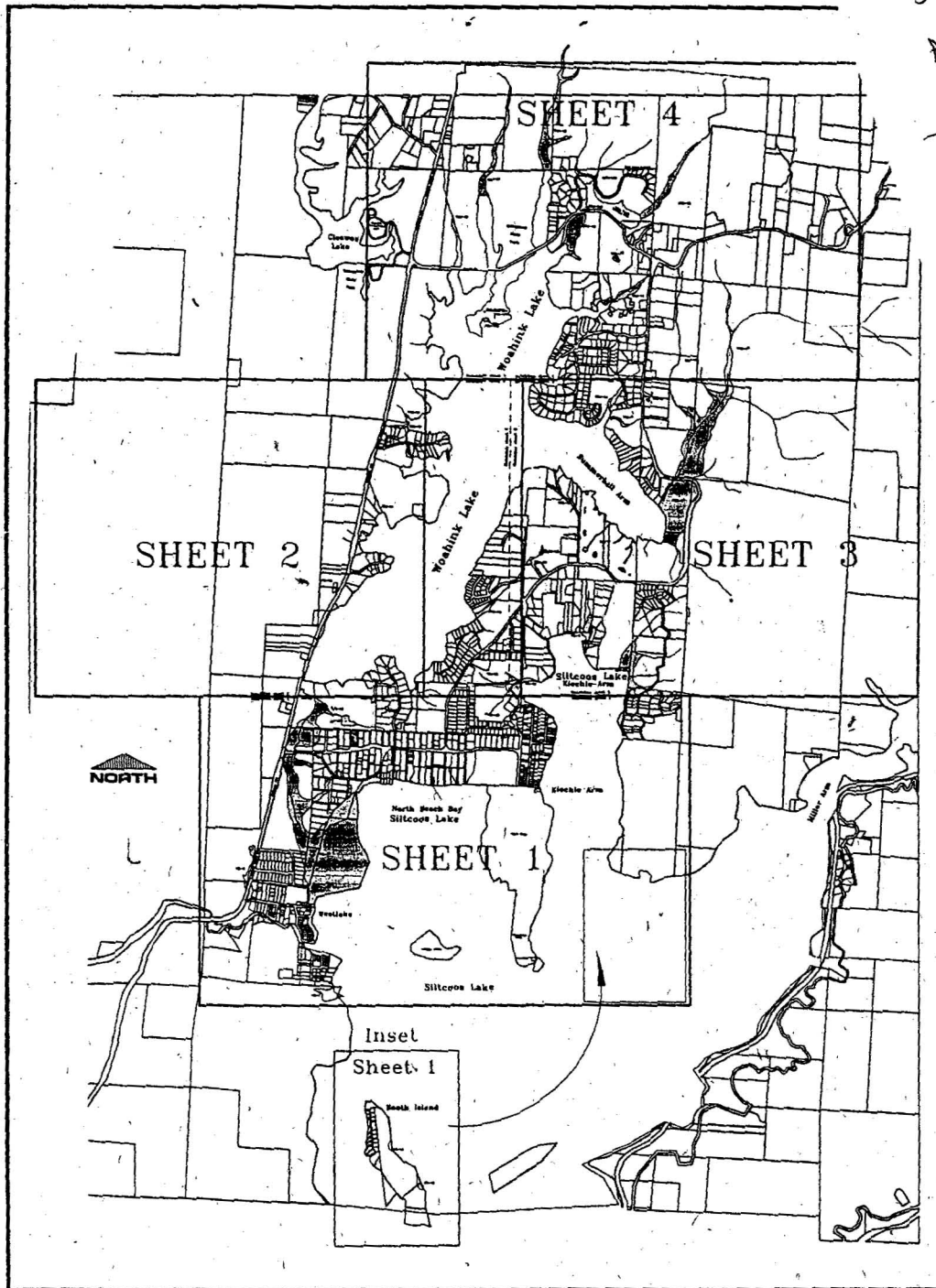


Dunes City Local Wetlands Inventory and Riparian Inventory

*See 2004 update for
Area w/in UGB. updates
of w/m \approx includes LSWs.
Keep this for WLS outside
UGB.*



Prepared for
Lane Council of Governments
Eugene, Oregon

Prepared by
Pacific Habitat Services, Inc.
Wilsonville, Oregon
(503) 570-0800

November 1996



APPROVED WETLANDS INVENTORY
Oregon Division of State Lands
Meets Local Wetland Inventory standards
Date 12/96 Approved by J. Moran

Dunes City Local Wetlands Inventory and Riparian Inventory

Prepared for
Lane Council of Governments
Eugene, Oregon

Prepared by
Pacific Habitat Services, Inc.
Wilsonville, Oregon
(503) 570-0800

November 1996



Dunes City
Local Wetlands Inventory
and
Riparian Inventory

Prepared for

Tracy Brown
Lane Council of Governments
125 E. Eighth Street
Eugene, Oregon 97401

Prepared by

John van Staveren
Patricia Farrell
Fred Small
Dale Shank
Pacific Habitat Services, Inc.
9450 SW Commerce Circle, Suite 180
Wilsonville, Oregon 97070
(503) 570-0800
(503) 570-0855 FAX
PHS Project Number: 6-1224

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Little Dunes City Tackles Big Development Questions

By Winston Ross

The Register-Guard

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DUNES CITY - This town has no municipal tax base, no public sewer or water system, no police force and no fire department.

What this town of 1,290 people does have is six new development applications to contend with, all filed in a single summer. The proposals, five of which involve the city's former mayor, could add 100 new homes to the shores of pristine Woahink Lake.

Now the tiny coastal town, four miles south of Florence, is taking what state land use officials say is an extremely rare step. It is considering a moratorium on new subdivisions and planned unit developments for at least 120 days, maybe longer.

The community has a history of fighting to control its destiny, dating back to at least 1963, when Dunes City incorporated in order to block a U.S. Forest Service proposal that would have forced out residents.

