If a site is discovered, close the area as soon as possible and notify the Forest Archaeologist.

2. Effectiveness Monitoring

a. Tier monitoring to the Siuslaw Forest Plan and the Management Plan for the Oregon Dunes NRA. Monitoring will determine if the ROS class of Semi-Primitive Motorized recreation experience is being met.

b. Monitor motorized dispersed camping to determine compliance with the designated-site system (USDA 1994a; chapter IV, page 14).

c. Monitor impacts to scenery to determine if VQOs are consistent with the Forest Plan (USDA 1994a; chapter IV, page 16).

d. Monitor designated dispersed campsites and the staging area for new invader species as a part of administration of the dispersed camping program sites. Coordinate monitoring, target species, and weed identification and mapping with the Forest weed coordinator. Conduct monitoring at least annually and focus on detection of new weed infestations.

e. Monitor designated dispersed campsites annually to determine the potential need for adjustments to designated site locations. Certain sites may be dropped or relocated in the areas analyzed, depending on the results of evaluations.

Appendix B

OHV Sand Camping Project

List of Contributors

Preparers

Name	Position Title	Primary Responsibilities
Bruce Buckley	Resource Planner	EA writer, project coordinator
Jessica Dole	Forest Landscape Architect	Scenery effects
Barbara Ellis	GIS Technician	GIS mapping
Bruce Gainer	Forest Law Enforcement Officer	Law enforcement effects
Edward Garza	Forest Fuels/Fire Planner	Fire hazard effects
Michael Harvey	Forest Recreation Staff	Recreation effects
Cathy Lindberg	Forest Archaeologist (Willamette NF)	Heritage resource effects
Ken McCall	Forest Transportation Planner	Forest transportation system effects
Doug Middlebrook	District Wildlife Biologist	Wildlife effects; wildlife specialist report,including the biological evaluation
Mike Northrop	District Fish Biologist and Hydrologist	Fisheries effects; water quality effects; water and fisheries report, including the biological evaluation
Dan Segotta	Forest Botanist	Listed, sensitive, and survey-and-manage plant effects; effects on noxious and undesirable weeds; soil effects
Paul Thomas	Planning Manager	Team leader
Jennifer Wade	District Recreation Planner	Recreation effects

Support Team

Name	Position Title	Primary Responsibilities
Al Brown	Forest Environmental	NEPA guide Coordinator (past)
Frank Davis	Forest Environmental Coordinator (present)	NEPA guide
Joni Quarnstrom	Forest Public Affairs Officer	Public-affairs coordinator
Marty Moeller	District Project Engineer	Staging area location, design, and cost estimates
Phyllis Steeves	Forest Archaeologist (Siuslaw NF)	Heritage information
Sharon Stewart	Dispersed Recreation Supervisor	Technical support and costs
Doris Tai	Forest Recreation Manager	Recreation oversight
John Zapell	District Public Affairs Officer	NEPA public-involvement coordinator

Person or Organization	Comments Summary	Resolution
Frank Lyon	Opposes Alternative 4 as the proposed project based on the heavy concentration of sites and people without sanitation facilities.	
	The USFS ownership from Hauser to Horsfall is only 600 acres from Hauser to Horsfall, and placing 31% of the sites on less than 5% on the acres open to motorized use under Alternative 4. Under this alternative the criteria for placing sites would not allow the 55 to 60 sites for Hauser to Horsfall.	Analysis of campsite distribution and numbers are discussed in the Recreation Specialist Report in the project file.
	Proposes Alternative 3 be used, but only allow 10% of the sites be placed in the Hauser/Horsfall Corridor.	Limiting the sites to 10% is too restrictive because the Horsfall Bark Road area is the most popular camping area on the dunes and the area is very accessible for most campers. Historically, the Hauser to Horsfall corridor has experienced a substantial amount of use.
	Proposes a 300-foot set back from all private land to any campsite radius.	Most sites are located 300 feet from private property. Though ODNRA standards and guidelines do not require setbacks from private property, most sites are located more than 300 feet away from private land.
	City water wells	This issue was addressed in the design criteria; refer to appendix A.
	Hauser Bottleneck Management	Vehicle parking and access in the Hauser corridor is outside the scope of the analysis.

Person or Organization	Comments Summary	Resolution
Scott Dickey	Would like to have a site 75 to 100 yards north of the Umpqua closure boundary be considered for a designated site.	We agree and have located a site in this area, and the closure boundary line has been added to the maps.
Oregon Natural Resource Council (ONRC)	ONRC wants a credible capacity study to ensure that the long-term growth of OHV's is controlled.	The Dunes Management Plan established a capacity of 1 to 2 people per acre of open sand. Consistency with the established plan level capacity is disclosed on pages 65 and 66 of the EA, and in the Recreation Specialist Report.
	There are areas of the dunes that are effectively off-limits to non-motorized recreationalists because they feel unsafe.	Recreational experiences associated with land allocations was disclosed in the Dunes Plan FEIS, and thus this topic is outside the scope of this project.
	The EA should consider that most of the dunes are in inventoried roadless areas and all motorized use is inconsistent with most of the values associated with the roadless areas.	Roadless areas and their standards and guidelines were disclosed in the Siuslaw Forest Plan and the Dunes Plan. OHV use is permitted in some of the roadless areas. This EA followed those standards and guidelines. Effects on the inventoried roadless areas are disclosed on page 45 of the EA.
Jody Phillips	Did not see where the publics wants and needs were discussed.	Refer to The Problems to be Addressed and Help From Other Agencies and the Public sections in the EA, pages 5 and 6.

Person or Organization	Comments Summary	Resolution
	Agrees with Alternative 4, but that 20 people are not enough, and the restriction of five primary vehicles is too small.	Under alternative 2, group sites have been added to each riding area to accommodate up to 40 people and 10 vehicles. Refer to the EA, page 11.
	How will the reservations work, and what happens if there is standing water at the site? How will people know what camping area to reserve?	These comments deal with implementation of designated sites with the national reservation system, and are outside the scope of this EA. The respondent has been added to the mailing list that will inform users of the new system.
	Why do the staging areas have to cut out sand camping, why can't it be close to the road like Bull Run?	The proposed staging area is a similar distance from the road as Bull Run, and the Code of Federal Regulations requires a 200-foot buffer around the staging area that restricts camping. The Bull Run staging area did eliminate historically used campsites. The connection between developed facility and sand camping is identified on page 1 of the EA.
	People under 16 should not count in the limited number of people per site.	People at one time (PAOT) is based on individuals, regardless of age.

Person or Organization	Comments Summary	Resolution
	Vehicle access to designated sites	Historically, sand campers have selected sites based on their personal driving capabilities and the limitations of their vehicles for operating in the sand. Accessing different designated sites will require different driving and vehicle capabilities under all action alternatives. Thus, the experience in accessing the sand camping sites will not change under the action alternatives.
	There is a need for additional camping facilities addressed in the EA.	The need for additional camping facilities is addressed in the Dunes Plan, and directs development activities on day-use facilities so that the private sector can provide more lucrative overnight accommodations and therefore encourage economic inputs into the local communities. Thus, additional camping facilities are outside the scope of this EA.
	Open up a trail to the south of Horsfall Road in an areas currently closed to OHV use.	Designating new routes or opening riding areas south of Horsfall Road in management areas: 10A - non-motorized undeveloped, 10F - plant, fish and wildlife habitat and 10H - plant, fish and wildlife viewing, are outside the scope of the EA.
	Open a trail along Horsfall road	See above response.

Person or Organization	Comments Summary	Resolution
	Issue of OHV Flags	The required use of flags are a state regulation and are outside the scope of this EA.
Coos Bay Chamber of Commerce	The Bay Area Chamber is in favor of Alternative 4; it will have the least economic impact on the area. Request that the impacts on local communities be considered.	The economic effects of implementing the Dunes Plan, including the effects of designated sand camping, were addressed in the Dunes Plan FEIS. The OHV Sand Camping EA is tiered to the Dunes Plan FEIS and there is no change in the economic effects or impacts to the communities disclosed in the FEIS. Thus, no further analysis is required.
Reedsport/Winchester Bay Chamber of Commerce	The project does not analyze or measure any economical impact for the Reedsport/Winchester Bay area. Changes to the Dunes Plan requires analysis of the economic impact for any proposed change.	The minor plan amendment is tied to expanding the capacity to the Horsfall Staging area. The designated sand camping sites are consistent with what is identified in the Dunes Plan. There are no changes in Reedsport/Winchester Bay area in regards to the Dunes Plan. The economic effects of implementing the Dunes Plan, including the effects of designated sand camping, was addressed in the Dunes Plan FEIS. The OHV Sand Camping EA is tiered to the Dunes Plan FEIS and there is no change in the economic effects or impacts to the communities disclosed in the FEIS. Thus, no further analysis is required.
	The Reedsport/Winchester Bay Chamber does not agree with the numbers cited for the high-use periods.	See capacity analysis, EA, pages 65 and 66.

