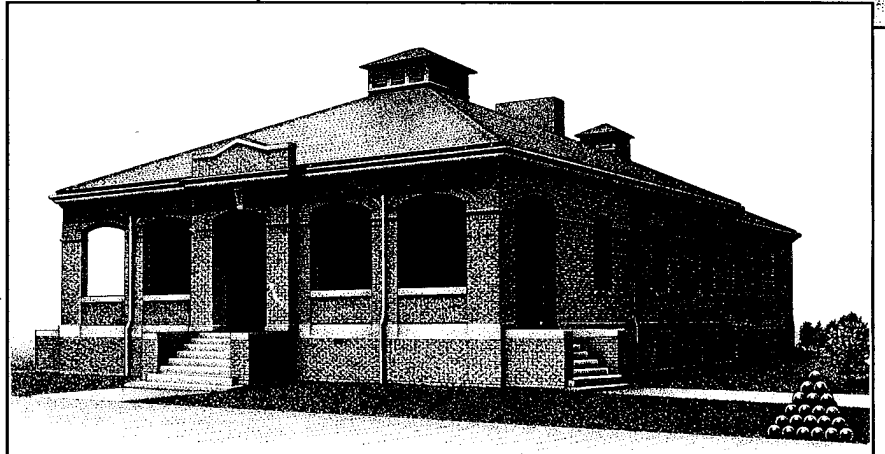
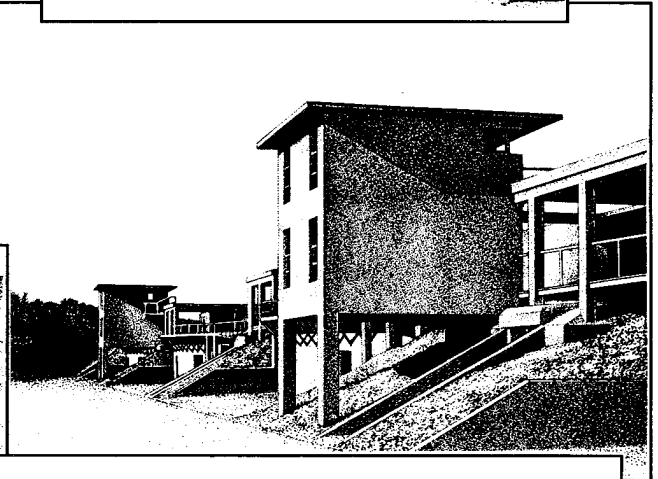
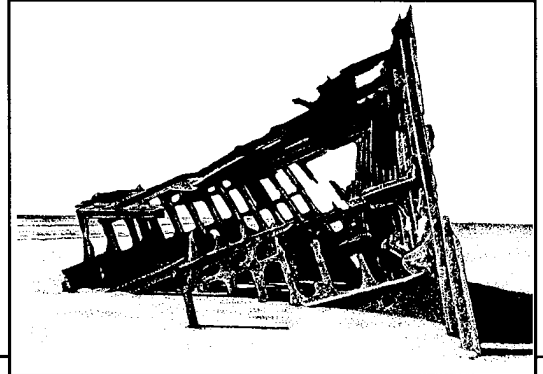


FORT STEVENS STATE PARK MASTER PLAN



OREGON PARKS AND RECREATION DEPARTMENT

2001

Acknowledgments

Director: Michael Carrier
Bob Meinen, Former Director

Staff: Jerry Winegar, Former Area Manager
John Allen, Current Area Manager
Patricia Oxley, Former Management Unit Manager
Jim Hutton, Former Management Unit Manager
Mike Stein, Current Management Unit Manager
Kathy Schutt, Master Planning Coordinator
Fort Stevens State Park Staff

Fort Stevens Master Plan Steering Committee:

Barb Balsensifer, Mayor of Warrenton
Jon Graves, Director, Columbia River Estuary Study Task Force
Brian Harrison, Friends of Old Fort Stevens
CWO Ronald Kinsley, Rilea Armed Forces Training Center
David Lindstrom
Chuck Meyer
Roger Rocka, Astoria/Warrenton Chamber of Commerce
Curt Schneider, Former Director, Clatsop County Planning
Michael Stanton, President North Coast Chapter Oregon Equestrian Trails
Lena Tucker, Oregon Department of Forestry
Janet Wright, Former Planner, City of Warrenton
Bill Willingham, Division Office

The Friends of Old Fort Stevens

Contacts: Fort Stevens State Park is administered through the Fort Stevens Management Unit office of Oregon Parks and Recreation Department State Parks System, at Fort Stevens State Park office, in Hammond/Warrenton, Oregon.

Or contact the Area 1 Managers office at Lincoln City; or the Master Planning Team Leader in the Salem office of the Oregon Parks and Recreation Department.

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LIST OF OTHER FORT STEVENS STATE PARK MASTER PLAN DOCUMENTS

The following documents are incorporated into the Fort Stevens State Park Master Plan.

- Land Use Findings for the Fort Stevens State Park Master Plan
- Maps:
 - Existing Conditions, Fort Stevens State Park Master Plan
 - Resource Suitability Composite, Fort Stevens State Park Master Plan
 - Wetlands, Fort Stevens State Park Master Plan
 - Vegetation, Fort Stevens State Park Master Plan
 - Wildlife Habitat, Fort Stevens State Park Master Plan
 - Water Features and Protected Species, Fort Stevens State Park Master Plan
 - Historic Features, Fort Stevens State Park Master Plan (2 maps)
 - Scenic Resources, Fort Stevens State Park Master Plan

The above documents are available for viewing at the following locations:

Oregon Parks and Recreation Department
Salem Headquarter Office
1115 Commercial St. NE
Salem OR 97301-1002

Fort Stevens State Park Office
Ridge Road
Hammond OR 97121

Clatsop County Planning and Development
800 Exchange, Suite 100
Astoria OR 97103

City of Warrenton Planning and Development
147 S. Main
Warrenton OR 97146

INTRODUCTION - Chapter One

This document is the master plan for the future use and management of Fort Stevens State Park, an Oregon Parks and Recreation Department (OPRD) property. This plan amends the 1976 master plan for Fort Stevens State Park. The plan document explains the master planning purpose and process. It also contains descriptions of the existing facilities, future recreation demands, the suitability of the land and resources for public recreational use, and issues and goals related to the use or development of the property and management of the park's resources.

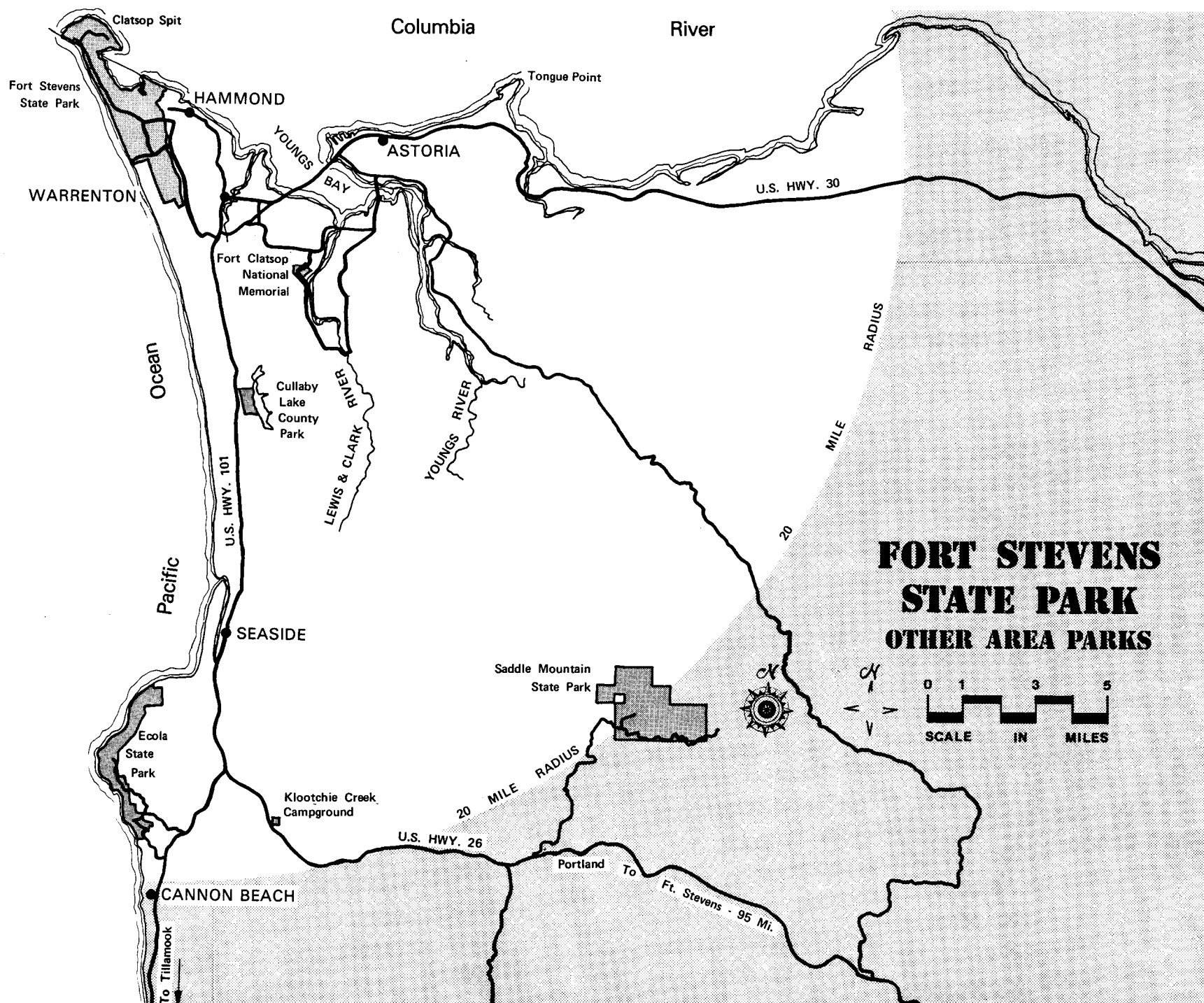
Master Plan Purpose

The Oregon Parks and Recreation Department (OPRD) prepares master plans for its properties as mandated in ORS 390.180. The purpose of state park master plans is to identify and plan for the most appropriate recreation-related uses for each state park based on resource opportunities and constraints, development opportunities and constraints, public recreational needs and the Department's role in the area of the park in providing needed recreation. The master plan may also identify desired lands for Department acquisition in relation to the park being master planned; and the identification of any Endowment parcels. It also provides a basis for preparing land use compliance requests, partnership agreements, budget and management priorities and detailed development and management guidelines.

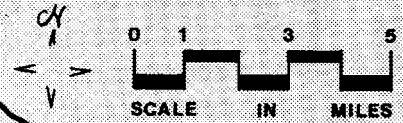
Master Planning Process

1. OPRD planning staff conducted introductory meetings in 1995 and 1996 to collect public and governmental opinions about use and management issues, problems, needs and opportunities for Fort Stevens State Park. Ideas, comments and concerns collected from these meetings served as a beginning point for problem-solving and for setting use and management goals and objectives for the property. For Fort Stevens, a large local steering committee formed to provide input to the planning process. The volunteer group, Friends of Old Fort Stevens also provided input.
2. Staff and consultants completed a detailed resource inventory for the property, including an assessment of its suitability for public recreational use.
3. Staff collected information regarding recreation needs and resource issues.
4. The local volunteer group, steering committee, and department staff and managers reviewed the available information and issues; and recommended use, management, development and acquisition goals for the property.
5. Staff completed a draft "Goals Chapter" and development concepts and introduced them for public comment at public and Steering Committee meetings. A comment period followed the meetings.
6. Staff completed a final draft plan document in 1996 for review and comment by interested parties, OPRD administration, and by the Oregon Parks and Recreation Commission. The Commission recommended to the Director changes to the plan in 1996 and 1999. Commission discussion and recommendations were made in public meetings with opportunities for public comment.

7. The plan proceeds through the state administrative rule-making process and is adopted as a rule. Concurrently with this process, OPRD applies to affected local governments for land use approval of the master plan. Opportunities for public comment are provided in both the state and local processes.

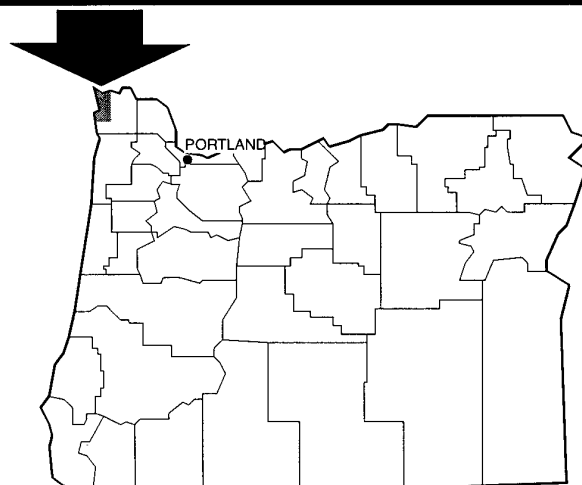
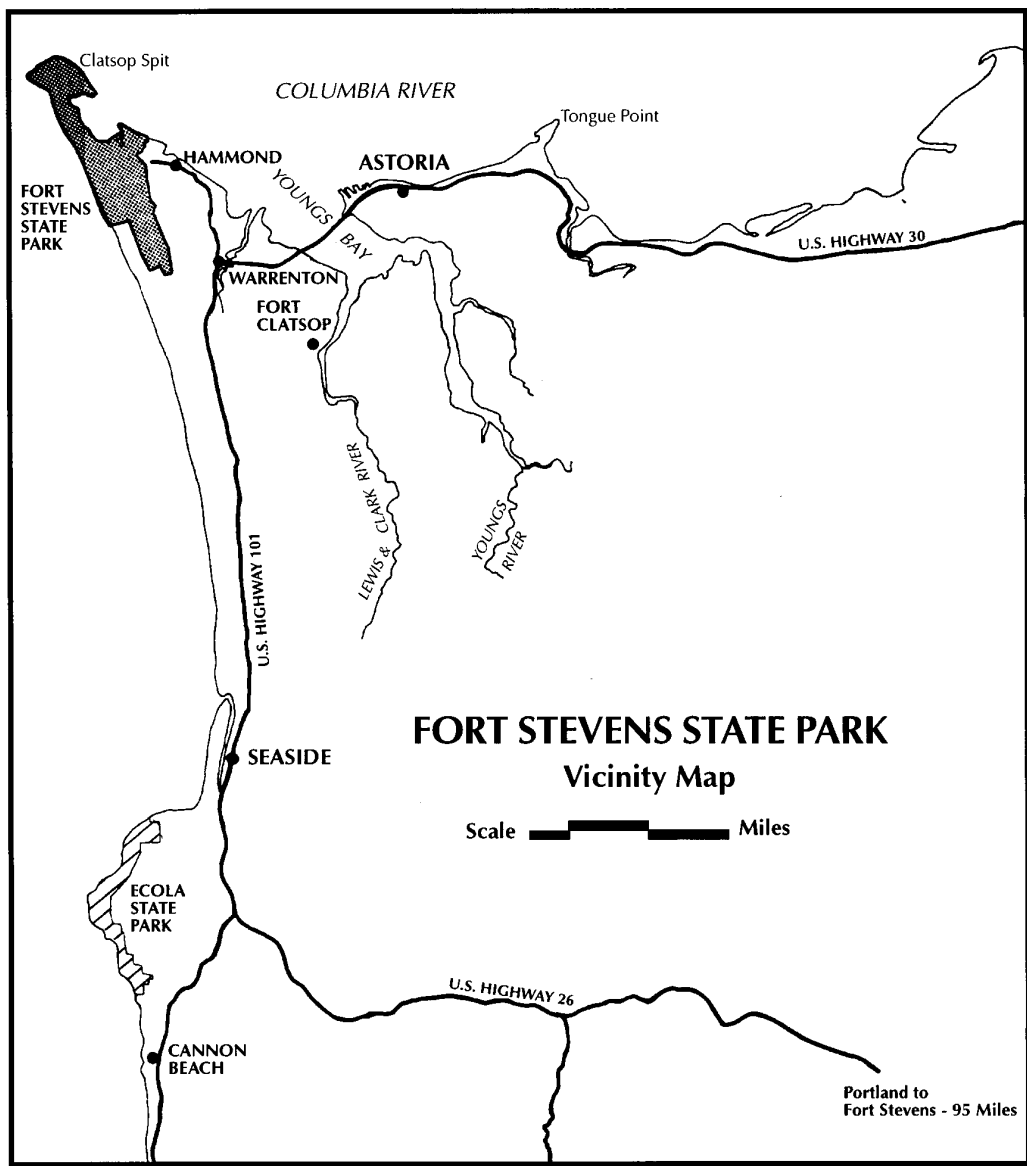


FORT STEVENS STATE PARK OTHER AREA PARKS



20 MILE RADIUS

Portland To Ft. Stevens - 95 Mi.



MASTER PLAN SUMMARY - Chapter Two

Fort Stevens State Park is a premier attraction in the Oregon Parks and Recreation Department system of parks. It is the second largest OPRD property in acreage and encompasses forests, diverse wetlands, inland lakes, and miles of ocean and Columbia River beach . It also includes a variety of interesting historic resources, including much of the historic Fort Stevens site and the wreck of the Peter Iredale. The park includes the departments largest campground, by far, up to 600 sites, and several dayuse and beach access sites.

Visitors from all over the state and from Washington, Canada and other places heavily use the park, during the summer season. It is also a very important local community recreational and economic asset. The park is loved for its traditional uses such as vehicular beach access, tent and RV camping and for fishing and swimming in its lakes and the Columbia River.

The park is capable of meeting at least some of the needs of the future for a growing and changing population. These needs include diversified camping opportunities, improved amenities for camping and dayuse and high quality, meaningful interpretation. The park has critical, deferred maintenance and management needs. These include facility and infrastructure repairs or replacement, historic resource preservation, natural resource management, improved maintenance and administrative facilities and the need for a centrally located park orientation and administration building. There is a need for a more understandable routing of visitors to and through the park, by vehicle and on trails. And there is a need to better explain to the public the department's future needs and plans and the necessity of partners to help OPRD meet some future demands and to provide cost effective improvement for the park.

In brief, Fort Stevens State Park needs to prepare for the future. The Oregon Parks and Recreation Department is committed to making Fort Stevens a priority for meeting those needs and for finding partners to assist. Here is a summary of the future goals for Fort Stevens.

- Protect important resources. Place and design facilities and uses to support resource protection. Develop management guidelines for both natural, scenic and cultural resources in the park.
- Make maintenance and management one of the most important goals for the park, including the identification of funding for maintenance and rehab, and for new development. Market the park amenities to extend visitation throughout the year and to encourage return trips, to make more use of the facilities in the park.
- Pursue private, non-profit and other agency partners for providing some future funding needs.
- Provide a diversity of outdoor recreational opportunities, including continued and expanded beach access, a variety of camping opportunities, an expanded and diversified trail system, improved Coffenbury Lake facilities, a park orientation center, and a parkwide interpretation strategy and improvements. Pursue extensive preservation and restoration measures at the Fort site to facilitate good interpretation of the history of the place and related activities. Recognize that some important recreational, natural and cultural resources exist near the park. Recognize that most of the cultural resources near Ft. Stevens have been protected for many years by private property owners and will be secure in the future under private ownership.

EXISTING CONDITIONS - Chapter Three

Location: Fort Stevens State Park is located off of U.S. Highway 101, via Ridge Road, about 10 miles west of Astoria and partly within the town of Warrenton.

The property has three access points from Ridge Road, one via Peter Iredale Road, one via South Jetty Road and one via Pacific Drive to the fort area. An internal park road connects Jetty Road and Peter Iredale Road.

Size: 3,789.84 acres

Classification: Fort Stevens is classified as a State Park with an extensive scenic setting and diverse opportunities for recreation, wildlife and cultural resource enjoyment.

Description: This property encompasses an extensive area of ocean and Columbia River beach, stabilized dunes and deflation plain wetlands. Mature upland forest exists in the higher areas. Coffenbury Lake and other smaller interdunal lakes occur within the property. The Trestle Bay intertidal area, off the Columbia River, offers a diversity of wetland habitats and plant communities.

The park currently is heavily used for camping, day use, bicycling, beach access, beach driving and hiking. Fishing, clamming and swimming occur as well. A small visitor center in the fort area offers interpretation of the historic fort.

The northern portion of the property includes the remains of the historic Fort Stevens on Point Adams. Fort construction began during the civil war era and was greatly expanded in the early 1900's and 1940's. The fort was on alert during the Spanish American War and World War I, and was actively used during World War II effort. The historic jetty and dune stabilization areas are also found within the State Park.

Neighborhood: Developed residential areas of the former town of Hammond, now incorporated into Warrenton, lie adjacent to the historic fort area of the property. The Hammond boat basin and private businesses and residences are located to the east and south of the fort area. Residential developments also occur on the south edge of the property and along the west side of Ridge Road. A large Kampground of America facility is located across Ridge Road from the park. Undeveloped, county-owned property is located along the south and western boundary of the property and within the park. Camp Rilea, an Oregon National Guard facility, and Camp Kiwanalong, a Kiwanis Youth Group Camp, are located near the park to the south.

Facilities: As of the writing of this document the campground has 213 full hookup sites, 128 electrical-only sites and 255 tent sites without hookup, with a total of 596 sites. There are also 14 yurts and a hiker/biker primitive camp area. A central administration area includes a camper registration building, sewage dump station, a small information station, park and Area offices and shop buildings and yard. The campground includes several shower and toilet buildings. The administration and shop buildings are

reaching the end of their useful life. Several of the toilet and shower buildings and much of the utility lines and equipment are in need of replacement. Many of the camp roads and paths need repaving, as does much of the bike path. There are two maintained dayuse areas at Coffenbury Lake with picnic tables and picnic shelters. The North Lake area has a boat dock and ramp. Seasonal boat rentals are available there.

The Peter Iredale beach access site has parking and toilet facilities, which require constant maintenance to remove sand. Three other beach access parking lots are located along the spit.

The property has about 8 miles of paved trails and many additional miles of unpaved trails.

Other

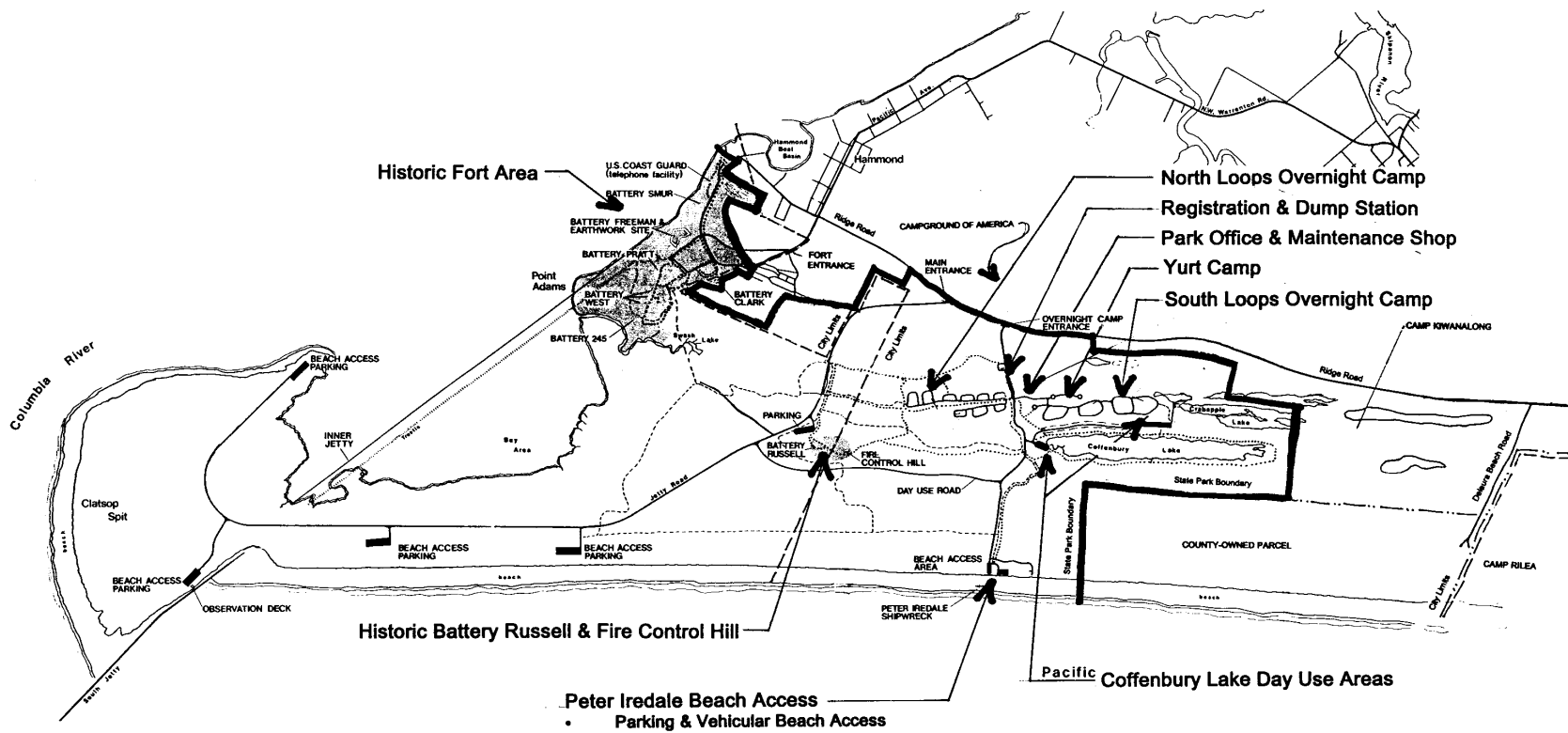
Jurisdictions: The northern portion of the park is located within the jurisdiction of Clatsop County and the southern portion within the town of Warrenton jurisdiction. Ocean shore related zone overlays apply to much of the property. An unusual Soil and Water Conservation District zoning authority applies to the western portion of the park. An historic resource overlay exists for the fort site and Battery Russell.

The historic fort area and Battery Russell/Fire Control Hill area are included in a National Register of Historic Places designation area, as is the officers quarters area and parade grounds currently located outside park boundaries.

The ocean and river beaches and intertidal areas are under the jurisdiction of OPRD and the State Division of Lands.

Most of the property has a recreational setting of either Roaded Natural or Roaded Modified. The campground and old fort areas are Urban within Open Space settings.

Ownership: The fort area and the northern portion of the spit is currently owned by the Army Corp of Engineers and is under a lease agreement with OPRD for public access and management. Clatsop County owns several hundred acres of undeveloped land to the south of the park and two small parcels within the western portion of the park. The remainder of the park is owned by OPRD. OPRD has a lease agreement with Oregon Department of Fish and Wildlife regarding allowing waterfowl hunting around Trestle Bay.



LEGEND
 HIKING TRAIL
 BICYCLE TRAIL -----

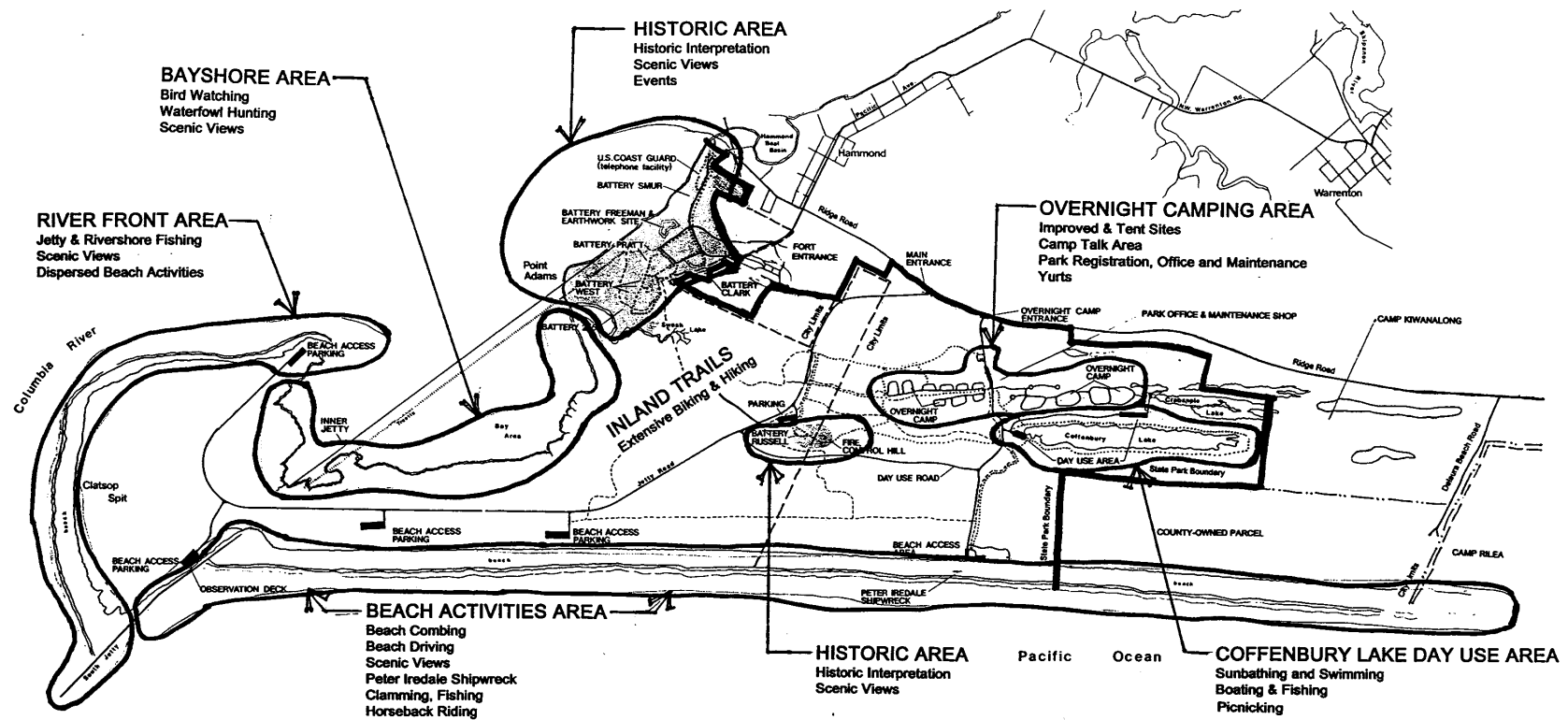
Existing Facilities

FORT STEVENS STATE PARK



Warrenton/Clatsop County

Scale 0 1000 Feet



NOTE:

There is currently no main orientation or interpretive center for the park. The fort cannot be accessed by vehicle from within the park. There is no horse camping or inland horse trails. There are no camping amenities such as information, sundries and eateries. The trail system is incomplete and does not connect with the surrounding community. Vehicular access to the beach occurs at the Peter Iredale parking lot. There is no publicly managed beach access at Delaura Beach Road.

Existing Recreation Use Areas FORT STEVENS STATE PARK



Warrenton/Clatsop County

Scale 1" = 2000 Feet

HERITAGE ASSESSMENT SUMMARY -

Chapter Four

Regional Overview

This chapter provides a summary of the resource inventories and assessments that were completed for the master plan. Detailed mapping has contributed the completion of the comprehensive resources suitability map, which is addressed in the next chapter. Detailed maps and reports are stored at the OPRD headquarters. Maps can also be viewed at the park headquarter office.

Fort Stevens State Park is located on the northernmost stretch of the Clatsop Plains. This is a long low area along the oceanfront which extends east to the coast range and south to Tillamook Head. The park is located within the City of Warrenton and includes the old Hammond residential areas. The towns of Seaside and Cannon Beach are located nearby on the plains to the south. Astoria is located to the northeast at the base of the coast range.

Fort Stevens includes Point Adams, the high ground at the original confluence of the Columbia River and the Pacific Ocean. Point Adams was a strategic location for Native American settlement and trading, and became a strategic location for United States military protection for the mouth of the Columbia. Today, the point with its Native American and historic fort themes is a strategic interpretive site for telling the history of this area. As an interpretive site, it complements Fort Clatsop, the towns of Astoria and Seaside, and the Washington State Parks on the north bank of the Columbia River.

The park has extensive sandy beaches, due to deposits from the Columbia River, via ocean currents. Construction of the South Jetty has caused considerable accumulation of sand and thereby has extended the shore westward over the past 90 years. Older dunes have stabilized and grown mature forests while pines and spruce are colonizing younger dunes. The most westward dunes support extensive grasslands.

Most of the beaches and dunes in the park are undeveloped and adjoin undeveloped, county-owned oceanfront land to the south. Even further south is the long stretch of oceanfront adjacent to the Oregon National Guard Camp Rilea. The park's interior is filled with wetlands, dunes and forests, and is becoming a haven for wildlife and forest settings as the town of Warrenton is developed to the east. The historic and natural settings and the extensive campground and dayuse opportunities have made Fort Stevens a regional and statewide destination attraction, as well as an attraction for visitors from Washington and Canada. It is also a very important local recreational and economic resource for Hammond, Warrenton and Astoria. Other regional attractions, such as the oceanside tourist communities of Seaside and Cannon Beach, and the historic and interpretive attractions of the town of Astoria and historic Fort Clatsop, team up with Fort Stevens to provide visitors to this area a variety of things to see and do.

Classification

Fort Stevens is classified as a State Park based on its extensive scenic setting and opportunities for a variety of outdoor recreational activities and interpretive opportunities. Management of the visual and scenic qualities of this property is one of the priorities for this state park class property. Preservation of the outstanding natural and historic resources, which are the basis for the park's scenic qualities, and the diversity of recreational opportunities are also priorities for a state park.

Vegetation

A series of long dunes extend over most of Fort Stevens State Park, paralleling the coastline from the northwest to the southeast. Vegetation patterns at the park often reflect the alterations of the underlying dunes and swales, causing long, thin bands of vegetation associations. Plants that thrive on high ground water dominate the interdunal swales. Because of their age, the eastward dunes have had the opportunity to develop mature forests. Near the beach the dunes are more newly formed. Due to sand movement problems plants such as shore pine and European beach grass have been historically used to stabilize the sand. Both species have aggressively established. However, Sitka spruce is rapidly growing into much of the southern dunal area of the park.

Vegetation at Fort Stevens shows high diversity, ranging from an "urbanized" landscape to mature natural forests. Forests, shrubs, grasslands, wetlands, and the beach's special "coastal strand" plant community variously dominate areas. In some areas, Scots broom is encroaching. In some limited areas, gorse is beginning to appear.

The sensitivity to disturbance of these plant communities is rated below, with 1 being the most sensitive and 4 being the least sensitive to alteration or disturbance. (See the abbreviations in each title). Detailed mapping of these plant communities is available for viewing at the Park, Area and Salem offices of OPRD.

Forest Associations

Upland Coniferous Forest (UCF-1) : A mature forest of Sitka spruce, western hemlock, and alder cover older dunes in the park. Under the trees, plants such as salmonberry and huckleberry grow. This forest association extends across much of the eastern half of the park.

Mixed Coniferous Plantation Forest (MCP-3) : These areas were planted, often in rows, and contain a wide mix of native and non-native tree species, including Sitka spruce, shore pine, Scotch pine and Austrian pine. Areas with native trees tend to have well-established native plants growing in the understory, along with Scotch broom, a persistent weed.

Shore Pine Forest (SPF-3) : Shore pine forests were planted to stabilize the dunes. These forests are now mature and in some cases past their prime. Since their introduction, shore pine have spread to adjacent areas. They now occupy the park's western dunes from the spit to the southern park boundary. On county property south and west of the park, shore pine forest occupies two areas: a narrow band east of the foredune, and further inland along the county property's eastern boundary (west of Coffenburg Lake).

Riparian Forest (RFO-1) : Found as narrow bands in the swales between the dunes, the Riparian Forest contains trees such as red alder and willow densely growing with crab apple, cascara, and salmonberry. This community does not extend to the western third of the park.

Shrubland Associations

Willow Shrubland (WSH-1) : South of Clatsop Spit and west of Battery Russell lies an area dominated by several kinds of willow and red alder. Another area with willow, sedge and beach silverweed extends across a deflation plane between dunes southeast of the *Peter Iredale* wreck.

Shrubland Mosaic (SMO-2) : The shrubland mosaic occurs in stabilized dune hummocks and longitudinal dunes. Patches of shore pine, Sitka spruce, willow, sedge, and non-native plants such as Scot's broom and European beach grass characterize it. Many of the trees in this community have been planted during prior land management activities. This plant association occupies much of the western third of the park, as well as almost half of the county property south of the park.

Grassland Associations

Dune Hummocks (DHU-3) : While dominated by European beach grass, many native species flourish in this association such as willow, sedge, and other valuable native dune plants. This association is located inland from the most westward dune along the beach.

American Dunegrass (ADU-1) : Occupying a narrow band on the lee side of the foredunes along the beach on State Park and County property, American dunegrass forms a nearly pure stand. Some European beach grass occurs here, along with native dune species like lupine and beach silverweed.

European Beachgrass (EBE-4) : The exotic European beach grass dominates the ocean side of the foredunes, much of the spit, and other dunal areas in the park. This grass has been planted to stabilize the dunes. These grasslands are being colonized by shore pine and some sitka spruce.

Tideland Communities

Cattail-Bulrush (CBU-2) : Cattail and bulrush dominate in freshwater wet areas, much of which is somewhat influenced by tidal fluctuations. While this plant association has many native plants, it also contains reed canary grass, a non-native weedy species. This association occupies the most inland part of the Trestle Bay estuarine system.