Dunes City is an example of how residents of small coastal towns are feeling swamped by growth, pinched between an ocean on one side, a mountain range on the other and a raft of cash-rich immigrants and developers in between.

"What I see is a small town that is all of the sudden having to face growing up," said Ralph Farnsworth, a Dunes City resident. Farnsworth said he is specifically concerned about the impact of nearly 100 new houses on the water quality of Woahink Lake, with more runoff, septic systems, disturbed soil and fertilizers draining into the drinking source.

"Through the years, we've had one or two houses built a year, and all of the sudden somebody put a book together saying Florence is the greatest place to retire and we've got five different subdivisions coming in. What I'm seeing is degradation of the water quality. It's not alarming, but it's serious enough for me to say, 'Wait a second. What's going on here and how much worse is it going to get?' "

Rob Ward, who resigned as Dunes City mayor in October amid allegations that he'd unfairly used his influence to overwhelm the city's 2 1/2 person staff, says there's nothing to worry about. Dunes City has plenty of available land and it is long past time for it to join the coast's other burgeoning cities, he says.

"Florence has run out of property," he said. "Builders are scrambling for places to live. Oregon land use laws are designed to put people in cities."

In this case, a bunch of people. Ward's proposals, plus a sixth put forth by another developer, could boost the city's population by 15 percent, assuming two people moved into each new house.

Less fuss and nonsense

If ever there was a city ill-equipped to handle a major growth spurt, it's Dunes City.

The town's first meeting was held in a councilor's home. Its first major issue was the state law requiring all cities to adopt a budget before spending any money. Since liquor and gas taxes wouldn't be available for months after incorporation, there were no funds to be had. Residents pooled their own money to create the city's first budget.

In the past 40 years, population growth has limped along at 1 percent or 2 percent a year, and is today only twice what it was when the town incorporated. The city's budget is \$900,000, compared with neighboring Florence's \$27 million.

All of Dunes City's houses rely on septic tanks for wastewater disposal. Many of them are aging and, based on an earlier state study, probably leaking harmful phosphates and nitrates into the ground and Woahink Lake, around which half its residents reside.

"This is a situation where you have a beautiful coastal lake, a source of drinking water for everybody on the lake," said Holly Martin, a Boring attorney whose mother lives on the lake. "You have a small city that basically doesn't have an infrastructure and that's quite frankly the way everybody likes it. Everybody moved there because they don't want to have all the fuss and nonsense of the more traditionally structured communities.

"But it gives you a problem when everybody has a septic system, and they're all draining into the lake," said Martin, who has been hired by two Dunes City couples to fight the development proposals. "Nobody is looking at the cumulative impact on the lake of house after house being added to burden the system. It's come to a crisis point."

Ward agrees that the city's services are sparse. "We are a city of committees," he said. "We have a road committee that goes out and cleans a culvert or two." But, he said, that's perfectly fine. City ordinances are basic. The only growth that's allowed is one house-per-acre. City leaders froze commercial zoning in the 1970s and no additional commercial development is allowed.

The three planned unit developments Ward proposed were new to Dunes City - a PUD allows developers to skirt the one-house-per-acre rule if they agree to maintain enough land as "open space" so that the average density of the property doesn't change.

The staff hired the nonprofit Lane Council of Governments to assist it and the applications are all meeting the highest standards of approval, Ward said.

"Everything was done by the book," he said. "In the end, all the i's were dotted and all the t's were crossed."

Rewriting its building code

LCOG'S efforts haven't stopped the controversy, however. With the town's then-mayor proposing five of six new developments, other residents cried conflict of interest. Though no one accuses Ward of breaking any laws, "it sure didn't pass the smell test," Farnsworth said.

To make the debate even more complicated, the city is rewriting its building code - a process begun long before Ward's proposals came forward - leading suspicious residents to claim the

mayor was working to make things easier for his own projects. City Councilor Peter Howison threw a copy of the revised code on the floor in an October meeting, complaining that a provision had been struck from it that would protect natural conditions in a developed area.

Residents packed city council meetings through the fall and howled in opposition to the projects, three of which have already been approved by the City Council.

On Oct. 13, under intense fire, Ward resigned his post as mayor, saying he had become too much of a distraction to the city.

"I found it was becoming an issue for me to earn a living, to develop property in Dunes City and be the mayor at the same time," Ward said. He also was tired of the irreverence community members showed him in public meetings, he said. "You can disagree with somebody. But what bothers me the most about what I see going on now is there's no reason why you have to be disrespectful in the process."

Ward's critics say there's plenty of reasons to be skeptical about what Ward is doing. Some whisper that he deliberately dropped the development proposals in the city's lap all at once, knowing the city planner was about to resign and her replacement would be too overwhelmed to give the plans much scrutiny. The next city planner lasted just two weeks.

"The people of Dunes City are really disappointed, and I'm disappointed, that he wouldn't give us more consideration," Howison said. "He subjected the city to five developments in the space of a few months."

Ward said that's merely a coincidence. "There was no strategy," he said. "It just happened."

The result, said Martin and others, is that the mayor's applications were pushed through with few of the requirements they should have met before approval. Rules to ensure that Woahink's water quality is protected are relegated to "conditions of approval" that will now have to be enforced after-the-fact, rather than before the projects were approved.

"There's been a steep learning curve," said Hilary Dearborn, a planner with Lane Council of Governments. "Some things were approved with conditions that really should have happened up front."

The bottom line is "there's a history of not saying up front 'No, this doesn't meet requirements,' and both the planning commission and City Council weren't willing to put their feet down in the beginning and say 'It doesn't meet code; we can't do it,'" Dearborn said.

Fear for the lake

Residents such as Farnsworth fear the casualty in all this will be the lake.

Farnsworth has served on the city's water quality committee for two years, a task that involves testing the water with another member, Mark Chandler, in Farnsworth's small fishing boat.