Person or Organization	Comments Summary	Resolution
	Alternative 4 is the only one that meets the growth in the Reedsport/Winchester Bay area, and some type of overflow camping should be provided to make sure that the Alternative 4 numbers are reached. Ensure that the maximum capacity of vehicles and people is always available in the Umpqua riding area, displayed in Table 1.	The standard and guidelines in the Dunes Plan is to manage camping by designating sites. Table 1 is a quantitative comparison between alternatives by managing to those site levels. Managing to the maximum people at one time capacity is outside the scope of this EA.
Winchester Bay Sanitary District	Designated campsites close to the Winchester Bay Sanitary District's service area could have an increased impact on the sewer system from sand camper's traffic to county facilities. The proposal should include a vault RV dump facility.	The management of RV sanitary dump stations off National Forest land is beyond the scope of this EA.
	The plan should include restroom facilities and showers for the sand campers.	Developed facilities are not consistent with dispersed recreation opportunities under the semi-primitive motorized designation. Thus, this topic is outside the scope of the EA.
	The rate-paying residents would not benefit by the proposal. The USFS should connect to the public sewer system and pay the system development charges and monthly service charges.	See above response.

Person or Organization	Comments Summary	Resolution
Francis Eatherington	Illegal OHV trespass from the ODNRA land onto State Parks land is impacting the endangered shorepine/kinnikinnik plant community and should be considered a significant cumulative effects issue.	The issue of OHV trespass into prohibited areas was resolved as part of the appeal process associated with the Management Plan Oregon Dunes National Recreation Area - Record of Decision Appeal #94-06-00-0099. State Parks is aware of the issues and is working with the Forest Service to address it. Designating campsites will not have an effect on whether or not OHV's trespass or not. Whether an area is open to OHV's or not is a Forest Plan issue and outside the scope of this EA**.**
	Noise from the OHV use is affects the adjoining mature forests on state land. Noise from OHV's and trespass could affect endangered species, especially during nesting season.	The issue of noise emanating from the ODNRA, including that associated with OHV use, was resolved as part of the Management Plan Oregon Dunes National Recreation Area - Record of Decision appeal process (Appeal #94-06-00-0095 and #94,06-00-0096). This analysis would not change OHV use patterns or the sound limit. Effects of designating sites is disclosed in the wildlife specialist report.
	Alternative 4 would not meet the purpose of more effective law enforcement by encouraging an increase in sand camping from current high of 130 to 180 sites, and perpetuate the crowed conditions. Only Alternative 3 meets EA goals for enforcement staffing capabilities.	See EA Table 2, and Ability to Prevent Violations and Enforce regulations effects section, pages 47 and 48 of the EA.

Person or Organization	Comments Summary	Resolution
	The Forest should not implement a plan amendment that will increase OHV recreation in the DNRA without first determining the safe carrying capacity of the most popular areas. The EA claims it will not increase OHV use, but show no documentation for this conclusion. The EA fails to consider visitor safety in terms of a safe carrying capacity for popular recreation areas, if the ODNRA Plan did not establish a safe OHV carrying capacity, it must do so with this plan amendment. Alternative 3 is best until a safe carrying capacity is determined.	The Dunes Management Plan has established a capacity of 1 to 2 people per acre of open sand. This capacity included dispersed and developed capacity. Since designated sand camping and the developed facilities being developed under this EA are all tiered to the Dunes Plan FEIS, reevaluating dispersed capacity in the open sand and facilities capacity is outside the scope of this EA. The alternatives are all within the established levels, and would not exceed the identified capacity of the dunes when all of the adjacent capacity is considered. Refer to EA, pages 65 and 66.
	There is no analysis on how the project affects Riparian Reserves. All 13 lakes in the project area must have Riparian Reserves around them.	Refer to the Riparian Reserves and Aquatic Conservation Strategy sections of the EA, pages 59 to 61.
	The NWFP requires that “the construction of recreational facilities should not prevent future attainment of these ACS objectives, the EA should consider this. The EA should also document how many acres of the project are in Riparian Reserves.	Refer to the Riparian Reserves and Aquatic Conservation Strategy sections of the EA, pages 59 to 61.

Person or Organization	Comments Summary	Resolution
	Trees at the Horsfall Staging area, how old is the stand.	Based on aerial photos, the age of the trees are estimated at 50 years, and appear to be naturally occurring trees that are encroaching into the dune environment. The stand of shore pine is about 45 feet tall and located in an area that has experienced heavy use by sand campers and day users. Most of the trees have been limbed up to about 6 to 8 feet by campers.
	What does “borrowed sand” mean? Will it be returned?	The term borrowed sand comes from a barrow pit. A barrow pit is an area where material (sand in this case) is used as fill at another location.
	Will the staging areas be paid for by user fees?	Based on past projects, similar in nature, we anticipate using a mixture of funding sources. This project is not connected to any timber sales, and thus does not qualify for KV funding sources. In the past, similar projects have been funded with sources such as user fees, grants, and Regional Capital Investment Project funds. A portion of the New Carissa settlement funds has been set aside for the project.
	Will the monitoring of sites include the known number of trespass occurring from sand camping sites? What will be monitored?	Refer to appendix A, Effectiveness monitoring section.

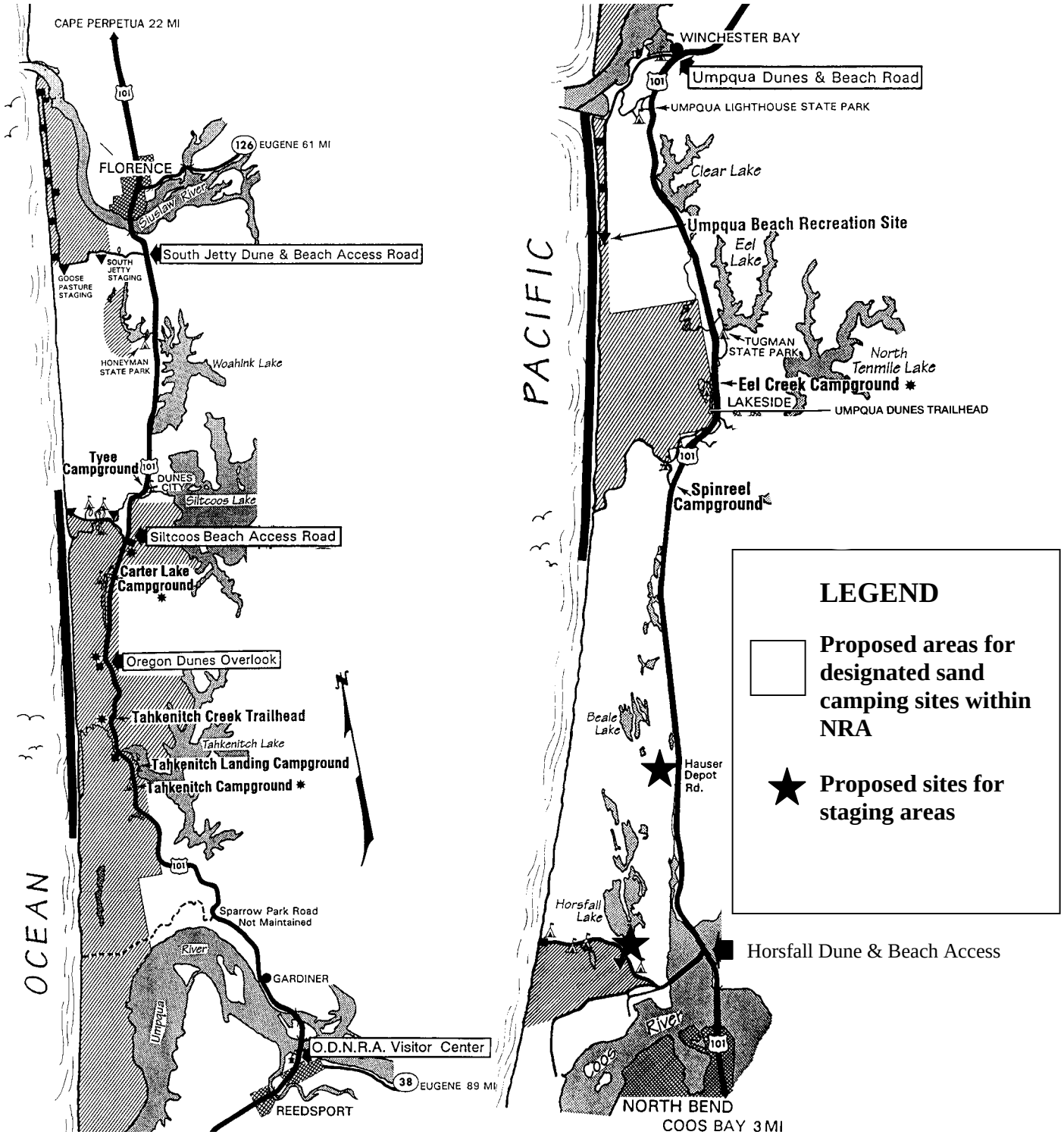
Person or Organization	Comments Summary	Resolution
Joe Coyne	The Semi-Primitive Motorized definition imbedded the Dunes Plan, differs from the definition in the EA.	The Semi-Primitive Motorized definition used in glossary of the sand camping analysis comes from the glossary definition used in the Dunes Plan. In Chapter III of the Dunes Plan, an expanded definition of the Semi Primitive Motorized experience is defined to specify the Oregon Dunes; both apply to this analysis.
	The delineation between Semi-Primitive Motorized campers and Semi-Primitive Motorized users is significant, and is not addressed in the EA.	Sand campers are a subset of the OHV user group. The analysis of capacity for the motorized areas included all available capacity related to OHV use. Refer to Recreation Specialist Report.
	The EA fails to recognize or quantify the number of people per acre with outside ownership, and rental businesses.	The analysis of capacity for the motorized areas included all available capacity related to OHV use, including adjacent access outside National Forest land. Refer to the Recreation Specialist Report and EA pages 65 and 66.
	There is not a figure in the report of what the daily use of the area is at any moment in time, and without this the calculations for the environmental effects to be predicted are not valid.	See Glossary definition of PAOT and table 7 of the EA.