Sedge Intertidal (SEI-1) : Salt water partially inundates this plant association twice daily. Lyngby's sedge and beach silverweed make up important components of this community, which mostly occupies the low edges of Trestle Bay's shoreline.

Pickleweed (PIC-1) : An intertidal marsh that becomes inundated with salt water is located adjacent to the South Jetty near the northwestern edge of the park. Pickleweed and jaumea inhabit the lower marsh, with salt grass dominating higher elevations.

Coastal Strand (CST-1) : While vegetation is very sparse in the Coastal Strand located along the upper beach, unique plants inhabit this area, including a fleshy plant called sea rocket.

Developed Areas

Urbanized Non-forested (UNF-4) : Lawns, maintained landscaping, buildings, roads, and parking lots are lumped into this category which represents the more developed portion of the park

Disturbed Forested (DFO-4) : While supporting species such as Sitka spruce, red alder, and native herbs and shrubs, these areas are disturbed by development or major harvest.

Weedy Disturbed Areas (WDA-4) : Some portions of the park have experienced removal of native vegetation and soil disturbance allowing weedy species such as Scotch broom, European beach grass, and reed canary grass, to become dominant. One such area lies north of the campgrounds and another to the west of the north camp loops.

Wetlands

Marine

Marine wetlands are formed in low coastal areas where tides at least occasionally inundate the land. With little influence from fresh water, salinities usually exceed 30 percent. Elevation greatly influences the location of various types of emergent plants that grow in marine wetlands, since plants have different tolerances for inundation or exposure to dryness. The type of bottom (sand, silt, or rock) also plays a factor in the patterning of plants in marine wetlands. Marine wetlands extend along the western side of the park.

Estuarine

Estuarine wetlands form where both fresh and salt water influence the environment. They typically cover the borders of inlets or bays with access to the open ocean. Salinity in estuarine systems widely varies. Incoming fresh water may dilute the salt water, or, alternatively, evaporation may concentrate and increase the salt content. Estuaries can be either subtidal (substrate continuously submerged) or intertidal (substrate exposed and flooded by tides) Estuarine wetlands occupy Trestle Bay and low-lying land along the Columbia River, from the historic fort area to the west side of the spit.

Palustrine

Palustrine wetlands may be found in a variety of locations: adjacent to lakes or ponds, stream channels, estuaries, on slopes, or at isolated catchments. Trees, shrubs, or emergent plants such as cattails may dominate these freshwater wetlands. Palustrine wetlands are a common feature of the park's interior, generally between the dunal uplands. They also occupy over half of the county property south and west of the park.

Lacustrine

Lacustrine wetlands are permanently flooded and typically have the following three characteristics:

1. Situated in a depression
2. Less than 30% coverage of vegetation
3. Greater than 20 acres in size

The largest lacustrine wetland features are Coffenbury and Crabapple lakes, located in the southeast part of the park. Creep and Crawl Lake is another significant lacustrine wetland feature in the park.

Wildlife Habitat

Fort Stevens State Park contains significant areas of high quality wildlife habitat. Once rural, the lands surrounding Fort Stevens State Park are being developed for residential and other uses. This development process reduces the movement of wildlife into and out of the park. As the park becomes more of an island of habitat, conflicts arise between habitat goals and those of adjacent development. Management of the elk herd may be one such example. Most areas between the dunes support various types of wetlands which provide some of the richest wildlife habitat in the park. The Trestle Bay, river and oceanfront areas also support excellent wildlife habitat.

The most important habitats found at Fort Stevens State Parks are described below:

Estuarine Subtidal

The middle of Trestle Bay contains Estuarine Subtidal habitat, a transitional zone between marine and freshwater influences. It is subtidal in that low tides do not expose the bottom of the bay. The open water areas offer foraging opportunities for eagles, resting and feeding for waterfowl, loons and grebes and are also highly productive for marine organisms and fish. Trestle Bay is especially popular for migratory geese.

Estuarine Intertidal

Much of Trestle Bay, Swash Lake, a strip along the Columbia River banks, and the north side of the south jetty are estuarine as described above, but are called intertidal because they are sand and mudflats continually inundated and then exposed by the cycle of high and low tides. Shorebirds and waterfowl benefit from the many invertebrates that live in the intertidal zone. In terms of biomass production, this habitat is one of the most productive known.

Collecting soft-shell clams, mussels and crayfish, bird watching, waterfowl hunting and fishing are popular recreational activities in this habitat.

In 1996, the Army Corp of Engineers in cooperation with ODFW created a 500-foot long opening in the jetty that will allow greater tidal influence on Trestle Bay and Swash Lake. The project was intended to open up this area for juvenile salmon, and will also favor many other species, such as crabs. A monitoring program will demonstrate benefits to wildlife resulting from the modification.

Marine Intertidal

The ocean shore and the strip along the south side of the south jetty are considered Marine Intertidal because the ocean defines their character. This marine habitat is intertidal as described above, and also offers feeding and resting places for shorebirds and gulls. Fishing for perch, flounder, salmon, and ling cod, and clamming represent primary recreational activities in this habitat. Razor clamming from the beach at Fort Stevens State Park is among the best in Oregon.

Palustrine Emergent and Scrub/Shrub

This designation describes two separate types of wetland habitat, Palustrine Emergent and Scrub/Shrub. The plants that make up these habitat types often prosper in similar physical settings and the dominance of one type over another may be influenced by a slight change in elevation, age of the wetland, or history of disturbance. This designation dominates much of the western side of Fort Stevens State Park, south of Trestle Bay, but can also be found in low-lying portions of the eastern half of the park.

While the Shrub/Scrub type offers more habitat to a greater number of wildlife species than the Palustrine Emergent, both types of wetlands are important food sources for animals. Besides hosting a variety of songbirds, mammals and waterfowl, these habitats are also frequented by shorebirds due to their proximity to the marine and estuarine habitats of the park. The wetlands and adjacent waterways offer crucial feeding and breeding areas for several amphibian species.

Palustrine Forested

Palustrine Forested areas can be seasonally swampy, or at least occasionally flooded. Much of this habitat lies south of the historic Fort Stevens area, and along the eastern side of the developed camping facilities in the middle of the park. These forests once had more Sitka spruce and hemlock, but now alder and willow dominate many areas.

Like the Scrub/Shrub Wetlands, Palustrine Forested areas offer breeding and feeding opportunities for hundreds of wildlife species, and provide cover for elk, deer, beaver, raccoon and songbirds. The park's Palustrine Forested habitat contains some relatively large Sitka spruce and has well developed diversity and structure that benefits animal species which live in mature forests.

Lacustrine

The park's lakes and ponds represent lacustrine habitat, which are areas of still, open water. The habitat includes Coffenbury, Crabapple, and Creep and Crawl Lakes. While not as productive in biomass as shallow water habitats, they provide habitat diversity and are used by a number of fish and amphibians as well as bird species such as kingfisher and a variety of ducks. The large trees at their edges provide nesting as well as foraging perches for birds, including the bald eagle. Fishing in the park's inland lakes for bass, trout, and bullhead catfish has declined over the years for unknown reasons. Research is needed to understand and address this problem.

Upland

Certain lakeside and wetland fringe areas are mapped as Upland habitat to stress their importance to wildlife that rely on habitat edges or more than one habitat type for their survival. The Wildlife map depicts these areas dispersed throughout the park. Sitka spruce, western hemlock, and lodgepole pine dominate the Upland habitat. Depending upon their density and age, the Upland has a variety of understory conditions. It offers cover for elk, deer, coyotes, and a variety of birds and other animals and creates beneficial linkages with other habitat types. The edges associated with this Upland fulfill a great number of wildlife opportunities.

Protected Species

OPRD recognizes protected species as plants and animals listed as threatened or endangered by the state or federal governments or as candidates to those lists. Four such species have historically used the Fort Stevens area: snowy plover, bald eagle, Columbia white-tailed deer, and Townsend's big-eared bat. Red legged frogs, silver spot butterflies and marbeled murrelets are other protected species which were likely to have been found in the Fort Stevens area in the past.

Of these, only the bald eagles and bats are known to nest or winter in the park in recent years. The bald eagle is state and federally listed as threatened, but it is currently in the process of being delisted. This well-known fish hunter currently nests within the park and can be viewed soaring over water features in and around the park.

An informal sighting of Townsend's big-eared bats occurred in the park in recent years. Bat roosting occurs in historic buildings at the park. A thorough inventory is needed to assess the extent and location of the bats. There is a question about whether red legged frogs and Columbia whitetail deer are currently found in the park. Surveys are needed.

Once more common, the inconspicuous shorebird called the snowy plover has not been recorded at the park since 1983. In 1999, six were seen by ODFW staff. It's decline along the Pacific Coast relates to human use of its favorite nesting habitat, open sand. Snowy plover is federally and state listed as threatened. The Oregon Department of Fish and Wildlife has not designated official critical habitat for the plover at the park, due to the level of human activity on the beach there.

Cultural Resources

Prehistoric and Historic Resources

Prior to the construction of the jetty at the end of the 19th Century, the southern shore of the Columbia River ended in a narrow projection of land named Point Adams. The point has long been a focal point of human activities. Native Americans lived in the lower Columbia River area for thousands of years and a Clatsop Indian village existed on the high ground at Point Adams in the mid 1880s.

Little archaeological evidence of prehistoric use within the park has been discovered, although three surveys have been completed in recent years. Much of the area currently within the park has been subjected to ocean deposition and erosion over the last several thousand years. The present sandy beach, foredune, and interdunal areas were formed following the construction of the jetty and the development of sand stabilization efforts undertaken over the last 100 years. Prehistoric resources may be present beneath the surface at Point Adams in the vicinity of the old Clatsop village and the Fort Stevens complex. However, there is extensive disturbance of the surface from military use. Two archeological surveys have been completed for the earthworks area, and another survey is planned for the area north of the Batteries.

Fort Stevens State Park is named for the US Army fort built on Point Adams beginning in 1865. It was developed as part of a three-fort complex that included Fort Canby and Fort Columbia located on the north banks of the river in Washington. The forts initially were developed during the Civil War to prevent Confederate ships from entering the Columbia River. Further development occurred just before and during World War I, including most of the artillery batteries still present. Military base activities continued through 1947 when the fort was decommissioned.

The park contains a variety of historic resources including artillery batteries, shipwrecks, military buildings, the jetty, and tree plantations. These valuable historic resources illustrate important events including the Civil War, Spanish-American War, and World Wars I and II, and efforts to improve shipping on the Columbia River. Shipwrecks and tree plantations used to stabilize drifting sands show the results of attempts to face the harsh conditions of the area. Historic resources in Fort Stevens State Park are concentrated at the northern end of the park due to US military activities. In 1971, the Fort Stevens Military Reservation was listed as a district in the National Register of Historic Places sites. The sites are contained within approximately 542 acres. (Historic resources and the National Register designation have been mapped in detail and maps can be viewed at OPRD offices.)

Areas of Fort Stevens that were developed during and shortly after the Civil War include the fort, officer's quarters, support buildings, a wharf, two cemeteries, and roads. Also, during this period, a lighthouse was built on a low ridge about one mile south of the fort, near the current Battery Russell site. Fort Stevens,

the wharf, the buildings, and one cemetery were located on the south bank of the Columbia River, just above its mouth. A second cemetery was located along a road connecting the fort and the lighthouse. One of the cemeteries is now gone. However, the site of the original earthworks of the fort is still visible and is currently being rebuilt.

Between 1884 and 1898, the fort was under the control of the Army Corps of Engineers. The first 3.5 miles of the jetty were constructed during this period. Developments during this period included the jetty, a parallel railroad for hauling rock, expanded docks, Engineer's quarters, bunkhouses, and offices. These features were located next to the south bank of the Columbia River. In addition, the jetty and remains of the railroad extend westward into the Pacific Ocean for several miles. The docks, quarters, offices, and bunkhouses were east of the original fort location. Following construction of the jetty, sand deposits greatly enlarged Clatsop Spit. Only the jetty and Engineer's quarters survive today.

In 1898, control of the fort was returned to the Army and the period of most intensive development began and continued until the end of World War I around 1920. Almost all of the artillery batteries present today were constructed during this period. These include Batteries Russell, Clark, Pratt, Lewis, Walker, Smur, and Freeman. In addition, facilities for mining the river entrance were built as well as additional bunkhouses, officers' quarters, and support buildings. All of these features were located not far from the south bank of the Columbia, in the vicinity of the original fort, except Battery Russell which was located about 1 mile south along the Pacific coast near the lighthouse. Many of these buildings remain today.

The final period of construction at the fort occurred during World War II when Battery 245, an automotive school, and additional barracks and Mine Command facilities were constructed. These facilities were placed among or in place of some of the earlier developments of the fort.

Fort Stevens State Park was established in 1955 with additional lands acquired over the next several years. Included in the park are the remains of the British sailing ship *Peter Iredale* which ran aground in 1906. Remains of a second shipwreck, *Cainsmore*, dating from the Civil War era, are also present in the park. Both wrecks are located west of Coffenbury Lake. The *Peter Iredale* is located on the beach while the *Cainsmore* is more inland.

Another historic feature in the park is the tree and European beachgrass plantations done as part of efforts to stabilize the drifting sands in the area. During the early settlement period these areas were grassy, periodically flooded lowlands, which quickly became severely disturbed by overgrazing and road cutting. As sand began to drift into developed areas and fields sand stabilization was desired. Evidence of these plantations is located inland from the beach in a strip running from the south end of the Clatsop Spit to the south park boundary and beyond.

A thorough study of the history of Point Adams, Fort Stevens and of the state park has yet to be prepared. Histories current exist only on various related topics. While most of the standing buildings and structures have been recorded, few comprehensive surveys of the park have been conducted for historic or prehistoric archaeological sites.

Water Features and Hazards

Features

Fort Stevens State Park lies at the mouth of the Columbia River, with the Pacific Ocean to the west and the Columbia to the north and east. Other special water features include:

- *Trestle Bay*, the shallow estuary that lies between Clatsop Spit and the historic fort area.
- *Hammond Boat Basin*, which provides boating access and is located just east of the park on the Columbia River.
- *Swash Lake*, a shallow marsh lying southeast of Trestle Bay.
- *Coffenbury Lake*, the largest freshwater lake at the park (about 50 acres) located at the southern side of the park.
- *Crabapple Lake*, and *Creep and Crawl Lake*, smaller freshwater lakes east of Coffenbury
- *Numerous smaller lakes and marshes* located throughout the park.

Since Coffenbury, Crabapple, and Creep and Crawl lakes are formed between old, parallel dunes, they are all long and thin in shape. The porous, sandy soils surrounding them can allow water pollutants to travel through the shallow water table that feeds the lakes; thus the lakes and nearby wetlands are sensitive to land uses that potentially pollute the ground water.

Hazards

Flooding: 100 year flood areas are shown on federal flood maps below the 8 foot contour. This would include beach areas and shores along Trestle Bay, Swash Lake and the other lakes, and very low lying wetlands. Ocean over topping of the foredune, solely from significant ocean storm events, has not been thoroughly evaluated by the responsible agencies to date. However, the foredune is recognized as an important resource for the prevention of storm event flooding.

Tsunamis : Much of the park would be at risk during a tsunami (tidal wave) event according to Oregon Department of Geology and Mineral Industries tsunami hazard mapping. Tsunamis can be caused by large earthquakes. The preparation of evacuation routes and procedures will be essential for future tsunamis and related earthquake hazards.

Earthquake : Coastal Oregon is an area of potential earthquake risk. Places with unconsolidated substrate and high groundwater, like much of Fort Stevens State Park, are subject to the risk of liquefaction during earthquake events. Liquefaction means that the ground acts like a liquid and the potential for earthquake damage becomes amplified. Evacuation routes and procedures would also be needed for general earthquake threats.

Geology

Fort Stevens consists of a series of sandy dunal formations, running north and south, with inter dunal depressions. Dune age and stability increases from west to east due to the ocean beach deposition origin of the sand. Soils in the park are derived from the sandy dunal substrate. Depending on elevation, they are either high and severely drained or low with a high water table.

Scenic Resources

Fort Stevens is known for its scenic beauty in relation to its lakes, ocean beaches, views of the Columbia River and its quiet forests and wetlands areas. Important viewpoints have been identified and include:

- The view down Coffenbury Lake from the North Lake day-use area.
- The view of Trestle Bay from Jetty Road.
- The view of the ocean and river from the observation tower on the spit.
- The view of the bay from the wildlife bunker at the end of the spit and views up the river from the spit end.
- The view of the bay from the bike bridge over Swash Lake.
- The view of the river from the riverside trail at the fort (old railroad route) and from the earthworks.
- Views of the river and bay from Battery 245 and other nearby batteries.
- Views of the ocean from Fire Control Hill.
- View of the headlands to south from Jetty Road on the spit.

In addition to views, there are three main types of settings at the park. Settings used by OPRD are defined in the Oregon State Comprehensive Outdoor Recreation Plan. For Fort Stevens they include:

- **Urban within Open Space** : The fort area and campground. This is a largely developed setting, with extensive paving and buildings, heavy visitor interaction and visitor controls, within a largely natural area. The many wetlands in the Hammond area preserve the sense of these areas being within a larger natural area.
- **Roaded Natural** : This setting includes non-plantation forest areas of the park. This setting appears to be an unmodified natural setting, with road access and moderate facility development and social interaction, within an open space context. This includes the beaches, the wetlands and the upland forests. Although much of the park was actually created by sand accretion from the jetty, it still has the appearance of being unmodified to the average visitor.
- **Roaded Modified** : This setting includes the plantation forest areas of the park, along Jetty Road and Burma Road primarily. In these areas, the geometric planting pattern of the trees is still obvious to the average visitor. Roaded modified settings are forests with obvious modifications, road access and limited facility development.

RESOURCE SUITABILITY ASSESSMENTS - Chapter Five

Existing and future recreational uses should coexist and complement natural, scenic and cultural resources within Fort Stevens State Park. To this end, land within Fort Stevens State Park has been assessed to identify discrete areas and determine the levels of suitability, of resource areas, for recreational use in conjunction with the need to protect important resources from disturbance. Other areas outside but adjacent to the park were also mapped to understand resource continuity and context.

For Fort Stevens State Park, OPRD recognizes four resource suitability levels for several resources. These resources include Vegetation, Wildlife Habitat, Protected Species, Water Features and Hazards, Wetlands, and Historic Resources. Each of these resources has been mapped and classified with respect to the four resource suitability levels that are based on criteria including current resource conditions, types, sensitivity, rareness, and extent of existing development or other intrusions. Areas with resources that are very sensitive, rare or unique, and are in good condition, have a very low tolerance for intensive, public, recreational uses and facilities development. These areas are typically assigned a low suitability level. Areas with resources that are very tolerant to development, are in a developed condition, or are common, have a high carrying capacity and are typically assigned a high suitability level. Some areas contain a mosaic of various resource types and qualities. Those areas will need to be surveyed in greater detail to site development.

Once the suitability levels were assigned for each resource category, the resource categories were overlaid and composite suitability levels were determined for areas. The composite suitability of each area within Fort Stevens State Park is determined by the most restrictive resource suitability level within that area. The four composite resource suitability levels are discussed below with respect to each level's criteria and distribution pattern within Fort Stevens State Park. A simplified version of the Composite Suitability Map is shown at the end of this chapter.

Resource Suitability Levels

Composite Resource Suitability Level One : Approximately 89% of the State Park, and 74% of county-owned Study Area (250 acre total county-owned land, south to south boundary of park.)

Composite Level One areas which have **very limited development suitability** contain one or more of the following natural resources: All wetland areas, Upland Coniferous Forest, Riparian Forest, Willow Shrubland, American Dunegrass, Sedge Intertidal, Pickleweed, or Coastal Strand associations, important wildlife habitat areas nesting habitat for bald eagles, water features and likely flood-prone areas. Historic features (except the tree plantations) are also included as Composite Level One areas with a special cultural resource overlay that allows compatible development.

For the Fort Stevens State Park area and south, there is continuing discussion among the local jurisdictions about the extent of the flood hazard areas and active dunes. Ocean related flood velocity mapping is not available for Fort Stevens. The federal flood mapping produced by FEMA is only available for areas within the City's jurisdiction, and does not address ocean flooding events. As a result, detailed flood hazard mapping is not included in this assessment.

The majority of land within Fort Stevens State Park and county-owned property within the study area is designated as Level One. This includes all of Trestle Bay because of its highly valued wetlands and aquatic habitats; the entire tidally affected beach because of its wetland classification; all inland water bodies including Abbot, Squash, Creep and Crawl, Crabapple, and Coffenbury Lakes because of their importance to local ecosystems; a broad area of highly valued forested property comprised mostly of Upland Coniferous and Riparian Forested vegetation extending west of Ridge Road to the vicinity of the north-south trough associated with Coffenbury Lake; the area generally extending north and west of most of the North Camp Area to about the Equestrian & Beach Access Lot A; the unstable dune areas containing limited vegetation generally south of Peter Iredale Road and west of Burma Road; most of the spit area; and, the Fort Stevens National Register of Historic Places within the northern portion of the park. The sites of the shipwrecks of the *Peter Iredale* and *Cainsmore* are also Level One resources.

Level One natural resource areas and their important and sensitive natural resources are protected from recreational impacts by allowing only very limited visitor access and facility development such as trails and ramps appropriately placed and designed. In Level One historic resource areas high use levels and extensive development can occur if done in a manner compatible with the protection of the integrity of the historic feature and setting.

Composite Resource Suitability Level Two : Approximately 2% of the State Park, and 11% of County-owned Study Area.

Composite Level Two areas, which have **limited development suitability**, contain one or more of the following resources: Vegetation resources consisting of Cattail-Bulrush or Shrubland Mosaic.

Level Two areas are comprised mostly of small isolated areas of upland Open Sand Habitat areas in the spit head, and of narrow bands along most of the old roads within and just north of the County-ownership. Level Two areas and their resources are protected important resources from recreational impacts by allowing limited visitor access and facility development.

Composite Resource Suitability Level Three : Approximately 5% of the State Park, and 15% of County-owned Study Area.

Composite Level Three areas, which have **moderate development suitability**, contain one or more of the following resources: Vegetation resources consisting of Dune Hummocks, Mixed Coniferous Plantation Forest, and Shore Pine Forest. Historic tree plantation areas. Some areas within the plantations are in extremely bad condition and could be more specifically designated as Level Four on closer examination.

Level Three areas are concentrated in the northern and southern portions of the study area. One band of Level Three area extends generally south of the spit head to the vicinity of the Equestrian and Beach Access Lot A, and consists of dune vegetated with Shore Pine Forest and Dune Hummocks. Bands of Level Three areas generally center along Burma Road south of Peter Iredale Road, and along the Peter Iredale Road itself. Much of the eastern portion of the North Camp Area consisting of mostly Mixed Coniferous Plantation Forest, and the easternmost portion of South Camp Area next to Coffenbury Lake are also classified as Level Three.

The recreational management emphasis for Level Three areas would be to allow development at moderate levels.

Composite Resource Suitability Level Four : Approximately 4% of the State Park, and 0% of County-owned Study Area. Composite Level Four areas, contain one or more of the following resources: Vegetation resources consisting of the European Beachgrass, Disturbed Forested, Weedy Disturbed, and Urbanized Nonforested associations, primarily intensively developed areas.

Level Four sites include existing parking lots, the camp entrance, and the shop and office area. Much of the eastern portions of both the South Camp Area and North Camp Area consist of Disturbed Forested or Urbanized Nonforested vegetation associations and are Level Four areas. Also Level Four Areas, are existing developed beach and river access sites.

Ownership and Use Suitability




In addition to Resource Suitability assessments, OPRD planning staff study the land uses and resources surrounding the park to better understand the context of the park in the area.

FORT STEVENS STATE PARK CLATSOP COUNTY AND CITY OF WARRENTON

For more detail mapping of this area see
Fort Vicinity Natural & Cultural Resource Areas Map.

Map represents generalized areas.

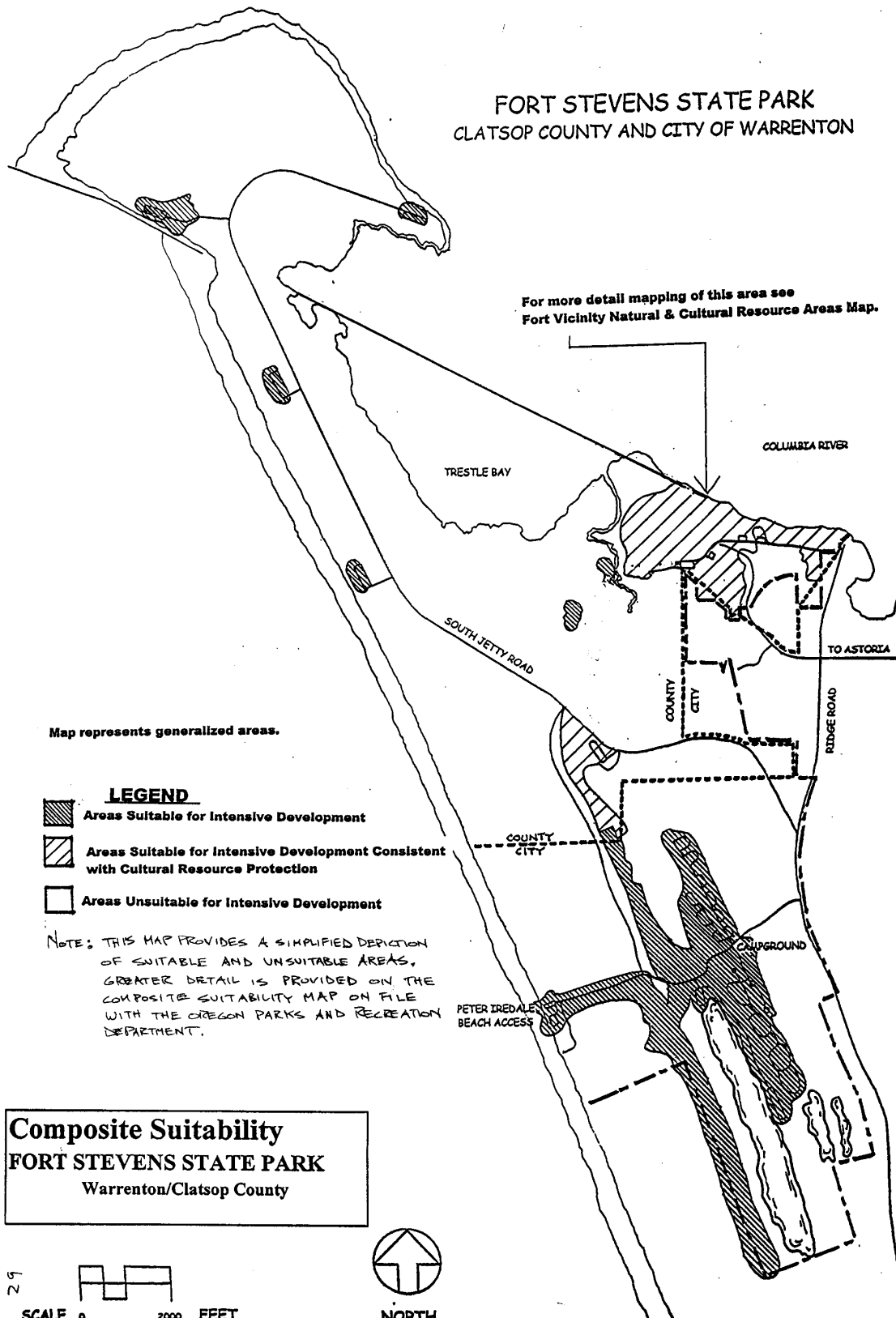
LEGEND

-  Areas Suitable for Intensive Development
-  Areas Suitable for Intensive Development Consistent with Cultural Resource Protection
-  Areas Unsuitable for Intensive Development

NOTE: THIS MAP PROVIDES A SIMPLIFIED DEPICTION OF SUITABLE AND UNSUITABLE AREAS. GREATER DETAIL IS PROVIDED ON THE COMPOSITE SUITABILITY MAP ON FILE WITH THE OREGON PARKS AND RECREATION DEPARTMENT.

Composite Suitability
FORT STEVENS STATE PARK
Warrenton/Clatsop County

29
SCALE 0 2000 FEET



ISSUES - Chapter Six

Issues related to park management, maintenance, public use and development have been identified through a series of issue scoping meetings. Meetings were held with OPRD staff, with The Friends of Old Fort Stevens, with the master plan Steering Committee and four meetings with the general public. Staff have summarized the problems, concerns, ideas and opportunities that were heard in the scoping meetings under a series of issue topics. Suggested solutions, which had been offered by the groups mentioned above, are shown for each issue topic. *Please Note: Not all of the comments or suggestions mentioned here have been included as a master plan goal or development concept. The Goals chapter is based on a selection and refinement of ideas from issue scoping, by the department. The issues and suggested solutions described below represent the full range of ideas discussed in the master planning process.*

Park Setting

Everyone seemed to agree that the main attraction at Fort Stevens is the natural and historic setting, and that any improvements should be carefully placed and limited in size to preserve that setting. Many stated that the stretch of beach from Sunset Beach to the jetty is currently undeveloped and should remain so as a public legacy. Many mentioned that much of the "natural" landscape in the park was actually created by "cultural" actions such as dune stabilization and jetty construction.

Suggested solutions:

- Use the OPRD suitability assessment to determine where appropriate areas are for park development and do not develop all of those areas. Limit full build out to something less than the full extent of those areas.
- Use parking lot size and road locations to limit the number of visitors to each area to a tolerable number.
- Use native plantings, berms and natural colors to harmonize developments.
- Be sensitive to the cultural resources including the fort related features, lighthouse, shipwrecks, homestead and stabilization landscape elements, as well.

Maintenance/Management/Operations

Many commenters were concerned about having to pay fees to park in the state park and were uninformed about the need for revenue to support park maintenance and operations. OPRD staff took some time to explain that the department has not received gas tax revenue for about 15 years, and has not been a part of the Department of Transportation for about four years. Also, OPRD gets 0% of its funding from taxes. They also explained that camping, RV and parking fees are currently just enough to cover essential maintenance and operations costs, without sufficient funding for deferred rehab or new development.

Commenters felt that it might be alright to pay parking fees based on the maintenance need, but that the public should be allowed to drive through the park and on the beach without charge, or to walk or bike into the park without charge. There were several requests for local residents to get free parking passes. They also urged OPRD to increase the advertising about season passes, and to look at the possibility of weekly passes. There were some complaints about the RV licensing fee. And they urged OPRD to pursue funding for rehab and development from other sources than use fees, and to continue to make maintenance and rehab a priority over new development.

Other comments included compliments about the level of maintenance and supervision currently happening in the park, especially given limited staffing.

Suggested Solutions:

- Make clear that the dayuse fee is a "parking fee only" as implemented at Fort Stevens, and that driving through the park and on the beach is currently allowed without paying the fee, and that this is planned to continue in the same manner. (Even though parking stickers are purchased at a registration type both, they are for parking only.)
- Provide information to visitors about where the fee dollars go, and about efforts to find funding for rehab and development from other sources.
- Continue to make maintenance and supervision the number one priority for fee revenue expenditure.
- Pursue long-term, dedicated funding for major rehab and some development.
- Pursue partnerships for investing in some needed facility development.
- Expand the use of volunteers, in-kind labor, National Guard, scout and student groups to get work done in the park. Pursue the use of jail and prison inmates under close supervision.

Partnerships

Commenters urged OPRD to pursue partnerships for public use, management, education and development in certain areas of the park with the city of Warrenton, the county, Camp Kiwanalong, Camp Rilea, The Army Corp, groups like Audubon, The Friends of Old Fort Stevens, the local business community, ODFW and nature education groups, local school districts, Fort Clatsop, neighboring residents and any others that may be appropriate. Many of these partnerships already exist and are in the process of being revitalized by new park management and a department priority on community involvement.

Suggested Solutions:

- Develop master planning goals and management and development concepts to be used as a basis for pursuing partnerships for Fort Stevens.

Ocean Beach Access

Most of the commenters expressed concern about continued public vehicular access to drive on the beach. Many would like to see vehicular beach access continued where it currently exists, and expanded to one or two new sites. Some commenters would prefer that no vehicles be allowed to drive on the beach, but understood that other recreationists prefer this approach, and seemed to accept the seasonal closure to vehicular access as a good compromise. Many would like to see seasonal vehicular access regulations for the Columbia River beach, as well.

Under state administrative rules, the ocean beach adjacent to Fort Stevens State Park is open to motor vehicles, except for the season closure from May 1 to September 15, from noon until midnight, north of Peter Iredale Road. There is a need for an emergency exit/access at the north end of the beach. There is also a need for an entrance/exit just north of Camp Rilea, at Delaura Beach Road, to avoid beach closure conflicts associated with National Guard and police training on the beach adjacent to Camp Rilea. However, constructing a "driveable" access across the foredune at Delaura Beach Road may be precluded by land use and other regulations designed to protect the foredune from overtopping and erosion. Most preferred to see no fees for vehicular beach access. They would also like to see improvements made to the beach access ramp, parking and toilet building at the Peter Iredale access site. Everyone wanted to see a variety of pedestrian beach access points preserved. Many would like to see Columbia River and Trestle Bay access limited to preserve a low to moderate density experience and to avoid impacts on the birds. Some beach access parking lots have room for diversifying the use from just parking, to other activities and facilities within the footprint of the existing pavement.

Suggested Solutions.

- Open a new vehicular beach access road and parking lot at Delaura Beach.
- Open an emergency exit/access at the north end of the spit with no parking.
- Do not charge for driving on the park roads or beach. Charge for parking only, except for parking on the beach.
- Route most through-traffic to the Jetty Road access. Continue to allow public access to Peter Iredale via Peter Iredale Road. Improve camp registration to lessen conflicts.
- Move the toilet building and parking lot at Peter Iredale to the east to avoid sand deposition and land use problems.
- Maintain the beach access road from the Peter Iredale parking area regularly.
- Explore with the Division of State Lands & ODFW the possible need for seasonal vehicular access regulations on the Columbia River beach. Try to continue to accommodate fishing access.
- Convert one beach access parking lot to equestrian use, possibly including camping, and designated horse trails to the beach and park interior.
- Limit parking at the far spit and bay access lots to keep use levels moderate to low there for fishing, birding and hiking.

The Campground

The existing Fort Stevens State Park campground experiences a huge level of use during the summer season, tapers off in the spring and fall and is quite low in the winter months. During the summer months campers experience crowding, traffic congestion between camp registration and through-traffic and conflicts between vehicles, pedestrians, children playing and bikes. Campers have a wide array of demands for camping experiences, ranging from large, well developed RV sites to primitive, walk-in tent camping, yurts and group use areas. They also desire special amenities such as an information center, store, an enlarged camp talk area, and better trails in the campground. Everyone who commented also wanted to see the overall natural setting of the campground be protected.

Suggested solutions:

- Route dayuse through-traffic another way into the park than through the campground or provide for low conflict through traffic management measures.
- Provide yurts for single and group use, especially for rainy season use.
- Provide some walk-in tent sites.
- Provide a better registration/information/sales area.
- Provide bike/walking routes through the campground, other than the camp roads.
- Provide an expanded camp talk area and include parking for the disabled.
- Limit new camp development to areas where important natural resources would not be affected and where the visual impact would be low.
- Efficiently route traffic within the campground, and with new camp loops.
- Continue to offer tent sites with electrical hookup.
- Provide a horse camp.
- Improve garbage and electrical service. Provide optional cable TV hookup.
- Reduce the existing density of some camp loops. Increase others to provide choice.
- Let the master plan resource suitability and local land use process direct where development can happen without impacts. Let camping demand that cannot be accommodated at Fort Stevens be addressed by the private sector outside the park. Let Fort Stevens offer camping in a natural setting.

Trails

There is an extensive, existing trail system at Fort Stevens, which is yet incomplete and undersized. Resting spots are needed along some of the longer trails. Better directional, difficulty level and destination signs are needed. There is also a need to provide separate trail opportunities for biking/strolling, hiking and horseback riding. There is a critical need in the campground to provide trail alternatives for circulation rather than using the camp roads. There is a need at the far north end of the spit to designate a trail and build workable blinds along Trestle Bay, to provide public access for viewing without disturbing the birds. Some commenters wanted to see boardwalk and trail improvement in this area kept to the minimum necessary. Some commenters wanted to see a designated mountain bike area. Others said the soils at Fort Stevens are too erosive or soft for this kind of use and mountain bikes are best kept on paved or graveled trails or roads at Fort Stevens. Many wanted to see better trail maintenance and supervision and the closure of unofficial trails. Many would also like to see trail connections made outside the park to the north and south. Better designation of trailheads and trailhead parking was discussed, as well as expanded ADA accessible paths to destination attractions in the park.

Suggested Solutions:

- Complete a parkwide trail plan that addressed paved, two-way bicycle and strolling trails, unpaved hiking trails, horse trails and graveled mountain bike trails, such as Burma Road. Included in this plan would be properly-spaced trailheads and staging areas, trails information and signage and rest stops with picnic tables.
- Identify unofficial trails for closure, and high priority trail repair projects.
- Identify trail connection projects including connection with the City of Warrenton trail system, connection to Camp Kiwanalong and to the county property and Delaura Beach Road to the south.