Few claim the lake is poisoned or polluted, but late-summer algae blooms and spikes in bacterial counts have caught residents' attention. And a former lakeside resident contracted a rare waterborne illness after she failed to properly filter the water she drew from the lake to

drink, Farnsworth said.

Farnsworth said he backs the moratorium so the lake's water quality can be studied before any more developments are approved - although it wouldn't stop any of the six proposals already in motion.

"If we don't stop and do what has to be done to protect this lake we're making a serious mistake," he said. "The answer is to replace the book of ordinances we have now and enforce some new ones. They streamlined ordinances but didn't fix anything. I'm not against building. They can build the Empire State Building across the lake. But don't pollute my water."

For the past two years, for example, the city has been working on passing an ordinance requiring maintenance of septic systems. Until it passes, argues Farnsworth and others, there shouldn't be new development.

Sewer system questions

Ward said he's all for preserving the lake's water quality, but a moratorium doesn't accomplish that. The houses and septic systems that pose a threat to Woahink are already there, he said, citing a Lane County analysis in the 1970s that determined 25 percent of the septic systems around the lake were failing. New houses will have new systems. Ward doesn't see the need for a halt on development.

"You can't declare a moratorium just to have a moratorium," he said. "There has to be a reason."

The council voted at its Dec. 8 meeting only to notify the state's Department of Land Conservation and Development that it is considering a moratorium. In the meantime, councilors challenged the public to come up with some hard evidence for a moratorium, as required for state approval.

Howison said he wants the city to develop "best management practices," as is common in other municipalities, to guide future development in a way that protects the lake before new projects are approved.

"These concentrated developments are putting our water quality at risk," he said. "With this increased density, eventually we're going to pollute our lakes."

Winston Ross can be reached at (541) 902-9030 or rgcoast@oregonfast.net.

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1.0 INTRODUCTION

On December 1, 1995, the Oregon Division of State Lands (DSL) awarded a grant to the Lane Council of Governments to conduct Local Wetlands Inventories (LWI) in the Cities of Florence and Dunes City. Both of these communities are currently working with the Oregon Department of Land Conservation and Development to update their comprehensive plans. Part of this periodic review requires revisions to Goal 5 (*Open Spaces, Scenic and Historic Areas, and Natural Resources*) of Oregon's Statewide Planning Goals. The objective of this goal is to conserve open space and protect natural and scenic resources. Complying with Goal 5 requires an inventory of the location, quality and quantity of wetlands within a jurisdiction. The LWI, which attempts to identify the location and assess the quality of all wetlands within the Urban Growth Boundary, satisfies the requirements of this goal.

In April 1996, Pacific Habitat Services, Inc. (PHS) was selected to conduct the LWIs in Florence and Dunes City. PHS was also hired to inventory and assess the quality of riparian areas within the two cities. This report presents the results of the wetlands and the riparian inventories conducted in Dunes City. A separate report was prepared for the City of Florence.

This report begins by discussing the methodology used to conduct the field work for the LWI and the riparian inventory, the methodology used to produce the maps for the inventory, and definitions used in the inventory.

2.0 DEFINITIONS

These definitions were used to conduct the Local Wetlands Inventory and the riparian areas inventory in Dunes City and are used in this report.

Wetland

Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. (Federal Register 1982).

Wetlands Regulation

Wetlands in Oregon are regulated by DSL under the Removal-Fill Law (ORS 196.800-196.990) and by the U.S. Army Corps of Engineers (Corps) through Section 404 of the Clean Water Act.

1987 Manual

The Corps of Engineers Wetlands Delineation Manual, Technical Report Y-87-1 (Environmental Laboratory 1987).

This manual is used by the Corps and DSL to document the location of wetlands within the State of Oregon. The 1987 manual provides technical criteria, field indicators, and recommended procedures to be used in determining whether an area is a jurisdictional wetland. Undisturbed areas require three criteria for them to be classified as wetland. These criteria are hydric soils, a dominance of hydrophytic vegetation, and wetland hydrology.

Hydric Soils

Soils which are ponded, flooded, or saturated for long enough during the growing season to develop anaerobic conditions.

Periodic saturation of soils causes alternation of reduced and oxidized conditions which leads to the formation of redoximorphic features (gleying and mottling). Mineral hydric soils will be either gleyed or will have bright mottles and/or low matrix chroma. The redoximorphic feature known as gley is a result of greatly reduced soil conditions which result in a characteristic grayish, bluish or greenish soil color. The term mottling is used to describe areas of contrasting color within a soil matrix. The soil matrix is the portion of the soil layer that has the predominant color. Soils which have brightly colored mottles and a low matrix chroma are indicative of a fluctuating water table.

Hydric soil indicators include: organic content of greater than 50% by volume, sulfidic material or "rotten egg" smell, and/or presence of redoximorphic features and dark soil matrix, as determined by the use of a Munsell Soil Color Chart. This chart establishes the chroma, value and hue of soils based on comparison with color chips. Mineral hydric soils usually have a matrix chroma of 2 or less in mottled soils, or a matrix chroma of 1 or less in unmottled soils.

Wetland Hydrology

Permanent or periodic inundation or prolonged soil saturation sufficient to create anaerobic conditions in the soil.

Wetland hydrology is related to duration of saturation, frequency of saturation, and critical depth of saturation. The 1987 manual defines wetland hydrology as inundation or saturation within a major portion of the root zone (usually above 12 inches), typically for at least 12.5% of the growing season. The wetland hydrology criterion can be met, however, if saturation within the major portion of the root zone is present for only 5% of the growing season, depending on other evidence.

Hydrophytic Vegetation

Plant life growing in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content.