Person or Organization	Comments Summary	Resolution
Douglas County Parks Department	Douglas County Parks Department is concerned about displacing sand campers onto County and other lands by setting limits.	Alternative 2 will meet current demand, and provide room for growth, except potentially during summer holiday weekends. It is not expected that displacement will occur, except perhaps on holiday weekends**.**
	The management actions and facility developments specified within the Umpqua Dunes State Parks Master Plan should be implemented and analyzed prior to consideration of the sand camping limits specified in the Sand Camping analysis.	The Forest Service has a responsibility to manage National Forest Land, and address the problems identified on page 2. Delaying the implementation of designated sites does not meet the purpose and need for change. In this analysis, the capacity analysis and cumulative effects took into account the Umpqua Dunes State Parks Master Plan. This EA addressed Forest Plan implementation. Refer to the EA, pages 65 and 66, and the Recreation Specialist Report.
	Douglas County Parks Department believes the management areas 10b and 10c should be managed for the Recreation Opportunity Spectrum classification Roaded Natural.	Changing the Recreation Opportunity Spectrum classification for management areas 10b and 10c is outside the scope of this analysis.
	In the Umpqua Dunes riding area, Douglas County Parks Department supports 27 sites until and new Management Plan is published.	Alternative 2 was modified by increasing the number of designated sites from 24 to 27 sites for the Umpqua Dunes area. Refer to the EA, page 11.

Person or Organization	Comments Summary	Resolution
Douglas County Board of Commissioners	Douglas County Board of Commissioners supports Alternative 4, but it should be amended to provide overflow sites. If designated sites are under utilized, overflow sites should be ready to provide overflow capacity to meet the 540 people and 135 vehicles in the Umpqua Dunes.	The standard and guidelines in the Dunes Plan is to manage camping by designating sites. Table 1 is a quantitative comparison between alternatives by managing to those site levels. Managing to the maximum people at one time capacity is outside the scope of this EA.
	The Forest plan is out of date, and the Semi-Primitive Motorized setting is not realistic, and when the plan is updated, it should be replaced with that of roaded natural, and 2.5 to 5 people per acre.	Forest Plan revisions are outside the scope of this EA.
	The sand camping project should address the economic impact to Western Douglas County by the outdated plan's trail classification (Semi-Primitive Motorized capacity).	The designated sand camping sites are inline with what is identified in the Dunes Plan. There are no changes in Reedsport/Winchester Bay area in regards to the Dunes Plan. The economic effects of implementing the Dunes Plan, including the effects of designated sand camping, was addressed in the Dunes Plan FEIS. The OHV Sand Camping EA is tiered to the Dunes Plan FEIS and there is no change in the economic effects or impacts to the communities disclosed in the FEIS. Thus, no further analysis is required.

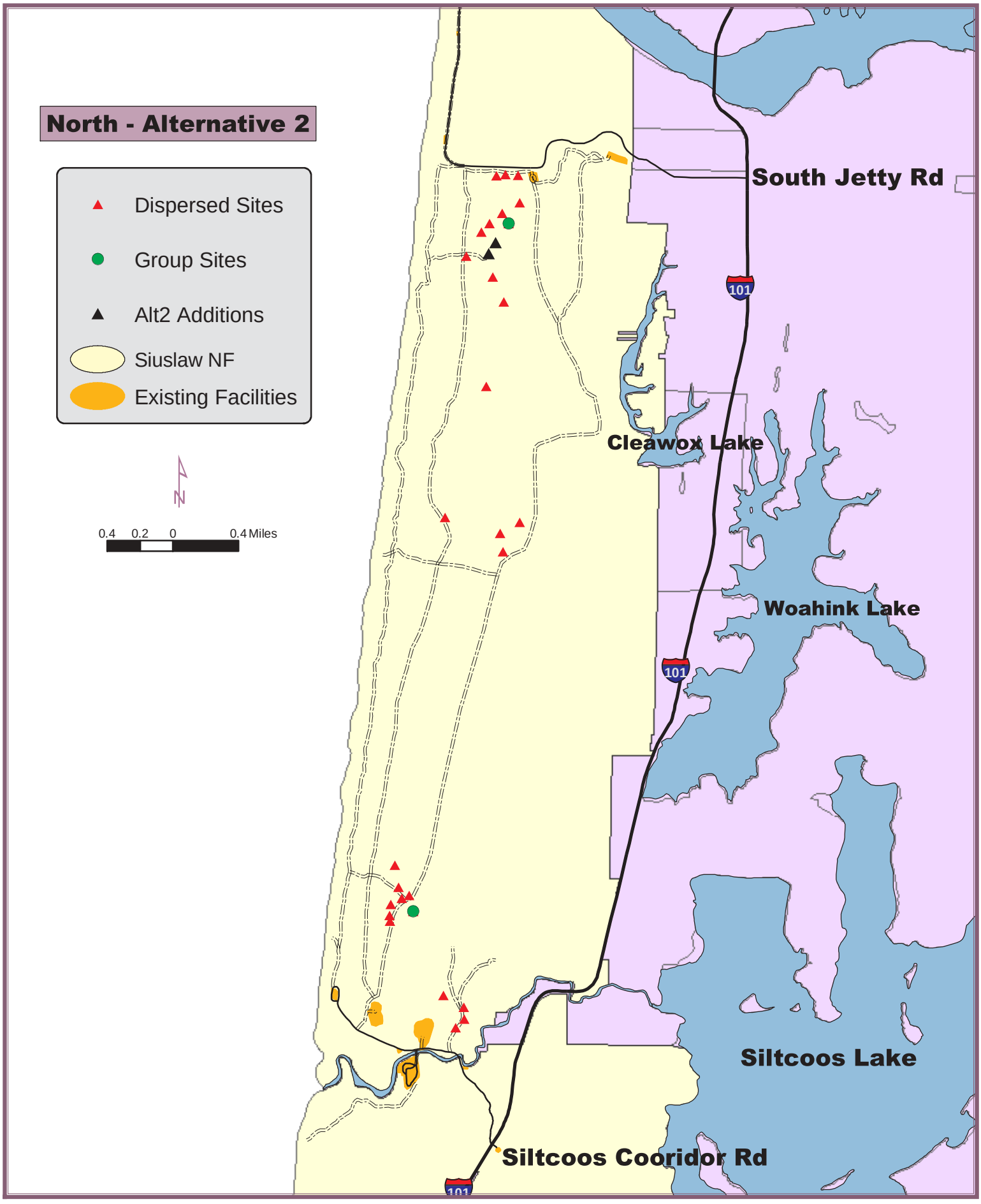
Person or Organization	Comments Summary	Resolution
Oregon Parks and Recreation Department	OPRD supports restoring the Semi-Primitive Motorized recreation characteristics, improving working conditions, minimizing environmental effects and better managing the riding area capacity to improve the quality of the recreational experience.	
	With effectiveness monitoring, hopefully there is the needed flexibility within the Record of Decision to adjust the number of designated sites as a management tool.	A Decision Notice, rather than a Record of Decision will be the decision document. Monitoring results and subsequent evaluations will help determine the need for changes in the number or location of sites and the level of analysis for changes (EA, appendix A).
	OPRD encourages the Forest Supervisor to consider Alternative 2 or 3, since Alternative 4 does not move sand camping toward Semi-Primitive Motorized guidelines.	See EA, chapter 3, recreation experience section.