Dayuse

Many commenters wanted to see the Coffenbury Lake dayuse areas remain as dayuse and not be converted to overnight facilities, especially in the heavy summer use season. Some said that the boat rental and concessions booth at Coffenbury Lake was immensely popular and could be continued and improved. Historically, a café was located on the lake. They wanted to see the existing beach dayuse parking lots continue to be used for nature trail access, fishing access, equestrian access, and beach viewing and walking. They suggested that development of a Delaura Beach access might include a dayuse parking lot, toilet building and picnic tables and trails.

Suggested solutions:

- Improve dayuse amenities at Coffenbury Lake to include an annual boat rental, snack concession or possibly a small café.
- Provide improved summer dayuse group use with some additional picnic shelters, and outdoor entertainment opportunities such as a floating dock.
- Rehab the South Lake parking lot and adjacent picnic shelter for winter only, group overnight camping with RV's and or yurts.

Park Access and Orientation

There is confusion among park visitors about how to access all of the attractions at Fort Stevens State Park. Currently, the park has three separate access roads off of Ridge Road. One access road travels through the middle of the campground, and takes visitors to Coffenbury Lake and the beach. Another, to the north is primarily used for jetty and north beach access, but allows access from the north to Peter Iredale, Coffenbury Lake and the campground. A third access road, Pacific Drive, further to the north travels through a growing residential area to the historic fort area. There is no other public access to the fort at this time. There is considerable local concern that road access to Peter Iredale be guaranteed with county road status or some other reliable method. Ownership of Peter Iredale Road has been transferred to OPRD and improvements made to the shoulder and pavement. In the transfer, OPRD has agreed not to close the road to through traffic.

The park has no workable central information and orientation center. The registration booth at the campground, and nearby information structure provides some of this need, but is located within the conflicts of congested campground traffic. The fort area has its own visitor information center and small interpretive display, but does not provide much information about the rest of the park.

There is a need to consolidate access to the park and to route vehicles to a central orientation building and parking lot, and then to each of the main attractions within. Any new roads, parking or buildings would be limited to a few areas which would not impact wetlands or other important resources.

There is also a need to address safety issues related to vehicular, biking and pedestrian traffic on Ridge Road and at accesses to the park. And there is now a need to provide information to park visitors on how to efficiently evacuate the park in case of a natural disaster such as an earthquake, as the entire park is subject to subsidence and tsunami related dangers.

Suggested Solutions:

- Construct a central park orientation building and parking lot. The logical opportunity site is the current Battery Russell parking lot, if done without conflicts to the historic district.
- Make the South Jetty Road the park access road and route traffic from the orientation center area north to the jetty and historic fort area and south to Peter Iredale, Coffenbury Lake and the campground. This would require the improvement of an existing road grade to the north into a one or two way paved vehicular road. Existing roads could be used as exits from the historic area and campground and could also be used for bike paths along the exit road.
- Provide excellent internal and external directional signage.
- Provide signs and brochures regarding emergency evacuation where appropriate.
- Study the need for turning refuges, warning signs and lights, crosswalks and bike paths on Ridge Road.
- Consider the need to widen some park roads to better accommodate two way RV traffic.

Interpretation/Education

Many people commented on the importance of improving the interpretive opportunities at the park regarding natural and cultural resources. In fact, several mentioned how the natural and cultural landscapes are one and the same at Fort Stevens, and to use this as the underlying interpretive theme of the park. Others mentioned that the fort was an interpretive focal point that is in critical need of interpretive improvements but should not be turned into a museum for viewing only. Some mentioned the importance of focusing on some key natural resource interpretive topics related to birds, dunal environments and the estuarine setting. Many commenters wanted to see interpretive partnerships created with the city, Camp Kiwanalong, the KOA, Camp Rilea, the county property, school districts, Fort Clatsop and resource groups. Concern was expressed that public access to private areas needs to be managed in a way that would limit impacts on the residents.

Suggested solutions:

- Establish an interpretive strategy for the park which shows the park to be a large cultural landscape surrounding the original naturally formed Point Adams.
- Explain the fort's history within that broad landscape context and within a long time line that includes Native Americans, mention of Lewis and Clark and post fort history.
- Have the fort area act as the focus for interpretive orientation for both cultural and possibly for some natural aspects of the park. Provide guidance to cultural and natural features throughout the park, and orientation to the fort area both inside and outside of park boundaries.
- Establish an interpretive center in the fort area that can address the cultural landscape theme and a museum building(s) that can interpret the coastal fort theme specifically.
- Improve pedestrian routing, signing, vegetation management and structure restoration as needed at the fort site to tell the fort and jetty story and to provide for public safety and minimal resource stabilization.
- Improve key features needed to "tell the fort theme story", such as the guardhouse and the earthworks, gun emplacement, etc.
- Preserve and interpret important areas for telling the story of jetty construction and dune stabilization.
- Improve the vehicular access experience to the historic fort area by bypassing the residential area.
- Use the far north end of the spit and viewpoints from the historic area to Trestle Bay as natural resource interpretive focal points.
- Form partnerships and develop management strategies that can facilitate public interpretation of cultural or natural resources on private and county-owned property and can minimize conflicts.

Outside the Park

There were many questions about OPRD's intentions for future acquisition. There was concern that the department would use condemnation to acquire properties it valued for park use, especially in the parade grounds area. Please note that this statement only reflects comments received from the public in the "Issue-scoping" phase of the master plan process and does not imply that the department would pursue condemnation in the vicinity of Fort Stevens. There was widespread support for improved public access and recreational use of the county-owned property on the south boundary of Fort Stevens. However, many felt that this did not necessarily mean that OPRD should buy the property. Public recreation might be achieved through joint management and agreements with the county. Most felt that low to moderate intensity recreational development was appropriate on the county property. Some concern was voiced

about the possible development of a golf course there. The National Guard expressed an interest in using Burma Road for exercises and supported the development of a beach access facility at Delaura Beach.

Suggested Solutions:

- Identify property important for current park use and operation, and for future public recreation and interpretation through the master plan process. Develop an OPRD goal for providing public access through a number of options including management agreements and purchase from a willing seller.

GOALS - Chapter Seven

OPRD has established a series of goals for guiding the appropriate management and use of Fort Stevens State Park, for the next 10-20 years. They are based on the suitability assessment and preferred solutions from the issues discussions conducted during the master planning process.

GOAL I. PROTECT AND ENHANCE THE OUTSTANDING NATURAL, SCENIC AND CULTURAL RESOURCES OF FORT STEVENS STATE PARK.

Protecting important wetlands, wildlife habitat, plant communities, views, vantage points, and cultural, historic and prehistoric resources is the number one goal for the management of the park. Enhancement of selected portions of these resources is also an important goal. Proposed development and public use will be located and designed to avoid significant impacts on important resources.

Within the boundary for the National Register of Historic Places area, development proposals may be pursued that are compatible with preserving the integrity of the historic resources. Within this historically important area, development proposals should also be compatible with important wetland, wildlife and plant community resources found there.

A: Prepare compatible concepts and guidelines.

- 1. Prepare development concepts and guidelines .** Proposals must be compatible with the protection of important resources. Most should be based on existing infrastructure. **See the Development Concepts Chapter.**
- 2. Prepare forest management guidelines .** They are needed for diverse wildlife habitat and for improved visual quality. **See the Natural and Scenic Resource Management Chapter.**
- 3. Use wetland enhancement & banking** to support wetland function and park recreation. **See the Natural and Scenic Resource Management Chapter.**
- 4. Complete maintenance guidelines for the cultural features ,** including the fort, Battery Russell and other outlying military features, the lighthouse site, shipwreck sites, dune stabilization and forest plantation. **See the Cultural Resource Management Chapter.**
- 5. Prepare wildlife management guidelines** for the park. **See the Natural and Scenic Resource Management Chapter.**

GOAL II. IMPROVE PARK MAINTENANCE & MANAGEMENT

Retaining high levels of facility maintenance and visitor satisfaction is a priority for the future of Fort Stevens State Park. This park has been identified as a department priority for addressing deferred maintenance, as well as, for providing for future visitor needs. Maintaining culverts and drainage ditches in the park is a top priority.

- A. Pursue a new maintenance schedule and funding** for the next several years that can address the deferred maintenance of roads, trails and buildings in the park. Seek cost effective alternatives for providing priority management/ maintenance needs.
- B. Consider implementing summer season, weekend park shuttles or tours to reduce traffic in the park.**
- C. Manage historic re-enactments to minimize impacts on neighbors.**

GOAL III. ENHANCE PARK VISITATION & PARTNERSHIPS

There is a need to do more than just provide a high level of maintenance of the existing facilities and attractions at Fort Stevens State Park. The park needs to connect to local trails and provide for increasing local day use and group use needs. The park also needs to provide for some of the future regional and state demand for camping, day use, trails and interpretation as a premier Oregon destination park. In meeting these needs, the park can continue to be a major contributor to the economic well-being of the local area, by attracting visitors to the area and by returned overnight accommodation taxes.

In order to be able to meet the future demands of our growing population, OPRD will need to find "investment and management partners" who can share the cost of many capital improvements and some facility operations. This is especially true for amenities like rental and supply stores and for meeting halls, meals and overnight accommodations.

State tax-based funding is gradually being eliminated for the Oregon Parks and Recreation Department which runs the State Parks System. OPRD's 1999-02 budget includes no funding from state taxes. In addition, federal funding from traditional programs is being dramatically reduced. The premier state parks, like Fort Stevens, will need to pay of themselves, more and more, and will need to contribute more to the support of smaller state parks in the area.

- A. Develop amenities and attractions which can extend visitor stays.** Identify how demanded amenities and new opportunities can be offered to the public so that they also increase visitor stays, extend the visitor season, and entice new visitors and return trips.
- B. Participate in programs which extend park enjoyment to the disadvantaged** , through organized outings, transportation and "classes" on camping, fishing, etc.. Fort Stevens State Park needs to retain opportunities for people of all income levels and cultural backgrounds.

- C. **Retain a fee structure that allows options for low income visitors.** Retain some lower cost camp sites for tents, offer lower off-season rates, and encourage the sale of annual day use passes.
- D. **Pursue investment and management partners** , volunteers, grants, in-kind assistance and fund-raising strategies to implement many of the goals and objectives listed below. Partners may include private individuals or companies, other agencies and non-profits groups.
- E. **Use the master plan and development concepts as tools for securing business partners.** Work with the local and other Oregon business community members to find partners for shared marketing of attractions, and for building and operating certain facilities in the park.

GOAL IV. PROVIDE FOR FUTURE RECREATIONAL NEEDS

The future is now at Fort Stevens State Park. The public has told us that there are recreational needs that are not being met now, and which will be in even more demand in the next 20 years as our state population grows. Generally, this involves providing a wider diversity of recreation opportunities and amenity levels than is currently available. Our inventory work for this plan has shown that Fort Stevens State Park has the potential to accommodate some new uses and facilities without harming resources or changing settings dramatically. Those activities and facility development that can be located appropriately in the park, and which are demanded by the public for the 20 years, are identified as objectives below.

A. Continue and Expand Ocean Beach Access

Fort Stevens has a popular tradition of seasonal public vehicular beach access via the Peter Iredale access site. Vehicular access to and from the beach is currently happening in undesignated areas at the north spit and near Delaura Beach Road. Additional vehicular beach access is desired by many to provide an exit opportunity when beach travel to the south is closed at Camp Rilea, and to offer a loop driving opportunity. However, this site is outside of current OPRD ownership and is considered to be infeasible to improve the foredune crossing. There is a need for emergency access at the north end. Conflicts currently exist between campground traffic and through-traffic on Peter Iredale Road. Beach access sites for walking and horseback riding are desired away from the vehicular accesses. Facility improvements are needed at several of the access sites. Other sites with extra large parking lots offer opportunities for diversified use. (Beach driving areas and schedules are not being addressed in this master plan. This issue would be addressed as a separate state rule, as needed.)

1. **Improve the Peter Iredale access for vehicular and walking access. Improve the parking, access road and toilet building to better avoid sand inundation. Provide equestrian trail access to the beach near the existing Peter Iredale access.**
2. **Look into the feasibility of a north access for emergency access/exit to the beach near the north end of the spit. This may be in conjunction with the existing parking area there.**
3. **Promote park visitor understanding about the dayuse fee** at Fort Stevens State Park. The fee is only for parking, in parking lots and is not charged for parking on the beach. Emphasize for Fort Stevens, no fee is required for driving through the park, or for parking on the beach.
4. **Improve the way that campground registration & trails work** to better allow for through traffic on Peter Iredale Road, without conflicts.
5. **Sign Peter Iredale Road for camping access to Fort Stevens from Ridge Road. Allow through traffic to the beach, but do not sign for beach access via Peter Iredale Road, at Ridge Road.**
6. **Sign Jetty Road for beach access and dayuse** to Fort Stevens from Ridge Road.
7. **Retain & maintain the separate non-vehicular beach access sites on the north spit .**

B. Provide for Different Kinds of Camping Opportunities

1. **Provide existing and new types of camping**
 - a. Continue to provide mostly high-quality, individual RV and tent camping sites and areas with vehicular access. Add yurts or camper cabins to some sites.
 - b. Provide individual and group yurt/cabin areas with meeting hall access..
 - c. Provide group RV opportunities with meeting hall access.
 - d. Provide some close-in, walk-in tent camp sites.
 - e. Provide horse camping at a site separate from the main campground.
 - f. Achieve these objectives mostly through reorganization of the existing camping area.
 - g. Preserve sensitive settings surrounding the campground. Place new loop(s) or camp areas, so that they are well screened from the existing loops and from the roads and other developed areas.
2. **Provide Certain Desired Amenities**
 - a. Upgrade and expand the electric & water utilities, camp trail system, camp road system, camp talk areas & play areas, as needed.
 - b. Improve the registration area to lessen conflicts with the road.

- c. Pursue a private partner for the development & management of a camp store for supplies and rentals.
 - d. Add lanes to the dump station.
- 3. **Move Conflicting Uses**
 - a. Relocate the maintenance shop yard and buildings and management offices to more appropriate locations outside of main camp area.
- C. **Maintain and Improve the Trail System**
 - 1. **Rehab damaged or degraded trails**
 - 2. **Reroute some trails in the camp to minimize conflicts with vehicles .**
 - 3. **Complete the paved biking/walking trail system .**
 - 4. **Complete the non-paved hiking trail system .**
 - 5. **Provide a horseback riding trail route .**
 - 6. **Connect the trails systems to adjacent areas as offered by partners .**
 - 7. **Provide accessible trails to key features , as is feasible.**
- D. **Improve Coffenbury Lake Facilities**
 - 1. **Increase use at South Lake ,** to include a snack shop, boat rental, cabins and meeting space. Pursue private partners to implement and to create a new retreat facility there.
 - 2. **Focus on boat ramp, trails use and picnicking at North Lake ,** possibly improve parking lot for boat ramp and trail access/parking.
 - 3. **Separate access roads to North & South Coffenbury Lake areas .**

GOAL V. IMPROVE STATE PARK ACCESS AND ORIENTATION

- A. **Provide a centrally located park orientation area which may include:**
 - Park and Area administrative offices
 - Visitor Information
 - Fee sales
 - Introduction to park interpretive themes and feature locations
 - Possible OPRD merchandise items
 - Possible recreation rentals (bikes, kites) with private partner.
 - Central trailhead and trail connections.
- B. **Emphasize Jetty Road as the main park access road .**
 - Sign Jetty Road as main park entrance, on Ridge Road.

GOAL VI. IMPROVE INTERPRETATION AND EDUCATION ABOUT THE PARK

A. Provide a Parkwide Interpretive Strategy, Routing and Stops

- 1. Provide for a range of interpretive opportunities** , parkwide, from self-guided to intensively managed. Begin at the proposed park orientation center, and direct visitors to interpretation focus areas, and other sites , throughout the park. Until the proposed major park orientation/interpretive center is constructed at Battery Russell, other orientation centers and sites could be used for interpretation, such as the visitor service center at the campground or the fort visitor center. Eventually, overall park orientation and interpretation would occur at the proposed Battery Russell facility.

Plan for OPRD participation in the Lewis and Clark and the Spanish American War 100 year anniversaries and other major interpretive events.

- 2. Park interpretation should support the main theme :** "How the meeting of the Columbia River and the Pacific Ocean has shaped both the human history and the natural resources of the Fort Stevens area."
- 3. Prepare interpretive theme and subtheme guidelines, and media strategies. See the Interpretive Guidelines Chapter .**
- 4. Focus intensive cultural resource interpretation on the fort area .**
 - a.** Themes should focus on the strategic location, advancement in military technology, jetty construction and changes it has caused, and fort life through time and Native American life.
 - b.** Provide a main access to the fort through the park, which it is a part of, and which can show arriving visitors Point Adams, the original confluence of the river and ocean.
 - c.** Provide a clear interpretive route through the fort site. (Vehicular and non-vehicular.)
 - d.** Clarify, for the visitor, different themes and eras, at the fort and how they relate to the arrangement of features/buildings seen there.
 - e.** Determine the right preservation and visitor access strategy for each feature at the fort. Prepare a maintenance schedule and restoration/reconstruction priority list for implementing future preservation actions.
 - f.** Provide some intensive educational opportunities appropriate to the historic setting, including meeting rooms and overnight accommodations to create a retreat facility there.
 - g.** Provide outdoor event areas appropriate to the historic setting.
 - h.** Identify needed buffers for protecting the fort site from modern day intrusions, and to protect the neighbors privacy and access.
 - i.** Provide additional cultural resource interpretation at key features throughout the park.

See the Development Concepts Chapter and the Interpretive Guidelines Chapter.

- 5. Focus intensive natural resource interpretation on the proposed orientation center and the spit .**
- a.** Themes should focus on the character and components of the landscape at the confluence of the river and ocean, before and after the jetty.
 - b.** Provide natural resource interpretive displays at the proposed orientation center.
 - c.** Provide a natural resource interpretive structure and focus area at the far parking lot on the spit. Coordinate the new structure and gathering area with trail improvements for viewing the spit and bay, and for protecting associated wildlife from intrusions by visitors.
 - d.** Provide interpretive panels and possible tours at other important and accessible natural resource sites such as Swash Lake, Coffenbury Lake, the Sitka spruce forest, the plantation forest, the deflation plain wetlands and the beach.
 - e.** Pursue partnerships with park neighbors and local schools to provide or share educational programs. (KOA, Camp Kiwanalong, City Parks, Camp Rilea and county land to the south.)
 - f.** Encourage natural resource education tours, classes and gatherings which can make use of underused spit parking lots, without intruding on wildlife.
 - g.** Continue to provide sufficient parking and access for fishers on the spit.
 - h.** As visitor use increases, especially during the off-season, monitor for conflicts with hunting and pursue any needed actions with ODFW to ensure visitor safety.

GOAL VII. OUTSIDE THE PARK

- A.. **Participate in the local land use process** , by addressing future adjacent development proposals as the local ordinances and periodic review process allow.

- B. **The Bed and Breakfast and staff residence owned by OPRD in the historic parade grounds** is not considered to be a part of the park or this master plan, as they are located within a privately-owned neighborhood of residential and industrial uses. Because of this distinction, there will be no Development Concepts for those OPRD parcels in this master plan, and they will not be a part of the master plan land use approval process.

DEVELOPMENT CONCEPTS -

Chapter Eight

This chapter describes the facility development proposals for Fort Stevens State Park. The proposals are based on the Goals and Suitability Assessments in this master plan.

Oregon Parks and Recreation Department has prepared the following facility development concepts for implementation over a period of about 20 years. The concepts include a site plan and a narrative of each major proposal. The concepts are intended to fit within the master plan goals and suitability assessments, but are meant to be somewhat flexible within those limits. Final designs may change somewhat from the conceptual designs as the projects are ready for development.

OPRD is dedicated to proposing facilities that fit the site and are needed to support park recreation, and which are appropriate to the department's role as a recreation provider in Oregon. Park proposal locations are selected where important resources would not be significantly harmed by the development or recreational uses. Conceptual designs are prepared by the department to show the appropriate location, layout, size and type of the proposed facilities. The concepts are based on design considerations. The key design considerations are the following:

- Avoiding conflicts with existing park uses and facilities
- Providing good access and circulation for vehicles and non-motorized travel within the park
- Placing facilities, roads and trails in a manner which is understandable by the public, in learning where to find the activity they are interested in.
- Avoiding significant impacts on important natural or cultural resources in or adjacent to the park.
- Presenting an appearance that is harmonious with the setting of the park and the region of the state.
- Providing choices for park visitors who may have different desires for amenities and settings.
- Avoiding or mitigating impacts on local facilities and services.
- Avoiding or mitigating impacts on neighboring land uses.
- Avoiding or mitigating potential impacts on the park by adjacent uses.
- Achieving compliance with regulatory requirements including the state land use goals, local comprehensive plans, building codes, resource laws, etc.
- Providing opportunities for access by visitors with disabilities and different economic and cultural backgrounds.

Development Concept Areas

The development concepts for Fort Stevens are described in this chapter on a location by location basis. The "Development Concept Locations" map, which follows this section, shows the major development locations within the park. The "Trails and Roads Concepts" map, which appears later in this chapter, illustrates the locations of trail and road improvements that are outside of the major development areas. Conceptual site plans for each of the major proposal locations are included with the narrative descriptions of each concept. Approximate building and parking lot sizes and layout, and the approximate alignment of roads and trails, are represented on the concept maps.

The major development concept locations include the following:

- Battery Russell Visitor Center & Trailhead concept;
- The Fort concept;
- Campground Rehab, Coffenbury Lake Retreat & New Maintenance Area concept;
- North Camp Loops Rehab & Registration Area concept;
- South Camp Loops Rehab, New Camp Center & RV Group Camp concept;
- South Coffenbury Lake Retreat & Day Use concept;
- Relocated Park Office & Maintenance Area concept;
- Peter Iredale Access, Horse Camp & Interpretive Area concept.

The concepts for road and trail improvements located outside of the major development concept areas listed above include the following. (Of these, only the "Fort Access Road and Bike Trail" concept is illustrated separately. Others projects are shown on the parkwide "Trails and Roads Concepts" map.)

- Peter Iredale Road Improvements;
- Emergency Vehicular Beach Access;
- Bike Trails in the Peter Iredale Road and Coffenbury Lake Area;
- Jetty Road Bike Lanes;
- Equestrian Trails;
- Hiking Trails in the Coffenbury Lake Area;
- Trestle Bay Nature Trails.

In addition, a "Wetland Mitigation Concept" is discussed at the end of this chapter. This concept is graphically illustrated together with the "Fort Access Road and Bike Trail Concept".

Land Use Permitting Requirements for Planned Projects

Except where specifically noted in the text, all of the projects described in this chapter are granted conceptual land use approval by the affected local governments, Clatsop County and the City of Warrenton, upon their approval of this Master Plan, as provided under OAR 660-034-0030(2). However, development permits are still required for most of the projects prior to beginning construction. The specific requirements for obtaining development permits for a project, and the kind of local land use process required, may vary from one project to another.

- **This chapter outlines specific "conditions of approval" for some of the planned projects, which must be satisfied for development permits to be granted.**
- **Chapter 12 indicates the kind of local permitting process required for each planned project.**

Prior to issuance of development permits for a project, the affected local government will conduct the necessary review of the project plans and specs to assure that the project proposed for construction is consistent with the conceptual design and description of the project in the adopted Master Plan and with any "conditions of approval" outlined in this chapter for that project. The local government may also review the project for consistency with any applicable development standards in the local government's ordinances and development codes, however, any such standards must be clear and objective, as required by OAR 660-034-0030(2)(c). Because the master planned projects are conceptually approved with the approval of the Master Plan, the development review process for a project cannot result in denial of the

project, provided that the project is consistent with the Master Plan and any applicable, clear and objective, local government development standards.

Changes in Visitor Capacity and Peak Visitation as a Result of Master Plan Development Proposals

For every master plan completed by OPRD, the department decides whether the park being planned for, or portions of the park, can sustain additional visitation without negative impacts on the park resources, park visitor experiences, or the neighborhood and local services. For Fort Stevens, car counts for the various use areas in the park have been collected over the last six years. OPRD staff have completed an assessment of the visitation capacity and peak use, and the potential effects on visitation that would result from the master plan development concepts, by using similar data and methods to those used by private consultants for this kind of analysis.

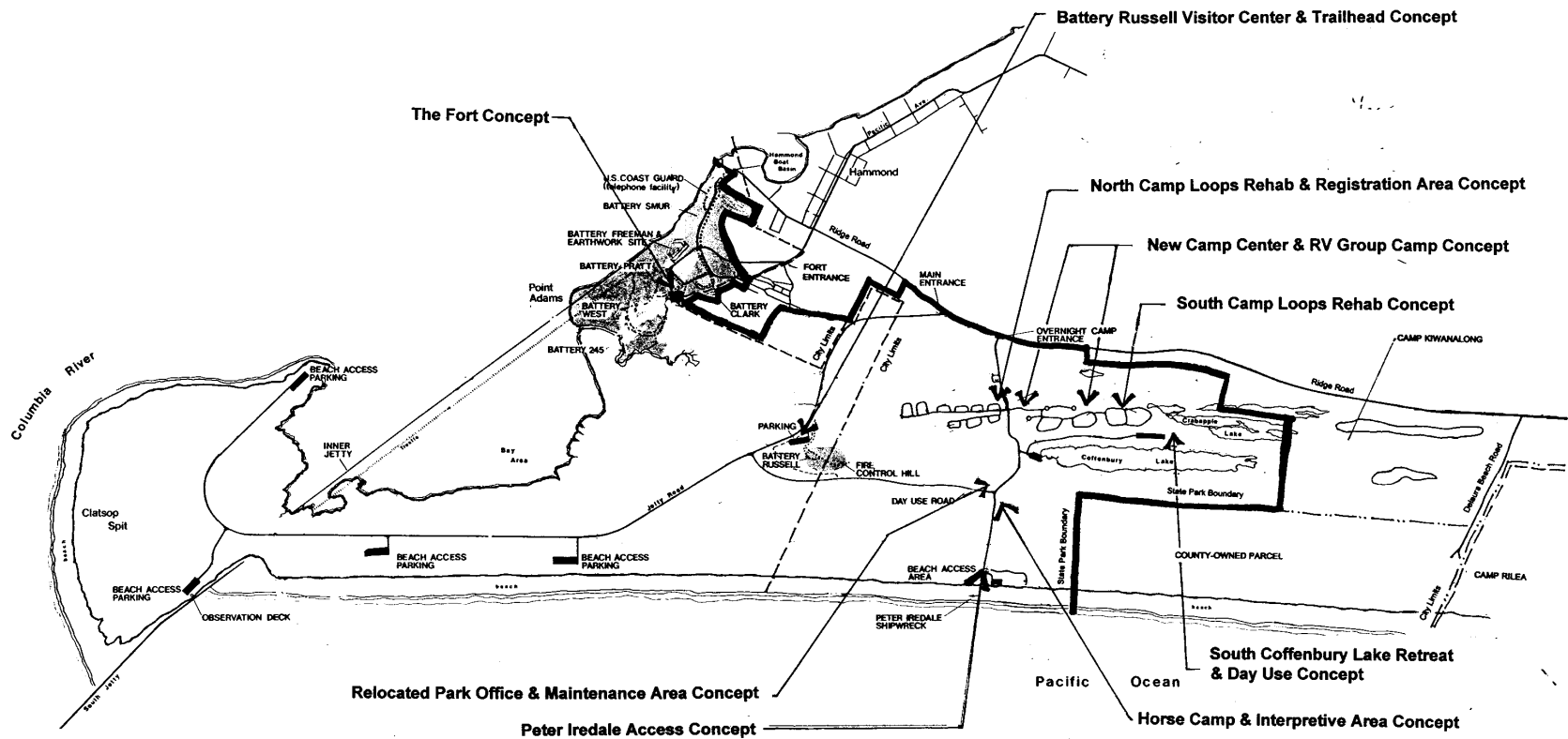
Annual visitation to Fort Stevens State Park overall is about 1.4 million, including about 150,000 to the fort site, 350,000 to the campgrounds and 900,000 to other day use areas in the park. Some of the campers are counted more than once as they also visit the fort and other day use areas. The peak use season for Fort Stevens is the 3 month period beginning on July 1 and extending to September 30.

After examining the demand for various recreation activities and facilities and the park's potential to absorb more use, the department concluded that the master plan proposals for Fort Stevens will increase the quality of service but not significantly increase the level of visitation to the park. As a result, the master plan proposals have been designed to better provide for current peak use numbers of visitors, rather than to provide for a significant increase in the peak use visitation.

Parking is the key facility that determines peak visitor capacity. The master plan concepts limit parking to an amount that supports current, average peak, daily numbers of vehicles in the use areas, based on counts over the last six years.

The affects of the development concepts on visitor capacity are summarized below. A more detailed explanation of the affects of master plan proposals on visitation levels is included with each of the following major concept narratives.

- **The Fort:** No change in visitor capacity. Construction of 146 designated parking spaces for day and overnight visitor use, 15 designated staff parking spaces, and 10 designated volunteer camp sites will accommodate existing peak use, except during re-enactment events.
- **North Camp Loops:** Net reduction of 54 camp sites.
- **South Camp Loops:** Net increase of 7 camp sites.
- **Horse Camp:** Increase of 29 camp sites.
- **Battery Russell:** Increase of 20 parking spaces.
- **Coffenbury Lake:** No change in visitor capacity. No additional parking with proposed facilities.
- **Beach accesses:** No change in visitor capacity. No increase in parking.
- **Total parkwide change: No significant increase in visitor capacity or peak visitation as a result of proposals in the master plan.**



Note: The concepts for road and trail improvements located outside of the major development concept areas listed here are located on the "Trails and Roads Concepts" map which follows the text for Trail and Road Concepts.

Development Concept Locations FORT STEVENS STATE PARK



Warrenton/Clatsop County

Scale 1" = 2000 Feet

Battery Russell Visitor Center and Trailhead Concept

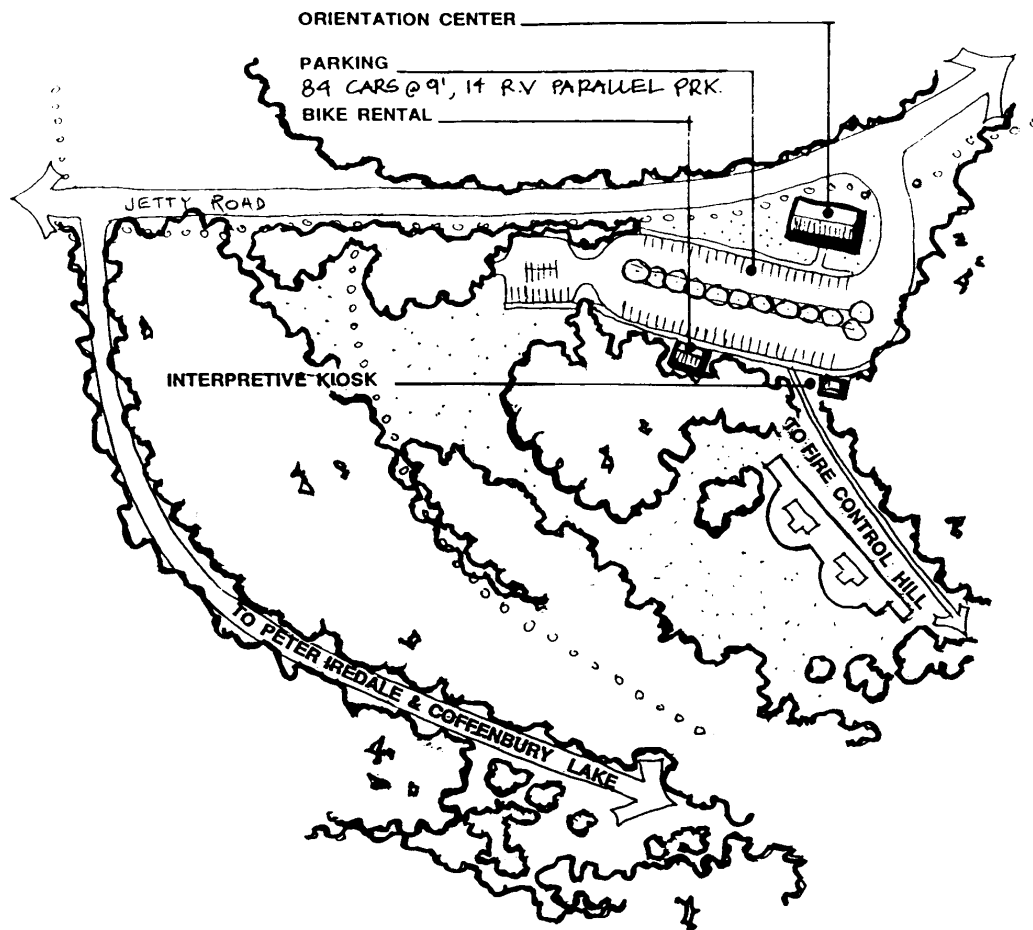
This concept involves the creation of a central information and interpretation center for the park. The concept works together with proposed traffic circulation improvements to correct the existing inefficiencies in the parkwide orientation and traffic circulation, increase visitor awareness and understanding of the resources offered within the park setting, and enhance the recreational experience of the visitors. Trailhead facilities are included with the concept. Development of the new visitor center is likely a long-term priority. The proposed development is within the National Historic Register District, and is designed to protect the integrity of that district.

- **Construct a large visitor and orientation building at the Battery Russell site**, on the north side of the existing parking lot, where it will be easily seen from Jetty Road. The plantation trees in the building site may be removed to improve the visibility of the building. The building should be designed in a distinctive style which expresses the historic military theme of the park and is compatible with the natural and cultural park setting. The building should accommodate a high level of visitor contact and include a lobby with information displays, separate space for interpretive exhibits and presentations, staff and/or volunteer offices and breakroom, and public toilets. It may include park administrator and/or Area manager's offices. Office space may be on a second floor to economize on space. A two story building would also appear more prominent, in keeping with its purpose as the main park center. An outdoor public plaza, gathering or presentation space should be constructed in connection with the central building.
- The existing parking lot may be reconfigured to accommodate more parking spaces efficiently, and additional parking may be constructed, for a total of up to 84 cars and 14 RV's. The RV spaces would provide parallel parking. A portion of the spaces should be designated for short term visitor parking. Some staff parking should be designated as well. Walks should be constructed around the parking lot and leading to the various facilities.
- **Construct trailhead improvements.** Designate a portion of the parking lot for long term parking for trail use. Construct a bike rental building near the parking lot and away from the Visitor Center and Battery Russell. Connect the bike path through the site. Replace the existing toilet building as needed, and consider relocating it to the west of its current location.
- **Possibly construct one RV site for the placement of a volunteer caretaker RV.** The site would include full utility hookups once the utilities are provided to the site for the visitor center. In the interim, the caretaker RV site would be located within the existing parking lot, without hookups.

Conditions of Approval for the Battery Russell Visitor Center and Trailhead

- OPRD planning and engineering staff will consult with the State Historic Preservation Office (SHPO) during the completion of preliminary and final plans and specs for the development. Consistency with the National Historic Register District will be determined by SHPO. Any change orders will also be reviewed and approved by SHPO.

- *A wetland delineation will be completed for the visitor center site prior to or together with the detailed site design. The delineation will include mapping of the riparian vegetation zone that borders the surrounding wetlands.*
- *A stormwater management plan for the visitor center development will be completed as part of the detailed site design. The management plan will include appropriate measures to prevent significant water quality impacts on nearby wetlands.*
- *Any expansion of the existing parking lot will meet the minimum applicable construction standards used by Clatsop County.*
- *Prior to site construction, OPRD will obtain approval from the City of Warrenton for the extension of sewer and water services to serve the visitor center development. (Upon the approval of this master plan by the City and County, an exception to statewide Goal 11 is being adopted to allow the future extension of these services. However, in order for the service connections to be approved, the City must find that the capacity of the City's sewer system is sufficient to serve existing and future uses in the UGB as well as the uses in the park.)*
- *Prior to site construction, OPRD will submit detailed plans and specs for the visitor center development to Clatsop County for review and approval.*



0 100 200 400 FEET

Battery Russell Visitor Center and Trailhead Concept FORT STEVENS STATE PARK

Fort Concept

The Fort concept involves the reconstruction and rehabilitation of historic structures for cultural resource interpretation, and the improvement of access and circulation to and within the fort site. The concept also involves improving the visitor's understanding of the existence of several historic eras at that site. Interpretation and education are major objectives for the site and are proposed in simple and intensive ways. In addition to the interpretive objectives, proposals include meeting space and overnight accommodations in the historic area and setting.

For purposes of Master Plan approval by the affected local governments, the Fort Concept proposals apply only to lands within the main park boundary, and do not include proposals for the two OPRD-owned parcels outside of the park boundary, which are located in the adjacent residential/industrial neighborhood that was once a part of the historic fort.

Changes in Visitor Capacity and Peak Visitation that will Result from the Fort Development

Actual numbers of vehicles counted in the Fort site over the last six years, for the peak season of July through September, has ranged from 345 to about 2800. However, the larger number has occurred only a couple of days over the last six years during the Labor Day weekend re-enactment. Without the additional re-enactment visitation the average daily peak number of vehicles over the same time period has been about 413. Averaging in the additional traffic from the re-enactment, the average daily peak vehicle count grows to about 440 per day. The small difference between the average with the re-enactment numbers and without them is due to generally lower visitation during the rest of September.

The larger number of vehicles entering the park is generally confined to July and August, with Labor Day weekend adding a final surge and then dropping off significantly during the remainder of September. Good weather in September can add 2 or 3 more weekends of traffic similar to that experienced in August.