The U.S. Fish and Wildlife Service, in the *National List of Plant Species that Occur in Wetlands*, has established five basic groups of vegetation based on their frequency of occurrence in wetlands. These categories, referred to as the "wetland indicator status", are as follows: obligate wetland plants (OBL), facultative wetland (FACW), facultative (FAC), facultative upland (FACU), and obligate upland (UPL)

Indicator Code	Status
OBL	Obligate wetland. Estimated to occur almost exclusively in wetlands (>99%)
FACW	Facultative wetland. Estimated to occur 67-99% of the time in wetlands.
FAC	Facultative. Occur equally in wetlands and non-wetlands (34-66%).
FACU	Facultative upland. Usually occur in non-wetlands (67-99%).
UPL	Obligate upland. Estimated to occur almost exclusively in non-wetlands (>99%). If a species is not assigned to one of the four groups described above it is assumed to be obligate upland.
NI	Has not yet received a wetland indicator status, but is probably not obligate upland.

Growing Season

The portion of the year when soil temperatures at 19.7 inches below the soil surface are higher than biological zero (41° Fahrenheit, 5° Celsius).

The growing season for any given site or location is determined from U.S. Soil Conservation Service (SCS) data and information. The length of the season can be approximated from frost free days, based on air temperature.

Wetland Classification

The classification of wetlands as defined by plants, soils and the frequency of flooding is described in "Classification of wetlands and deepwater habitats of the United States" (USFWS, 1979).

Riverine System

Includes all wetlands and deepwater habitats contained within a channel but not including palustrine emergent, scrub-shrub or forested wetlands, or estuarine systems. The riverine system is generally all freshwater rivers, creeks and their tributaries.

Lacustrine System

Includes areas where there is open water greater than 6.6 feet (2 meters) deep, with an area greater than 20 acres, and which is unvegetated by trees, shrubs, and persistent emergents, emergent mosses or lichens. Lacustrine waters may be tidal or nontidal, but ocean derived salinity is always less than 0.5%

Palustrine System

All nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens and all such wetlands that occur in tidal areas where salinity is less than 0.5%. This includes areas traditionally called swamps, marshes, fens, as well as shallow, permanent or intermittent water bodies called ponds.

Unconsolidated Bottom

All wetland and deepwater habitats with at least 25% cover of particles smaller than stones, and a vegetative cover less than 30%.

Aquatic Bed

All wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. This class includes rooted and floating vascular plants, as well as algal beds and aquatic mosses.

Emergent Wetland

These wetlands have rooted herbaceous vegetation which stand erect above the water or ground surface.

Scrub-shrub Wetland

Wetlands dominated by shrubs and tree saplings that are less than 20 feet high.

Forested Wetland

Wetlands dominated by trees that are greater than 20 feet high.

Local Wetlands Inventory

An inventory of all wetlands greater than 0.5 acres in size within a local jurisdiction using the standards and procedures of OAR 141-86-110 through 141-86-240.

In 1989, the Oregon state legislature authorized DSL to develop a statewide wetlands inventory for planning and regulatory purposes. Accordingly, DSL established Local Wetlands Inventory (LWI) standards and guidelines under ORS 196.674. An approved LWI replaces the National Wetlands Inventory maps and is incorporated into the statewide wetlands inventory.

An LWI is conducted using color or color infrared aerial photographs taken within 5 years of the inventory initiation and at a minimum scale of 1 inch = 400 feet (1" = 400'). Wetlands are located using the on-site option where access to property is allowed or off-site where access is denied. Wetlands can be mapped off-site by using information such as topographic maps, aerial photographs, soils surveys, and the National Wetlands Inventory quadrangles.

The approximate location of wetlands at a scale of 1" = 400' is placed on a parcel-based map. The parcel-based map allows the property owner, the local jurisdiction, and DSL, to know which tax lots may contain wetlands.

Wetland Assessment

Determining the relative quality of a wetland by assessing its functions and conditions.

The methodology generally used to determine the relative quality of wetlands for purposes of an LWI is the Oregon Freshwater Wetland Assessment Methodology (Roth, et. al. 1996)

Wetland Function

A characteristic action or role associated with a wetland that contributes to a larger ecological condition such as wildlife habitat, water quality and/or flood control.

Wetland Condition

The integrity of a wetland's physical and biological structure. This determines the ability of the wetland to perform specific functions, as well as its resilience and enhancement opportunities.

Riparian Area

The area of transition from an aquatic ecosystem to a terrestrial ecosystem adjacent to a river, lake, or stream.

Riparian areas provide erosion control, sediment filtering, forage and cover for wildlife habitat; as well as food, shade and large woody debris for fish habitat. It also provides water storage.

3.0 PROJECT METHODOLOGY

3.1 Public Involvement

Prior to beginning the inventory, the Lane Council of Governments and the City of Dunes City mailed letters to selected landowners who may have wetlands on their property. Landowners who had areas of mapped hydric soils, soils with hydric inclusions, National Wetlands Inventory mapped wetlands, or suspected wetland areas received a notice of permission for site access.

Landowners who would not allow PHS to access their property were requested to give notice to city staff. Those allowing access did not need to take any action. A parcel-based map of the urban growth boundary of Dunes City was prepared clearly showing those parcels where access was approved, denied, or an appointment was requested. These property boundaries were transferred to aerial photographs and used in the field by PHS staff during the inventory.

Three public meetings were held during the course of the inventory. The first meeting was held on April 16, 1996, to introduce the project to the residents of Dunes City. This meeting was held prior to the date required for return of the access request letters to answer any questions affected landowners may have for representatives of Dunes City, the Lane Council of Governments, PHS, or DSL.

The second public meeting was held on Saturday, August 3, 1996, to show the residents of Dunes City and Florence how the inventory process was conducted by the staff of PHS. The field trip focused on selected wetland and riparian areas of Florence.

The third public meeting was held on September 23, 1996, to present the draft results of the wetland and riparian inventory to the residents of Dunes City. Changes made to the maps at the public meeting and verified in the field, appear on the final version of the maps included with this report.