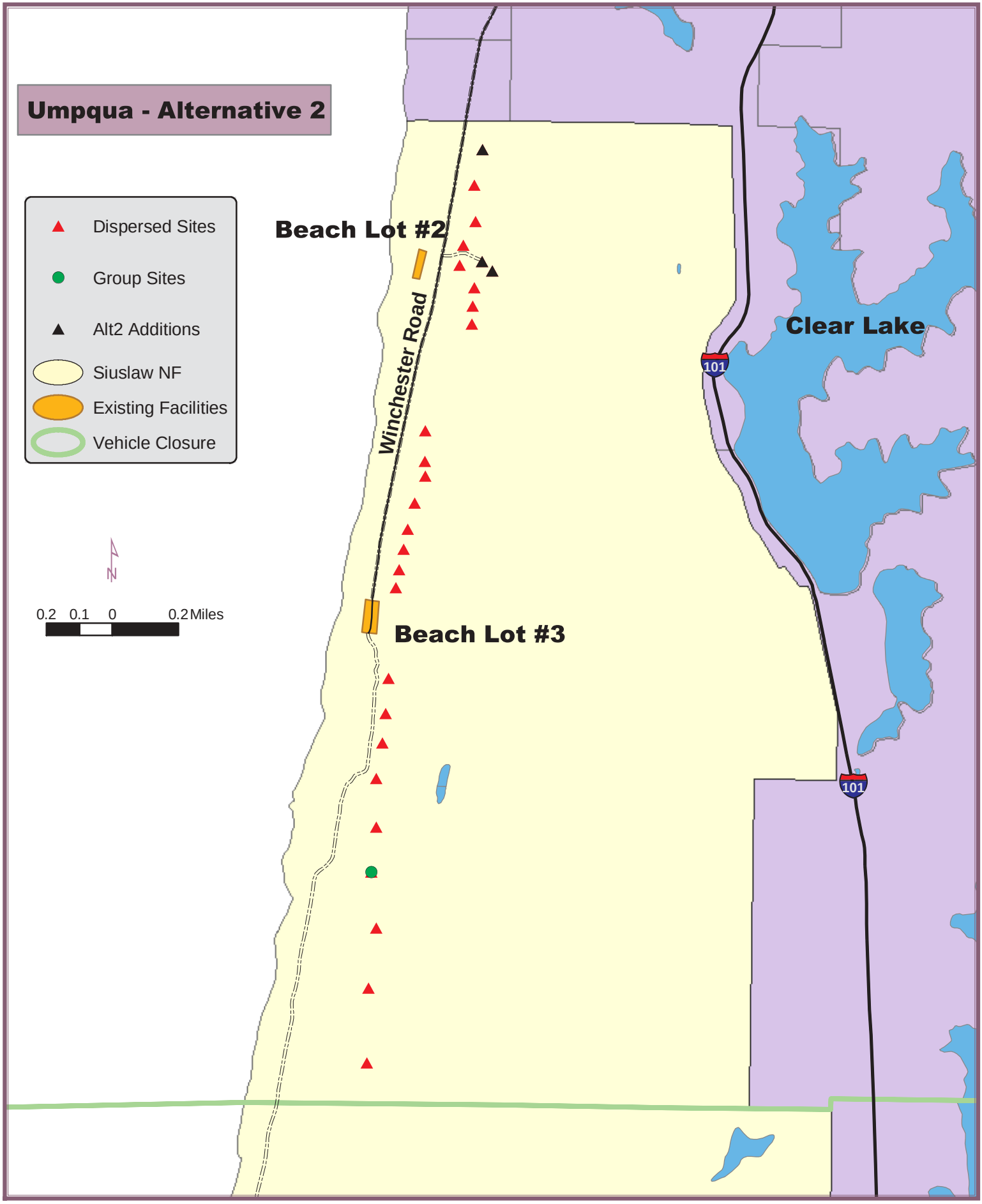
Oregon Dunes National Recreation Area
OHV Sand Camping Project
Vicinity Map

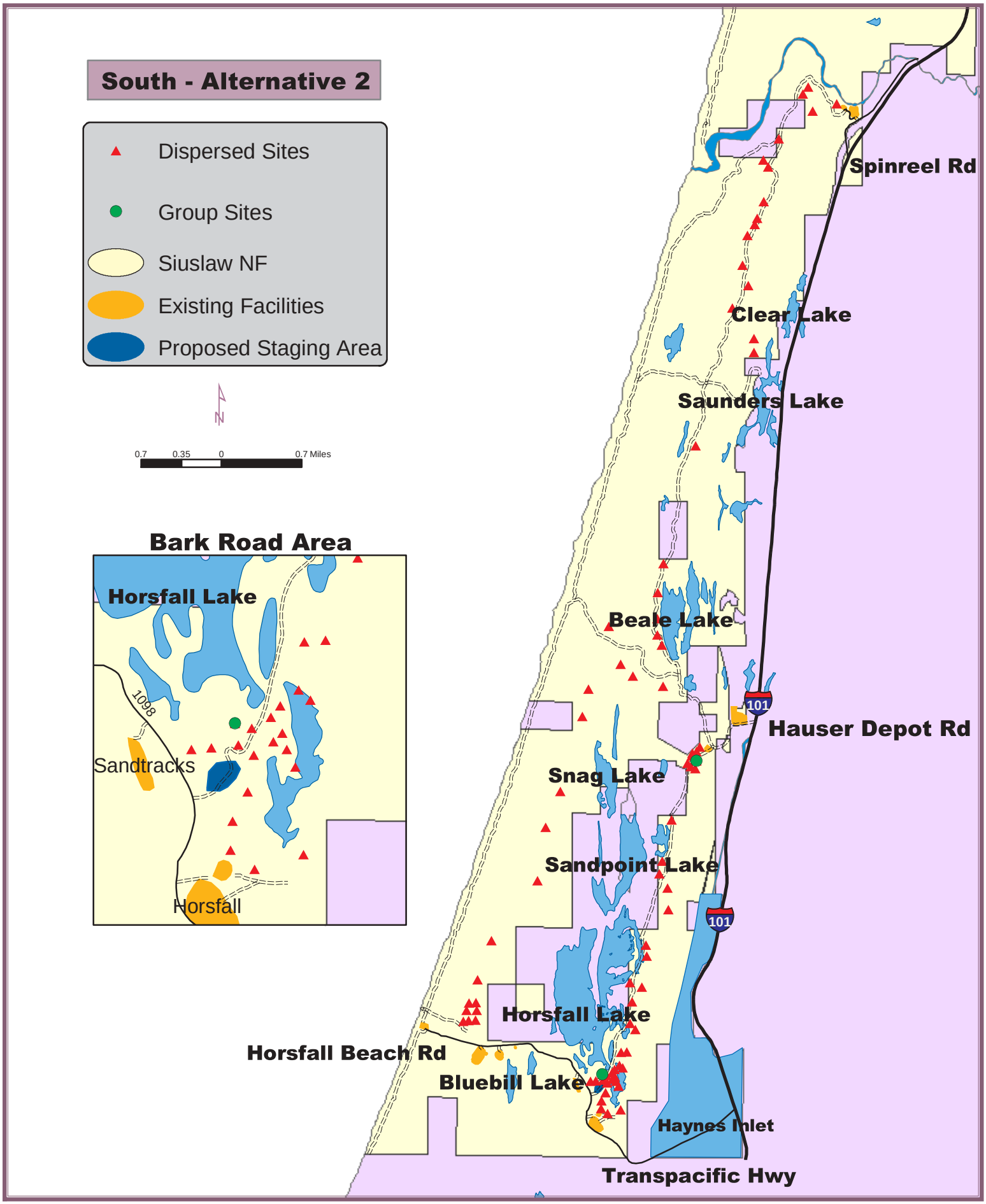


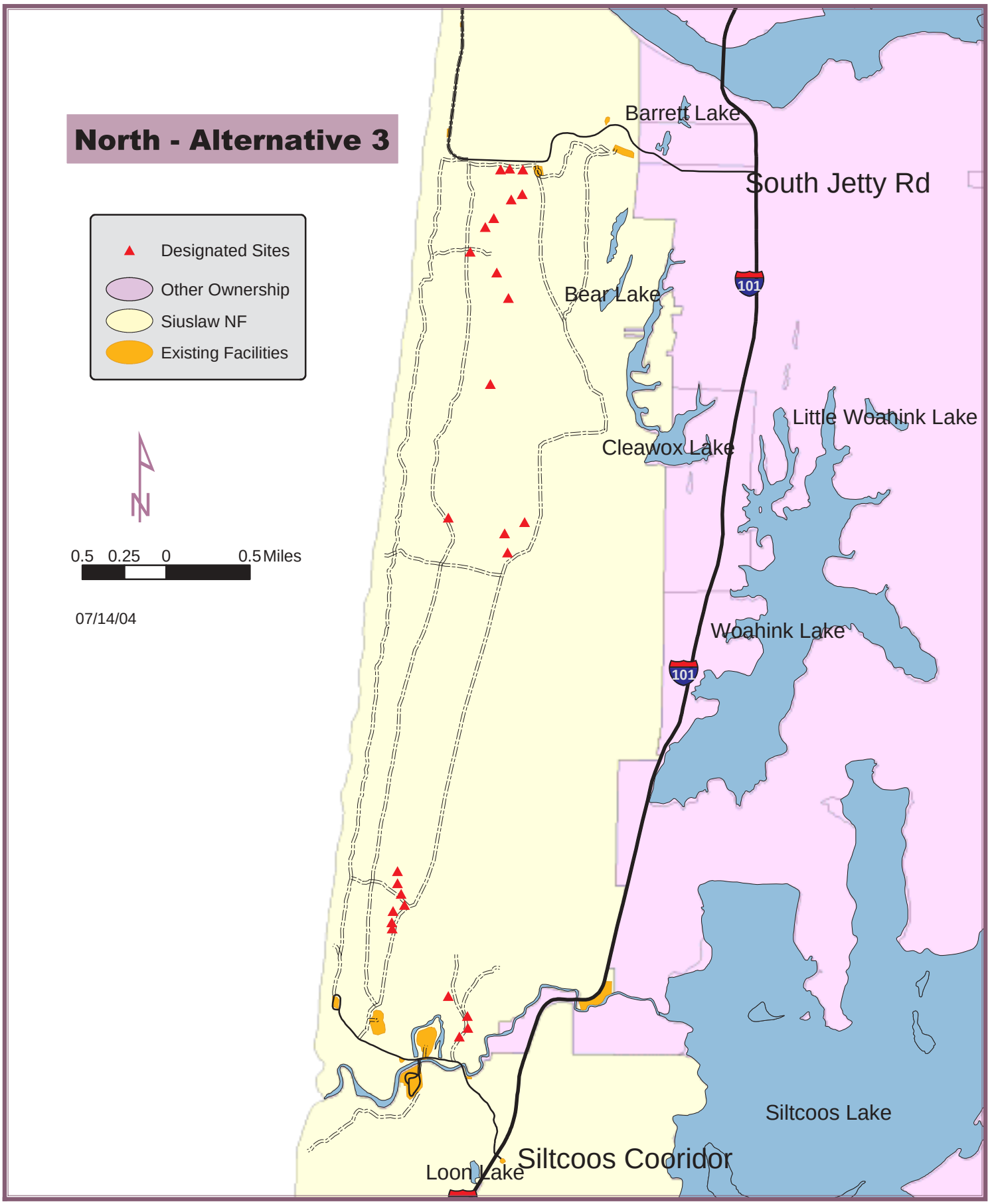
Oregon Dunes NRA – North
Florence to Reedsport