During the rest of the year visitation at the Fort site drops dramatically. Very little traffic enters the Fort area during October through June except for staff and volunteers. A few sunny weekends bring visitors in low to moderate numbers.

The development concept for the Fort proposes construction of enough designated parking to accommodate the non-event, non-Labor Day, peak use of about 413 cars a day. The concept includes two day use parking lots totaling up to 96 parking spaces, 50 overnight parking spaces, 15 staff parking spaces (existing), and 10 camping spaces for staff and volunteers. With 2-3 turnovers a day at the day use lots and one turnover a day at the overnight lots, this amount of parking would accommodate about 413 cars a day. Up to 50 cars would remain overnight at the Fort, which is longer than the current stay at the Fort. Additional cars would find no parking available except during special events, which are the only times that undesignated parking is allowed in grassy areas.

In summary, the development concepts for the Fort will not increase peak visitation during non-event peak visitation periods because parking at the Fort, which determines peak visitor capacity, will be limited to an amount that accommodates the current level of visitation only.

Circulation and Parking in the Fort Area

- **Reconfigure vehicular circulation within the Fort site.** Vehicular travel between the Fort and the other areas of the park will continue via the Ridge Road, located outside of the park boundary. The Fort access road, which extends from Pacific Avenue, will connect with the proposed new central parking lot. The Fort access and parking proposals in the Fort Concept are intended to direct visitors along a circulation route to interpretive facilities that represent the historic eras of the Fort site. Existing streets within the Fort site other than the main access route will be retained, but will be closed to public vehicular use and used as bicycle and pedestrian paths, tour vehicle routes and service accesses. Several proposed parking lots for the Fort development are discussed below.

Conditions of Approval for the Fort Roads and Parking, in General

- *OPRD will develop a stormwater management plan for the core area of the Fort. The management plan will include appropriate measures to assure that development in this area does not exacerbate flooding problems on the neighboring lands outside of the park boundaries to the south. (The core area includes the area east of the batteries, south of the earthworks, west of the existing Fort access road, and north of the manufactured home development.)*
 - *The stormwater management plan will be submitted to Clatsop County for review and approval prior to beginning construction of any new parking lots or roads or the reconstruction of historic buildings within the core area of the Fort.*
 - *All access roads and parking lots at the Fort will meet the minimum applicable construction standards used by Clatsop County, except that road widths may be reduced from such standards at the discretion of OPRD.*
 - *Plans and specs for proposed roads and parking lots at the Fort will be submitted to Clatsop County for review and approval prior to construction.*
- **Construct a new central parking lot** along the new entrance road, in the weedy field, for day use parking only. Design for 40 car-length and 20 RV-length parking spaces, maximum. Buffer the parking lot from the neighboring private lands to the south. Buffering will be accomplished using distance, a constructed berm along the south edge of the lot, and planting of native vegetation between the lot and the park boundary.

Conditions of Approval for the Central Parking Lot

- *The minimum requirements of the parking buffer cannot be reduced through application of the minor variation provisions of OAR 736-018-0040.*
- *The parking lot will be located a minimum distance of 140 feet from the park boundary to the southwest.*
- *The berm will be constructed along the south edge of the lot and extend beyond each end of the lot, with a minimum height of eight feet above existing grade.*

- Native and predominantly evergreen trees and shrubs will be planted on the berm and within additional area between the parking lot, the park boundary, and the existing tree cover to the west. The intent is to create a dense vegetative screen between the parking lot and access road and the adjacent private lands to abate noise and visual impacts. The vegetation will be planted prior to the construction of the parking lot and fort access road to allow the establishment of the screen. The vegetation in the buffer area will be maintained and replanted as needed to preserve a screening effect.

-The parking lot will meet the minimum applicable construction standards used by Clatsop County.

- Prior to Clatsop County's approval of the plans and specs for the central parking lot, OPRD will construct and plant the berm and the area between the berm and the private lands.

- **Retain up to 15 spaces of existing parking at War Games Building for staff and volunteer parking.**
- **Construct a second dayuse parking lot at the east central edge of Fort site.** Design for 36 car spaces maximum.
- **Construct parking lots along access road in the northeast corner of the site.** Design for a total of 50 car spaces. These lots are for overnight accommodations only.
- **Reserve areas along internal circulation roads for overflow parking on the grass.**
- **Connect bike trail and hiking trail from the Fort area to the Hammond boat basin.**
- **Direct re-enactment events** to the batteries and earthworks and areas north and west of them.
- **Construct docks on Columbia River** in the approximate location of the historic docks, for courtesy dayuse docking. Docks should be designed to accommodate small tour boats as well as private boats. The docks will be designed with a maximum of 600 linear feet of moorage space.

Conditions of Approval for Docks on the Columbia River

- The following requirements will be applied in addition to DSL and USACE permitting requirements for dock construction and related mitigation, provided these requirements do not conflict with DSL or USACE requirements.

- The docks will be designed in consultation with CREST, ODFW, DSL, USACE and the OSU Department of Marine Sciences.

- Professionally accepted methods will be employed to contain excavated materials and control erosion, sedimentation and turbidity during construction.

- Disturbance of riparian vegetation will be kept to a minimum. Riparian areas disturbed during construction will be rehabilitated using native riparian vegetation within one year following construction. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.

- Mitigation required for piling placement will be accomplished through estuarine wetland creation, restoration or enhancement, provided that a viable estuarine project can be identified. The wetland mitigation concept contained in this Master Plan will be evaluated through mitigation planning and pursued unless a more ecologically favorable project is identified.

- Prior to construction, OPRD will submit detailed plans and specs for the docks to Clatsop County for review and approval.

- Prior to Clatsop County's approval of the plans and specs, OPRD will obtain wetland fill and mitigation permits required for the project from DSL and USACE. Concurrently with the DSL and USACE permitting processes, OPRD will submit the plans and specs for the project to ODFW and CREST.

Fort Foot and Bike Circulation

- **Use routes shown on 1" = 200' Fort concept map.** They represent some retained routes and some routes to be constructed.

Volunteer Camp

- **Construct up to 10 permanent volunteer RV sites to east of firing range.** This project will need to wait until a portion of the new Fort access road can be constructed to this site. Design to remain screened from public access areas.

Conditions of Approval for the Volunteer Camp

- Prior to construction of the volunteer camp, OPRD will obtain approval from the City of Warrenton for the extension of sewer and water services to serve the development. (Upon the approval of this master plan by the City and County, an exception to statewide Goal 11 is being adopted to allow the future extension of these services. However, in order for the service connections to be approved, the City must find that the capacity of the City's sewer system is sufficient to serve existing and future uses in the UGB as well as the uses in the park.)

- Prior to site construction, OPRD will submit plans and specs for the volunteer camp to Clatsop County for review and approval.

Historic Preservation of OPRD-Owned Structures

- **Stabilize and restore buildings labeled as such on Fort Concept map** and per detailed instructions in the Cultural Resource Management chapter of this master plan, and as determined by consultation with the State Historic Preservation Office. Most of these buildings will be used for interpretation only. The War Games building will continue to be used as an interim museum and staff/volunteer offices until new museum buildings can be constructed.

- The Officer's Row Bed and Breakfast will continue in its present use. The staff residence on the parade grounds will continue as such; the use of this building may be expanded in the future to include meeting space and/or another bed and breakfast. However, any land use approvals needed for future uses of either of these two properties will not be granted through the approval of this Master Plan, but will require separate land use actions by the City of Warrenton.
- **Reconstruct certain, no longer extant, historic structures for museum, orientation, meeting space and overnight use.** The buildings recommended for reconstruction are labeled as such on the Fort Concept Map. Recommended reconstructions include buildings from several eras of fort history such as "turn of the century", "WWI" and "WWII". The center of the Fort area, currently filled with the foundations of previously existing barracks, should remain mostly undeveloped, except for the recommended reconstructions shown in the concept plan. This will provide an open space which will help to keep separate the various restoration and reconstruction areas surrounding it, and to provide space for staging events.

Barracks reconstruction could be used for one or more of the following purposes:

- Fort Orientation and Interpretive Center
 - museum display areas
 - display preparation
 - storage space
 - staff and volunteer offices and breakrooms
 - public restrooms
 - museum store
 - museum café
 - retreat facility public meeting spaces and/or classrooms.
 - retreat facility overnight accommodations including an associated dining hall.
- Overnight accommodations in the Fort Area will not exceed 60 double occupancy rooms.

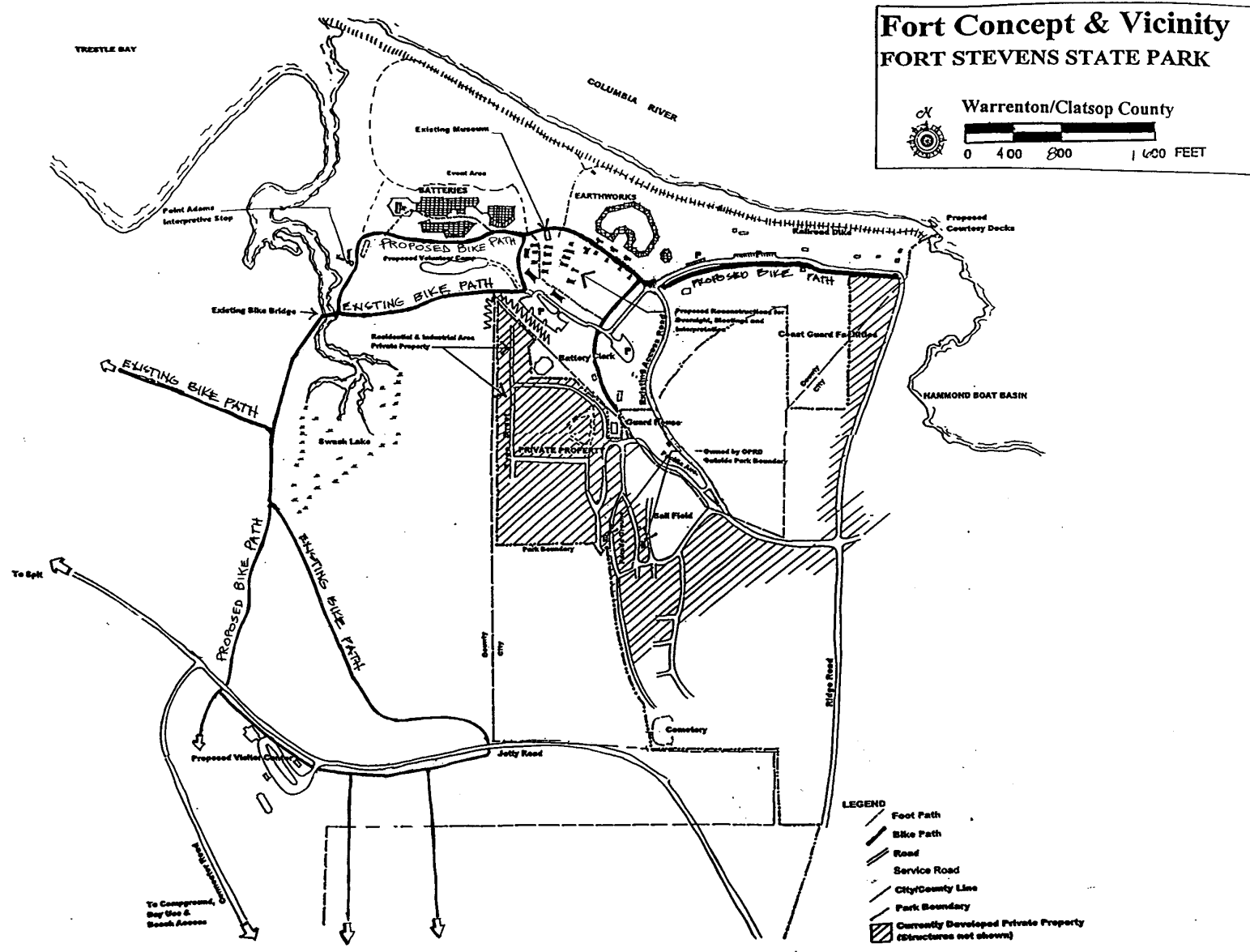
Conditions of Approval for Reconstruction of Historic Buildings

- Design of the reconstructed historic structures, including square footage and exterior and interior appearance, will preserve the integrity of the National Register District and its contributing elements. Compliance with this requirement will be determined through the review and approval of detailed designs by the State Historic Preservation Office.

- Prior to the reconstruction of historic buildings at the Fort, OPRD will work with the Department of Geology and Mineral Industries and local emergency service providers to complete a tsunami warning and evacuation plan for the park, and will provide any needed signage, materials or other improvements as necessary to implement the parkwide plan. (See the discussion under Chapter 7, Goal 2, on the tsunami warning and evacuation plan.)

- Prior to reconstructing historic buildings that require sewer or water service, OPRD will obtain approval from the City of Warrenton for the extension of these facilities to serve the development. (Upon the approval of this master plan by the City and County, an exception to statewide Goal 11 is being adopted to allow the future extension of these services. However, in order for sewer connections to be approved, the City must find that the capacity of the City's sewer system is sufficient to serve existing and future uses in the UGB as well as the uses in the park.)

- Detailed plans and specs for the historic reconstructions will be submitted to Clatsop County for review and approval prior to construction.

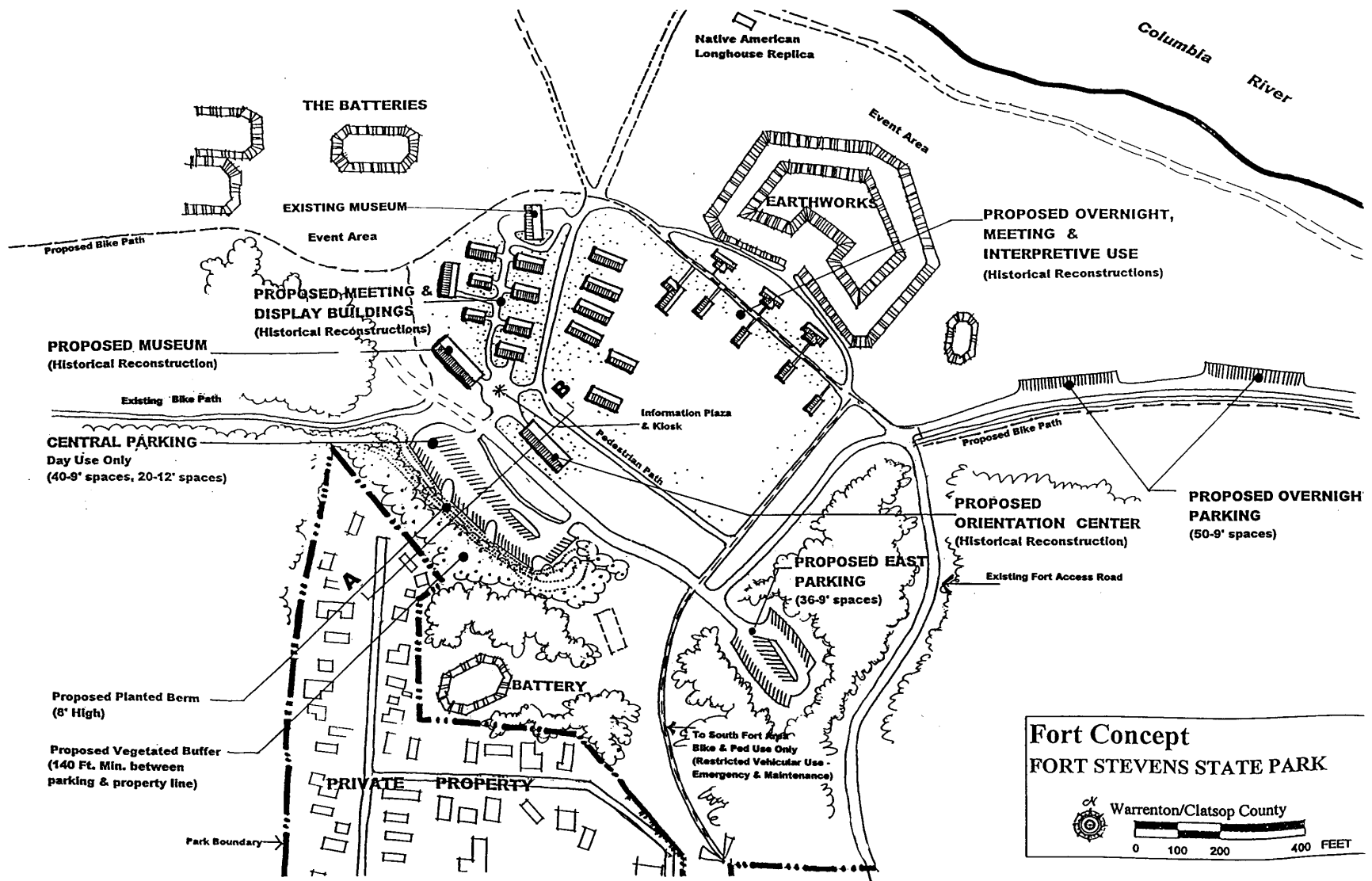


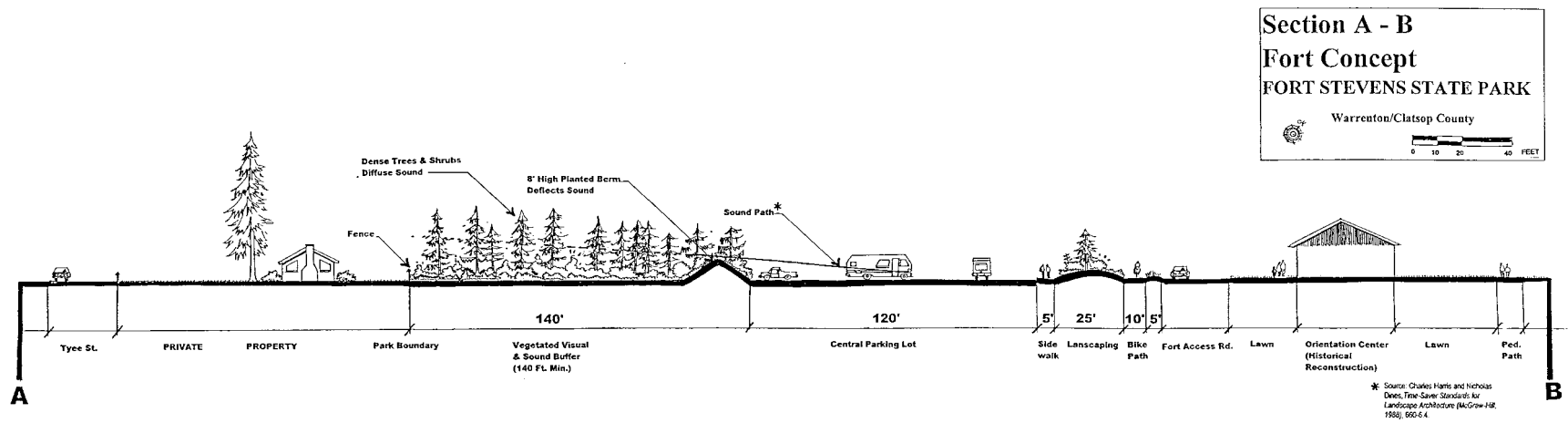
Fort Concept & Vicinity

FORT STEVENS STATE PARK

Warrenton/Clatsop County

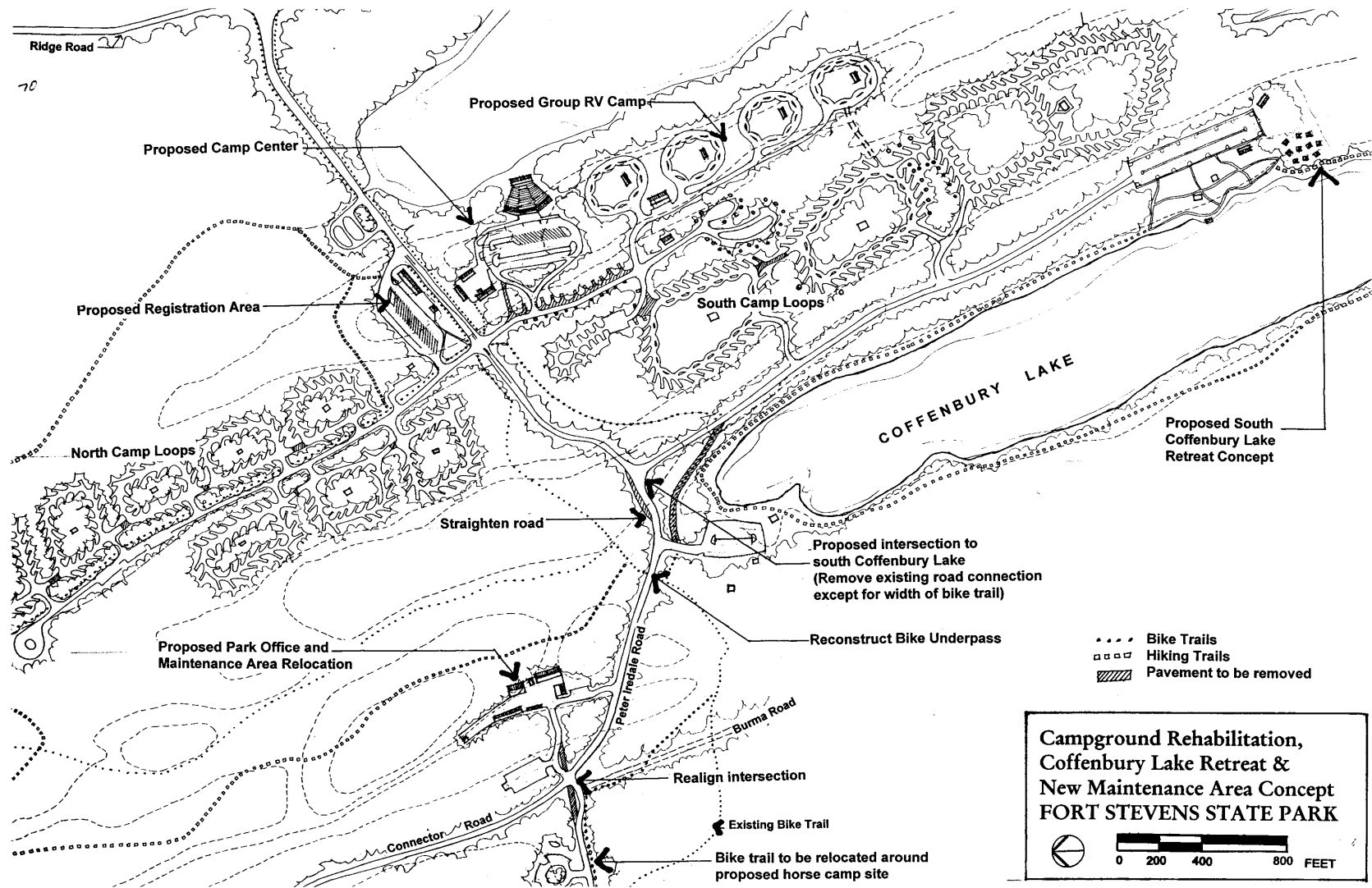
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The Campground Rehab, Coffenbury Lake Retreat and New Maintenance Area Concept

Several maps are provided to illustrate this group of concepts. The first of these maps is provided to orient the reader to the several concept close-ups which follow. This map shows how the north and south camp loops and camp center are related geographically to each other and to the access roads. It also shows the location of the South Coffenbury Lake concept in relation to the south camp loops; and the proposed administrative office and maintenance shop location in relation to North Coffenbury Lake and the intersection of Peter Iredale Road and Burma Road and the Connector Road. This map also shows how the hiking and biking trails would connect within the sites. Not shown on this map, or on the more detailed concept maps, are the camp host and camp volunteer sites. These sites are several of the existing or proposed campsites which may be occupied longer than those for public camping. Host and volunteer sites are designated annually by the park manager. Descriptions of the concept close-ups follow.



North Camp Loops Rehab & Registration Area Concept

This concept includes the area of the campground north of Peter Iredale Road. Besides the major changes listed below, the concept includes general rehabilitation of the water, electrical and sewerage utilities, resurfacing of roads and paths, lengthening as many camp site pads as possible, and replacing or rehabilitating the existing buildings, as is needed.

Changes in Visitor Capacity and Peak Visitation that will Result from the North Camp Loops Concept

There will be a net decrease of 54 camp sites in the North Camp loops upon completion of the projects described in this concept. In order to improve the access to the camp loops, open up the spaces and diversify the camping alternatives, 71 camp sites will be removed and 17 group camp sites will be added to the North Camp loop area, resulting in a net reduction of 54 sites. As a result, visitor capacity and peak visitation at the North Camp loops will decrease.

- **Construct a new, two way, central access road or "spine".** This road would roughly follow the banks of the existing drainage ditch. The ditch may need to be enclosed for safety purposes. Wetland delineation and mitigation are likely needed. Construction will need to be scheduled to be compatible with the nearby eagle nesting season.

Existing road connections between the loops would be removed and new accesses to each loop would be constructed from the new access road. A turn-around or cul-de-sac and up to 35 "extra vehicle" parking spaces should be designed into the new access road.

The road will require a new alignment with Peter Iredale Road. Needed turning refuges would be installed, and all trails in the area would be routed to cross at new crosswalks at the realigned intersection.

If the new access road is not feasible to permit or build due to conflicts with the drainage ditch or other conflicts, the recommended alternative is widening the existing access roads through the loops. This may involve the removal of a number of campsites.

(This project was completed prior to master plan adoption.)

- **Locate bike trails in the north camp loops area.** To aid non-vehicular circulation through the north loops a paved bike path is recommended to parallel the new central access road. Ideally, this path would be at least 6 feet wide and up to 10 feet wide, and would be separate from the road itself, not a bike lane. Along Peter Iredale Road, between the intersection with the camp access roads and Ridge Road, bike lanes on each side of the road are recommended to connect with the existing bike lanes in that road segment.

(This project was completed prior to master plan adoption.)

- **Remove the southeast camp loop in the north loops area and rehab it into a group tent site.** This loop is the first one on the right, heading north. Remove the existing camp loop paving and construct up to 10 vehicle parking area, off of the new central access road. Much of the loop will be removed to accommodate the new registration area. Retain and rehab, as needed, the existing toilet building for this loop. Construct a group shelter at the site. Designate close by, walk-in tent sites to the east of the parking area. Screen from the registration area.
- **Add a small group tent area at the southwestern loop, in the north loops area.** This is proposed for the first loop on the left, heading north into the north loops. Construct parking for up to 6 vehicles off of the southeastern corner of the existing loop. Construct a small group shelter. Designate close by, walk in tent sites to the south of the loop. Screen from the access road and Peter Iredale Road and the bike paths.
- **Add two new lanes to the existing dump station, with sewerage dumping and cleanup connections.** The lanes should be added within the U-shaped dump station access road, and should be placed to retain as many large trees and screening vegetation from Peter Iredale Road as possible.
- **Build a new camp registration area.** Remove the existing registration building from within the alignment of Peter Iredale Road, after the new area is constructed. Clear and grade an area for new construction on the north side of Peter Iredale Road, at the northeast corner of its intersection with the new north camp loops access road. Construct a one way routed parking lot for up to 20 RV's and up to 30 car spaces, and four staff vehicle parking spaces. Parking may be constructed in phases to test the size needed. Construct an "express check in" lane along the north edge of the new lot with several drop boxes. Construct the parking lot exit onto the new north loops access road, far enough to the north of the intersection with Peter Iredale Road to deter conflicts with vehicles queuing at the intersection.

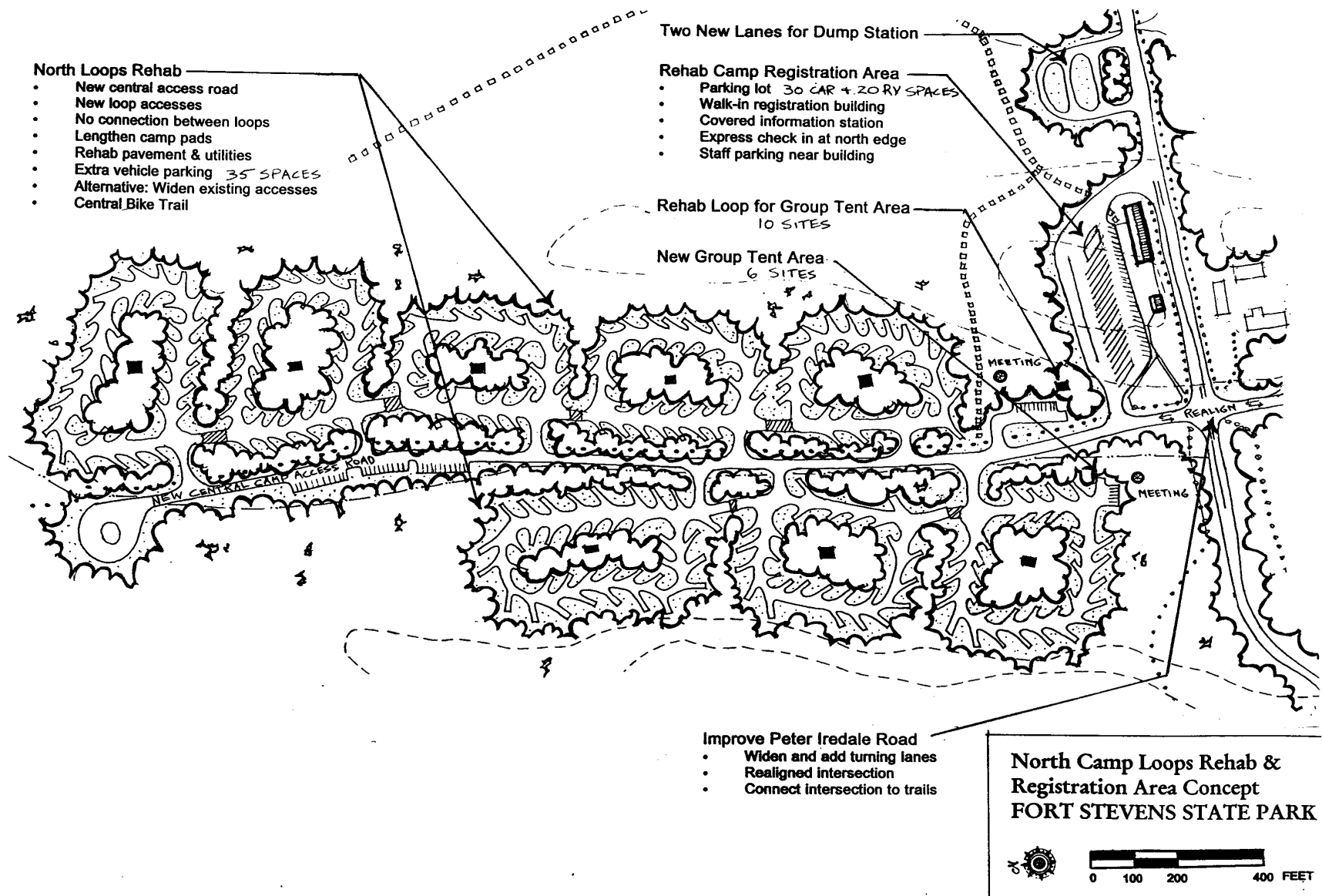
Construct a new registration building with interior registration counter space for up to four staff persons at a time. Provide plenty of interior and exterior, covered waiting space. (The building shown in the concept drawing is only 50% interior space, and the remaining roofed area is not enclosed.) Locate the building between Peter Iredale Road and the new parking lot, and just west of the entrance to the lot from Peter Iredale Road. This will make the building easy to see for visitors looking for the registration area.

Also provide space in the building for money processing, staff breaks and toilets. Provide lobby space for information panels and brochure racks.

Construct a covered information shelter near the registration building to provide information to visitors when the registration building is closed, or to provide general park information to campers. Construct a paved, pedestrian "plaza" between the parking lot and the registration building and information shelter. Construct connecting paths from the plaza to the Peter Iredale intersection and to the bike trails through the campground.

Grade and replant the hill to the north of the new site with native vegetation. Use erosion control matting as necessary to keep sand in place until vegetation can become established.

(This project was completed prior to master plan adoption.)



South Camp Loops Rehab, New Camp Center and New RV Group Camp Concept

The south camp loop concept, like the north loop concept, includes a reorganization of vehicular access to the loops, to help to alleviate congestion. It also includes the creation of a group tent area, a yurt area and a group RV area. The existing administrative offices and maintenance buildings and yard are currently located in the south loops area. The maintenance area is proposed to be dismantled and a new camp center built in its place. The camp center would provide a camp store, and could also offer recreational rentals and interpretive sales. It would also be the site of a new, larger camp talk area, and parking to accommodate campers who want to drive to the camp center. OPRD will endeavor to encourage campers to leave their vehicles at their camp sites, and to walk or ride a bike whenever possible, throughout the park.

Changes in Visitor Capacity and Peak Visitation that will Result from the South Camp Loops Concept

There will be a net increase of 7 camp sites in the South Camp loops upon completion of the projects described in this concept. In order to improve circulation and diversify camping alternatives, 33 sites will be removed and 40 group RV sites will be added. The existing group tent camp will be converted to 6 yurts with no change in capacity. As a result, visitor capacity and peak visitation in the south loops area will increase by the equivalent of 7 camp sites.

The proposed camp center parking is intended to serve Fort Stevens campers primarily. The parking provided for the center is intended to serve only about 10% of the campground capacity and to encourage most campers to walk or bike to the center. Because the center and its parking are intended for camper use, they will not affect the capacity of the campground area or the peak use of that area.

- **Construct two new access roads from South Coffenbury Lake Road to the south camp loops, approximately as shown on the concept map.** The two northerly loops would be disconnected from each other, and from the two southerly loops, by the removal of some existing road segments. Two new access roads would wind up the hill from South Coffenbury Lake Road to the disconnected loops. The short new access roads would be two way. Some camp sites will need to be removed to accommodate the new access roads and the removal of interloop connections. The northerly loop would also be disconnected from the original access road by the removal of a road segment at the northeast corner of the loop.
- **Widen the original access road and construct new accesses from it to the camp center, the group RV camp and the yurt camp.** Remove all of the camp sites along the existing south loops access road between Peter Iredale Road and the right turn into the south loops. Widen the road through this area and align with the new Peter Iredale intersection resulting from the placement of the central north loops access road. Remove the existing access drive to the administrative and maintenance area. Construct a new access road to the proposed camp center farther to the south. Construct a new access road up to the proposed group camp area. This new access should provide access to the existing group tent site, which is the future yurt area.

- **Rehab the small northern, cul-de-sac loop for group tent camping.** Remove several of the existing camp sites coming into the loop, and construct up to 15 parking spaces. Provide close by, walk-in tent sites at the remaining sites. Construct a group shelter. Screen the site from the bike trail and Peter Iredale Road.
- **Expand the yurt camp, and add yurts to some camp sites.** In the yurt camping area between the south loops and the proposed group RV camp, add yurts or camper cabins up to a total of 21. Remove the existing toilet building at the cul-de-sac loop and construct a new toilet or shower/toilet building between the yurt camp access road and the proposed group RV camp, at the base of the hill. The building will be shared by the group RV camp, the group tent camp and the yurt camp. *(The restroom building was completed prior to master plan adoption.)* Provide parking for up to 35 vehicles in the yurt area. Do not design to accommodate large vehicles here. Construct a group shelter.

Add yurts or camper cabins to existing camp sites in the south loops where desired.

- **Rehab the south loops pavement, utilities and buildings as needed.**
- **Construct a group RV camp.** On the dune top south of the existing administrative/maintenance area, clear and grade, and construct up to four camp loops, with up to 10 pull-through or back-in sites on each loop. Construct a group shelter at each loop. Construct one central, enclosed group shelter.

Conditions of Approval for Group RV Camp

- A wetland delineation will be completed for the group RV camp development site prior to or together with the detailed site design. The delineation will include mapping of the riparian vegetation zone that borders the wetlands to the east of the development site.

- A stormwater management plan for the group RV camp will be completed as part of the detailed site design. The management plan will include appropriate measures to prevent significant water quality impacts on nearby wetlands.

- Prior to site construction, OPRD will submit detailed plans and specs for the group RV camp to the City of Warrenton for review and approval.