3.2 Local Wetlands Inventory

3.2.1 Routine Off-site Determination

Prior to beginning field work, off-site mapping was conducted to determine the approximate location of wetland boundaries based on available information. This information included the USGS topographic quadrangles, the *Soil Survey of Lane County Area Oregon* (SCS 1982), the National Wetlands Inventory maps, and color aerial photographs at a scale of 1" = 400'.

If access to land was allowed, the wetland boundaries were verified in the field (see Section 3.2.2). If access was not granted, the boundaries were based on the mapping conducted in the office, on observation of wetland boundaries from adjacent roads or properties, and on an aerial reconnaissance conducted over the Florence-Dunes City area.

3.2.2 Routine On-site Determination

Where property access permission had been granted, on-site observation and inspection of soils, vegetation, and hydrology were made using the Routine Onsite method of the 1987 manual. Soil pits were excavated to a depth of approximately 18-inches in selected locations. The soil profiles were examined for hydric soils and wetland hydrology field indicators. A visual percent-cover estimate of the dominant species of the plant community for a maximum 30-foot radius was conducted at each sampling location. Sampling locations were chosen to document a change in the wetland boundary and a particular plant community visible on an aerial photograph. Data was recorded in the field and transferred to computer-generated wetland delineation data sheets (included in Appendix A) in the office.

Field work for the inventory was conducted between May and August 1996. No wetland boundaries were staked or flagged in the field.

3.3 Wetland Quality Assessment

3.3.1 Wetlands of Special Interest for Protection

The first filter in the Oregon Method is to determine whether the wetland is in a management plan, is protected by regulatory rules or statutes, or is uncommon in Oregon. Ten questions are answered for each wetland and a "yes" answer to any of the questions puts the wetland into the "special interest for protection" category. If the wetland falls into this category, it is noted on the wetland characterization sheet.

3.3.2 The Oregon Freshwater Wetland Assessment Methodology

The quality of wetlands in the study area were assessed using the *Oregon Freshwater Wetland Assessment Methodology* (OFWAM) (Roth et al. 1996). OFWAM was developed by an interagency committee to assess the relative quality of wetlands primarily for planning and educational purposes. OFWAM does not assign a numeric ranking to the wetlands, but does determine the relative quality of six functions and three conditions for each of the wetlands. A description of each of the functions and conditions is included below.

Wetland Functions

Wildlife habitat: Evaluates the habitat diversity for species usually associated with wetlands, without emphasizing one particular species. Wetlands assessed by OFWAM can provide diverse habitat for wildlife, habitat for some wildlife species, or does not provide habitat.

Fish habitat: Evaluates how a wetland contributes to fish habitat in streams, ponds or lakes associated with a wetland. The questions are suitable for both warmwater and coldwater fish and no particular species is emphasized. Wetlands assessed by OFWAM can have fish habitat function intact, impacted or degraded, or lost or not present.

Water Quality: Evaluates the potential of a wetland to reduce the impacts of excess nutrients in stormwater runoff on downstream waters. A wetland's water quality function can be assessed by OFWAM as intact, impacted or degraded, or lost or not present.

Hydrologic control: Evaluates the effectiveness of a wetland to reduce downstream flood peaks and store floodwaters. A wetland's hydrologic control functions can be assessed by OFWAM as intact, impacted or degraded, or lost or not present.

Education: Evaluates the suitability of a wetland to provide educational opportunity and act as an "outdoor classroom." A wetland assessed by OFWAM can have educational uses, have the potential to provide or not be appropriate for educational uses.

Recreation: Evaluates the suitability of a wetland and associated watercourses for non-powered boating, fishing, and similar recreational activities. A wetland assessed by OFWAM can provide, have the potential to provide, or not provide recreational opportunities.

Wetland Conditions

Sensitivity to Future Impacts: Evaluates the wetlands ability to sustain itself and its ability to recover from future impacts. It is an indication of risk to the wetland because of future changes in the watershed and surrounding land. A wetland can be assessed by OFWAM as sensitive to future impacts, potentially sensitive to future impacts, or not sensitive to future impacts. An undisturbed forested wetland is more sensitive to future impact than a wetland which has already been disturbed, such as agricultural wetland.

Enhancement Potential: Evaluates the suitability of a degraded wetland for enhancement. A wetland providing this condition does not provide one or more of the functions assessed by OFWAM. A wetland fulfilling this condition, therefore, would be of lower overall quality than a wetland providing wildlife habitat, fish habitat, etc. Wetlands which provide diverse wildlife habitat were not assessed in this section, as per the revised OFWAM. Wetlands are assessed as either high enhancement potential, moderate enhancement potential, or little enhancement potential.

Aesthetic quality: Evaluates the visual and aesthetic quality of the wetland. Wetlands can be considered pleasing, moderately pleasing, or not pleasing.

3.3.3 Field Methodology

During the process of determining the boundaries for the LWI, data were also collected for the process of determining its relative quality. Data collected for this purpose are explained in the *Wetland Characterization* section of OFWAM. Data collected in the field included the number of wetland classes, the types of disturbance (if any) in the wetland area, the hydrology of the wetland area (e.g. the location of constrictions), the presence of fish, large woody debris, the degree of vegetative cover, and other information necessary to complete the assessment of the wetland in the office.

If the wetland determination was off-site, the OFWAM section and wetland characterization was based on review of the aerial photographs, the aerial reconnaissance flight, and knowledge of other similar or adjacent wetlands.

3.3.4 Office Assessment

Subsequent to the field work, the data collected for each wetland were used to answer questions for each function and condition. Additional information on the wetlands, the landscape and the general area were gathered in the office. The answers within each function and condition section of the methodology were entered into a computer spreadsheet, which automatically displays the results of the assessment methodology.

Certain criteria were established for the OFWAM assessment prior to beginning. The following is a list of certain standards which were used in answering the questions.