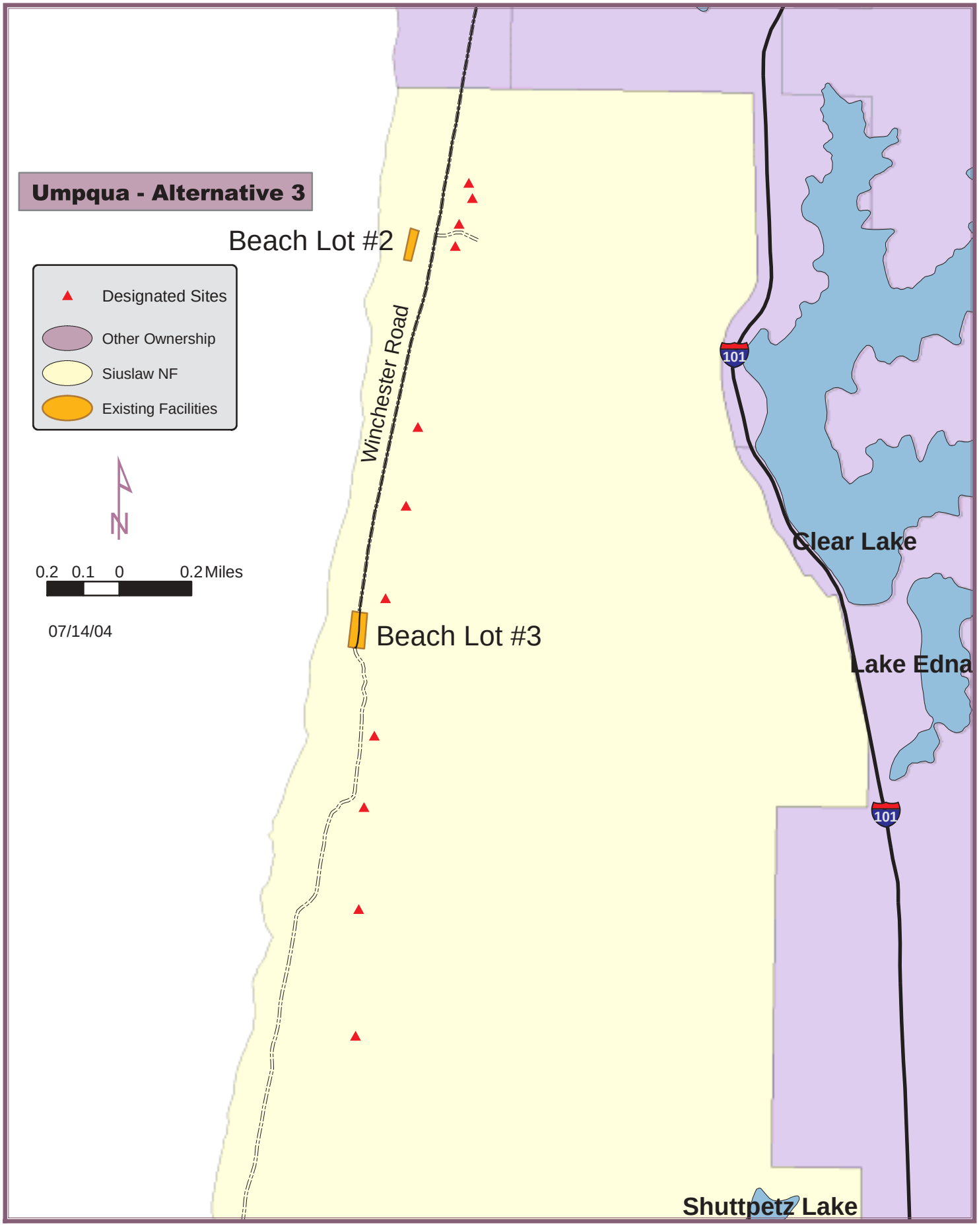
Oregon Dunes NRA – South
Reedsport to North Bend

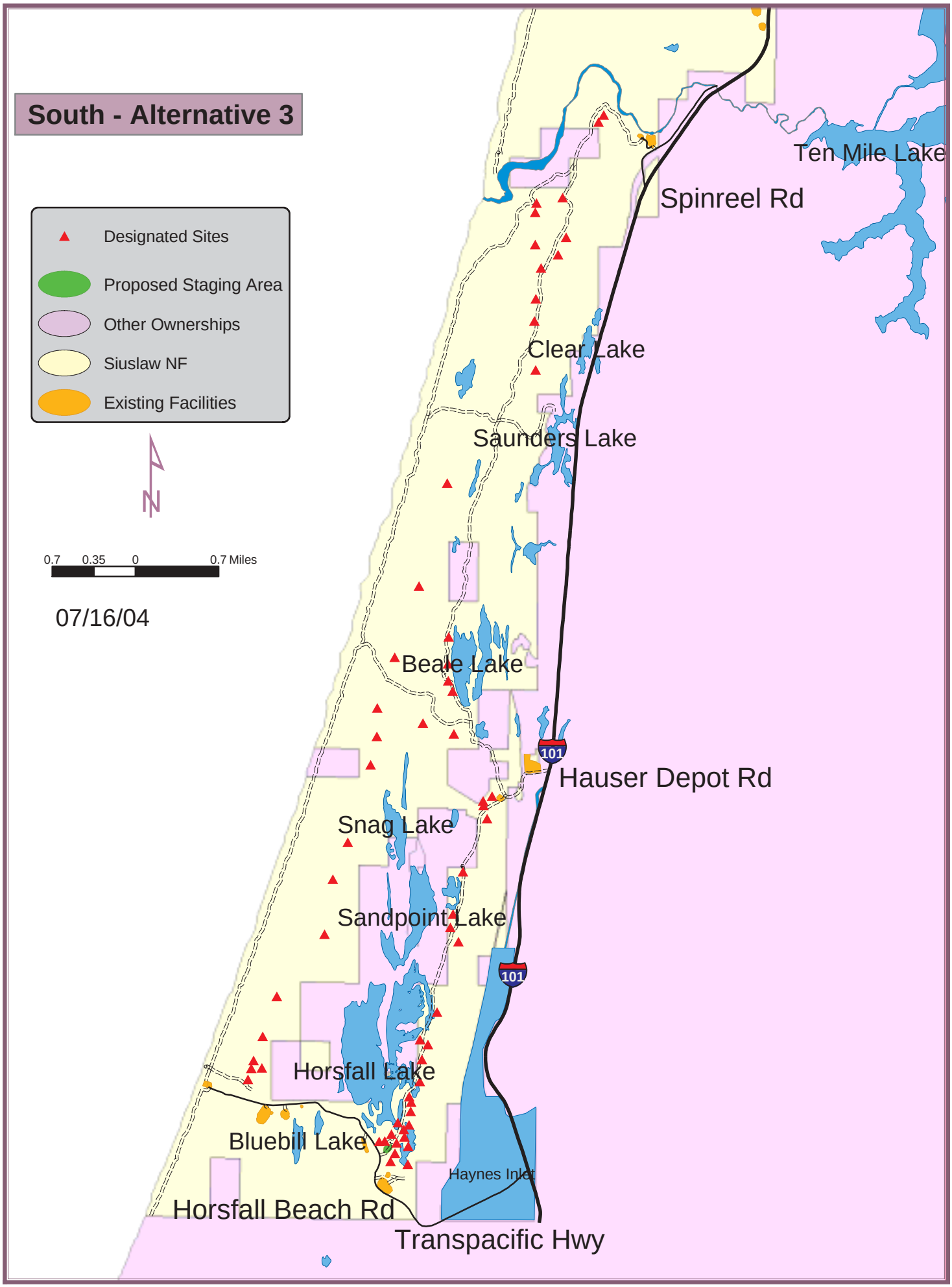

North - Alternative 2
Dispersed Sites
Group Sites
Alt2 Additions
Siuslaw NF
Existing Facilities
N
0.4 0.2 0 0.4 Miles
South Jetty Rd
101
Cleawox Lake
Woahink Lake
101
Siltcoos Lake
Siltcoos Cooridor Rd
101