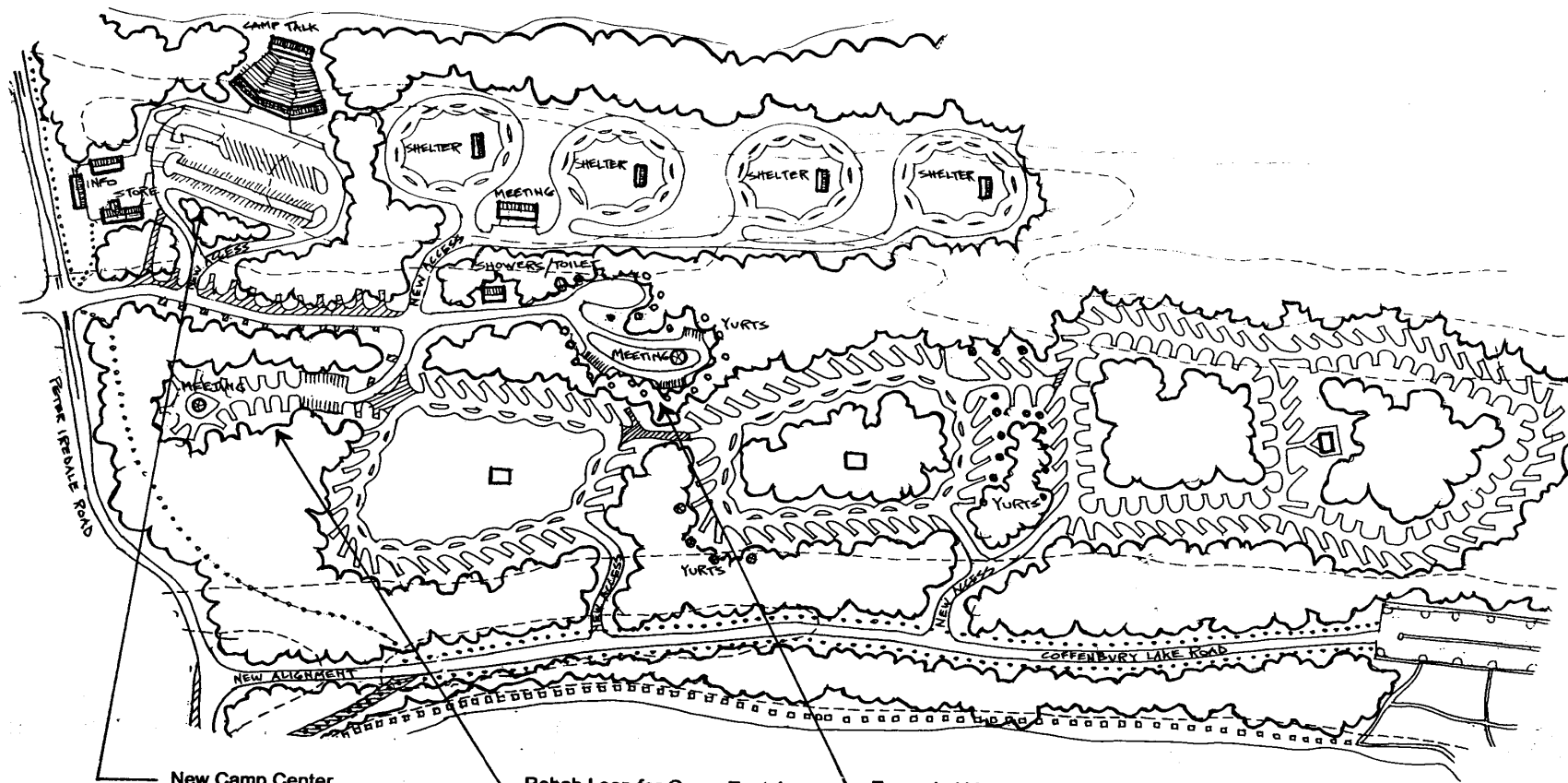
- **Construct a new camp center and camp talk area.** After moving the administrative offices and maintenance facilities to their new location, proceed with constructing a camp center at the existing administration site. The center should be accessed from the existing south loops access road, but via a new access to the south of the existing access. This is intended to reduce congestion on Peter Iredale Road. Construct a one way parking lot for up to 20 RV and 70 car spaces. Construct storage, information and camp store buildings on the low rise, south of Peter Iredale Road and north of the new parking lot. The buildings should be designed to be harmonious with the park setting, and may reflect the historic fort theme. They should be visible from Peter Iredale Road to help orient arriving campers to their location. The buildings should be placed around a pedestrian "plaza" which opens to the parking lot, and connects to the bike paths from the Peter Iredale Road intersection.

The proposed camp store will be operated as a concession. A contractual agreement for operation of the store will be offered through a public bidding process through the OPRD Business Services Division.

Construct a new outdoor camp talk area and remove the existing one at the north loops. The camp talk seating area should be placed into the hillside to the east of the proposed camp center parking lot, looking down into the wetland below. Construct a covered and raised stage. A covered walkway or gateway may be constructed over some or all of the back of the seating area. The new camp talk area should accommodate at least twice the seating of the existing camp talk area, but should not exceed the square footage shown on the concept map. This is estimated to be approximately 300 seats.

Conditions of Approval for Camp Center and Camp Talk Area

- A wetland delineation will be completed for the camp center and camp talk area prior to or together with the detailed site design. The delineation will include mapping of the riparian vegetation zone that borders the wetlands to the east of the development site.*
- A stormwater management plan for the camp center and camp talk area will be completed as part of the detailed site design. The management plan will include appropriate measures to prevent significant water quality impacts on nearby wetlands.*
- Prior to site construction, OPRD will submit detailed plans and specs for the camp center and camp talk area to the City of Warrenton for review and approval.*



New Camp Center

- Camp store and plaza
- Information & storage buildings
- Camp talk area 300 SEATS
- New access road
- Parking 70 CAR, 20 RV SPACES
- Remove camp sites on old access road & widen

Rehab Loop for Group Tent Area

- Parking and walk-in sites
- 15 SITES

Expanded Yurt Camp

- Shower/toilet building replacement (shared with RV group camp)
- Additional yurt sites & parking
- 21 YURTS

**South Camp Loops Rehab,
New Camp Center &
New RV Group Camp Concept
FORT STEVENS STATE PARK**



0 100 200 400 FEET.

South Coffenbury Lake Retreat & Day Use Area Rehab Concept

This concept includes an upgrading of the facilities available for day use at the south lake site, and the creation of a new retreat that includes cabins, a meeting hall and a small cafe. The proposed café would serve both drop-in customers and guests of the cabins or meeting hall. This retreat idea is built on the knowledge that a café once stood near the current day use area at South Coffenbury Lake.

Changes in Visitor Capacity and Peak Visitation that will Result from the Coffenbury Retreat and Dayuse Concept

There will be no change in visitor capacity or peak visitation in the south Coffenbury Lake area as a result the projects described in this concept, because the amount of parking will not be changed. Day use visitors and visitors to the proposed café, cabins and meeting hall will share the existing parking. With the addition of the proposed cabins, up to 18 cars will occupy parking spaces overnight. Because parking capacity determines visitor capacity, no increase in the visitor capacity or peak visitation at south Coffenbury Lake will result from the development proposals.

- **Rehab or replace the toilet building and picnic shelters to the west of the existing parking lot, as needed. Add up to two more picnic shelters and a boat rental building and dock.** The dock will be designed with a maximum of 100 linear feet of moorage space. No indoor boat storage or other boating support facilities will be included with this project.

Conditions of Approval for the Dock on Coffenbury Lake

- *The following requirements will be applied in addition to DSL and USACE permitting requirements for dock construction and mitigation, provided these requirements do not conflict with the DSL and USACE requirements.*
- *The dock will be designed in consultation with DSL and ODFW.*
- *Professionally accepted methods will be employed to contain excavated materials and control erosion, sedimentation and turbidity during construction.*
- *Disturbance of riparian vegetation will be kept to a minimum. Riparian areas disturbed during construction will be rehabilitated using native riparian vegetation within one year following construction. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.*
- *Mitigation required for dock construction will be accomplished through estuarine wetland creation, restoration or enhancement, provided that a viable estuarine project can be identified. The wetland mitigation concept contained in this Master Plan will be evaluated through mitigation planning and pursued unless a more ecologically favorable project is identified.*

- Prior to construction, OPRD will submit plans and specs for the dock to the City of Warrenton for review and approval.

- Prior to the City's approval of the plans and specs, OPRD will obtain wetland fill and mitigation permits required for the project from DSL and USACE. Concurrently with the DSL and USACE permitting processes, OPRD will submit the plans and specs for the project to ODFW.

- **Create a new park retreat area at South Coffenbury Lake.** Replace the existing picnic shelter to the southeast of the parking lot with new meeting hall. Construct up to 10 small cabins with up to 2 double occupancy bedrooms, each with a bathroom and no kitchens. One cabin may be designated as a caretaker cabin, and that cabin may include a kitchen. Locate the cabins to the southwest of the parking lot, and east of the lake trail. Designate 20 parking spaces in the existing parking lot for use by registered cabin guests and the occupant of the caretaker cabin.

As an alternative to 10 small cabins, construct up to 3 group cabins with no kitchens and one small caretaker cabin with a kitchen. The total capacity of the group cabins will not exceed the total capacity of 9 two-bedroom cabins, which is 18 double occupancy bedrooms.

Construct a café along the southwest edge of the parking lot. The cafe will not exceed 1500 square feet and will have a maximum of 15 tables. 10 tables will be available for reservations by cabin guests and 5 tables will be available for use by others. Designate up to 10 parking spaces in the existing parking lot for drop in use and 2 parking spaces for café employee use.

The proposed retreat lodging and café will be operated as concessions. Contractual agreements for operation of these facilities will be offered through a public bidding process through the OPRD Business Services Division.

Conditions of Approval for Coffenbury Lake Retreat

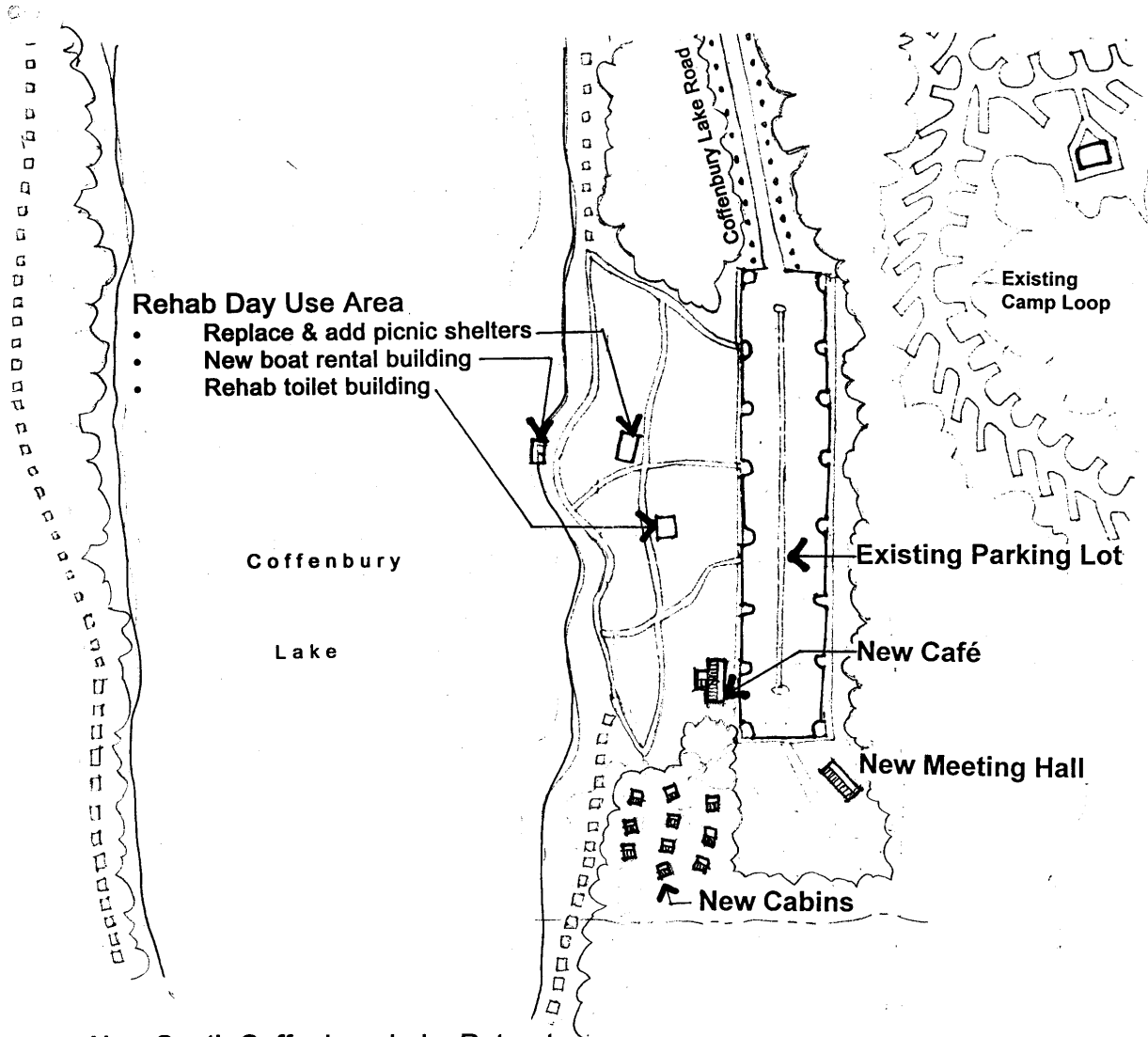
- A stormwater management plan for the retreat area will be completed as part the detailed site design. The management plan will include appropriate measures to prevent significant water quality impacts on Coffenbury Lake.

- Prior to any vegetation removal, grading or construction, the vegetation in the development area will be surveyed by the OPRD forest management staff, and the vegetation intended for protection will be identified on site and reflected in the site design. The site design will seek to minimize removal of or damage to mature native trees and shrubs.

- Prior to any vegetation removal, grading or construction, OPRD will submit plans and specs for the retreat area to the City of Warrenton for review and approval.

- Prior to construction, OPRD designers or their consultants will complete a site visit and site plan for the retreat area which shows the location of each proposed cabin. All cabins will be located north of the drainage that is south of the parking lot, a minimum distance of 10 feet east of the shrub line along the lake shore, and a minimum distance of 10 feet south of the shrub line along the south end of the parking lot and day use area.

The cabins will be located and designed to minimize their appearance among the existing vegetation as viewed from the lake, the lake edge, parking lot and day use area.



New South Coffenbury Lake Retreat

- Portion of existing parking dedicated to retreat use only
- New meeting hall with kitchen (replaces picnic shelter)
- New cafe
- Cabins

Existing Hiking Trail



0 100 200 400 FEET

**South Coffenbury Lake Retreat
& Day Use Area Rehab Concept
FORT STEVENS STATE PARK**

Relocated Park Office and Maintenance Area Concept

This concept involves moving the location of the park management and staff offices and the maintenance shops, storage buildings and maintenance yard out of the campground area to a separate site with a central park location and good access to park roads. The new site is a level area at the base of a forested dune, at the northeastern corner of the intersection of Peter Iredale Road and the Connector Road. The proposed maintenance site should not conflict with existing or proposed trails or use areas, and may provide better supervision of the uses happening to the west. There is an old service road entering the site at the two new site accesses shown in the concept. Because the main traffic flow by this site is a continuation of Peter Iredale Road into the Connector Road, on a long curve, the intersection with the access road to Peter Iredale site and the new administrative/maintenance site needs to be realigned to be more perpendicular to the main route.

Burma Road will remain unimproved in this master plan. However, future amendments to the plan which may include some development in the southern portion of the park along Burma Road may eventually require improvements to Burma Road. If this happens a new alignment of the intersection of Burma Road and Peter Iredale Road will likely be needed apart from the Peter Iredale access intersection.

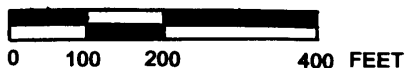
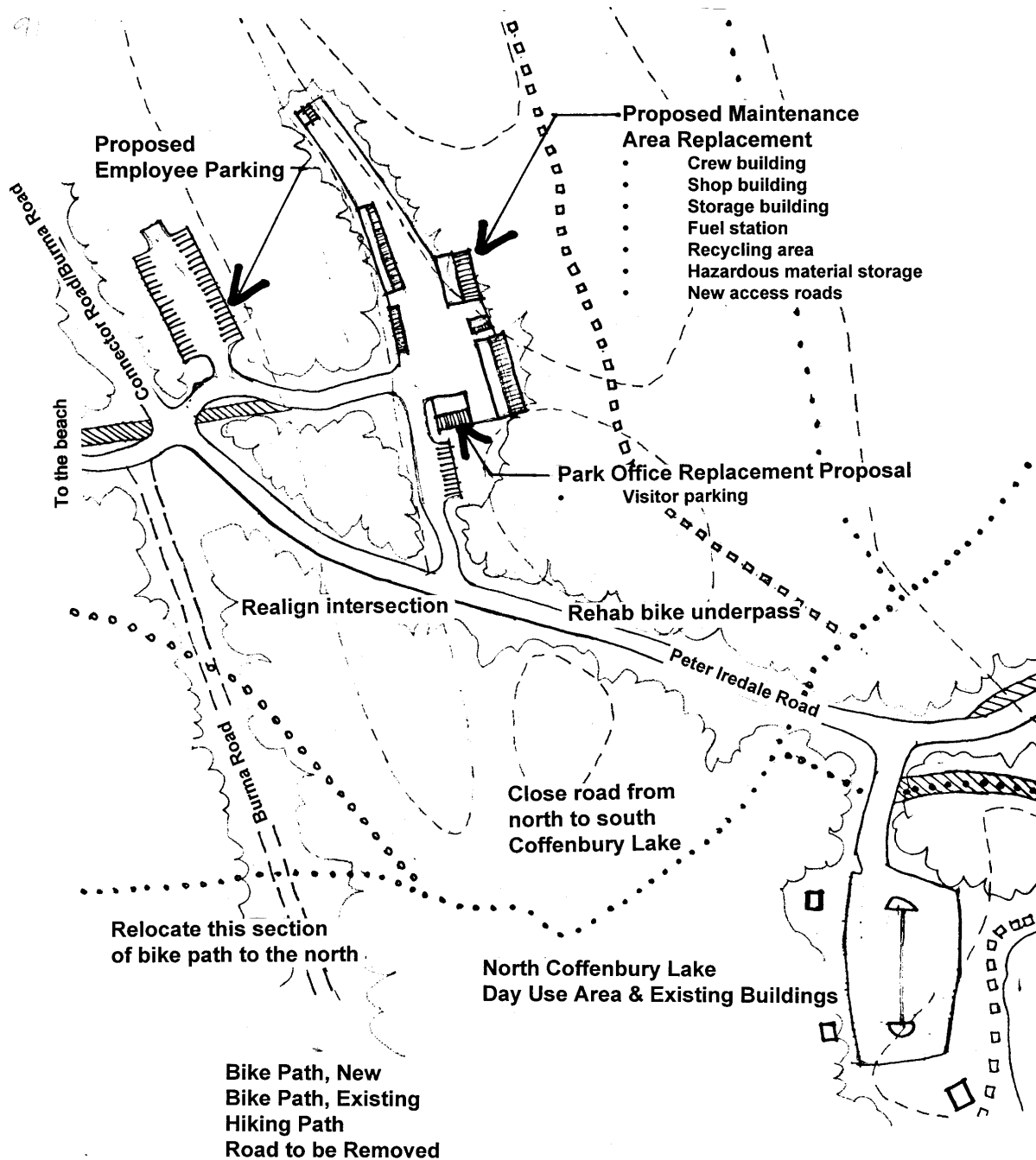
- **Construct a new intersection alignment between Peter Iredale Road, the Connector Road and the new west entrance into the proposed administrative/maintenance area.** The approximate realignment is shown on the concept map, as well as pavement to be removed.
- **Construct employee parking along the proposed western access road to the site, near the Connector Road and west of the wetland area.** Construct up to 40 parking spaces. These spaces may be used by permanent, temporary, seasonal and volunteer staff at the park. Screen the lot from the Connector Road and Peter Iredale Road. Design to avoid the wetland.
- **Construct a south side access road to the site with public parking and a new administrative office.** Provide up to 10 parking spaces for visitors to the office. Large vehicles may occasionally be accommodated in the maintenance yard and use the west access road to negotiate leaving the site. Construct an office building to accommodate the park manager and their staff, as well as a visitor contact counter. This building is not intended, over the long term, to be a visitor contact location, but can continue as staff offices and meeting space after the Battery Russell Orientation Center is constructed. The office building should also include staff breakroom, toilets and storage, copying and mail accommodations.
- **Construct any needed maintenance or storage buildings around a new maintenance yard in the area east of the wetland.** Typical buildings for a large OPRD park maintenance area should include a large shop building; moderately sized crew meeting and break space with room for crew belongings, and toilets; covered or enclosed storage building for equipment and material; a fueling station; recycling processing area; and a hazardous material storage building. Sites like this one, away from a caretaker's residence, may also include a site with utility hookups for a caretaker RV.

Conditions of Approval for Park Office and Maintenance Area

- A wetland delineation will be completed for the park office and maintenance site prior to or together with the detailed site design. The delineation will include mapping of the riparian vegetation zone that borders the surrounding wetlands.

- A stormwater management plan for the park office and maintenance site will be completed as part of the detailed site design. The management plan will include appropriate measures to prevent significant water quality impacts on nearby wetlands.

- Prior to any vegetation removal, grading or construction, OPRD will submit detailed plans and specs for the park office and maintenance site to the City of Warrenton for review and approval.



Relocated Park Office & Maintenance Area Concept FORT STEVENS STATE PARK

Peter Iredale Access, Horse Camp & Interpretive Area Concept

This concept includes the development of three projects all west of the Connector Road and Burma Road and all accessed via the westerly portion of Peter Iredale Road. The horse camp has been located to keep it close to utilities and to provide some equestrian loop trail opportunities. The interpretive site will focus mostly on the plantation forest and the wreck of the Peter Iredale over the long term. This site may also host the whale skeleton or other natural resource themes, but only until the Battery Russell Orientation Center can be built. The Peter Iredale beach access improvements are intended to move most of the facilities off of the top of the foredune, and to provide more easily negotiated vehicular beach access, as well as better sand erosion control.

Changes in Visitor Capacity and Peak Visitation that will Result from the Horse Camp

This concept will add up to 29 new camp sites, in a new camping area. However, this will not result in an increase in camping capacity parkwide, or in visitor capacity or peak visitation in the park, because these added sites are offset by a net decrease of 47 camp sites in the North and South Camp loops.

- **Construct a horse camp just to the west of Burma Road and south of Peter Iredale Road.**
Construct a new access road from Peter Iredale Road south into the horse camp loop area. Construct a toilet or toilet/shower building at the north end of the loop, to allow use by visitors to the interpretive site. Connect the toilet building to the interpretive site with walking paths. Construct up to 29 camp sites with water and electrical hookups, each with a four square or similar outdoor horse stall. Install a watering trough at the trail end of the loop and a manure bin at each end of the loop. Screen the campsites from Burma Road using native vegetation. Delineate for wetlands and provide mitigation as needed. Include drainage filtering devices for keeping runoff from pavement and horse stalls from wetlands and the mitigation pond. Construct a horse trail from the south end of the loop along an old service road route to the beach. Designate one site for a camp host.

Conditions of Approval for the Horse Camp

- A wetland delineation will be completed for the horse camp area as part of the site design. The delineation will include mapping of the riparian vegetation zone that borders the surrounding wetlands.

- A stormwater management plan for the horse camp will be completed as part of the site design. The management plan will include appropriate measures to prevent significant water quality impacts on nearby wetlands.

- Prior to any vegetation removal, grading or construction, OPRD will submit plans and specs for the horse camp to the City of Warrenton for review and approval.

- **Construct an interpretive stop or station near the Peter Iredale-Connector Road intersection.** The site should be on the north side of Peter Iredale Road and just west of the Connector Road. Construct parking for up to 20 car spaces and 1 RV space on a compact cul-de-sac layout. Construct a small pedestrian plaza and interpretive panel shelter for interpretive panel placement. The plaza should be large enough to accommodate the whale skeleton or other displays and gathering space for a group of visitors. The plaza should be connected by walks to the parking spaces and to a loop trail into the plantation forest where rotations are to be managed for interpretive purposes. The interpretive station should be open to view from Peter Iredale Road to orient visitors and to keep vandalism to a minimum.
- **Rehab the Peter Iredale beach access parking and restroom facilities.** Rehab the Peter Iredale beach access parking and restroom facilities. Remove the western portion of the existing north lot from the top of the foredune and fill and revegetate the site. Extend the parking lot to the south along the inland toe of the foredune. Provide for up to 50 cars and 6 RVs, with no overnight parking. Remove the existing toilet building and construct a new one at the edge of the reconfigured lot.

Site the new restroom and parking to avoid significant impacts on wetlands. The toilet building will be constructed so that it may be moved if threatened by wave action and foredune erosion. The toilet building should be connected to city sewer via a new sewer line extended along Peter Iredale Road. The sewer line will have a shut off valve located between the proposed horse camp and the toilet building.

The south parking lot may be removed, or retained with the addition of lot edges which make sand removal easier. This existing lot is important for providing views of the ocean for those with disabilities or limited abilities as vehicles can be parked on top of the foredune. The size of the south lot may be reduced, but turning radii capable of accommodating a large vehicle should be retained.

Retain the bike trail along Peter Iredale Road to the foredune. Provide bike racks at the new parking lot

Conditions of Approval for Peter Iredale Restroom and Parking Rehab

- *Reclamation of the existing restroom and parking area sites will not result in lowering of the existing foredune elevation.*

- *Professionally accepted methods will be employed to contain excavated materials and control erosion during construction.*

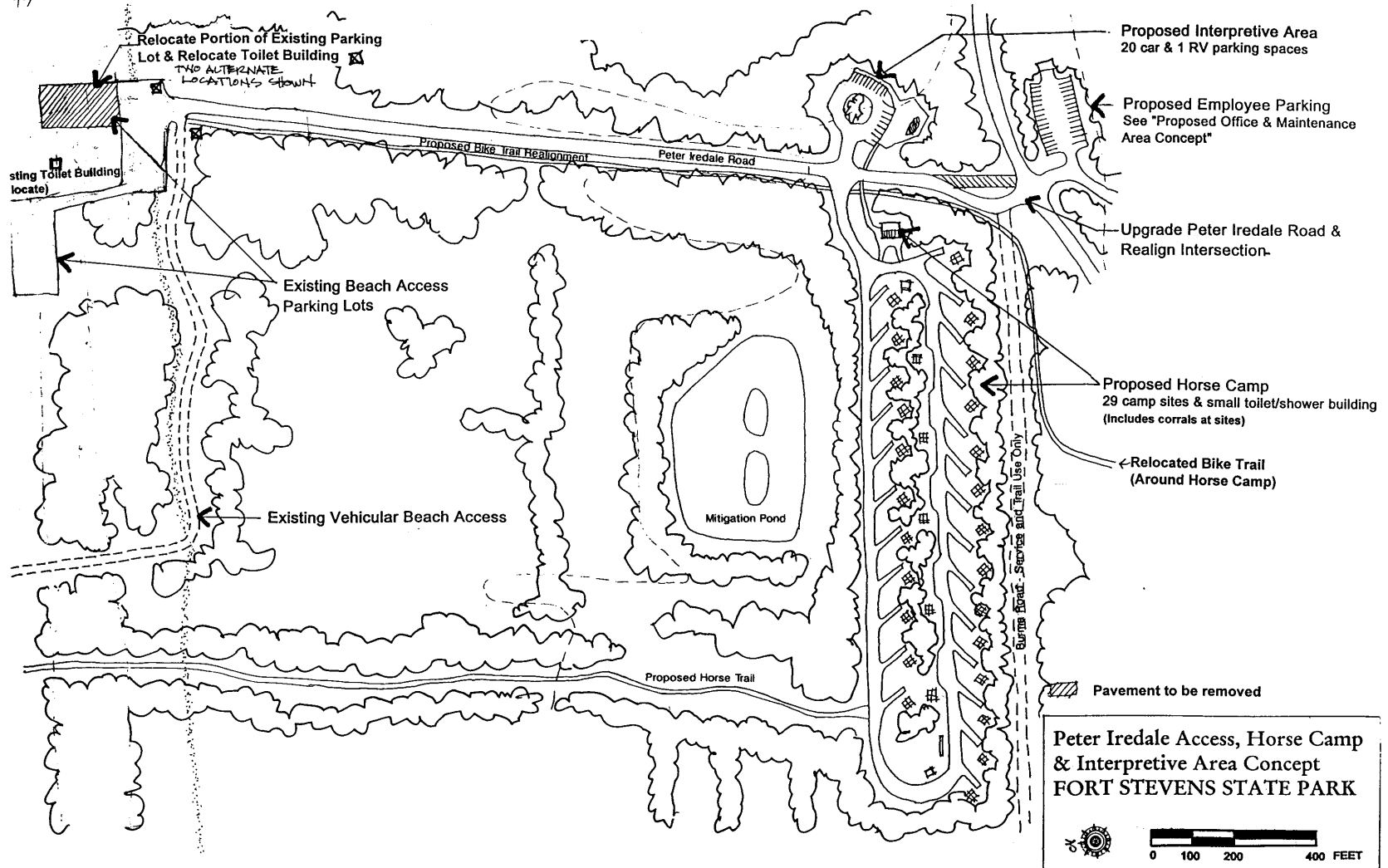
- *The reclaimed sites and other areas disturbed as a result of the project will be stabilized and rehabilitated. OPRD will consult with the OSU Department of Marine Sciences and Clatsop SWCD in determining the appropriate methods, materials and timing for site construction and stabilization and rehabilitation. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.*

- *Prior to construction, OPRD will submit plans and specs for the project to the City of Warrenton for review and approval.*

- **Improve the Peter Iredale Vehicular Beach Access.** The existing road over the foredune should not be lowered but may be covered with an appropriate erosion control mat or surfacing. The approach to the foredune may be covered as well to improve traction in the dry sand.

Conditions of Approval for Peter Iredale Vehicular Beach Access Improvements

- *Improvement of the vehicular access will not result in lowering of the existing foredune elevation.*
- *Professionally accepted methods will be employed to contain excavated materials and control erosion during construction.*
- *The road crossing the foredune will be designed, constructed and maintained in a manner that prevents blowout of the foredune. OPRD will consult with the OSU Department of Marine Sciences and the Clatsop SWCD in determining the appropriate methods, materials and timing for construction and site stabilization and rehabilitation. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.*
- *The access improvements will be consistent with OPRD's permitting requirements for ocean shore development.*
- *Prior to construction, OPRD will submit plans and specs to the City of Warrenton for review and approval.*



Park Circulation

Several road and trail projects are proposed in this master plan. Some of these projects are described together with other facilities proposed within development concept areas, while others are described as separate projects.

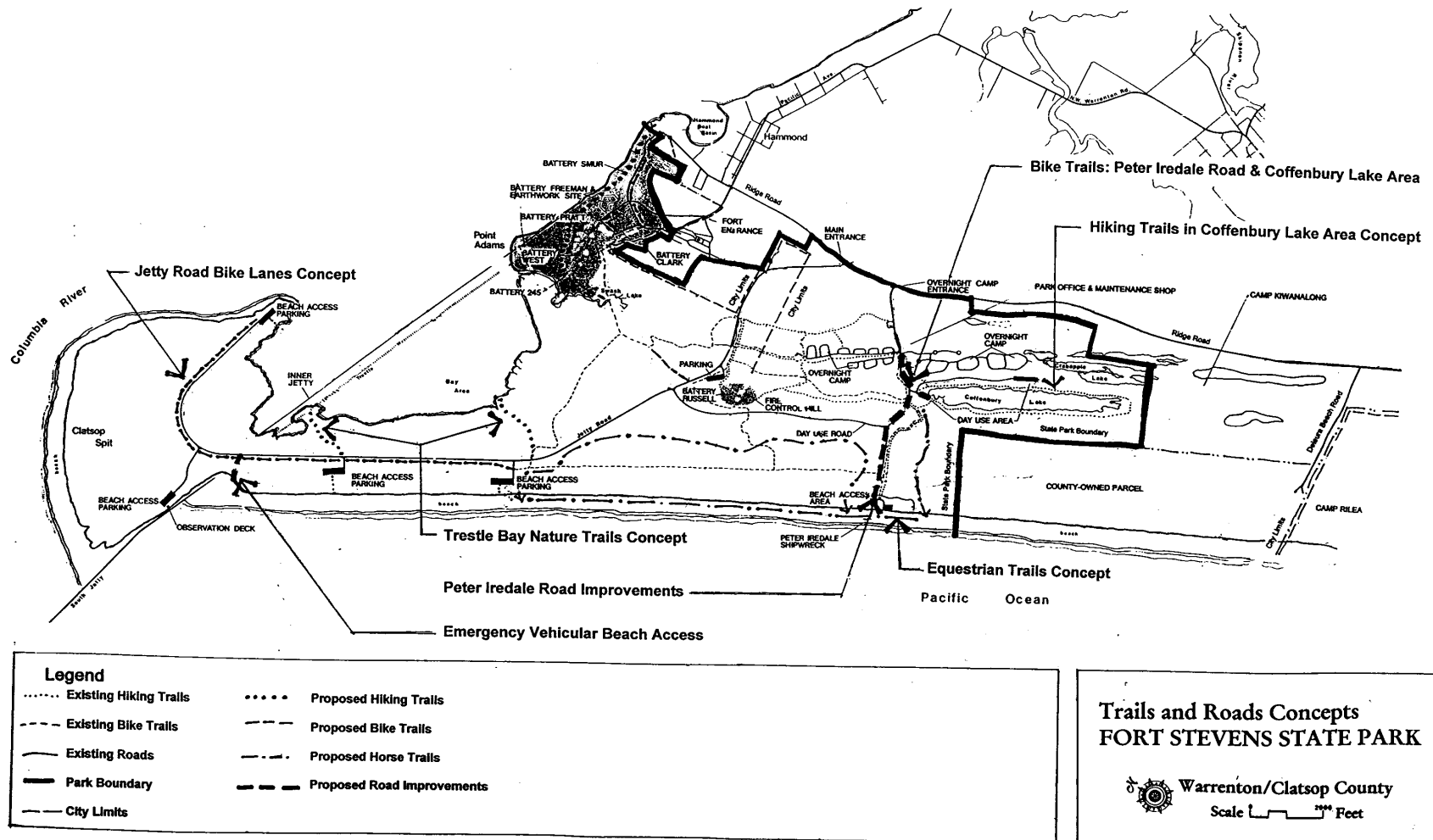
The master plan identifies Jetty Road as the main access into the park. With the exception of the Fort area, the various recreational use areas within the park are to be accessible via connections from Jetty Road. Jetty Road is to be signed on Ridge Road as the entrance for all park use areas except the campgrounds and the Fort site. Peter Iredale Road will continue to be open for beach access and access to other park sites via the Connector Road, but will only be signed on Ridge Road for camping.

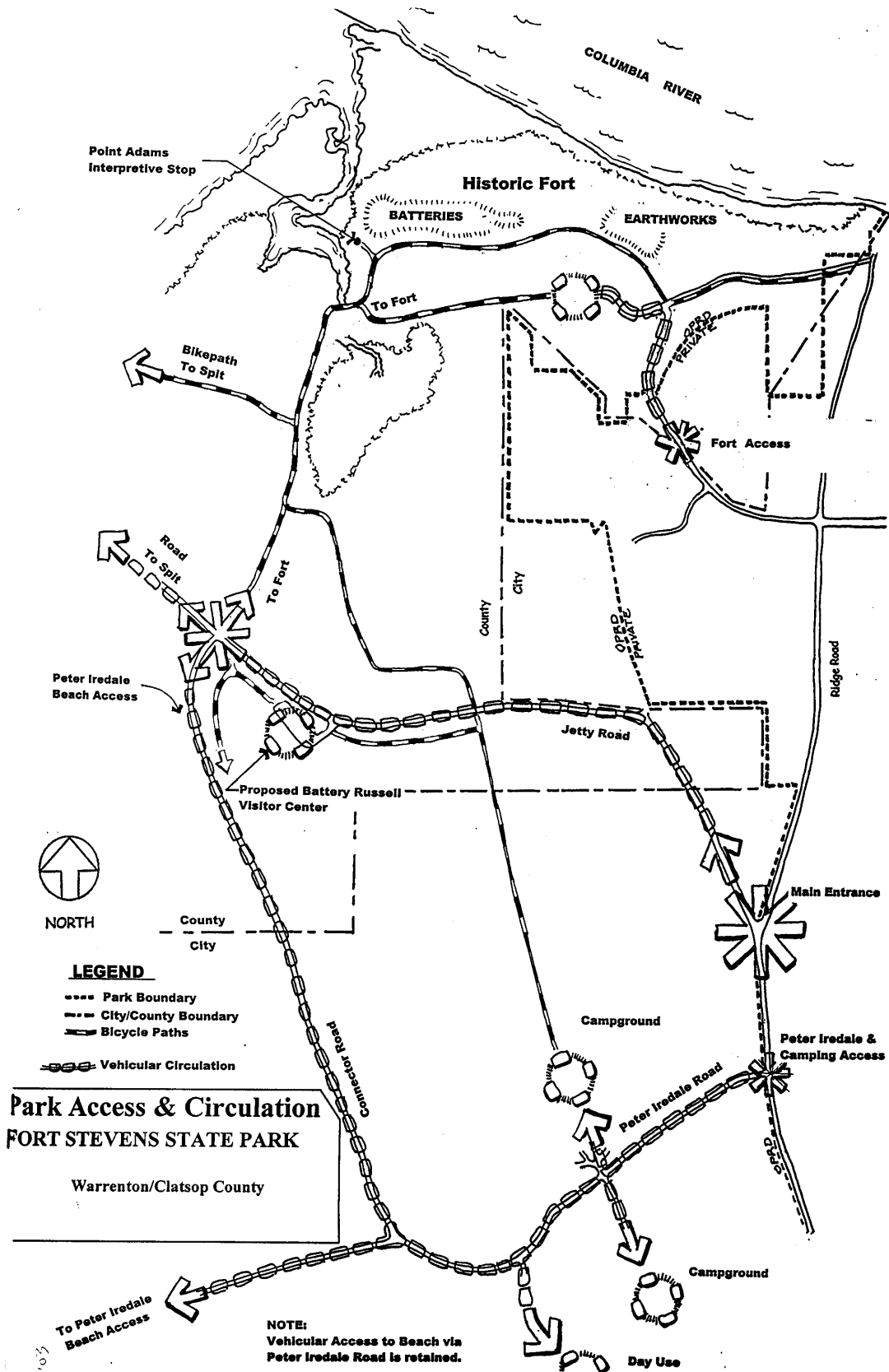
Vehicular travel to and from the Fort will require using Ridge Road, located outside of the park. The Fort site will be accessible from the proposed orientation center for hikers and bicyclists via the bike trails and old military service roads. Visitors entering the Fort site via the bike trail will see the original mouth of the river at Point Adams, which was the reason for locating the fort where it is. This route will enhance visitor orientation to the Fort and understanding of the history of the site.