All areas were considered as “urban areas” even though they might be outside the UGB or were in undeveloped areas of the city (Wildlife question 1, 4, and 9; Aesthetics, question 6) and were considered to be in an “urbanizing” area (Hydrologic control, question 7).

If a wetland was adjacent to either Siltcoos or Woahink Lake it was considered to have more than 1 acre of unvegetated open water present (Wildlife, question 4). Wildlife question 1 was answered based on structural diversity, rather than a strict interpretation of Cowardin class. In addition, all the wetlands were considered to have development downstream, due to the residential developments on the banks of the lakes (Hydrologic control, question 6).

Siltcoos Lake is considered a water quality limited lake, based on a proposed listing by the Oregon Department of Environmental Quality (Fish Habitat, question 4; Water Quality, question 6; Sensitivity to Future Impacts, question 3). This question appears to be judged incorrectly in the habitat sections of the methodology, giving the highest ranking to the lower water quality in the Wildlife and Fish Habitat (Wildlife, question 7; Fish, question 4). If these questions were answered according to the current OFWAM, it resulted in several wetlands receiving a “lower” functional assessment. Based on discussions with DSL and Emily Roth, principal author of OFWAM, these answers were reversed for the Dunes City LWI, so that good water quality received an “A”, and water quality limited received a “C” in the Wildlife and Fish Habitat sections. Other questions related to water quality were not changed.

3.4 Riparian Inventory

A riparian inventory and assessment were conducted as part of this project for Woahink, Little Woahink, and Siltcoos Lakes, and 18 drainages in the Dunes City project area. Riparian assessments were conducted for representative stretches of drainages which connect wetlands, or are adjacent to perennial streams or lakes.

Riparian areas are transition areas between the aquatic and terrestrial zones. These areas provide a variety of functions, such as wildlife habitat and corridors, flood storage and amelioration, thermal regulation of adjacent waterways, contribution of large woody debris and organic material, erosion control, and bank or slope stabilization. During the riparian inventory PHS assessed not only the physical characteristics, but also the quality of the riparian corridors based on a series of qualitative questions related to riparian functions and conditions.

In order to assess the physical character of the riparian areas a standardized riparian assessment sheet was developed to summarize channel characteristics, dominant riparian vegetation, and estimated riparian measurements. Channel characteristics include channel width and depth, bank condition, percentage of shade, dominant riparian classification (similar to the Cowardin classification for wetlands), the presence of large woody debris, type of channel substrate, and the degree of human channel modification (e.g. culverted, channelized). The dominant riparian vegetation was listed according to strata, similar to the wetland characterization. Riparian measurements included estimates of riparian width based generally on an estimated horizontal distance from the top of bank to a break in slope, and a horizontal distance to the top of the slope or drainage watershed. In addition, general notes were made about the location of the riparian stretch, associated wetlands, and adjacent land-use.

3.5 Riparian Quality Assessment

In addition to the standard assessment sheet, a series of questions relating to riparian functions were developed in order to assess the overall health or functional “value” of the riparian areas. These questions are divided into the following functions: thermal regulation, erosion control, flood control/water quality, and wildlife habitat. As with OFWAM, several

of the questions were repeated in different sections, due to the overlap between the functions, and as a means to ensure consistency in the answers. A description of each of the functions is included below.

Riparian Functions

Thermal Regulation: The ability of the riparian area to provide thermal regulation for the adjacent water body. This is important for fish habitat and water quality. Functional assessment is based on the dominant vegetation type and height, percent shade, slope, and degree of disturbance.

Erosion Control: The ability of the riparian area to provide bank or slope stability and sediment removal. This function is dependent on adjacent slope angles, degree of disturbance, bank condition, soil type and percent of vegetation cover.

Flood Control/Water Quality: The ability of the riparian area to withstand flooding, provide floodwater storage and desynchronization of peak flows, and remove sediments and nutrients. This function is dependent on the percent of woody vegetation, the presence of associated wetlands, the floodplain width, and the presence of physical flow restrictions.

Wildlife Habitat: The ability of the riparian zone to provide food, cover, and nesting areas, protection from predators, and separation from humans. This function is dependent on vegetation diversity, the presence and duration of water, the presence of large woody debris, the presence of associated wetlands, the width of the riparian area, structural diversity, and the degree of disturbance.

An assessment of high, moderate, or low functional value was then determined for each of the riparian areas. Off-site riparian assessments were based on review of aerial photographs and available maps.

3.6 Cartography

Aerial photographs were supplied by the City of Dunes City for use in the field. These maps are 1995 true color, and are approximately 1" = 400'. Clear acetate was overlaid and permanently registered on the photographs and preliminary wetland boundaries and data point locations were then drawn directly on the acetate in the field. In addition, areas within the project area to which we had permission to enter were drawn on the acetate overlays. These acetate sheets were then removed from the photographs at the completion of field work and scanned into a digital format which could be overlaid onto the base map.

The base map information was provided by Lane Council of Governments and the City of Dunes City. Base map data included a hard copy and an electronic copy of the parcel-base tax lots, hydric soils, soils with hydric inclusion, the NWI mapping, the project boundary and various geographic names. No topographic information was available for this project, other than the standard USGS 7.5-minute topographic series. The electronic base information was

transferred from a .DXF file to AutoCAD drawing (.DWG) files. The scanned wetland boundaries were then inserted as a separate layer.

Additional layers added onto the AutoCAD base map included drainage basin boundaries, streams from the USGS, additional geographic names, wetland codes, and sample point locations. Each wetland was assigned a code based on the three letter watershed designation and the number of wetlands within each watershed (SIL- # for Siltcoos Lake, and WOA-# for Woahink Lake). Wetlands that were hydrologically connected but separated by roads, culverts, or riverine systems were labeled with a code modifier (WOA-6A, 6B). Sample points were numbered consecutively from south to north. In addition, on-site determinations and previous delineations were shown with different hatch overlays.