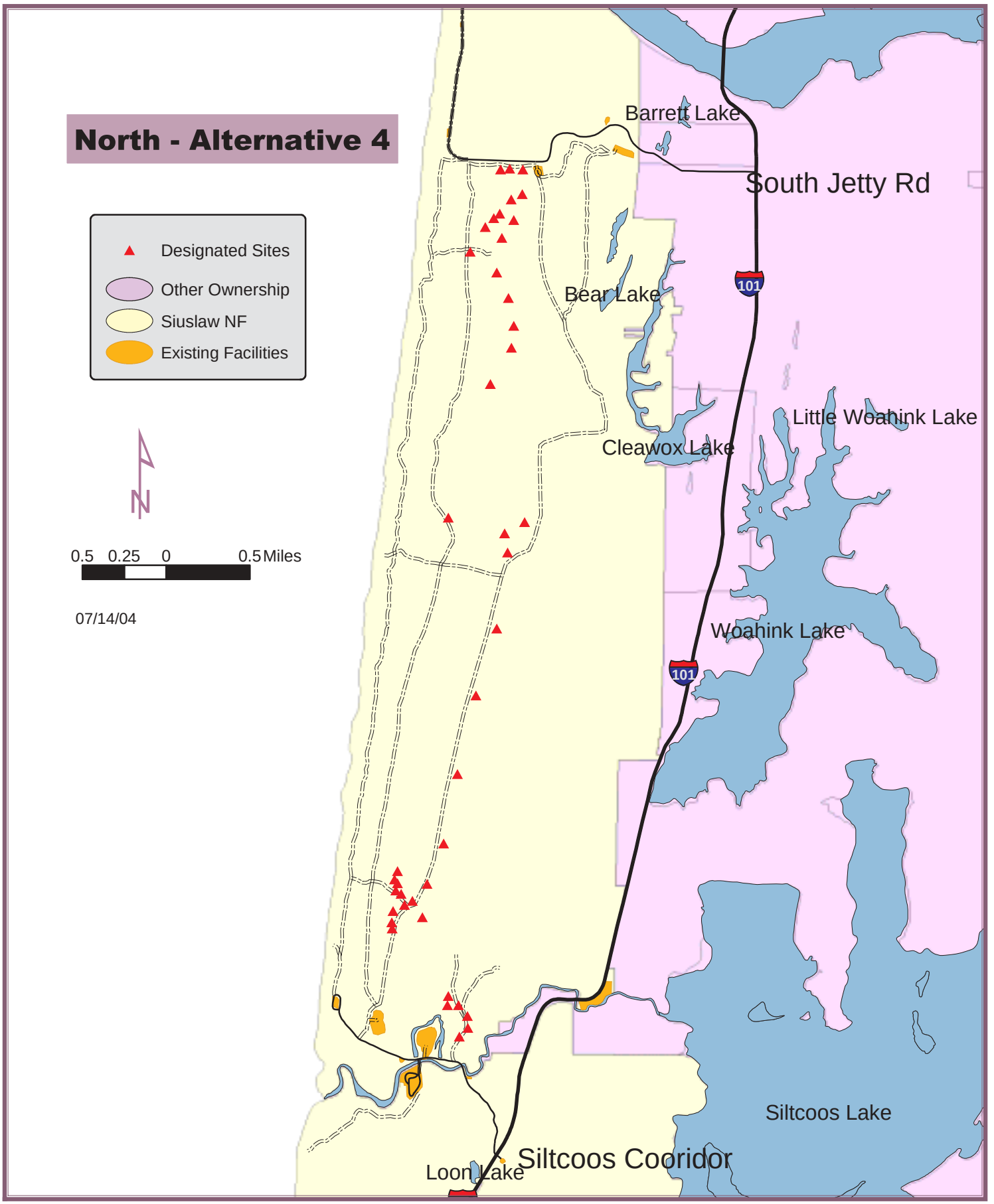

Umpqua - Alternative 2
Dispersed Sites
Group Sites
Alt2 Additions
Siuslaw NF
Existing Facilities
Vehicle Closure
N
0.2 0.1 0 0.2 Miles
Beach Lot #2
Beach Lot #3
Winchester Road
Clear Lake
101
101

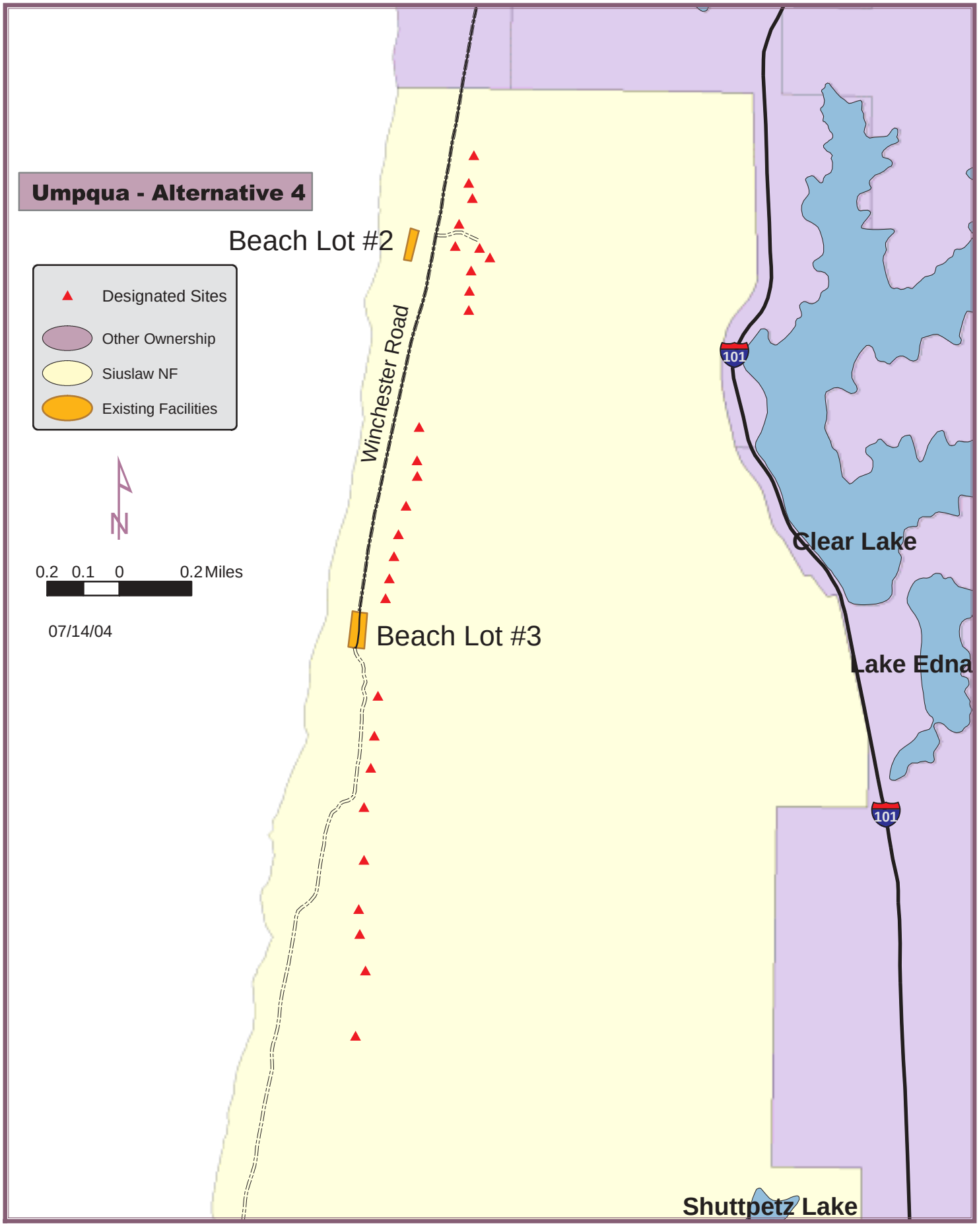

South - Alternative 2
Dispersed Sites
Group Sites
Siuslaw NF
Existing Facilities
Proposed Staging Area
N
0.7 0.35 0 0.7 Miles
Bark Road Area
Horsfall Lake
1098
Sandtracks
Horsfall
Spinreel Rd
Clear Lake
Saunders Lake
Beale Lake
101
Hauser Depot Rd
Snag Lake
Sandpoint Lake
101
Horsfall Lake
Horsfall Beach Rd
Bluebill Lake
Haynes Inlet
Transpacific Hwy