Trail improvements and expansion are proposed for hiking, biking and equestrian use. Official trailheads are recognized, as follows, to avoid conflicts in trail access in the campground and Fort area: Battery Russell, North and South Coffenbury Lake, and any of the beach access lots for hiking and biking trail use; the first beach access lot along Jetty Road for equestrian trail use. (Most of the beach access trails include the beach itself as a leg of the loop trails.) The park trail system may be accessed by campers from the campground via internal camp circulation paths. Paths within and from the Fort area may be accessed via the parking lots at the Fort.

Why Changes in the Park's Vehicular Access and Circulation Are Needed

Improving park circulation is a primary objective of the master plan for Fort Stevens. There are currently three park entrances off of Ridge Road. One leads only to the historic Fort area while the other two provide access to the other areas of the park. This pattern creates confusion for new visitors. As a result, there is a need for a central park orientation stop from which visitors can be directed to all of the attractions and facilities in the park. The Battery Russell parking lot site on Jetty Road offers a good central location for a new park orientation center.





Peter Iredale Road Improvements

- **Realign intersection with camp access roads** to include needed turning refuges, new north loops access road and to better accommodate trail connections and crossings at the intersection.
- **Create new intersection for access to South Coffenbury Lake. Improve intersection with access to North Coffenbury Lake.** Remove internal connecting road between North and South Coffenbury Lake. Realign Peter Iredale Road between camp roads and Connector Road to smooth out curves.
- **Realign intersection with the Connector Road and build access road to new maintenance area.**
- **Construct new access roads** from Peter Iredale to the Plantation Forest Interpretive Station site, and to the new Horse Camp Site.
- **Repair, surface and widen Peter Iredale Road through park, as needed.** Detailed design of the Peter Iredale road improvements will include wetland delineation in any areas where wetland impacts appear likely.

Emergency Vehicular Beach Access

Construct a "service/emergency only" unpaved access road over the foredune from Jetty Road south of the observation deck site and jetty. Install a locked steel gate and flanking fencing to deter unofficial use of the access.

Conditions of Approval for the Emergency Beach Access

- *Improvement of the access will not result in lowering of the existing foredune elevation.*
- *Professionally accepted methods will be employed to contain any excavated materials and control erosion during construction.*
- *The road crossing the foredune will be designed, constructed and maintained in a manner that prevents blowout of the foredune. OPRD will consult with the OSU Department of Marine Sciences and the Clatsop SWCD in determining the appropriate methods, materials and timing for construction and site stabilization and rehabilitation. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.*
- *The access will be gated to prevent vehicular use by the general public.*
- *The improvements will be consistent with OPRD's permitting requirements for ocean shore development.*
- *Prior to construction, OPRD will submit plans and specs for the project to Clatsop County for review and approval.*

Bike Trails in the Peter Iredale Road and Coffenbury Lake Area

- **Realign bike trail from North Coffenbury Lake to Peter Iredale access**, routing to the east via the existing road connection to South Coffenbury Lake Road, and west around the proposed Horse Camp on its eastern and northern edge, and on the south side of Peter Iredale Road.
- **Rehab and possibly relocate the bike underpass under Peter Iredale Road.** The horizontal and vertical alignment of the underpass needs to be improved to be safer.

Jetty Road Bike Lanes

- **Add bike lanes along Jetty Road.** Convert the existing road, and add fill north of parking lot B, to create two 10 foot-wide vehicular travel lanes, a 4 foot-wide unpaved separation strip with fencing and a 6 foot-wide two-way bike path. The bike path will occupy the Trestle Bay side of the existing road. Between parking lots A and B, the existing 30+ foot pavement width will be converted. No fill is necessary in this area. North of parking lot B, the existing 24 foot-wide pavement will be converted, and fill will be added to the west and north side of the existing road as necessary to support 6 feet of new pavement width.

Conditions of Approval for the Jetty Road Bike Lanes

- The following requirements will be applied in addition to DSL and USACE permitting requirements for any wetland fill and mitigation necessary for this project, provided these requirements do not conflict with the DSL or USACE requirements.

- The following requirements cannot be changed through application of the AMinor Variation@ provisions of OAR 736-018-0040.

- Where the realignment of the road bed for vehicular travel lanes is necessary as described for this project, the road will meet the minimum applicable construction standards used by Clatsop County, except for the following: North of parking area B, the width of the road bed will be the minimum necessary to support 20 feet total of auto travel lane width, 6 feet of total bike lane width and 4 feet of additional separation, for a grand total of 30 feet.

- Prior to, or during, the preliminary design phase of the project, OPRD will complete a wetland delineation for the affected areas. Any wetland fill will be the minimum necessary to achieve the project's intended purpose and alignment. Wetland mitigation will be accomplished through estuarine wetland creation, restoration or enhancement, provided that a viable estuarine project can be identified. The wetland mitigation concept contained in this Master Plan will be evaluated through mitigation planning and pursued unless a more ecologically favorable project is identified.

- Any wetland fill needed north of parking area B will be on the west and north side of the existing road. No fill will be placed on the Trestle Bay side of the road.

- The maximum speed limit will be 25mph.

- Professionally accepted methods will be employed to contain excavated materials and control erosion, sedimentation and turbidity during construction.

- Fill slopes and other areas disturbed by construction will be stabilized and rehabilitated using native vegetation within one year following construction. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.

- Culverts will be located and sized as needed for optimum hydraulic continuity and drainage, and designed for passage of aquatic species.

- Prior to construction, OPRD will submit detailed plans and specs for the bike lane project to Clatsop County for review and approval.

- Prior to Clatsop County's approval of the plans and specs, OPRD will obtain wetland fill and mitigation permits required for the project from DSL and USACE. Concurrently with the DSL and USACE permitting processes, OPRD will submit the plans and specs for the project to ODFW and CREST.

Equestrian Trails

- **Construct a horse trail from the first beach access parking lot on Jetty Road to the beach,** separate from hiking paths. Sign for equestrian use only.
- **Construct a new horse trail connection from the proposed horse camp to the beach** near, but separate from, the vehicular access at Peter Iredale Road.
- **Construct an inland horse trail** through the dunes from the first beach access along Jetty Road to the Peter Iredale access area.
- **Construct an inland horse trail** through the dunes from the Peter Iredale beach access and proposed horse camp to Delaura Beach Road. This is mostly on property currently owned by Clatsop County, and will require an agreement with the County and approval by the City of Warrenton. This project will not be granted land use approval with the approval of this Master Plan.

Conditions of Approval for Equestrian Trails

- Construction of trails across the foredune will not result in lowering of the existing foredune elevation.

- Professionally accepted methods will be employed to contain excavated materials and control erosion during construction.

- *The trails crossing the foredune will be designed, constructed and maintained in a manner that prevents blowout of the foredune. OPRD will consult with the OSU Department of Marine Sciences and Clatsop SWCD to determine the appropriate methods, materials and timing for construction and site stabilization and rehabilitation.*

Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.

- Construction of the trails will be consistent with OPRD's permitting requirements for ocean shore development.

- Signs will be strategically placed to direct equestrians to stay on the trail.

- Prior to construction, OPRD will submit plans and specs to the affected local government, Clatsop County or the City of Warrenton, for review and approval.

Hiking Trails in the Coffenbury Lake Area

- **Construct a hiking trail from Coffenbury Lake trails to Delaura Beach road.** This is mostly on property currently owned by the County, and will require an agreement with the County. This project will not be granted land use approval with the approval of this Master Plan.
- **Construct hiking trail connection between Camp Kiwanalong and Coffenbury Lake and county land trails.** This is mostly on property currently owned by the County and Camp Kiwanalong, and will require agreements with these entities. May require wetland delineation and mitigation. This project will not be granted land use approval with the approval of this Master Plan.

Trestle Bay Nature Trails

- **Construct up to three nature trail boardwalks and wildlife observation blinds into the north and west shorelands of Trestle Bay** as shown on the "Roads and Trails Concept" map.

Conditions of Approval for the Trestle Bay Nature Trails

- The following requirements will be applied in addition to DSL and USACE permitting requirements for boardwalk piling placement and mitigation, provided these requirements do not conflict with DSL and USACE requirements.

- The boardwalk and blinds will be designed and constructed in consultation with CREST, ODFW, DSL, USACE and the OSU Department of Marine Sciences.

- *Professionally accepted methods will be employed to contain excavated materials and control erosion, sedimentation and turbidity during construction.*
- *Disturbance of riparian vegetation will be kept to a minimum. Riparian areas disturbed during construction will be rehabilitated using native riparian vegetation within one year following construction. Rehabilitated areas will be monitored and maintained for a period of three years following planting to insure that vegetation is adequately established, and will be replanted as needed.*

- Mitigation required for piling placement will be accomplished through estuarine wetland creation, restoration or enhancement, provided that a viable estuarine project can be identified. The wetland mitigation concept contained in this Master Plan will be evaluated through mitigation planning and pursued unless a more ecologically favorable project is identified.

- The boardwalks and blinds will be designed to discourage visitors from straying from the designated walkways. Signs will be strategically placed to educate visitors about the estuarine ecosystem, its sensitivity to overuse and efforts to protect and enhance estuarine resources.

- Prior to construction, OPRD will submit detailed plans and specs for the project to Clatsop County for review and approval.

- Prior to Clatsop County's approval of the plans and specs, OPRD will obtain wetland fill and mitigation permits required for the project from DSL and USACE. Concurrently with the DSL and USACE permitting processes, OPRD will submit the plans and specs for the project to ODFW and CREST.

Wetland Mitigation Concept

Wetland mitigation will be required in conjunction with the implementation of several projects described in this chapter. These projects include the addition of bike lanes to Jetty Road and the construction of docks on the Columbia River and on Coffenbury Lake. There could be other projects described in this chapter that involve minor encroachment into wetlands yet to be identified. The most significant filling of wetlands will likely occur with the Jetty Road bike lane project. As much as 1.1 acres of wetland fill could be required for that project. The other projects mentioned above will likely require substantially less fill.

A delineation of jurisdictional wetlands will be required prior to final design and construction of projects involving wetland fill to precisely determine the extent of wetlands. (The resource mapping prepared for the Master Plan is not sufficiently detailed for the wetland fill permitting requirements, and often does not show small wetlands within predominantly upland areas or small uplands within predominantly wetland areas.)

Prior to the development of any projects involving significant wetland fill, a wetland mitigation plan will be completed that addresses the collective mitigation requirements of these projects. Development of the mitigation plan will favor estuarine wetland restoration, creation and/or enhancement, provided that a suitable estuarine site can be identified.

Under DSL and USACE permitting authorities, the following acreage requirements generally apply to mitigation projects:

Wetland restoration:	1 acre restored for every acre filled.
Wetland creation:	1 2 acres created for every acre filled.
Wetland enhancement:	3 areas enhanced for every acre filled.

Proposed Mitigation Area

The "Wetland Mitigation Concept" map included in this chapter depicts an area proposed as a possible estuarine wetland mitigation site, located west of Swash Lake and south of Trestle Bay. Swash Lake is an estuarine slough with a direct tidal connection to Trestle Bay. Tidal elevations in Trestle Bay and Swash Lake range from a mean low of about 1.2 feet to a mean high of about 7.7 feet. The mean tide level is about 4.4 feet. The proposed mitigation area is characterized by low hummocky dunes that reach elevations over ten feet, and interdune areas that range from four to nine feet in elevation. Vegetation inventories prepared for the Fort Stevens Master Plan describe upland portions of this area as "weedy and disturbed". Palustrine wetlands occur in the interdune areas, however, the extent of the wetlands has not been accurately delineated.

The Columbia River Estuary Regional Management Plan (1979) identified the proposed mitigation area as a potential estuarine "restoration" site. In 1989, a wetland mitigation project was implemented in this area to satisfy wetland fill permitting requirements associated with ODOT's construction of the John Day bridge on State Highway 30. The ODOT mitigation project created a new arm of the Swash Lake slough encompassing roughly 2 acres. Studies completed for the ODOT project suggest that, historically, the area now proposed for mitigation was probably not inundated regularly by tidal action. Therefore, estuarine "restoration" is probably less likely than "creation" or "enhancement" in this area.

The proposed mitigation would extend the intertidal marsh created by the ODOT project farther into the interdune areas. Potentially, the extended marsh could be connected to existing palustrine wetlands. An accurate wetland delineation would be needed to determine the extent of existing wetlands, the extent of wetlands that would be created, and the resulting total acreage of mitigation area needed to satisfy wetland fill permitting requirements. As depicted on the concept map, the mitigation project would encompass more than 5 acres of interdune area; a large portion of the area depicted is likely to be existing wetlands. Potentially, the mitigation project could encompass substantially more interdune area than what the map shows.

Alternative plans for creating or enhancing wetlands should be examined. In particular, technical studies should consider the relative success of the ODOT mitigation project, and both the positive and negative effects of altering the existing palustrine wetlands through extension of the intertidal marsh. Any opportunities for restoring old wetlands discovered during site investigations should be included in the plan.

Development of the mitigation plan and project design will include the following:

- Consultation with CREST, NMFS, ODFW, USACE, and DSL.
- Review of the ODOT mitigation plan, technical reports, and monitoring reports.
- Soil sampling and analysis.
- Topographic surveys.
- Evaluation of mitigation plan alternatives.
- Provisions for the displacement of excavated materials.
- Provisions for project monitoring and remediation.

Interpretation of the mitigation project should also be considered. The “Wetland Mitigation Concept@ map depicts a proposed interpretation site, accessible by an existing trail, for placement of an interpretive sign at the edge of the mitigation area.

WETLAND MITIGATION CONCEPT

SCALE: 0 200' 400'

CONTOUR INTERVAL = 2 FEET

Proposed Mitigation Site

Proposed Interpretive Site

TRESTLE BAY

BATTERIES

SWASH LAKE

The map is a topographic representation of a wetland area. It features contour lines with an interval of 2 feet, labeled with elevations such as 4.5, 5.0, 6.0, 7.0, 7.5, 8.0, 9.0, 10.0, 10.5, 11.0, 11.5, 12.0, 12.5, 13.0, 13.5, 14.0, 14.5, 15.0, 15.5, 16.0, 16.5, 17.0, 17.5, 18.0, 18.5, 19.0, 19.5, 20.0, 20.5, 21.0, 21.5, 22.0, 22.5, 23.0, 23.5, 24.0, 24.5, 25.0, 25.5, 26.0, 26.5, 27.0, 27.5, 28.0, 28.5, 29.0, 29.5, 30.0, 30.5, 31.0, 31.5, 32.0, 32.5, 33.0, 33.5, 34.0, 34.5, 35.0, 35.5, 36.0, 36.5, 37.0, 37.5, 38.0, 38.5, 39.0, 39.5, 40.0, 40.5, 41.0, 41.5, 42.0, 42.5, 43.0, 43.5, 44.0, 44.5, 45.0, 45.5, 46.0, 46.5, 47.0, 47.5, 48.0, 48.5, 49.0, 49.5, 50.0, 50.5, 51.0, 51.5, 52.0, 52.5, 53.0, 53.5, 54.0, 54.5, 55.0, 55.5, 56.0, 56.5, 57.0, 57.5, 58.0, 58.5, 59.0, 59.5, 60.0, 60.5, 61.0, 61.5, 62.0, 62.5, 63.0, 63.5, 64.0, 64.5, 65.0, 65.5, 66.0, 66.5, 67.0, 67.5, 68.0, 68.5, 69.0, 69.5, 70.0, 70.5, 71.0, 71.5, 72.0, 72.5, 73.0, 73.5, 74.0, 74.5, 75.0, 75.5, 76.0, 76.5, 77.0, 77.5, 78.0, 78.5, 79.0, 79.5, 80.0, 80.5, 81.0, 81.5, 82.0, 82.5, 83.0, 83.5, 84.0, 84.5, 85.0, 85.5, 86.0, 86.5, 87.0, 87.5, 88.0, 88.5, 89.0, 89.5, 90.0, 90.5, 91.0, 91.5, 92.0, 92.5, 93.0, 93.5, 94.0, 94.5, 95.0, 95.5, 96.0, 96.5, 97.0, 97.5, 98.0, 98.5, 99.0, 99.5, 100.0. The map includes a north arrow pointing upwards and a scale bar indicating 0, 200, and 400 feet. Two specific sites are highlighted: the 'Proposed Mitigation Site' and the 'Proposed Interpretive Site'. The 'Proposed Mitigation Site' is located in the lower-left quadrant, near 'TRESTLE BAY'. The 'Proposed Interpretive Site' is located in the lower-right quadrant, near 'SWASH LAKE'. A dashed line indicates a path or boundary. The area is labeled with 'TRESTLE BAY' on the left, 'BATTERIES' on the right, and 'SWASH LAKE' at the bottom. The map also shows various contour lines and a network of roads or paths.

NATURAL & SCENIC RESOURCE MANAGEMENT GUIDELINES - Chapter Nine

This chapter provides guidelines for the appropriate management of the natural and scenic resources found in Fort Stevens State Park. It includes the OPRD Natural Resource Management Objectives and Natural Resource Management Objectives for Fort Stevens; and more specific management objectives and actions for certain areas or resources in the park.

The natural resource management guidelines are based on a summary of the detailed vegetation, wetland and wildlife habitat designations completed for the park. A detailed listing of these resources can be found in the **Heritage Assessment Summary Chapter**. Detailed resource mapping for the park is available for viewing at the department headquarters or park office.

OPRD Natural Resource Management Objectives

The following objectives have been established by OPRD to guide natural resource management decisions for the state parks. The objectives were considered in combination with each other, and as applied to the specific situations at each park to determine the best course of action for Fort Stevens State Park.

1. Protect all existing high quality, healthy, native Oregon ecosystems found within OPRD properties. (Based on Oregon Natural Heritage ecosystem types and OPRD definition of high quality.)
 - a. Generally allow successional processes to proceed without intervention.
 - b. Identify and monitor existing high quality ecosystems for the presence of threats to a desired type or condition. Determine whether there are desired changes in ecosystem type or condition, based on consultation with Oregon Department of Fish and Wildlife, the Oregon Natural Heritage Program, the Oregon Department of Agricultural Natural Resource Conservation Program and U.S. Fish and Wildlife Service on targeted ecosystems for the region of the park.
 - c. Manage the resource to eliminate any unacceptable threats or to attain desired ecosystem conditions and types.
 - d. Following a natural or human-caused catastrophic event, such as major fire, windthrow, landslides or flooding, etc., determine what management actions are needed, if any, to attain a desired ecosystem condition or type.
2. Generally restore/enhance existing low quality OPRD resources, to a desired ecosystem type and condition, based on consultation with ecosystem agencies as to what a desired ecosystem should be for the park, and for the region of the park. Retain some low quality areas for future recreational use and development, as identified in the park master plan.
3. Manage all OPRD properties to protect existing occurrences of state or federally listed or candidate species in accordance with state or federal endangered species laws and rules:

- a. Broaden species management plans into ecosystem management plans that include the monitoring and management of indicator species.
 - b. For selected lands, determined in consultation with ecosystem agencies, manage for protected species recovery and related desired ecosystem type and condition.
4. Manage all OPRD lands and uses to keep erosion, sedimentation, and other impacts on important resources low.
5. Identify and acquire additional and, or enter into management partnerships with landowners, to provide long term viability for important natural resources found within OPRD properties.
6. In areas of high quality ecosystems or habitats, endeavor to provide opportunities for the public to experience:
 - a. Sights, sounds, smells and feeling of representative ecosystems.
 - b. Understanding of the ecosystem structure, composition and function.
 - c. Larger views of the landscape of which the ecosystems are a part.
7. In selected areas of low quality natural resources, manage for:
 - a. Popular or attractive native plants or animals, appropriate to the local ecosystems.
 - b. Desired views or settings.
 - c. Desired cultural landscape restorations for interpretation.
8. Place, design and construct facilities for public access to high quality ecosystems or habitats to avoid significant impacts on the ecosystems.
9. For those OPRD properties or sites which are historically significant and which have been identified by the department as priority sites for emphasizing cultural resource protection, management and interpretation, manage the natural resources in the cultural resource areas to support cultural resource interpretation, unless this would result in unacceptable conflicts with protected species or areas of special natural resource concern.
10. Manage OPRD natural resources to protect visitors, staff, facilities and neighboring properties from harm.
11. Manage OPRD natural resources to protect them from threats from adjacent or nearby properties or their use.
12. Limit the use of non-native plants to developed facility areas or intensive use areas, and as is needed to withstand intensive use and to provide desired amenities such as shade, wind breaks etc. Wherever possible, use native species in landscaping developed sites.

Fort Stevens State Park Natural Resource Management Objectives

OPRD has evaluated the ecosystems and habitats found at Fort Stevens State Park and has identified areas of poor condition, opportunities for certain desired ecosystems and specific areas to be managed for interpretive purposes. Fort Stevens State Park is rapidly becoming a natural area island within the surrounding developments of the towns of Warrenton and Hammond. The park's natural features offer opportunities for protecting and enhancing a variety of coastal ecosystems. Due to its history of relatively

recent sand deposition and stabilization efforts, it also provides an opportunity to interpret how the landscape is changing over time, and historic efforts to manage that change. Also, for Fort Stevens scenic management mostly involves the management of vegetation, particularly trees. So the scenic or visual management actions for Fort Stevens are mostly contained within this chapter.

Natural resource management objectives for the park have been prepared based on the OPRD Natural Resource Management Objectives and on the specific needs and opportunities in the park.

The general natural resource management objectives for the park include:

- Protecting visitors and staff from tree fall danger.
- Providing a naturalistic appearance in developed park areas outside of the historic sites.
- Protecting important views.
- Protecting the forests from major fire, disease or insects infestation events.
- Enhancing upland sites for Sitka spruce and western hemlock.
- Letting the areas of shore pine forest change through natural events.
- Retaining and enhancing wetlands.
- Protecting and enhancing the estuarine habitats found in Swash Lake, Trestle Bay, and the ocean and river beach habitats.
- Retaining and enhancing upland meadows.
- Managing resources and uses to protect and enhance protected species found in the park.
- Manage certain areas of the park to illustrate the pine plantation and beach grass stabilization effort for interpretation.
- Managing sand movement to prevent impacts on facilities and important natural or cultural resources.
- Managing for an acceptable level of intrusive weeds in the park, i.e. especially scotch broom and gorse.
- Managing nuisance wildlife to protect visitors, staff, facilities and adjacent properties.
- Managing waterfowl hunting.

The following sections discuss more specific management actions to implement each of the Natural Resource management objectives listed above for the park. Refer to the map at the end of this chapter for an illustration of the natural resource management area locations in the park.

Developed Area Management

This section addresses the first three natural resource management objectives for the park: Protecting visitors and staff from tree fall danger; providing a naturalistic appearance in developed areas; and protecting important views.

The "Natural & Scenic Resource Management " map shows areas associated with the current facilities and areas proposed for development in this master plan as a "Developed Area" designation. This includes the campground, day use areas, beach accesses, paved and major service roads, maintenance and administration areas, the fort and Battery Russell/Fire Control Hill sites and important viewpoints. Not shown within this designation are the hiking and biking trails which travel through other natural resource management areas. At least the safety actions mentioned below would apply to narrow corridors associated with the trails located outside of the "Developed Area" designation.

Most of the "Developed Area" is currently forested or is rapidly growing up into larger tree cover. Exceptions are the fort site and much of the north side of Jetty Road along the west side of Trestle Bay. Some of the "Developed Area" has large trees which have become structurally unstable. In other areas,

the grid pattern of the plantation forest is still very apparent. For the "Developed Area" the following actions should be taken .

1. Locate any unstable "hazard" trees which threaten to fall onto use areas or roads, and carefully remove them. Periodic evaluations of the presence of hazard trees should be done. Special training is available from the OPRD Forester regarding methods and timing for hazard tree evaluations. After major wind or flooding events is a critical time to re-evaluate the presence of hazard trees. In areas outside of the "Developed Area" or away from park trails, hazard trees do not need to be located and unstable trees can be allowed to fall naturally. Fallen trees can be left to deteriorate in place, as long as no severe disease, fire or insect problems would result, or the trees would conflict with park uses. The OPRD Forester can advise on whether the amount of down and dead material in the park is becoming a forest condition problem. Currently, this problem does not exist in the park.

2. Within the "Developed Area" selectively thin out trees in areas where the grid pattern is noticeable, to provide a more natural appearing forest setting for visitors. This should not be done in the area identified for interpreting the plantation forest, near the intersection of Peter Iredale Road and the Connector Road. Where trees are thinned, young trees or shrubs, appropriate to the forest community, may be planted or natural ingrowth could be allowed to occur. Thinned areas should be monitored for scotch broom or gorse invasion and these weeds should be removed regularly.

3. Where ever possible screening vegetation should be encouraged to hide developed areas from the park roads and from one use area to another. In some areas plantings should be done to speed up the establishment of a natural screen. Generally use native plants appropriate to the surrounding plant community for screening plantings.

4. In areas where distant views need to be preserved, trees should be selectively removed to retain the views. Important locations for this action include views to the bay from Jetty Road, views of the river from the observation platform on the spit, views of the ocean from Fire Control Hill and views of the river from the fort site.

- Trees within the fort viewshed should be retained in locations and proportions similar to that shown in photos of the area during the early 20th century.
- The view to the bay from Jetty Road should be kept open of trees which are tall enough to obscure the view,. However, trees can be allowed to grow up at the north and south ends of the view corridor.
- Views from Fire Control Hill will be the hardest to maintain over the next 20 years and beyond. The forest west of the hill is rapidly growing up with Sitka spruce, which can grow to a height great enough to obscure views from the higher elevation of the hill. Trees on Fire Control Hill itself should be removed. Trees within the narrow viewshed, shown on the management map, to the west of hill should be selectively removed as they reach a height that begins to obscure views of the ocean from the hill. Trees to the north and south of the viewshed should be allowed remain, to provide a contrast in historic views and current day views.
- Views from the observation platform will likely require very little tree removal. However, over time Sitka spruce may become established on the spit and will need to be selectively removed to preserve views of the river.

Protecting Forests from Threats

Forests throughout the park should be managed to deter major fire, and disease or insect infestations, and to encourage tree vigor. This may include careful thinning of overly dense stands, selective removal of species not well adapted to site conditions or which harbor diseases or insects at dangerous levels. It may also include the creation of fire breaks through thinnings and/or windthrow protection edges, either within the park or along its boundaries.

The forests at Fort Stevens are currently, generally in good condition, except for some areas of pine plantation which are overly dense and have reached the stem exclusion stage of growth. Actions for overly dense areas are addressed in sections below. Fire threats are not currently significant in the park, as the amount of fuel on the ground and standing dead is within acceptable levels. Small ground fires, although posing a potential threat to visitors and facilities in some areas of the park, would not pose significant threats to the ecosystems in the park, and should be allowed to occur in contained areas. The forester may consider controlled burns in some areas of the park's forests to keep fuel loads at an acceptable level.

Periodically, about every 10 years, the OPRD forester should reexamine the forests to see if threats are emerging, and implement any needed actions to deter the threats.

Enhancing the Sitka Spruce/Western Hemlock Stands

Mature Sitka spruce forests are rapidly disappearing on the Clatsop Plains, along with their associated wildlife. Generally, mature Sitka spruce/western hemlock forests support more species than the shore pine forests. Some coastal animal species primarily occur in mature spruce/hemlock forests. The forest, at Fort Stevens, is gradually succeeding to Sitka spruce and western hemlock, ODFW encourages OPRD to facilitate the growth and expansion of Sitka spruce stands in areas of the park that can support them.

Areas for enhancing Sitka spruce and western hemlock include the "Mixed Conifer Forest" (MCF) area shown on the "Natural and Scenic Resource Management" map, most of the "Developed Area" with favorable conditions and pockets of the "Shore Pine Forest" (SPF) and "Forest/Shrub/Grass" (FSG) areas with favorable conditions. Care should be taken to retain a healthy component of snags and down wood.

1. The existing stands of Sitka spruce and western hemlock should be allowed to succeed without much intervention, except as needed to address threats.
2. In protected upland sites where Sitka spruce and western hemlock are becoming established, thin out competing trees such as shore pine. Retain enough pine to protect young trees from wind damage and drying. Thin out dead and dying trees. Thin from below to retain/encourage a vigorous canopy of dominant trees. Isolate any individual openings to provide some edge habitat within the forest.
3. Around Coffenbury Lake and in the campground manage to encourage Sitka spruce and western hemlock. Retain existing healthy, stable trees. Replace hazard trees with Sitka spruce plantings. Retain stable snags for wildlife perching and nesting.

The Shore Pine Forests

Most of the shore pines in the park are there either from direct planting for sand stabilization or as off spring from the planted trees. Shore pine are mostly located west of the campgrounds within the "Shore Pine Forest" (SPF), the "Mixed Conifer Forest" (MCF) or the "Forest/Shrub/Grass" (FSG) areas of the park. These areas also include some planted non-native species such as Austrian and Scotch pine.

Coastal shore pine forests are not generally rich wildlife habitats, due to their simple structure and limited food supply. But they are a tough pioneer species which can withstand winds and drying conditions. They are quick to respond to openings created by natural or human intrusions. They serve a valuable role in the succession of western portions of the park toward Sitka spruce forests.

Although low in stature due to storm effects, some shore pine stands are healthy and growing vigorously in the park. Areas of poor vigor include the very dense, tall stands along the Connector Road. Without intervention, this community will replace itself in stands of different ages of shore pine, where wind and other disturbances create canopy gaps large enough for pine regeneration. On protected sites, Sitka spruce and western hemlock will increase and shade out the shore pine. In wetter sites, the shore pine will die out and yield to Hooker's willow, sedges and other wet soil plants. Care should be taken to retain a healthy component of snags and down wood.

1. In general, areas of shore pine should be allowed to succeed without intervention, except areas selected to enhance Sitka spruce and western hemlock.

2. In the forest stands on both sides of the Connector Road, the trees are in poor condition, being overly dense, single aged at the stem exclusion stage and with a lot of weed invasion. This poor quality area is so extensive that minor actions will not be effective, as regeneration or response to thinning will likely not occur. Also, creating excessive openings or clear-cutting the large, poor condition areas would cause a significant threat of windthrow to adjacent trees.

- Work from east to west creating a series of larger openings, at 5 year increments, to about 200 feet west of the Connector Road and Burma Road. Use the opened areas for needed recreational facilities or replant with shore pine and other trees such as Sitka spruce. Monitor the opened areas and generally allow natural regeneration. Routinely remove any invading weedy species such as scotch broom or gorse. Do not create open meadows in this area, due to possible conflicts between elk and traffic.
- Replant with shore pine in a grid pattern at the northwest corner of the intersection of Peter Iredale Road and the Connector Road for interpretation. Construct an interpretive station at this location to address the sand stabilization effort.
- West of the area mentioned above and primarily in the "Forest/Shrub/Grass" (FSG) area allow natural disturbances and succession to remove pines from marginally wet areas and to allow Hooker willow and related species to enter the wet areas. Allow natural disturbances to and succession to favor Sitka spruce and western hemlock in the drier, protected sites, except within the viewshed from Fire Control Hill.

Wetland Enhancement

Wetlands occur throughout the park. Older wetlands are located in the eastern portion of the park, and newly forming wetlands are occurring along the western edge. The interdunal wetlands in the park are generally in good condition and may be allowed to succeed naturally. Invasive species such as shore pine, European beach grass, scotch broom and gorse do not favor wet areas and should not be a problem for the wetlands in the park.

Interdunal wetlands and open lakes may be enhanced or created in the western portions of the park to speed up their occurrence for wildlife purposes. Wetland enhancement projects should be carefully designed by experienced wetland biologists, hydrologists and engineers, and in cooperation with the appropriate agencies. Wetland enhancement may be done as part of an official wetland banking program, for use in relation to needed wetland mitigation in the developed areas of the park or for minor wetland impacts in other areas of the park. Native plant species should be used in wetland enhancement plantings and naturally occurring wetland and pond shapes should be used, rather than square or rectangular shapes. The occurrence of protected or candidate species such as red legged frogs should be checked prior to planning any changes in wetlands in the park, and changes should be cancelled or altered to protect the species.

Estuary and Beach Management

Trestle Bay and the bayshore including Swash Lake, and the shores of the Columbia River are important wildlife habitats, probably the richest in the park. Managing to protect and enhance the quality or condition of these areas is utmost importance. Proposed park development and related sedimentation and water contamination will generally be kept away from these areas. The exception is the proposed new access road into the fort from Battery Russell. The access road will require wetland mitigation, a new bridge and road widening along and over Swash Lake. The bike trail to the spit will also require pavement relocation and some wetland mitigation. Special measures and careful design will need to be used to avoid impacts on the estuary.

OPRD will continue to work with ODFW and USFW in monitoring the effects of the jetty lowering to favor salmon in the bay. Crabbing in the bay may also be enhanced. The agencies may need to consider the potential effects on shore birds if crabbing increases in the bay.

Construction of blinds and trails around the bay will need to be done in consultation with resource agencies and birding and fishing groups to ensure protection of the birds that use the bay.

The ocean beach along Fort Stevens is known to be a very good location for clamming, and much of the vehicular beach access is to support clamming and surf fishing activities. Monitoring of the clam populations should be done to determine if beach access is negatively affecting them. If so, changes in beach driving patterns may be needed to be explored.

There are currently no access restrictions for the river beach along the spit. OPRD should consult with the Oregon Division of State Lands and resource agencies to determine if rulemaking for river beach access is warranted, and what kinds of controls are needed.

Upland Meadow Enhancement

There are a couple of large grassy areas in the park, currently. One is located in the "Mixed Coniferous Forest with Meadows" (MCF/M) area, just east of Trestle Bay. This is a small upland area just south of the fort site. The other grassy area is on the north side of the fort site along old railroad dike and jetty.

Grassy areas are primarily important for elk. Elk meadows are suffering a similar fate of decline on the Clatsop Plains, and the park will increasingly become a refuge for the local elk herds. Neighbors to the south have lodged complaints with Camp Rilea regarding elk entering their neighborhoods. Elk habitat to the east is increasingly becoming cut off by development.

Having elk in the park is important for visitor enjoyment. But the park can only support a limited elk herd given its limited opportunities for meadow habitat. Increases in elk numbers in the park will require active management of the herd to prevent property damage, resource damage and possible visitor hazards. OPRD has entered into a management agreement with Oregon Department of Fish and Wildlife regarding how to study and manage the elk in the park. Park managers and program staff will be working closely with ODFW in regard to the elk management agreement in the future. Park managers will also work with the county sheriff and state police to ensure that adequate patrols of park roads are provided during the hunting season.

1. For existing grassy and weedy brush areas in MCF/M and along the river: Control weedy brush through a regular maintenance routine of removal and herbicides. Plant the areas to native species once common to meadows on the coast such as native fescue. Volunteers, school groups and prison crews would make productive partners for this work.
2. Consult with ODFW and the OPRD Natural Resource Management Coordinator on the appropriate size of the elk herd for the park and on methods for controlling elk numbers.
3. Work with the OPRD Natural Resource Coordinator on appropriate actions for dealing with elk in developed areas of the park and in relation to visitor conflicts.

Protected Species Management

Of the protected species, only the bald eagle is currently known to occur in the park, although Townsend's bat is suspected and others have been historically known to be in the area of the park.

OPRD is currently completing a bald eagle management plan with ODFW and USFW for its one current nest site. In the future other eagles may nest in the park, as the eagle population grows dramatically on the Columbia River. OPRD will continue to work with the resource agencies and eagle inventory specialists to monitor any changes in eagle nesting in the park. Preserving perching trees on the east side of the bay is important for feeding. Winter roosting may increase along the bay and river in the future.

A professional inventory of the presence of Townsend's bat should be completed and used as a basis for the completion of a management plan, for any bats found to occur in the fort site, or other cave-like structures in the park. Management may include seasonal controls on visitor and staff access to these structures, and the installation of special gates that exclude intruders but admit bats.

Professional inventories should be completed for the occurrence of red legged frogs in the park, and any needed management plan completed with the resource agencies.

OPRD should officially confirm with ODFW that the beach along Fort Stevens will not be targeted in the future for snowy plover re-establishment. Currently ODFW focuses re-establishment and enhancement in middle and south coast areas. However, as plover have been seen in the Clatsop Spit area recently, in winter, use of this area at that time needs to consider any potential impacts on the plover.

It is also unlikely that the park would be targeted for re-establishment of Columbia white tailed deer, due to the large numbers of people using the park seasonally. Any attempt to re-establish these deer in the park should be done on an experimental basis only with provisions which would not preclude recreational use and the construction of the proposals in this master plan. It is unlikely that Columbia white tailed deer occur in the park currently. A professional survey is needed to confirm this.

There may be some potential to establish *viola adunca* in the upland meadow east of Trestle Bay for the re-establishment of the silver spot butterfly. OPRD should consult with ODFW and USFW on this potential. Care should be taken that the use of the grassy area along the fort could still be used seasonally for recreational and interpretive events without closure due to the re-introduction of the butterfly in the area.