The riparian mapping was drawn on the 1" = 400' base maps and scanned into the base as a separate layer. The riparian areas were labeled with a riparian code (DCR-#) and an assessment location symbol. Wetland boundaries are included within the riparian areas, however, each are designated with a different hatch-pattern overlay.

4.0 STUDY AREA CHARACTERISTICS

4.1 Setting

The City of Dunes City was incorporated in 1963. It lies six miles south of the City of Florence and immediately east of the Oregon Dunes National Recreation Area. The City covers an area of approximately 2.5 square miles (1600 acres), which includes the 820-acre Woahink Lake (near the center of the city) and approximately 23,000 linear feet of Siltcoos Lake shoreline along North Beach Bay, Kiechle Arm, and Booth Island.

The 522-acre Jessie M. Honeyman State Park is located northwest of Dunes City and occupies approximately 15% of the shoreline of Woahink Lake. The remainder of the shoreline of Woahink Lake is in private ownership.

In 1963 the population of Dunes City was 676. Today, the population is estimated to be 1,220, which includes a high proportion of retirees. The city has no public water system or wastewater system. All residential water use comes from the lake and all waste disposal is through private septic systems. Consequently, the expanding population of Dunes City and development pressure along the margins of the Lake increases the importance of maintaining the quality of water in the lake for future generations.

4.1.1 Climate

The Dunes City area has a temperate marine climate. The average annual precipitation is approximately 65 inches. Approximately 50 inches of rainfall typically occurs between October and March. The wettest month is usually December, with over 11 inches of rain in a typical month. In 1994, the Dunes City area received almost 56 inches of rain, approximately 9 inches below normal. In 1995, the total was 89.58 inches almost 25 inches above normal.

For the period of January through March 1996, the rainfall total was 34.13 inches, approximately 6 inches above the typical 28 inches for the same period.

The mean annual temperature is approximately 50 degrees Fahrenheit. The warmest months are usually July and August, with typical average maximum temperatures of just above 60 degrees Fahrenheit.

4.2 Topography

The topography of the Dunes City study area is dominated by Woahink Lake. The highest elevations are along the east side of the lake, where the hills reach a maximum height of approximately 500 feet National Geodetic Vertical Datum (NGVD). The surface of Woahink Lake is approximately 39 feet NGVD and Siltcoos Lake is 9 feet NGVD. Woahink Lake has relatively steep banks sometimes reaching a height of more than 50 feet. The generalized topography and project area boundaries are shown on Figure 1.

4.3 Hydrology

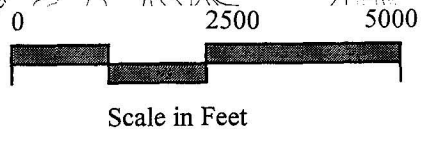
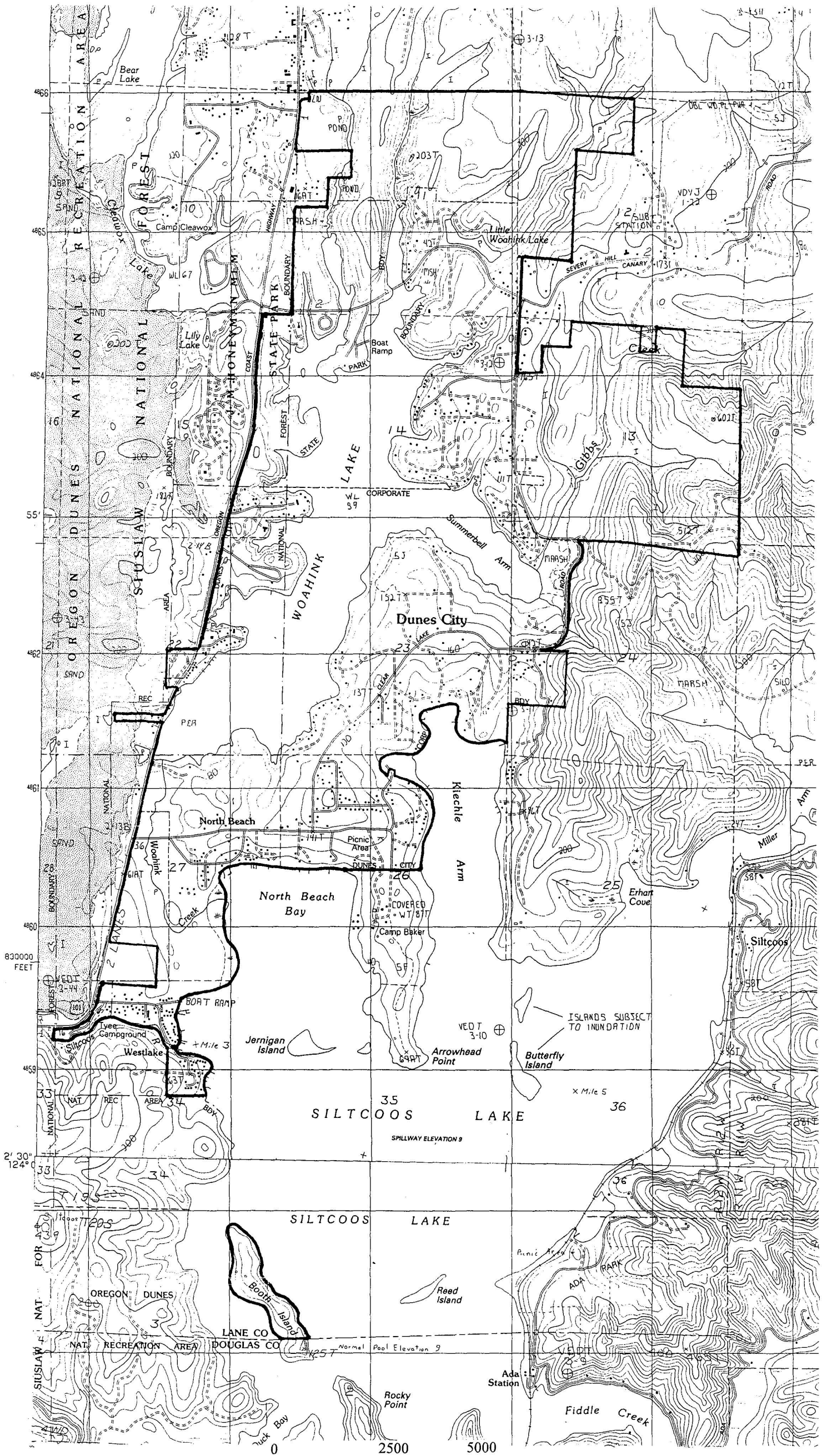
4.3.1 Hydrologic Features of the Dunes City Area