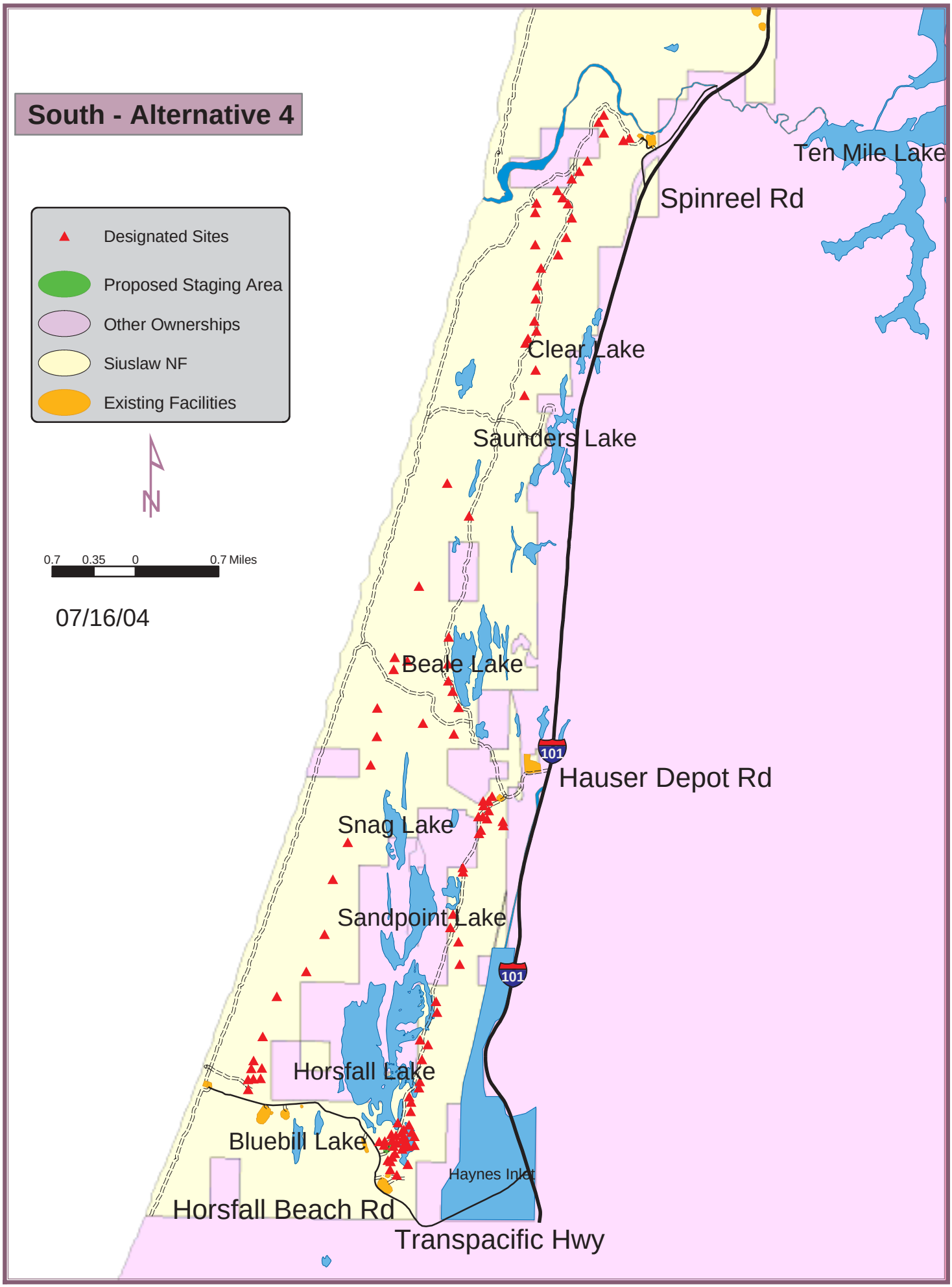

North - Alternative 3
Designated Sites
Other Ownership
Siuslaw NF
Existing Facilities
N
0.5 0.25 0 0.5 Miles
07/14/04
Barrett Lake
South Jetty Rd
Bear Lake
101
Little Woahink Lake
Cleawox Lake
Woahink Lake
101
Siltcoos Lake
Siltcoos Coordor
Loon Lake

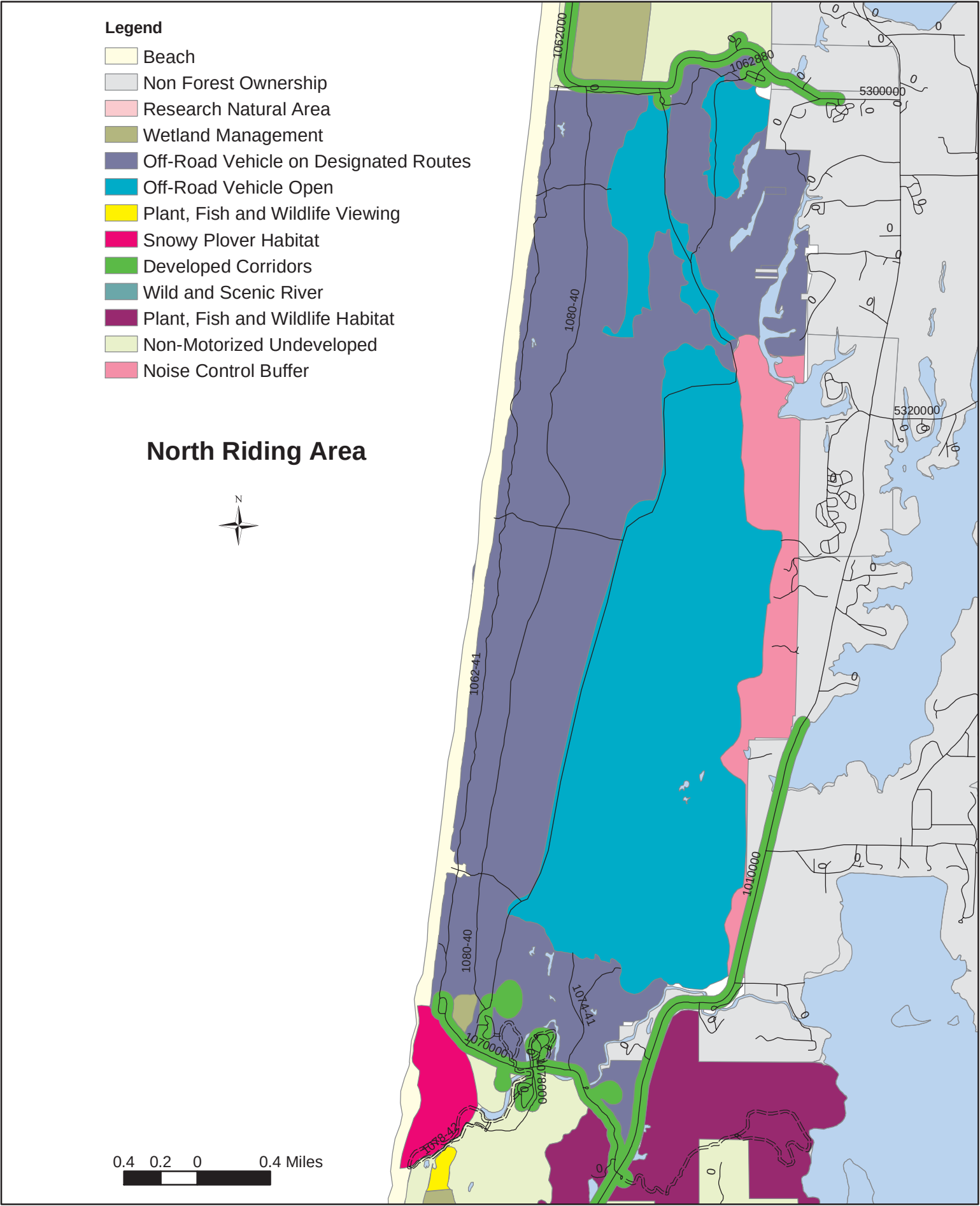

Umpqua - Alternative 3
Beach Lot #2
Designated Sites
Other Ownership
Siuslaw NF
Existing Facilities
N
0.2 0.1 0 0.2 Miles
07/14/04
Winchester Road
Beach Lot #3
101
Clear Lake
Lake Edna
101
Shuttpetz Lake