Fort Stevens may be a good park for the completion of a special parkwide species/ecosystem management agreement with ODFW and USFW which would assure continued recreational use in the future consistent with the proposals in this master plan.

Bald Eagle Management

OPRD contracted with a biologist, in 1998, to complete a Biological Assessment and Management Plan for the bald eagles found in the park. In general, the assessment determined that the development activities scheduled to occur in the park over the next couple of years are not expected to increase the number of park visitors, and will not change the type of recreational activities offered at the park.

At this time, bald eagles are listed as threatened under the Endangered Species Act, and bald eagles are protected under the Bald Eagle and Golden Eagle Protection Act of 1940 and under the Migratory Bird Treaty Act of 1918. These regulations protect eagles themselves and their habitat from directly or indirectly caused damage or health. The Bald Eagle Management Guidelines for Oregon and Washington (USFWS 1981) recommend that certain activities be restricted around a bald eagle nest. To ensure adequate and uncontaminated food supplies, these guidelines also recommend minimizing human activities that may disrupt foraging by eagles for food. Also, communal roosts, wintering areas and staging areas should be protected. Also, the Pacific Bald Eagle Recovery Plan (USFWS 1986) recommends restricting the type of potentially disturbing activities and the proximity of these activities to bald eagle nests. Bald eagles are currently going through the delisting process.

Fort Stevens State Park is located within the Columbia River Recovery Zone, designated by U.S. Fish and Wildlife Services, underscoring the need for good bald eagle management in the park.

In Oregon, bald eagles typically begin exhibiting nesting behaviors in January, with egg laying and incubation occurring in February and March. Young are reared through April, May and June, and fledging occurs in July and August. In general, bald eagle foraging activity is thought to concentrate around one or two periods. Feeding activity most often occurs between sunrise and 10:00 a.m., the peak occurring between 5:00 a.m. and 6:00 a.m. A second period of foraging may occur just before sunset. Proximity to an available food source appears to be the chief reason for the selection of perch sites. Bald eagles winter along ice-free lakes, streams and rivers. If sufficient winter food sources are available, a nesting pair may remain in proximity to the nest site throughout the winter. Most eagles that breed in Oregon and Washington winter near their nesting territories. Communal roosts are used by bald eagles primarily during the winter months. In some areas, bald eagles roost within a few miles of feeding sites.

Suitable bald eagle nesting habitat has been identified at Fort Stevens State Park. During the 1998 nesting season, there were two known occupied bald eagle territories within a 5-kilometer (3 mile) radius of the park. There are no known winter roosts within 10-kilometer (6 mile) radius of Fort Stevens State Park. For Stevens' bald eagle breeding territory includes two nest sites on property under the jurisdiction of Oregon Parks and Recreation Department. The Fort Stevens bald eagles appear to tolerate the routine, non-motorized recreational activities, such as hiking, bicycling and overnight camping, and show some acclimation to human activities around the nest site during the breeding season.

Most of the major construction associated with the camp access road and utilities and with hiking and bicycle trail improvements has the potential to disturb the Fort Stevens bald eagles at their nest site between January and June, however, most of the construction areas are located outside of the core buffer zone. To minimize the potential for adverse impacts from noise disturbance to nesting bald eagles, OPRD will implement timing restrictions on construction activities with the nest buffer zones.

As recommended in the Pacific Bald Eagle Recover Plan (USFWS 1986), OPRD will distinguish protective buffer zones around the Fort Stevens bald eagle nests. Staff will manage, to the best of their abilities, potentially disturbing activities on lands under their jurisdiction during the critical nesting season. Any future bald eagle nest sites will be similarly protected. OPRD will implement measures to protect potential perch trees in the nesting zones and foraging areas.

Bald eagles may establish new nests in the future at other locations in the park. OPRD will recognize buffer zones for any future sites based on recommendations outlined in the Pacific Bald Eagle Recover Plan and the Bald Eagle Management Guidelines for Oregon and Washington. In general, OPRD will recognize 400 meter (1,312 foot) and 800 meter (2,640 foot) buffer zones around all bald eagle territories that may be established near Fort Stevens in the future. For sites on property under the jurisdiction of OPRD, the boundaries of buffer zones may be modified, taking into consideration topography, line of sight, vegetation and other site-specific information such as the behavior of the birds at the site.

During the critical nesting period (i.e., January 1 through August 31), activities such as the timber harvest and the operation of heavy equipment (e.g., heavy trucks, pavers, backhoes, front-end loaders, jackhammers) and explosives or gunfire will not be permitted within the primary buffer zones. This seasonal restriction will be lifted if it is demonstrated that the site is unoccupied or is reproductively unsuccessful during that nesting period.

Recreational activities that have historically occurred in the area of the Fort Stevens bald eagle territory will continue to be permitted within all buffer zones, based on the tolerance demonstrated by the birds in the past. OPRD does not plan to modify the types of recreational activities in the park, and no significant change in the number of park visitors is anticipated for several years. Any new recreational activities that may be proposed within this buffer zone, will be evaluated to determine these potential adverse effects.

For future development in other areas of the park, in advance of scheduling construction, OPRD will revisit the protection status of bald eagles and as needed, will revisit the biological assessment and management plan for the birds found in the park at that time.

Based on the implementation of the strategies outlined above, the proposed rehabilitation and development activities for the next two years at Fort Stevens are unlikely to adversely affect bald eagles at the Fort Stevens breeding territory. In the long term, ongoing recreational activities at the park are unlikely to adversely affect the species, based on their demonstrated tolerance to these activities in the past. The results of routine monitoring will be taken into account and management adapted as necessary to assure activities on lands under the jurisdiction of OPRD do not result in adverse effects to bald eagles in the area.

Plantation Forest Management for Interpretation

This natural resource management issue was touched on under the Shore Pine Forest section of this chapter. The following are some more specific actions recommended for interpretation of the plantation forest and other sand stabilization efforts.

A large portion of what is now Fort Stevens State Park was planted with trees (mostly shore pine), scotch broom and European beachgrass in the 1930's, 1940's and 1960's to stabilize shifting sands. Many species were used in an experimental manner to determine which would stabilize sands the best. Prior to planting for stabilization the dune area had open shifting sand and native grass cover without forest. Settlement period grazing and traffic disturbed the native grass cover resulting in sand movement by wind to the east.

It has been determined in this master plan work that the best place to interpret the stabilization effort would be at the intersection of Peter Iredale Road and the Connector Road, on the west side. In this location an interpretive station and panels could be installed. Also, small areas could be opened up and re-established with grid pattern plantings of species representative of the historic efforts. Areas of native grasses should be encouraged along the western fringes of the beach. American dune grass now occurs on the lee side of the foredune and should be left undisturbed there except for the few official beach access routes over the dune. As new sand accretes to the west, American dune grass should be planted instead of European beachgrass in an attempt to recreate the pre-settlement appearance of the dunes. Some areas of new accretion may be appropriate for native fescue plantings as well.

1. Zone the pine forest into small quadrants near the interpretive station site. The quadrants can be rotated for different ages of grid pattern planted shore pine. Scots broom should not be planted, but can be illustrated on the interpretive panels.

Managing Sand Movement

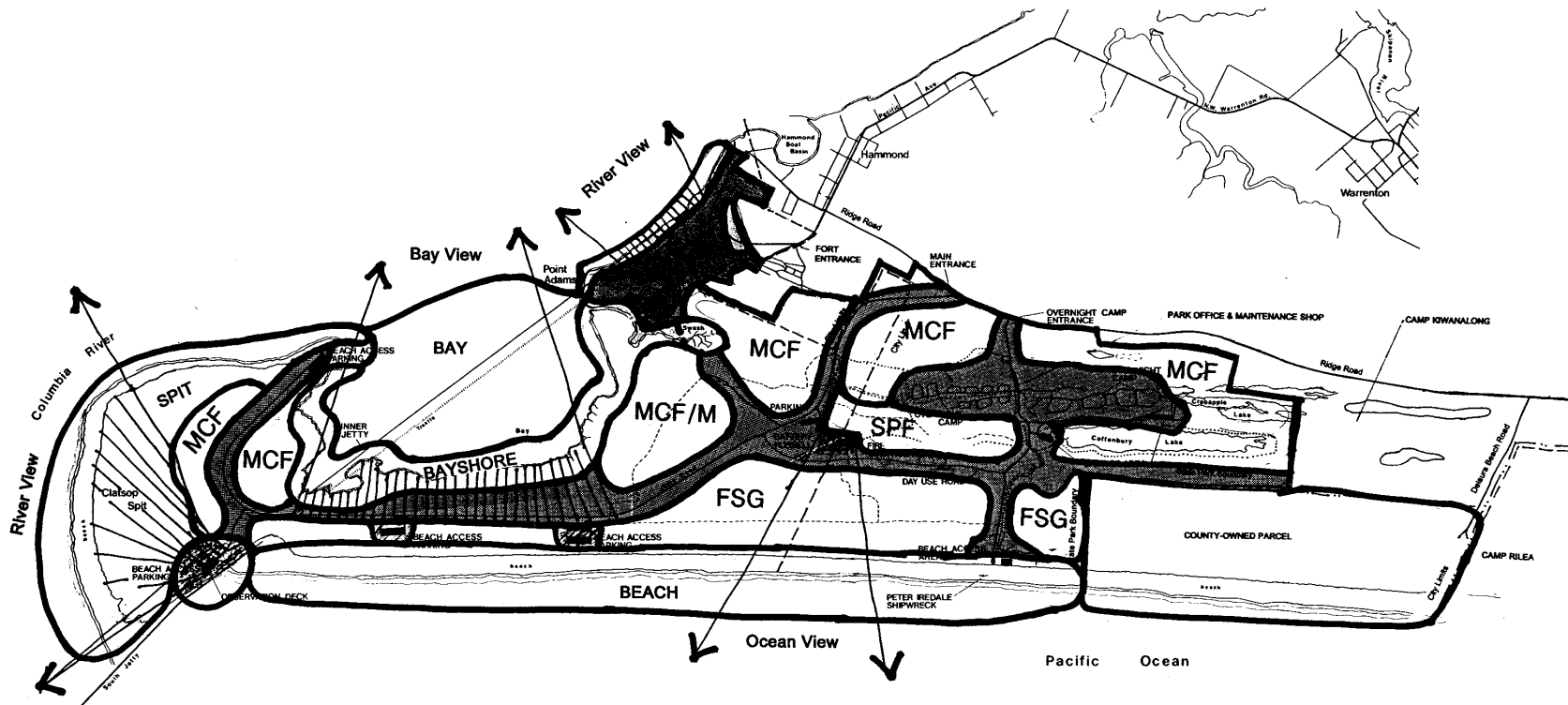
Sand will continue to accrete along the western edge of the park due to deposition related to the jetty. It is likely that European beachgrass and American dune grass will naturally become established on new open sand areas and blowing sand will not likely be a problem at Fort Stevens over the next 20 years. Areas of sand movement will occur where the vegetative cover of the dunes has been disturbed by construction, vehicle travel or bikes, horses or foot traffic. In areas where blowing sand is a problem due to disturbances, special erosion control measures should be taken to control blowing sand as much as is practical. Fabric or other mats can be laid over official beach access roads and trails. Unofficial roads and trails should be closed and replanted.

Managing Nuisance Wildlife and Feral Animals

The need to manage elk conflicts with human uses has already been mentioned in this chapter, but there is a potential for other nuisance wildlife management needs. Likely species include beaver, muskrats, neutria, rats, feral dogs and cats, skunks, raccoons, swallows, starlings, deer, bear and even cougar. OPRD's Natural Resource Management Coordinator works with ODFW and other agencies to develop department policies for dealing with conflicts with these species as they occur, and to provide information to park managers and staff, as well as visitors on what to expect and how to behave in relation to many of these species. OPRD has entered into an agreement with ODFW for monitoring movements of elk through the park and neighboring lands to improve the understanding of annual elk migration patterns and preferred seasonal habitats on adjacent lands.

Managing Waterfowl Hunting

ODFW currently leases park property on Trestle Bay west of Swash Lake for waterfowl hunting. OPRD will work with ODFW to determine whether placement of hunting blinds is needed to help manage waterfowl hunting and enhance the hunting experience. If needed, OPRD will allow ODFW to place and manage up to 6 hunting blinds along the south shore of Trestle Bay west of Swash Lake. The blinds could be available for use by birders outside of the waterfowl hunting season. The blinds would have trail access only.



Legend
MCF Mixed Conifer Forest
SPF Shore Pine Forest
MCF/M Mixed Conifer Forest with Meadows
FSG Forest/Shrub/Grass
Developed Area

Natural & Scenic Resource Management **FORT STEVENS STATE PARK**



Warrenton/Clatsop County
Scale 1" = 1000 Feet

CULTURAL RESOURCE MANAGEMENT GUIDELINES: Interpretation, Preservation, Access and Safety Recommendations - Chapter Ten

Fort Stevens State Park's rich heritage of historic features and sites, representing several eras, presents a challenge to park managers to determine the best approach for providing public access and interpretation while preserving visitor safety and historic integrity. Managing these resources presents a budget prioritization challenge, as well, as funding does not exist for the restoration of all of the historic features in the park. OPRD decided that an evaluation was needed of the historic features in the park to provide a basis for making interpretive and management recommendations for the features. This chapter is a summary of that evaluation and of the interpretive importance and management recommendations for each of the historic features. The recommendations outline the best strategy for interpreting and protecting the different historic eras and features associated with the Fort Stevens area.

CH2MHill, a consulting firm, was hired to complete most of this evaluation and to make recommendations. This chapter is a compilation of the consultant's work and OPRD staff evaluations and recommendations.

How to Use this Chapter

The chapter has been designed to be used by OPRD managers to plan specific management actions and funding for the historic resources at Fort Stevens. It is provided to all as a background for better understanding the department's recommendations for the features.

The "Evaluation Scope, Method and Criteria" section, "Preservation and Access Definitions" and the "Historical Interpretive Themes" sections provide a summary of what planners looked at in the evaluation of the historic features and sites, to determine their priority for interpretation and preservation.

Refer to the "Historic Resources Management Recommendations" section for interpretive, preservation, access and safety recommendations for each historic feature or site. *Additional consultation and detailed plans or specifications may be needed prior to implementing the recommendations. Managers should consult with the State Historic Preservation Office representative and the department interpretive coordinator prior to proceeding with recommendations for any of the features. Special engineering assistance may also be needed.*

The Evaluation Scope, Method and Criteria

The historic resources evaluation included all of the known historic features and sites within Fort Stevens State Park and some associated features outside the park boundary. The features and sites addressed in this evaluation are identified on the "Historic Features" map, located at the end of this chapter. The numbers on the map for each feature correspond with the numbers following each feature name in this chapter and on the summary chart.

1. The major themes were identified for interpreting the history of the Fort Stevens site and a written description was prepared for each theme. Each feature was evaluated in reference to the major interpretive themes to determine which themes are represented by the feature.
2. The importance of each feature for interpreting one or more of the themes was evaluated. Those features with great importance for interpretation and which could be managed to allow the kind of public access needed to appreciate the interpretation of the feature were designated as being of "High Priority" for interpretation.
3. In addition, appropriate preservation treatments and access and safety actions were considered and recommended for each feature based on the feature's interpretive importance, historic significance and current condition.
4. A summary chart showing the treatment and management recommendations was prepared for each feature was prepared.
5. A diagrammatic map was prepared of the fort site to show the interpretive theme focus areas, circulation proposals and interpretive stops.

Preservation and Access Recommendation Definitions

Preservation Treatments are the type or degree of preservation actions recommended for a feature. Decisions about which Preservation Treatment to recommend for a feature were based on the relative historic importance of the feature compared to the others on site, statewide and nationally, and on how much restoration is needed to provide the public a good understanding of the history of the feature. If a feature was found to be historically important and but had deteriorated enough to now be unrecognizable for its historic purpose or appearance, it might be recommended for restoration. Less important features would be given a lower restoration priority and may even be allowed to decay further. Some features may be recommended for rehabilitation for modern uses. The terms below describe 5 types of preservation treatments that were considered for the historic features and sites at Fort Stevens State Park and nearby. Each feature has been assigned a recommended treatment, using these terms. (The terms are based on the Secretary of the Interior's Standards for the Treatment of Historic Properties, which are used by the State Historic Preservation Office and OPRD for projects involving historic properties in the state park system.)

Preservation: Preserve the historic feature in a condition similar to its current condition. This is applied to features requiring limited to moderate intervention to attain a stable condition. Implement appropriate maintenance and conservation measures to limit the level of future deterioration of the historic feature; periodic maintenance and monitoring will be required. Examples of conservation measures for preservation include stripping and painting, repointing mortar and keeping vegetation trimmed.

Rehabilitation: Change portions of the feature so that it can be used for contemporary interpretive, administrative or other public uses while saving the significant historic aspects of the feature. This is often a more extensive and expensive approach but can provide more use of the structure. Examples include altering entrances, kitchens, bathrooms, heating, etc. to provide modern access and amenity levels.

Restoration: Accurately return the feature to its configuration and appearance at a specific former period. Depending on the current condition or amount of changes over time, this approach can also be extensive and expensive. Although, minor restoration can be cost effective for interpretive purposes.

Reconstruction: Rebuild a missing feature based on historic research to a specific former period. Reconstruction can be used as a strategy not only for interpretation of the feature itself, but also to offer support facilities for other park goals --such as museum, interpretive, educational, or public facilities. Reconstruction is an extensive and costly approach. But reconstruction can be planned to fit a budget better by reducing somewhat the level of authenticity, especially if the building interior is being changed for modern use but with the intent of retaining the historic exterior appearance.

Manage as Ruins: Retain certain features which are too deteriorated to be cost effectively preserved, restored or reconstructed. These features generally are expected to continue to deteriorate and would be treated as remnants of a vanishing history. Efforts should be made to record historic elements of the feature through drawings, photography and narratives. Features in this condition can still be very valuable for interpretive purposes.

Non-Extant Feature: These features have no currently visible presence, but are referred to in oral or written tradition and made be key to the interpretation of an era or activity. Generally, no action would be taken as a treatment strategy. However, for those sites with a potential to contain archaeological resources, surveys and documentation are required, especially if the site is being considered for a new use or development. Sites of non-extant features can also be valuable for interpretive purposes, especially with the addition of a display of photos or drawings of the lost feature, on the site where it once stood. Some sites may be appropriate for the construction of "ghost structures" of the lost feature. This is a 3 dimensional representation of the lost feature. Construction of these features relies on the availability of photos, drawings or good descriptions of the feature.

Access Levels are different degrees or types of desired or recommended visitor access which were considered for the historic features at Fort Stevens. Implementing the desired access level may require repairs or improvements, or programmatic controls on visitor access. The terms below are used to explain 6 different levels of visitor access. Each feature has been assigned a recommended level of access based on these terms.

Unlimited Visitor Access: Many sites were recommended to allow public access to all portions of the feature during open hours. These features would be maintained at a level at which extensive intervention would not be needed. In other words, it would be safe for a lot of public access with the implementation of a few access improvements. It assumes that visitors are prohibited from excavation or removal of artifacts.

Limited Visitor Access: Visitor access is recommended to be limited in and around areas of these historic features where public safety needs to be protected through: 1) guided tours, or 2) using limited closure techniques such as physical barriers. These features have also generally been determined to not require extensive visitor access to provide a satisfactory interpretive experience of key features.

Visitor Closures: Where safe, unsupervised visitor access cannot be accomplished without significant alteration of the historic feature or due to budgetary restraints for implementation, public access to the feature should be closed. Many ruins will be closed to public access. In some cases sites could be closed to protect the ruins from accelerated deterioration from visitor impacts.

Monitoring: Periodic monitoring by site personnel is recommended for many of the features to assess visitor usage, level of safety, and physical condition of feature.

Periodic Maintenance: Conducting periodic repairs as needed is recommended, i.e., to maintain moisture removal and disposal systems, safety elements, electrical circuits, and other feature systems are operating properly (for example, cleaning and opening the built-in drain lines of Battery Russell to relieve moisture penetration in the concrete upper deck).

Safety Actions : Specific safety measures have also been recommended for those structures that require them to reduce liability for public access. In general, removing or painting tripping hazards, foot traps, exposed bolts, sharp metal and fencing or marking drop offs and overhead concrete spalling areas are recommended for several of the batteries and for the guardhouse and power plant. Removal of hazardous materials should be coordinated with the State Historic Preservation Office to ensure that no significant impacts to the historic resource result. Warning signs have been installed at unsafe areas where barriers and repairs have not been completed.

Historical Interpretive Themes for Fort Stevens

The following themes and subthemes have been selected as being key to the interpretation of the historic areas of Fort Stevens. The themes have been identified through an evaluation of the significant eras for the historic district and other earlier historic occurrences at the fort site. These themes have been used as a partial basis for evaluating each feature's importance for interpretation. (The park has other interpretive themes related to natural resources and local culture and they are discussed in the Interpretive Guidelines Chapter.)

I. Historic Point Adams/Native American Habitation Theme

Point Adams overlooked the historic, pre-jetty confluence of the Columbia River and the Pacific Ocean and has always been a strategic location for the people inhabiting the area. The point was located at the present day site of the earthen fort embankments a couple of miles inland from the present day confluence. Some Native American dwellings were known to exist here at the time of settlement. Clatsop Indians that inhabited the Clatsop Spit area commanded an important link in the regional Native American trade network, both along the coast and inland, using the waterways for transportation. They also had early contact with Euro-American and their shipwrecks. (The construction of the jetty has caused sand accretion to move the confluence gradually farther and farther west.)

II. Treacherous Waters Theme

Mariners found treacherous waters while entering the mouth of the Columbia. They were driven to conquer them to access the tremendous wealth of the northwest's abundant resources.

A. Shipwrecks Subtheme

Several shipwrecks occurred along the coast adjacent to the present day Fort Stevens State Park. Some are located inland from the current beach due to the accretion of sand after the jetty construction.

B. Point Adams Lighthouse Subtheme

A lighthouse once stood near the current Battery Russell site and was the first government feature to be built on Point Adams. It later served as a base end station for Battery Russell.

C. South Jetty Construction Subtheme

Fort Stevens served as the center for the construction of the South Jetty, an achievement that has greatly contributed to the safety of ships using the Columbia River mouth. Jetty construction began by the Corps of Engineers in the mid-1880s and was completed in 1895. Construction of the jetty not only aided ship passage, but also radically changed the landscape as sand built up along its south side, pushing the shoreline westward. The Corp continues to shoulder the responsibility for jetty and channel maintenance.

III. The Fort Theme

The Federal Government established Fort Stevens as part of its defense at the mouth of the Columbia River, to guard U.S. territory including the thriving communities of Astoria, Portland, and Oregon City. The Columbia River served as a gateway to this territory, and provided an essential transportation link to exchange goods with the East Coast, Europe, and the Orient. The fort was developed as part of a three fort complex that included Fort Canby and Fort Columbia located on the north banks of the river in Washington. Later, Fort Stevens was the headquarters fort for the 9th Coastal Artillery District, including Forts Canby and Columbia. Fort Stevens has the longest history as an active coastal defense installation on the Pacific Coast north of San Francisco. Major changes in the technology of coastal defense are reflected in the interpretive story and in the remaining historic fabric of Fort Stevens.

A. Old Fort Stevens Subtheme

“Old Fort Stevens” possessed smoothbore cannons with limited range which were placed within an earthwork embattlement. However, the location of the earthworks was ideal for protecting the Columbia in association with the two forts on the Washington side. The low elevation of the fort would allow for close-in action with smoothbore cannon (Cannon pointing downwards from a higher elevation would present the possibility of the ball rolling out). While well-located, the wood and earth fort was a maintenance nightmare, and within 10 years, rotting wood was a considerable problem.

B. Old Fort Stevens Garrison Subtheme

Army housing and new support buildings were constructed near the earthworks and provided the first fort community for the area. None of these buildings survive today, although some sites are known. A wharf and primitive roads served the fort.

C. Height of Fort Construction - Spanish American War Subtheme

New fortifications were being planned in 1895 and construction activities began in 1896, 30 years after the fort was established. New technology and strategies for defense, and a greater commitment of resources on the part of the government transformed Fort Stevens during the next decade. Fort Stevens was "on alert" during the Spanish American war. It was during this period that the first cable for an electronically controlled underwater mine system was installed.

The West Battery and the adjoining Battery Pratt represent the evolution of big guns used for coastal defense. Placement of the battery was in part related to the changes wrought by the South Jetty: its western flank was protected by newly formed beach and sandy shoals.

Battery Clark added mortars to the fort, which could bombard ships with a nearly vertical drop of ordinance, a technique effective against armored ships.

The Parados was built to protect the west batteries, and an electrical generation plant was placed inside it.

Facilities for submarine mining of the river mouth were also constructed in the late 1890s. The center for these mining operations was located just east of the "old fort."

Battery Russell was added in 1904 at the lighthouse site south of the main fort, expanding the fire power influence.

Fire control hill, located just south of Battery Russell, was important for locating targets. The old lighthouse building was temporarily converted for fire control in 1904 while a new building was being constructed.

Searchlights became an important part of coastal defense at the turn of the century.

In 1899 new housing and associated buildings such as a guardhouse were constructed at the "upper fort," a new area of development south of the earthworks that had formerly been used as a sand pit. This area is currently known as "the parade grounds."

D. World War I Era Subtheme

Garrisons at Fort Stevens greatly expanded as a result of WWI, creating a need for new quarters and associated buildings. While almost none of the buildings that were built for the influx in population during this era survive today, their interpretation is important to telling the story of Fort Stevens as a wartime community.

E. World War II Era Subtheme

New threats of war again increased activities at Fort Stevens in the late 1930s and early 1940s. Fort Stevens was the command fort for the Harbor Defenses of the Columbia which included forts Stevens, Columbia, Canby and Grays Harbor, and that is why such an extensive barracks and office complex was built up at Fort Stevens during this era.

Battery Mishler was converted to the harbor defense command post in 1941.

Battery 245, constructed in 1942, represented new artillery technology at the fort.

As had occurred during WWI, the boost in population related to the war led to construction of numerous buildings for troop use. None survive today.

F. Fort Closure - Park Subtheme

Air power and guided missiles brought an end to the fort's military importance as a strategic location for coastal defense. The fort shifted to duty as a recreational and interpretive center.

IV. Dune Stabilization and Community Life Theme

Between WWI and WWII, the most important interpretive stories are the daily life in the growing community, and the extensive dune erosion problem and stabilization effort.

Historic Resource Management Recommendations

For each historic feature evaluated at Fort Stevens recommendations were made for interpreting, preserving and accessing the feature and for addressing safety concerns. In practice, all or most of the recommendations for each feature would be implemented at the same time. Some could be phased in. Any recommendation alternatives are clearly stated. Recommendations have been crafted in a manner which would avoid conflicts between the treatments for preservation and the access and safety actions.

The historic features are grouped according to the interpretive themes they support.

The "Historic Fort Interpretive Area" diagram shows recommended "interpretive theme focus areas", which can be used to help visitors sort out the many themes and eras represented on the site. This and other diagrams at the end of this chapter also shows recommended road and path locations, and recommended locations for interpretive stops.

I. Historic Point Adams/Native American Habitation Theme

Point Adams, the landscape feature: High Interpretive Priority. Point Adams includes the entire Fort Stevens site. At a landscape scale it is an important interpretive feature aside from the individual features located on it.

Preservation Treatment: Rehabilitation.

Restore the view of the river from the batteries and embankments by selectively removing trees and shrubs. Rely on historic photos to determine where trees occurred historically.

Inappropriate plant species should be removed. Extensive tree removal along the northern and

northwestern portion of the point will likely be required, based on historic research. This area could be used for events and for trails to supplement interpretation.

Access Level and Safety Actions: Limited Visitor Access. Periodic vegetation management. Visitor access to the point is recommended to be limited to marked roads and paths for interpretive understanding and for access control regarding sensitive areas. Opportunities for visual access to the river and to key theme/era areas will be designed into the overall pathway concept. The overall interpretation of Fort Stevens is closely tied to the story of the confluence of the Columbia with the Pacific Ocean, and a viewpoint from the historic Point Adams area to the river is recommended to be integrated into the Native American interpretive focus area. In addition, an opportunity for providing public access from the river should be included in the long term design concept for the fort area. River arrival could be based on a rehabilitation of the historic piers and docks used during the construction of the jetty. See the diagrams at the end of the chapter for a depiction of road and pathway development alternatives.

No specific safety measures are recommended for the site.

Long House Replica - High Interpretive Priority.

This is the only tangible evidence of Native American use of Point Adams. As such, the Long House should serve as the focal point for interpreting Native American use of the area.

Interpretation of this resource must clearly state that the building is a reproduction based on a design derived from a variety of sources, including input from local Native Americans who represent the historic presence of tribes in the Point Adams area. Interpretation and public access must respect modern day Native American cultural uses and be designed by and with tribal representatives.

Preservation Treatment: Preservation through periodic maintenance.

This building should receive routine maintenance to preserve it similar to its current condition.

Access Level and Safety Actions: Limited visitor access.

The building may be closed to general public access when tribal use requires it. Closures should be arranged in advance with the park management, and an appropriate closure sign should be placed at the entrance to the access path from the current visitor center parking area.

Clatsop Chief House Site (57) : Low interpretive priority.

The exact location of a Clatsop house site, shown on an historic schematic map, is not known. Information about the likely location of the site must be kept out of any interpretive material about the site, to protect the site from scavenging. It would be appropriate to mention that Native American continued to occupy Point Adams for some period after the construction of Fort Stevens.

Preservation Treatment: Non-extant feature. This would be a good site for a future archeological survey and dig to better determine the pre-European settlement cultural history of the Point.

Access Level and Safety Actions: Monitor for visitor disturbance, and document archaeological evidence.

II. Treacherous Waters of the Columbia Theme

A. Shipwrecks Subtheme

Peter Iredale Shipwreck (65): High Interpretive Priority. This is among the best known historic features in the park. This property presents good opportunities to interpret both the importance of the Columbia River to shipping and the dangers of the Columbia River bar. The Peter Iredale also can be the interpretive site for other shipwrecks to protect them as archaeological resources. The locations of the other wrecks must not be revealed to the public until the sites can be archaeologically surveyed, documented and stabilized.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Unlimited visitor access, monitoring (if dangerous conditions arise from deterioration, consider removal of dangerous sections).

B. Point Adams Lighthouse Subtheme

Lighthouse Complex Site (42) : Moderate Interpretive Importance. No visible trace of these buildings remains. The lighthouse began service from 1875. The location of the lighthouse near Battery Russell is recommended for interpretation --including why the lighthouse site is inland, and later uses for the buildings. Photos and plans of the buildings are available.

Preservation Treatment: Non-extant feature. This would also be a good site for an archeological survey and dig to determine details about the lighthouse era.

Access Level and Safety Actions: Unlimited visitor access.

C. South Jetty Construction Subtheme

Construction of the South Jetty halted the natural movement of sand, causing deposition south of the jetty that has shifted the shoreline substantially westward.

Jetty (28): High Interpretive Priority. The jetty is a major accomplishment of the Corps of Engineers. Management of the jetty is an ongoing Army Corps of Engineers responsibility. The jetty has created a safer river entrance for ships. It is also a dominant landscape feature and is the primary cause of the westward migration of the shoreline. A primary viewpoint and interpretive stop for this feature is recommended to be located near the Battery 245-rifle range area.

Preservation Treatment: Regular maintenance and rehabilitation will be undertaken by the Army Corps of Engineers.

Access Level and Safety Actions: Visitor closure. No official public access is allowed to the jetty structure itself. Army Corps of Engineers should post danger or access limit signs in relation to the jetty structure. Views of the jetty are provided from certain roads, viewpoints and trails.

Jetty Railroad Alignment (Elevated trestle and dike) (62): High Interpretive Priority. The trestle and dike were vital components in the construction of the jetty. They remain as prominent features of Trestle Bay and the riverfront and are also clearly visible near the jetty west of Trestle Bay. Interpretation of the trestle is recommended to be included in a viewpoint to be located near the Battery 245-rifle range area.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Visitor closure to the trestle. Public viewing of the trestle only from designated points and trails. Limited visitor access to the dike along designated trails. The dike is planned for trail use from the Hammond boat basin to the trestle structure.

Dock (piers) (26): Low Interpretive Priority. All that remains of the dock used during the construction of the jetty are the timber pilings in the river. This dock received the enormous amounts of rock and timber required for jetty construction from barges pushed by steam-powered tugs. While outside of the main interpretive area, the dock area has relatively minor interpretive value.

Preservation Treatment: Possible partial reconstruction.

Access Level and Safety Actions: Visitor closure, access for viewing only from designated points and trails.

Other Railroad Alignment Site (27): Low Interpretive Priority. Most of the railroad was removed and portions of the grade have been incorporated into the area's road system.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: Unlimited visitor access.

Army Corp of Engineers' sites (23, 24, 25): Moderate Priority. Most of the offices and housing for the Army Corp of Engineers are no longer extant, except for a cabin at site #23. However, the story of the engineering presence is separate and supplemental to the Army presence itself. It was the ACOE who completed the rail and jetty structures which has recreated the landscape at the mouth of the river.

Preservation Treatment: #23 - Preservation. #24 and 25 - Non-extant features.

Access Level and Safety Actions: Unlimited visitor access with interpretive panels.

III. The Fort Theme

A. Old Fort Stevens Subtheme

First established in 1863, Fort Stevens ranks as an important Civil War era site in Oregon. Its specific location relates to the artillery technology of the time in the context of the historic shoreline (putting its location much closer to the ocean shoreline than currently exists and historic channels of the Columbia).

Earthworks (37): High Interpretive Priority. This is among the most important historic resources in the park, even though it is a partially completed replica of the original earthwork fort.

Preservation Treatment: Reconstruction. This early feature is very important to the history and use of the old fort era and would be a priority for reconstruction over later structures that existed on the same site.

Faithful replication of the earthworks can provide substantial interpretive value. The rebuilt earthworks can serve as the focal point of the interpretation of the Civil War Era at Fort Stevens. Interpretive objectives may include understanding Civil War military engineering technological

criteria underlying fortification design. Complete reconstruction of the earthworks may conflict with preservation of the Mine Casemate and Mine Commander's Station (31). Reconstruction will be limited adjacent to the Mine Casemate structure. This should not negatively affect the interpretive value of the earthworks.

Planning documents for reconstruction of the original fortifications are being developed from available historic documentation located in site-specific engineering records and national military standards of the period. These design documents could aid current park planning by defining how extensive the reconstruction would be, i.e., whether it would include the counterscarp and glacis outside the ditch, and material selection.

The original fortification relied extensively on the use of wood. Rapid deterioration of the wood required a continual series of repair and replacement programs. Initial design planning could evaluate acceptable substitute materials to reduce maintenance and retain appropriate historic standards. This is especially true of the wooden elements which do not last long in the coastal climate. Substitutes should be approved by SHPO.

Access Levels and Safety Actions: Limited visitor access to protect steep slopes and avoid water hazards, periodic maintenance following reconstruction.

Officer's Quarters, Barracks, Guard House, and Commissary Sites (38): Moderate Interpretive Importance. No visible trace of these buildings remains, though they were a prominent part of the fort for many years. Reconstruction of these buildings would allow valuable interpretation of 19th century life at the fort in proximity to the earthworks. Reconstruction of the earlier structures is considered to be a higher priority for interpretation than of the 1940's buildings that overlap this area.

Preservation Treatment: Non-extant feature, or selective reconstruction for modern interpretive and other park visitor use.

Access Level and Safety Actions: Unlimited visitor access until reconstruction. Limited access and periodic maintenance following reconstruction.

Other Support Buildings Sites (39): Low Interpretive Priority. No visible trace of these 19th century buildings remains. Reconstruction of some of these buildings would allow some more interpretation of life at the fort in proximity to the earthworks.

Preservation Treatment: Non-extant feature. Or consider some selective reconstruction for interpretative purposes or other park uses. Reconstruction of these features would be less important than those in the area of # 38.

Access Level and Safety Actions: Unlimited visitor access until reconstruction. Limited access and periodic maintenance following reconstruction.

Early Wharf Site (40): Low Interpretive Priority. The wharf served as Fort Stevens' transportation link to almost all destinations. The wharf site is located away from the interpretive focus areas and is inland from the modern shoreline.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: Unlimited visitor access.

Old Cemetery Site (43): Low Interpretive Priority. This property appears on a map dating from 1882. The cemetery was moved to make way for new fort construction.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: Unlimited access.

Historic Road Alignment Sites (61): Low Interpretive Priority. The exact location of the Civil War era roads has not been field verified. It appears that some segments of those roadways have been incorporated into the current road system within the park and surrounding area. Interpretation of these features is not recommended, especially since the vital transportation links were by ship.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: Unlimited visitor access.

B. Height of Fort Construction-Spanish American War Subtheme

The fort underwent a major metamorphosis, keeping pace with advancements in military technology and responding to federal perceptions of foreign threats. Secondary in interpretive importance, but of interest to visitors, would be fort life from this era. Many garrison buildings still exist from this era, although most are currently privately-owned.

Battery Lewis (19), Battery Walker (20), Battery Mishler (60), and Battery Pratt (18): High Interpretive Priority. Batteries Lewis, Walker, and Mishler were known as the West Battery. Battery Pratt lies directly adjacent to the east. As a group, these four batteries are the core of the World War I Era fortifications at Fort Stevens. According to Haft's history of Fort Stevens, Battery Mishler contained two of the three all-around firing, retractable guns ever built in the United States. The other gun, located in Galveston, Texas, is no longer in existence. Their location near the parking area and the views they offer from the upper level make them popular attractions for the public.

(Batteries Lewis and Walker) (19 & 20)

Preservation Treatment: Preservation and some restoration of subsiding walkways and eroding surfaces. A more detailed evaluation and specifications is needed. A structural engineers report should be completed and reviewed for any comments on how the walkway failure is affecting the status of the central command tower integral to the walkway on the south elevation. Remove soil and vegetation from the upper level.

Access Level and Safety Measures: Limited visitor access until safety measures can be implemented. Temporary repairs should be made to the most severe hazards. Public access should be precluded along the walkway between the batteries until repairs can be made and engineering determines where safe areas are located. Install appropriate barriers on all drop-offs, especially on the upper level. Barriers should be approved by SHPO. Monitoring, periodic maintenance.

(Battery Mishler) (60)

Preservation Treatment: Preservation. Restoring Battery Mishler to pre-WWII condition is not recommended since the battery also has significance in its converted condition as the harbor defense command post.

Access Level and Safety Actions: Limited visitor access, monitoring, periodic maintenance. Continuance of access by guided tours only is recommended. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal.

(Battery Pratt) (18)

Preservation Treatment: Preservation and limited restoration. Deterioration of material and assembly does not appear to be as severe in Battery Pratt as in other batteries. With its close proximity to the visitor access, Battery Pratt offers the opportunity for limited restoration for interpretive purposes.

Access Level and Safety Actions: Limited visitor access until safety measures are in place. Install barriers or markers on all drop offs, particularly on the upper level. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal. Monitoring, periodic maintenance.

Battery Clark (16): High Interpretive Priority. This battery, located out of sight of the river, is important in illustrating the variety of artillery technology used at Fort Stevens. As a mortar battery, it employed different methods for bombarding ships. Its isolated location in the park's fort site currently invites few visitors. Its location right next to a residential neighborhood, which can be viewed from the Battery Clark site, provides a confusing context for interpreting the battery and its purpose. Installing attractive, historically compatible, visual barriers along the park boundary in the Battery Clark area, where the residential neighborhood would be seen from visitor vantage points, could resolve the setting situation. Installing interpretive signage along the main pedestrian route in the park's fort site, which directs visitors to a closer view of Battery Clark, would help to increase visitor's awareness of its presence. Installing an interpretive panel at the battery would provide visitors with an understanding of how the battery operated and how it contributed to the function of the fort.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Fence off the battery from public access until safety measures can be implemented. Limited visitor access to underground rooms by organized tours only. Install barriers on all drop offs. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal. Monitoring, periodic maintenance.

Parados (21): High Interpretive Priority. The Parados was an important element of Fort Stevens, particularly in relation to artillery technology of the period. Its purpose was to protect the soldiers from incoming fire. Also, built into the Parados were the West Battery commander station, a mine observation station, and the fort's first power generation facility.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Limited visitor access-tours only on the interior. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal. Monitoring, periodic maintenance.

Mine Casemate and Mine Commander's Station (31): High Interpretive Priority. This property was the command center for mines placed in the Columbia River until World War II. The structure of otherwise unprotected walls with windows and doors, is an example of a trend away from an unnecessary amount of protective cover (with its resulting dampness), a trend shortly to be curbed by development of the airplane. Its location provides a gateway to the Spanish American War and Mine Theme areas. Interior and exterior signs could be installed at the building and in the focus area.

Preservation Treatment: Preservation of this building is recommended.

Access Level and Safety Actions: Limited visitor with guide. Monitoring, periodic maintenance.

Mine Cable Storeroom (12) and Test Tanks (13): Low Interpretive Priority. These facilities were part of the system used to mine the entrance to the Columbia River. The mines were an important part of the harbor defense system. These facilities are not as important for public understanding of the activities and facilities that were integral to the mining operations during this era, but they act as additional background for the mining story.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Visitor closure, monitoring, periodic maintenance.

Battery Russell: (2) High Interpretive Priority. This recommendation primarily relates to the battery's location relative to new park development. Due to the site location and scale of the structure, Battery Russell is both imposing and attractive to the park visitor. This master plan proposes that the Battery Russell area become the visitor orientation and interpretive core of the park. As such, Battery Russell might be the visitors' initial exposure to the military component of the park.

Preservation Treatment: Preservation. Measures to arrest corrosion and spalling are needed. Repairs to the drainage system are needed.

Access Level and Safety Actions: Consideration should be given to closing off the lower level to public access until the safety concerns can be addressed. Limited visitor access to some of the rooms after repairs. Remove or repair tripping hazards, foot traps, exposed bolts or sharp metal. Remove soil and vegetation from the upper level. Monitoring, periodic maintenance.

Fire Control Hill (1): High Interpretive Priority. This site is important in illustrating the triangulation techniques used for aiming the Fort Stevens guns.

Preservation Treatment: Preservation. The structures of Fire Control Hill appear to be of two distinct construction types. The larger, centrally placed command office is unreinforced, poured in place concrete. Though it lacks a roof, and settlement cracks appear occasionally in the walls, actual concrete deterioration seems to be minor. Small details, such as the drip molding over the windows, still have a reasonable profile.

The other structures (base end stations) are small, reinforced "bunker-type" observation stations. Relatively recent preservation intervention of new rolled roofing installations have reduced moisture infiltration. Active oxidation of the short support columns at the front corners of the roof slabs is occurring. Evaluation of columns capacity should be undertaken. Remove soil and vegetation from the top of the structures.

Access Level and Safety Actions: Unlimited visitor access following preservation and safety actions-install barriers on all drop-offs. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal. Site stairways are narrow with steep steps, and void of handrails. Visitors should be advised in signage that the combination of structure design and steep terrain require caution. Monitoring, periodic maintenance.

Searchlight Generator and Searchlights (30): Low Interpretive Priority. These features are well away from the central area where interpretation of the World War I era will occur. It is recommended that their interpretation be done at a location in the interpretive focus area. Their function was to discover and identify enemy vessels, and to illuminate the enemy to facilitate target location and judgment of fire results.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Visitor closure, monitoring.

Guard House (9): High interpretive priority. The Guard House is an interesting building that adds to the visitors' understanding of life at Fort Stevens. The building is rich in historic fabric, and offers high interpretive potential for the military justice system and associated military life. Preservation Treatment: Rehabilitation. The Guard House is an unreinforced brick structure. There is an extensive amount of interior historic fabric that is highly vulnerable to loss from lack of exterior maintenance. A standard military slate roof is leaking badly. The actual slates appear in reasonable condition and repair seems feasible. The problems appear to be associated with failed flashings and deteriorated sheathing. Under certain conditions, slate roofs are subject to wind-driven rain, and sheathing deterioration may be from intense winter storm rains being pushed beneath the slates. The downspouts are also extensively damaged and are doing little good except to direct water against the brick walls where it erodes the mortar. The complete roof, gutter, and downspout system should be repaired as soon as possible to prevent a rapid escalation in the deterioration of this structure.

The extensive brick wall appears in relatively good condition with the exception of mortar damage primarily around the downspouts. Localized damage is present in some brick, but is repairable. A maintenance repointing project of brick mortar joints should accompany roof repairs.

A larger question exists in a structural context for the Guard House. As an unreinforced masonry building, it would be subject to certain degrees of structural upgrading to improve seismic performance. A seismic evaluation of the Guard House would allow the opportunity to integrate any required structural improvements into other rehabilitation measures like the new roof.

Access Level and Safety Actions: Limited visitor access by schedule once repairs are completed, monitoring, periodic maintenance. Access to the Guard House should be limited until the roof and its structure can be evaluated and needed repairs made. Tripping and other injury hazards should be identified and repaired. Access for physically disabled visitors will require development of access to the main floor and intermediate cell block level by means of a ramp or lift. Monitor, periodic maintenance.

War Games Building (17): Low Interpretive Priority. First built as housing associated with the West Batteries, this building was converted to a center for war games, where strategies for protecting the Columbia were enacted. However, details of its use for war games are sketchy. It was remodeled in WW II and used by the Army Corps of Engineers as an office. Its history allows flexibility in interpretation or adaptive modern park uses.

Preservation Treatment: Rehabilitation for visitor use or site management. The building currently houses OPRD staff and volunteer offices and a museum/shop.

Access level and Safety Actions: Limited access, periodic maintenance.

Hospital Site (63): Low Interpretive Priority. Photos on interpretive signs might be installed at this site which provides a view of the "upper fort".

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: Unlimited visitor access.

Communications Bunker (14): Low Interpretive Priority. This served as a center of communications at the fort.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Visitor closure, monitoring, periodic maintenance.

Artillery Engineer (15): Low Interpretive Priority. The engineers operating out of this facility played an important role in maintaining functioning coastal artillery batteries.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Visitor closure.

Battery Smur (22) Low Interpretive Priority. Battery Smur is outside the central area of interpretation. However, the scale of the battery makes it ideal for small children to explore with a relatively high level of safety.

The scale and siting of Battery Smur provide opportunities for a less complex interpretation of the concept of a battery with a reduced level of safety issues for small children and unlimited visitor access.

Preservation Treatment: Preservation. Little deterioration was noted at the structure, and the scale of hazard much less than the other batteries. Remove soil and vegetation from upper level.

Access Level and Safety Actions: Unlimited visitor access once safety measures are implemented. Until then fence off the battery from public access and allow access by guided tours only. Install barriers on all drop-offs. Remove or repair all tripping hazards, foot traps, exposed bolts and sharp metal. Monitoring, periodic maintenance.

Torpedo Loading Room (29) Low Interpretive Priority. While this is a unique feature, it is located at the far eastern side of the fort complex away from the interpretive focus areas.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Monitoring, visitor closure.

Battery Freeman Site(34): Low Interpretive Priority. The battery is no longer present, and its site is not essential for interpreting batteries of this era. It was located in the area where Old Fort Stevens is being reconstructed, and its interpretation at that site would conflict with interpretation of Old Fort Stevens.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: No action.

Central Power Plant (64): Low Interpretive Priority. This power plant replaced the original one built into the Parados. It is not an important interpretive feature.

Preservation Treatment: Ruins.

Access Level and Safety Actions: Monitoring, visitor closure-fence off.

Cemetery (41): Low Interpretive Priority. This is an appealing site. However, since the fort saw extremely limited action (during WW II) and suffered no casualties due to hostile fire, it is not integral to telling the story of the fort.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Monitoring, limited visitor access via pull off on central park entrance road, pedestrian access from the south. No public access or parking from the north. Periodic maintenance.

IV. World War I Theme

Barracks Sites (32) Low Interpretive Priority. The WWI barracks share the same site with the WWII sites and both have map number (32). With the entrance of the United States into WWI in 1917, the fort's population expanded. Numerous barracks and associated structures were constructed. Most of these buildings were viewed as being temporary, and none have survived.

Preservation Treatment: Selective reconstruction of WWI-associated barracks or other similar buildings to provide interpretive or park use opportunities relative to WWI and life at Fort Stevens. An area to consider for reconstruction includes barracks adjacent to the war games building. Better reconstruction information may be available for WWII era barracks which overlapped this area.

Access Level and Safety Actions: Unlimited visitor access. Remove exposed bolts in foundations. Periodic maintenance

V. World War II Theme

Battery Mishler (60): High Interpretive Priority. Battery Mishler should also be interpreted as being converted to the harbor defense command post in 1941.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Limited visitor access through guided tours. Remove or replace tripping hazards, foot traps, exposed bolts and sharp metal. Monitor, periodic maintenance.

Battery 245 (35): High Interpretive Priority. This property has several unique characteristics making it very important for interpretation. It is the only battery built during the World War II era and the only battery with armaments in place (although they are replacements that are similar to the original guns). It is the only battery on a single level, making it ideal for interpretation for the physically challenged. In addition, it is the only battery with good views of both the river and ocean, thus providing a direct visual link between those two major features and the decision to locate Fort Stevens at this spot. Battery 245 appears in good condition. Though subject to the normal safety hazards for the visiting public, limited restoration and improved interpretative support systems could allow this site to be one of the most popular batteries.

Preservation Treatment: Preservation, limited restoration.

Access Level and Safety Actions: Unlimited visitor access to the exterior with safety measures. Visitor closure by locking doors until safety measures can be implemented. Install barriers on all drop-offs. Once hazards along tour route are fixed, guided tour access may be allowed. Upgrade interior lights to vandal-proof type. Remove or repair tripping hazards, foot traps, exposed bolts and sharp metal. Monitoring, periodic maintenance.

Mine Loading Building (36): Low Interpretive Priority. This is one of two remaining buildings dating to the World War II era that are associated with river mining. It has an excellent visual link with the river and offers some spectacular views from the window openings facing the river. The building is separated from the main area identified for interpretation of the World War II era at the park, however.

Preservation Treatment: Preservation.

Access Level and Safety Actions: Limited visitor access, monitoring, periodic maintenance.

Barracks Site (32): High Interpretive Priority. The rows of foundations and chimneys that mark the location of the World War II era barracks are important for providing the visitor with a feeling for the number of troops stationed and trained at Fort Stevens during that era.

Preservation Treatment: Consider reconstruction of some of the buildings, or treat as ruins. Reconstruction of large numbers of these barracks, especially in the central area, would conflict with interpretation of the old fort area. Reconstruction could serve as support for interpretation, management or other visitor uses.

Access Level and Safety Actions: Remove exposed bolts on foundations. Monitoring. Limited visitor access following reconstruction, periodic maintenance following reconstruction.

VI. Between Wars: Dune Stabilization and Community Life Theme

The Fort was occupied between WWI and WWII, and military life and its relation to the surrounding community has interpretive value. An important non-military aspect of the park that should be interpreted is dune stabilization which began in the 1930s.

Dunes Stabilization Plantations: High Interpretive Priority. These plantations, along with the jetty, are the most visible features that demonstrate human efforts to control nature near the south bank of the Columbia River.

Preservation Treatment: Selective restoration of different stages of plantation growth for interpretation.

Access Level and Safety Actions: Monitoring, periodic maintenance, limited visitor access from designated points and trails.

Automotive School Site (33): Low Interpretive Priority. Automobiles, trucks, and roads began to replace the importance of the river for transportation.

Preservation Treatment: Non-extant feature.

Access Level and Safety Actions: No action.

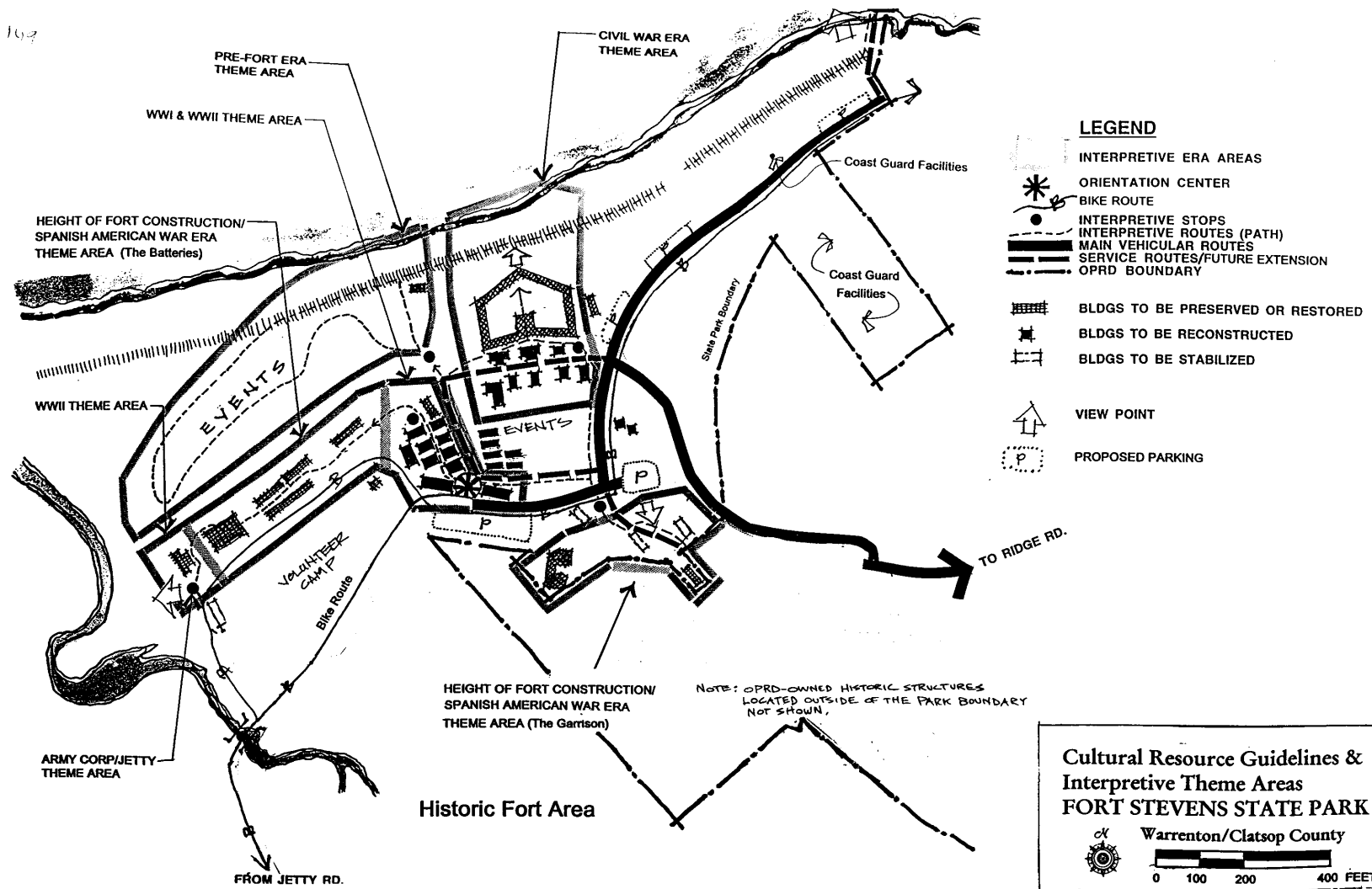
Unknown Era Features

The priorities for interpretation of the following features have not been identified. The era to which each of these features belong, and in many cases, their locations and/or current conditions are unverified. Additional study regarding the era and interpretive importance of the features is encouraged, but not essential to the interpretive priorities of the fort area or theme.

- 44. **Search Light Generators**
- 45. **Search Light Foundations**
- 46. **Guard Bunker**
- 47. **Rifle Range**
- 48. **Bunkers**
- 49. **Lower Bunkers**
- 50. **Historic Bridge Location** (Modern bridge may be constructed near this site.)
- 51. **Tower Foundations**
- 52. **Fire Control Tower**

- 53. **Firing Range**
- 54. **Dump**
- 55. **Guard Bunker**
- 56. **Dump**
- 58. **Bunkers**

(Sites to be located: AMTB Site, TNT Ammunition Bunkers, Dummy Battery Russell, Cainsmore Shipwreck, Coffenbury Homestead)



INTERPRETIVE GUIDELINES -

Chapter Eleven

Fort Stevens staff and volunteers have developed a variety of interpretive materials and displays for the park over the years, with a great deal of emphasis on the historic fort area. The park and Friends of Old Fort Stevens group operate a small visitor center and museum at the fort. They have also provided interpretation of natural resource topics. Interpretive talks and walking tours are provided in the park. This master plan provides a department update and formal clarification of the interpretive goals and themes to be pursued for Fort Stevens. This chapter outlines the official interpretive goals and themes for the park and provides them for staff and volunteer implementation over the next 10-20 years. Staff can use these guidelines as a basis for completing more detailed interpretive objectives and project priorities for the park, and for implementing projects and program elements.

The chapter includes a discussion of the department interpretive goals and objectives, the official interpretive themes and subthemes for the park, and major next steps for implementation in the park by staff and OPRD cooperative groups.

OPRD Interpretive Goals for Fort Stevens State Park

These goals are repeated here from the "Goals" chapter. Goal VI addresses interpretation and education about the park. Text shown in *italic* provides additional explanation for implementation.

Goal VI. Improve Interpretation and Education about the Park.

Provide a parkwide interpretive strategy, routing and stops.

1. **Provide for a range of interpretive opportunities**, parkwide, from self-guided to intensively managed. Begin at a park orientation center and direct visitors to interpretive focus areas, and sites throughout the park. *Until the proposed major park orientation/interpretive center is constructed at Battery Russell, other orientation centers and sites could be used for interpretation, such as the visitor service center at the campground or the fort visitor center. Eventually, overall park orientation and interpretation would occur at the proposed Battery Russell facility.*

Plan for OPRD participation in the Lewis and Clark and the Spanish American War 100 year anniversaries and other major interpretive events.

2. **Park interpretation should support the main theme:** How the meeting of the Columbia River and the Pacific Ocean has shaped both human history and the natural resources of the Fort Stevens area.
3. **Prepare interpretive theme and subtheme guidelines, and media strategies.** *These have been prepared and are presented in this chapter.*
4. **Focus intensive cultural resource interpretation on the fort area.**
 - a. Themes should focus on the strategic location, advancements in military technology, jetty construction and changes it has caused, fort life and Native American life.
 - b. Provide a main access to the fort through the park, which the fort is a part of , and which allows the visitor a view of the strategic location of Point Adams at the historic confluence of the river and the ocean.

- c. Provide a clear, understandable interpretive route through the fort site. Provide a vehicular route through the fort to parking areas which does not conflict with the interpretive route. Provide a central fort history orientation and interpretive building at the fort site, with possible additional museum space as needed.
- d. Clarify, for the visitor, different themes and eras at the fort site and how the themes and eras relate to the buildings and structures found there.
- e. Determine the right preservation and visitor access strategy for each feature at the fort. Prepare a maintenance schedule and restoration/reconstruction priority list for implementing future preservation actions at the fort.
- f. Provide some intensive educational opportunities at the fort which are appropriate to the historic setting, including meeting rooms and overnight accommodations.
- g. Provide outdoor event areas appropriate to the historic setting.
- h. Identify needed buffers for protecting the fort site from modern intrusions, and to protect the neighbors' privacy and access.
- i. Identify partnership approaches for improving the preservation and interpretation of privately-owned historic fort features located outside of the park boundary, while protecting neighborhood privacy.
- j. Provide additional cultural resource interpretation at key feature locations throughout the park.

5. Focus intensive outdoor, natural resource interpretation on the spit.

- a. Interpretive themes should focus on the character and components of the landscape at the confluence of the river and the ocean, before and after the jetty.
- b. Major indoor interpretation and displays of the natural resource themes at Fort Stevens should primarily occur at the proposed Battery Russell center.
- c. Provide a natural resource interpretive structure and focus area at the far parking lot on the spit.
- d. Provide interpretive panels and possible tours at other important and accessible natural resource sites such as Swash Lake, Coffenbury Lake, the Sitka spruce forest, the plantation forest, the deflation plain wetlands and the beach.
- e. Pursue partnerships with park neighbors and local schools to provide or share educational programs. (KOA, Camp Kiwanalong, City Parks, Camp Rilea and Clatsop county may be good potential partners.)
- f. Continue to provide sufficient parking and access for fishers on the spit.
- g. As visitor use increases, especially during the off-season and shoulder seasons, monitor for conflicts with hunting and pursue any needed actions with ODFW to ensure park visitor safety.

OPRD Interpretive Mission

The "Interpretive and Educational" mission for OPRD, in conjunction with its cooperative associations, is to provide interpretive and educational services that can involve visitors in activities which connect them with the natural and cultural heritage found on OPRD's parks and other properties.

OPRD's main interpretive purpose, as a department, is to heighten and spread public understanding, appreciation and enjoyment of the natural and cultural resources of the OPRD system, and to better understand the department's role in providing these opportunities to the public.

1. Promote public understanding of our agency mission and mandates. Promote the role of OPRD as a provider and steward of the public's resources.

Emphasize the value of Fort Stevens State Park in providing and maintaining significant natural, cultural and recreational resources and experiences for the public visiting or living in the north

coast of Oregon. Increase Fort Stevens visibility through interpretation and education programming.

2. Provide visitors with enjoyable and inspirational experiences of OPRD resources and lands.

Develop interpretive themes and subthemes for Fort Stevens State Park that can provide an organizational structure, clarity of understanding and a focus of visitor and management efforts. Define a broad central theme to support all other themes and subthemes. Fully develop a spectrum of themes, related to the central theme, that can provide for a spectrum of visitor interests and educational needs and learning styles. Make learning about Fort Stevens fun, and low effort.

3. Encourage thoughtful public use of resources.

Promote a public awareness of park regulations and management practices which address conservation of natural and cultural resources. Educate visitors on their potential impact on park resources and provide opportunities for visitors to participate in conservation measures and programs. Steer heavy use patterns away from sensitive resources or provide specially designed accesses which do not harm resources.

4. Enhance the OPRD image as a cultural and natural resources manager.

Allow the park interpretive program to serve as a networking tool for interacting with neighbors, local jurisdictions and area agencies, who have vested interests in the resources under park custody, or which contribute to the quality of life or economy of the local area.

5. Generate broad-based public and jurisdictional agency support.

Pursue opportunities to connect the park interpretive program with other private, local, state and national interpretive programs and granting entities or related natural or cultural resource managing agencies and groups.

Fort Stevens State Park Interpretive Themes

The following themes and subthemes have been identified for implementation in the Fort Stevens State Park interpretive program and facilities.

Central Theme for the Park: The Confluence of the Columbia and the Pacific Ocean. The confluence of the Columbia River, the Great River of the West, and the Pacific Ocean has shaped both the natural history and human history of the area, and of Fort Stevens State Park itself. People through time have been driven to enter the treacherous waters of the river to unlock the riches of a continent.

The central theme provides a starting point in presenting Fort Stevens as a gateway to the northwest. The gateway opens the door for closer examination of the biological and geological diversity of the area, and of human exploitation of the gateway and the role of Point Adams/Fort Stevens as guardian and protector of the gateway. It also provides the basis for understanding the "creation" of much of the parkland due to sand accretion from the jetty and from dune stabilization efforts. The state park landscape has been dramatically altered by the wildness of the river and ocean, and by human attempts to control them.

The Columbia River Empties a Continent and Opens a Region: The Columbia River has carried and deposited huge amounts of eroded material from deep within the North American continent, which has been deposited in an ever growing spit and beach complex, and a very dangerous bar at the mouth.

Pre-jetty sand movement and deposition.

Destruction of the pre-settlement beachside grasslands by grazing and trails .

The beachside sand stabilization effort .

Treacherous Waters

- * **The Point Adams historic lighthouse and shipping traffic.**

- * **Shipwrecks.**

- * **South Jetty Construction Attempts to Tame the Bar:** The jetty was constructed by the Army Corp of Engineers in the mid-1800's in an attempt to tame the river for safer shipping traffic. This is an effort that continues today.

Point Adams-Strategic Location : Fort Stevens was settled by Native Americans and was developed by the US military because of its strategic importance at the mouth of the Columbia River.

Clatsop Indian Presence, Trading and Culture.

Fort Stevens: The fort was an important element in our nation's coastal defense system until development of guided missiles and advanced air power made coastal artillery systems obsolete. The fort continued to upgrade fortifications and fire power and was both a social and economic center for the local community.

- * **Old Fort Stevens/Civil War**

- * **Old Fort Stevens Garrison Life**

- * **Army Corp of Engineers' role**

- * **Height of Fort Construction**

- * **Spanish American War (Fort & garrison) and Underwater Mining**

- * **World War I Era Fort and Garrison**

- * **World War II Era fort and Garrison**

- * **Fort Closure and Conversion to a State Park**

The Natural Resources of the Area: The ecosystems within the park are varied, valuable and becoming increasingly rare.

- * **Upland Sitka spruce forest, wetlands, dunal lakes, the bay, the river, the ocean.**

SUMMARY OF LAND USE PERMITTING REQUIREMENTS - Chapter Twelve

This chapter provides a summary of the land use approval requirements that pertain to the implementation of the Master Plan.

Development of park uses and facilities at Fort Stevens State Park is governed by Clatsop County and by the City of Warrenton within their respective jurisdictions under the provisions of their comprehensive plans and zoning ordinances. The City and County comprehensive plans and ordinances are acknowledged by the Land Conservation and Development Commission (LCDC) pursuant to the statewide land use goals, statutes and related administrative rules.

The Clatsop Soil and Water Conservation District (SWCD) also has regulatory authority over land uses in a portion of Fort Stevens State Park. This authority was first established by ordinance in 1948 to regulate land uses and maintain the stability of coastal dunes in dune hazard areas. OPRD will continue to work with the SWCD, through Master Plan adoption and implementation, to assure that the proposals in the Master Plan are in compliance with the SWCD requirements.

This Master Plan for Fort Stevens State Park has been formulated and adopted through the master planning process described under OAR 736 Division 18 and OAR 660 Division 34. The master planning process includes procedures for coordinating with affected local governments to obtain local approval of the Master Plan. Appendix B of this Master Plan contains the documentation formalizing the approval of the Master Plan by the affected local governments.

Development Permits

All of the projects described in this Master Plan are granted conceptual land use approval by the affected local governments, Clatsop County and the City of Warrenton, upon their approval of this Master Plan, as provided under OAR 660-034-0030(2). However, development permits are still required for most of the projects. Prior to beginning construction, the project manager is responsible for consulting with the affected jurisdiction and obtaining the necessary permits. The specific requirements for obtaining development permits for a project, and the kind of local permitting process required, may vary from one project to another.

Chapter 8 outlines specific "conditions of approval" for some of the planned projects, which must be satisfied for development permits to be granted.

The table at the end of this chapter indicates the kind of local permitting process required for each planned project.

Prior to issuance of development permits for a project, the affected local government will conduct the necessary review of the project plans and specs to assure that the project proposed for construction is consistent with the conceptual design and description of the project in the adopted Master Plan and with any conditions of approval" outlined in Chapter 8 for that project. The local government may also review the project for consistency with any applicable standards in the local government's ordinances and development codes, however, any such standards must be clear and objective, as required by OAR 660-034-0030(2)(c). Because the master planned projects are conceptually approved with the approval of the Master Plan, the development review process for a project cannot result in denial of the project, provided that the project is consistent with the Master Plan and any applicable, clear and objective, local government development standards.

Variations From the Master Plan

Under the provisions of OAR 736-018-0040, OPRD may pursue construction of a park use that varies from the adopted Master Plan without first amending the Master Plan provided that the variation is minor, unless the Master Plan language specifically precludes such variation. Specific project design elements that cannot be changed by applying the "Minor Variation" rule are indicated in the "conditions of approval" for certain projects in Chapter 8.

The OPRD Director must determine that a proposed variation from the Master Plan is "minor" using the criteria in OAR 736-018-0040. A minor variation from the Master Plan, which is approved by the Director, is considered to be consistent with the Master Plan, contingent upon the concurrence of the affected local government.

Rehabilitation of Existing Park Facilities

State law allows OPRD to continue any state park use or facility that existed on July 25, 1997. (See ORS 195.125 and OAR 660-034-0030(8).) The law allows the repair and renovation of facilities, the replacement of facilities including minor location changes, and the minor expansion of uses and facilities. Rehabilitation projects are allowed whether or not they are described in an adopted state park master plan. These projects are subject to any clear and objective siting standards required by local governments, provided that such standards do not preclude the projects.

Prior to applying for development permits for a project involving a minor location change of an existing facility or a minor expansion of an existing use or facility, the OPRD Director must determine that the location change or expansion is "minor" using the criteria in OAR 736-018-0043. The Director's determination is contingent upon the concurrence of the affected local government.

Land Use Reviews Required for Implementation of Master Planned Projects

Development Concept (see Chapter 8 for details)	Landuse Review Process
Battery Russell Visitor Center & Trailhead	
<ul style="list-style-type: none"> - Visitor center - Trailhead improvements - Caretaker RV site 	Clatsop County review through Type 2 procedure as described in Ordinance section 2.120
The Fort	
- Fort roads and parking construction in general	Clatsop County review through Type 3 procedure as described in Ordinance section 2.130
- Central dayuse parking lot	Clatsop County review through Type 3 procedure as described in Ordinance section 2.130
- RV camp for volunteers	Clatsop County review through Type 3 procedure as described in Ordinance section 2.130
- Reconstruction of historic buildings for interpretation, museum, staff offices, museum store & café, overnight retreat	Clatsop County review through Type 3 procedure as described in Ordinance section 2.130
- Stabilize/rehab existing historic buildings	Clatsop County review through Type 1 procedure as described in Ordinance section 2.110
- Docks on the Columbia River	Clatsop County review through Type 2 procedure as described in Ordinance section 2.120
North Camp Loops Rehab & Registration Area	
<ul style="list-style-type: none"> - New central camp loop road (completed) - North loops bike trail (completed) - Camp loop rehab to group tent site - New group tent camp area - Dump station rehab - New camp registration area (completed) 	Warrenton review under Ordinance section 3.092(2)
South Camp Loops Rehab, New Camp Center & RV Group Camp	
<ul style="list-style-type: none"> - New access roads from Coffenbury Lake to south camp loops - Realign main access road, construct access for camp center, group RV camp & yurt camp - Rehab small camp loop for group tent camp - Expand yurt camp - New group RV camp - New camp center and camp talk area 	Warrenton review under Ordinance section 3.092(2)
South Coffenbury Lake Retreat & Day Use	
<ul style="list-style-type: none"> - Restroom replacement & new picnic shelters - New retreat cabins, café & meeting hall - New boat dock and boat rental building 	Warrenton review under Ordinance section 3.092(2)
Relocated Park Office & Maintenance Area	
- New park office, access and parking	Warrenton review under Ordinance section 3.092(2)

<ul style="list-style-type: none"> - New maintenance yard & storage buildings - Peter Iredale & Connector Road intersection realignment & maintenance area access 	
Peter Iredale Access, Horse Camp & Interpretive Area	
<ul style="list-style-type: none"> - New horse camp - Interpretive site with kiosk and parking - Rehab/replace Peter Iredale beach access parking & restroom - Improve Peter Iredale vehicular beach access 	Warrenton review under Ordinance section 3.092(2)
Peter Iredale Road and Intersection Improvements	
Improve road and intersection (as described in Chapter 8)	Warrenton review under Ordinance section 3.092(2)
Emergency Vehicular Beach Access	
<ul style="list-style-type: none"> - Improvement of existing emergency access over the foredune, not for general public use 	Clatsop County review through Type 2 procedure as described in Ordinance section 2.120
Bike Trail rehab & realignment in the Peter Iredale Road & Coffenbury Lake Area	
Rehab & realignment bike trail (as described in Chapter 8)	Warrenton review under Ordinance section 3.092(2)
Jetty Road Bike Lanes	
<ul style="list-style-type: none"> - Widen a section of Jetty Road for bike lanes 	Clatsop County review through Type 2 procedure as described in Ordinance section 2.120
Equestrian Trails	
<ul style="list-style-type: none"> - Trails connecting horse camp and certain beach access areas 	<p>Clatsop County review through Type 2 procedure as described in Ordinance section 2.120 (in County jurisdiction)</p> <p>Warrenton review under Ordinance section 3.092(2) (in City jurisdiction)</p>
Hiking Trails in the Coffenbury Lake Area	
<ul style="list-style-type: none"> - Trail from Coffenbury Lake to Delaura Beach road - Trail connecting Coffenbury Lake, Camp Kiwanalong and county land 	Warrenton review under Ordinance section 3.092(2)
Trestle Bay Nature Trails	
<ul style="list-style-type: none"> - boardwalks and wildlife viewing blinds extended into tide lands 	Clatsop County review through Type 2 procedure as described in Ordinance section 2.120

Appendix A: Recreation Need Assessment

Recreation demand information is summarized here. Information is included regarding local demand as perceived through staff contacts, Regional SCORP demand and Community SCORP demand. Those activities which could be supported at Fort Stevens are addressed.

Observed Local Use

OPRD staff have observed a growing local demand for the following activities based on requests and conversations with local citizens and groups.

- Vehicular Beach Access
- Clamming and fishing
- Camping
- Picnicking
- Group Use
- Interpretive & Educational Programs
- Trails connections
- Retain Natural Setting

Regional SCORP Demand

The 1987 State Comprehensive Outdoor Recreation Plan demand survey provided staff with statistics regarding growth in demand and levels of use by regions across the state. The following information is based on surveys conducted about recreational use on the north to mid coast. Taken all together it is apparent that the demand for a wide array of recreational activities within the north coast region, is rising dramatically, and is outstripping the supply of opportunities for many things such as trails and campsites.

The following lists recreation activities which show a very large net growth in demand into the year 2000. The activity is listed with the projected net number of new participants by the year 2000, from 1987.

• RV camping	1,084,158**
• Tent camping	281,278*
• Group camping	48,925**
• Picnicking	448,640*
• Sight-seeing	1,453,507**
• Fishing	1,428,932**
• Swimming at a beach	586,051**
• Beach use	673,062**
• Nature observation	806,155*
• Interpretive Center visits	376,009
• Outdoor photography	936,649**
• Day hiking	591,404
• Horseback riding	1,453,507**

**Highest growth in state

*Second highest growth in state

The north coast has the highest use per unit in the state of trail miles, campsites and picnic sites.

Community SCORP Demand

In 1993, a new survey of Oregonians was completed to measure demand for recreational activity opportunities within their communities. Widespread support was voiced for the following activities:

- Historic exhibits
- Outdoor concerts
- Wildlife and nature education
- Walking and jogging trails
- Picnicking
- Biking
- Beach swimming
- Boat fishing
- Driving for pleasure and sightseeing.

Overall, respondents preferred to recreate in natural to primitive settings.