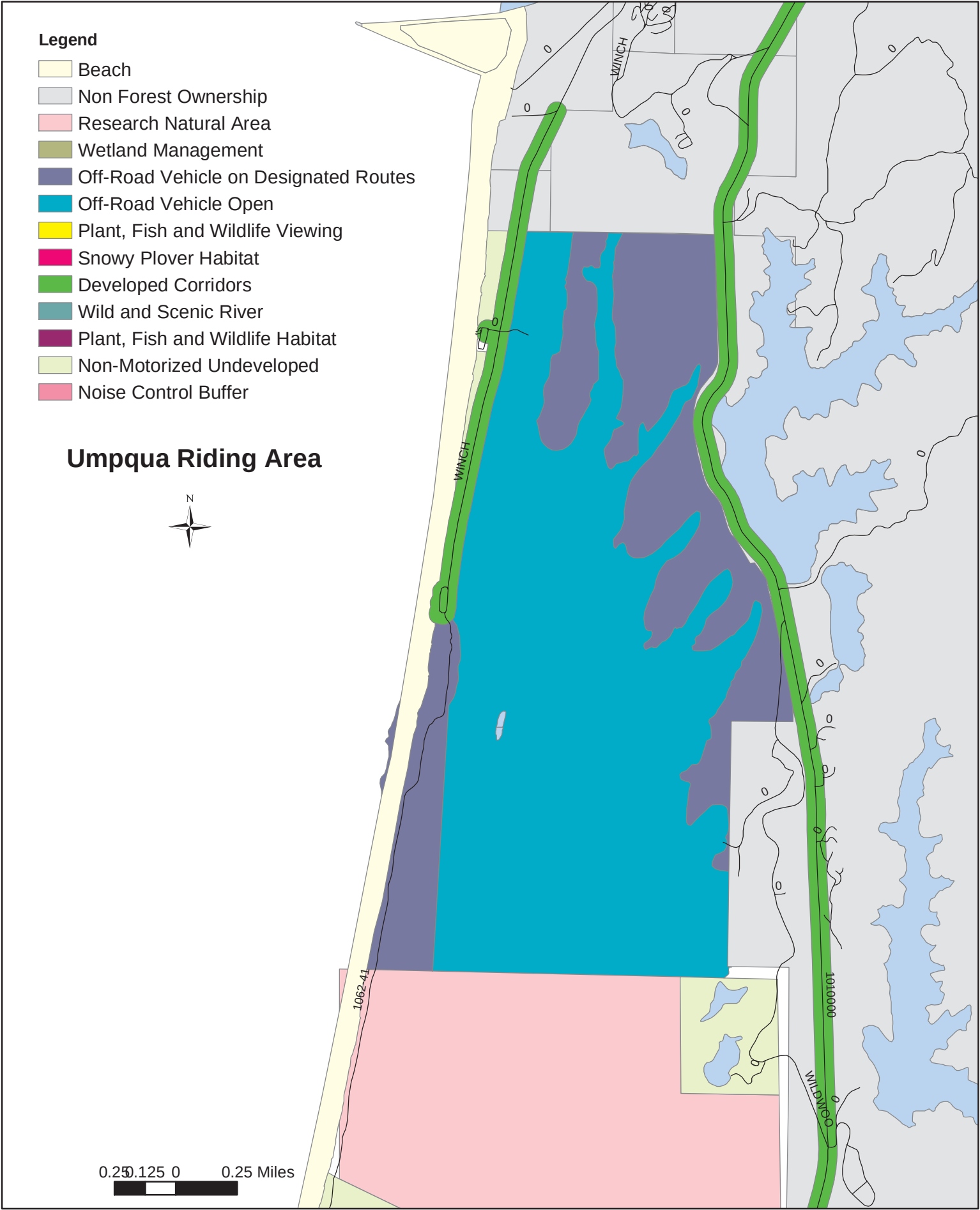

South - Alternative 3
Designated Sites
Proposed Staging Area
Other Ownerships
Siuslaw NF
Existing Facilities
N
0.7 0.35 0 0.7 Miles
07/16/04
Ten Mile Lake
Spinreel Rd
Clear Lake
Saunders Lake
Beale Lake
101
Hauser Depot Rd
Snag Lake
Sandpoint Lake
101
Horsfall Lake
Bluebill Lake
Haynes Inlet
Horsfall Beach Rd
Transpacific Hwy

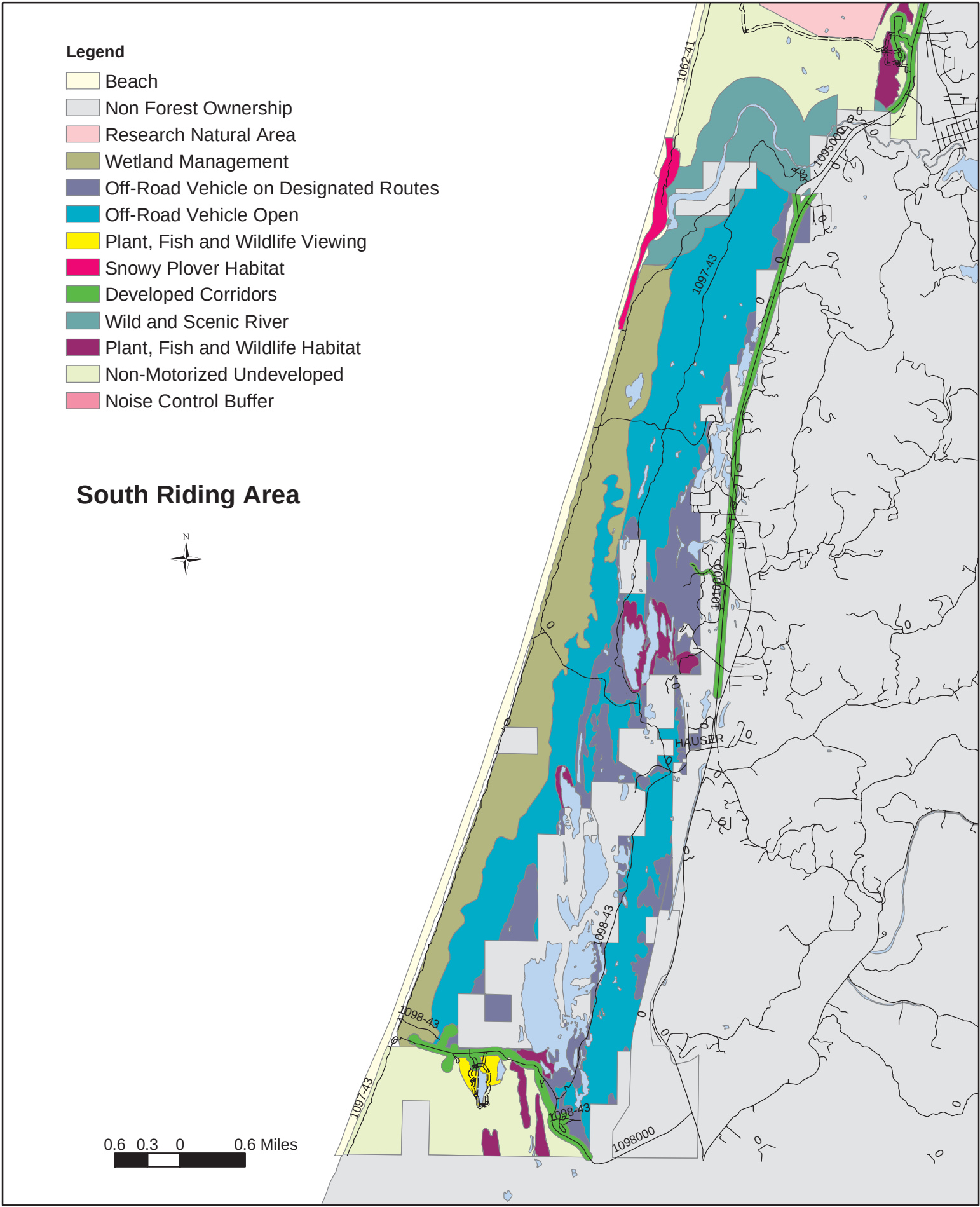

North - Alternative 4
Designated Sites
Other Ownership
Siuslaw NF
Existing Facilities
N
0.5 0.25 0 0.5 Miles
07/14/04
Barrett Lake
South Jetty Rd
Bear Lake
101
Little Woahink Lake
Cleawox Lake
Woahink Lake
101
Siltcoos Lake
Siltcoos Coordior
Loon Lake


Umpqua - Alternative 4
Beach Lot #2
Designated Sites
Other Ownership
Siuslaw NF
Existing Facilities
N
0.2 0.1 0 0.2 Miles
07/14/04
Winchester Road
Beach Lot #3
101
Clear Lake
Lake Edna
101
Shuttpetz Lake


South - Alternative 4
Designated Sites
Proposed Staging Area
Other Ownerships
Siuslaw NF
Existing Facilities
N
0.7 0.35 0 0.7 Miles
07/16/04
Ten Mile Lake
Spinreel Rd
Clear Lake
Saunders Lake
Beale Lake
101
Hauser Depot Rd
Snag Lake
Sandpoint Lake
101
Horsfall Lake
Bluebill Lake
Haynes Inlet
Horsfall Beach Rd
Transpacific Hwy


Legend
Beach
Non Forest Ownership
Research Natural Area
Wetland Management
Off-Road Vehicle on Designated Routes
Off-Road Vehicle Open
Plant, Fish and Wildlife Viewing
Snowy Plover Habitat
Developed Corridors
Wild and Scenic River
Plant, Fish and Wildlife Habitat
Non-Motorized Undeveloped
Noise Control Buffer
North Riding Area
N
0.4 0.2 0 0.4 Miles
1062000
1062880
5300000
1080-40
5320000
1062-41
1010000
1080-40
1074-41
1070000
1078000
1078-42


Legend
Beach
Non Forest Ownership
Research Natural Area
Wetland Management
Off-Road Vehicle on Designated Routes
Off-Road Vehicle Open
Plant, Fish and Wildlife Viewing
Snowy Plover Habitat
Developed Corridors
Wild and Scenic River
Plant, Fish and Wildlife Habitat
Non-Motorized Undeveloped
Noise Control Buffer
Umpqua Riding Area
N
WINCH
WINCH
1062-41
1010000
WILDWOOD
0.25 0.125 0 0.25 Miles


Legend
Beach
Non Forest Ownership
Research Natural Area
Wetland Management
Off-Road Vehicle on Designated Routes
Off-Road Vehicle Open
Plant, Fish and Wildlife Viewing
Snowy Plover Habitat
Developed Corridors
Wild and Scenic River
Plant, Fish and Wildlife Habitat
Non-Motorized Undeveloped
Noise Control Buffer
South Riding Area
N
0.6 0.3 0 0.6 Miles
1062-41
1095000
1097-43
1010000
HAUSER
1098-43
1098000