Hydrologic features of the Dunes City area include: Siltcoos and Woahink Lakes, Little Woahink Lake, the Siltcoos River, Woahink Creek, Gibbs Creek and several unnamed tributaries. Except for the northwest corner, almost all of Woahink Lake is within Dunes City's urban growth boundary (UGB). Only a relatively small portion of Siltcoos Lakes lies within the UGB.

Woahink Lake

The 820-acre coastal lake was probably once a tributary to the ancestral Siltcoos River. During the late Pleistocene the tributary did not have the erosive force necessary to stop the advancing dunes, which blocked the tributary and created the lake. Woahink Lake lies on a marine terrace. The elevation of the lake is approximately 38 feet above mean sea level. The maximum depth is approximately 74 feet (or 36 feet below sea level), making it the lowest point of any of the sand-dune dammed lakes along the Oregon coast (Johnson et. al. 1985). It has an average depth of 33 feet. As with other sand dune-dammed lakes, Woahink Lake has a dendritic pattern typical of reservoirs, with steep walled edges and few areas of adjacent wetland.

Three large partially isolated arms (Summerbell to the southeast and two north of Canary Road) are fed by groundwater-maintained stream channels. Gibbs (or Miller) Creek flows into Summerbell Arm. Three unnamed creeks flow through or adjacent to Honeyman State Park. All three creeks are likely to maintain a population of salmonids and all have associated high-quality wetlands. The lake is used for fishing and contains a variety of warmwater and coldwater fish.



DATE: _____
 BASE MAP INFO: _____
 JOB NO.: _____

Dunes City LWI Project Area

Pacific Habitat Services, Inc.
 8450 SW Commerce Circle, Suite 180
 Wilsonville, Oregon 97070
 Phone: (503) 870-0800



Fig. 1

Woahink Lake mixes once a year during the winter. During the summer the lake is stratified. In the deeper portions of the lake the bottom material is muck. In the littoral areas, areas close to the shore, the substrate is sand. The nutrient levels and alkalinity in the lake are relatively low. Although the level of nitrate is high, the levels of phosphorus and chlorophyll are relatively low. As such, the transparency of the lake is above average and the phytoplankton populations are relatively low. The lake is described as oligotrophic, or a lake with relatively low productivity.

Siltcoos Lake

Siltcoos Lake has a surface area of 3,164 acres and is the largest coastal lake in Oregon. The name was originally Tsiltcoos, a local chief and a native American family name, but was changed to Siltcoos by the U.S. Board of Geographic Names. The origin of the lake is similar to Woahink Lake in that it was formed when an advancing dune blocked its course to the ocean, impounding the ancestral Siltcoos River and its tributaries and creating the lake. The lake is unusual in that it does not have the dendritic pattern common to dune-dammed lakes. It is also very shallow, with a maximum depth of 22 feet and an average depth of 11 feet. By contrast, Woahink Lake's maximum depth is 74 feet and its average is 33 feet.

Siltcoos Lake is fed by several streams, including Woahink Creek. The perennial outlet to Siltcoos Lake is the Siltcoos River, a 2.5-mile river that flows to the ocean. In the past, lake level fluctuations have caused saltwater intrusion up the river and into the lake. In 1963, however, the International Paper Company constructed a dam approximately 1.5 miles below the lake, regulating the level of the lake and providing year-round freshwater to their pulp mill. The dam allows passage of anadromous fish and has raised the level of the lake.

The primary recreational activity in the lake is fishing. Siltcoos Lake is one of the best warmwater fishing lakes in Oregon.

The shallow depths of the lake have created good conditions for the growth of macrophytes. Several large wetlands exist around the perimeter of the lake, but only one within the LWI study area. Unfortunately, there are extensive populations of invasive non-native plants such as *Elodea* and *Myriophyllum*. *Elodea* infestations were noted by local residents as long ago as the 1930s. Control of the plants has been studied but complete control is unlikely.

The chemistry of the lake is similar to other coastal lakes, with low alkalinity and moderate levels of sodium and chloride. The pH of the lake is slightly acidic in the winter months and neutral to slightly alkaline in the summer months. Due to the shallow depths and the ocean winds, the lake does not stratify and is well mixed. There is no evidence of oxygen depletion, but the lake is classified as moderately eutrophic.

4.3.2 Drainage Basin Designation

The study area was divided into two watersheds. These drainage basins and their size are listed in Table 1 below:

Table 1: Drainage Basins and Areas for the Dunes City Local Wetlands Inventory (not including lakes).

Drainage Basin	Area (acres)
Siltcoos	211
Woahink	710
Total Project Acreage	921

Hydrologic Indicators

Direct indicators of hydrology observed during the inventory included saturation of the soil to the surface, inundation, and a shallow water table. Indirect indicators include oxidized rhizospheres with living roots, algal mats, drift lines, and wetland drainage patterns. All water tables observed during the inventory were assumed to be apparent and not perched. In no location was a hardpan observed in the soil.

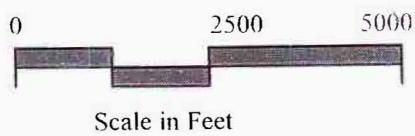
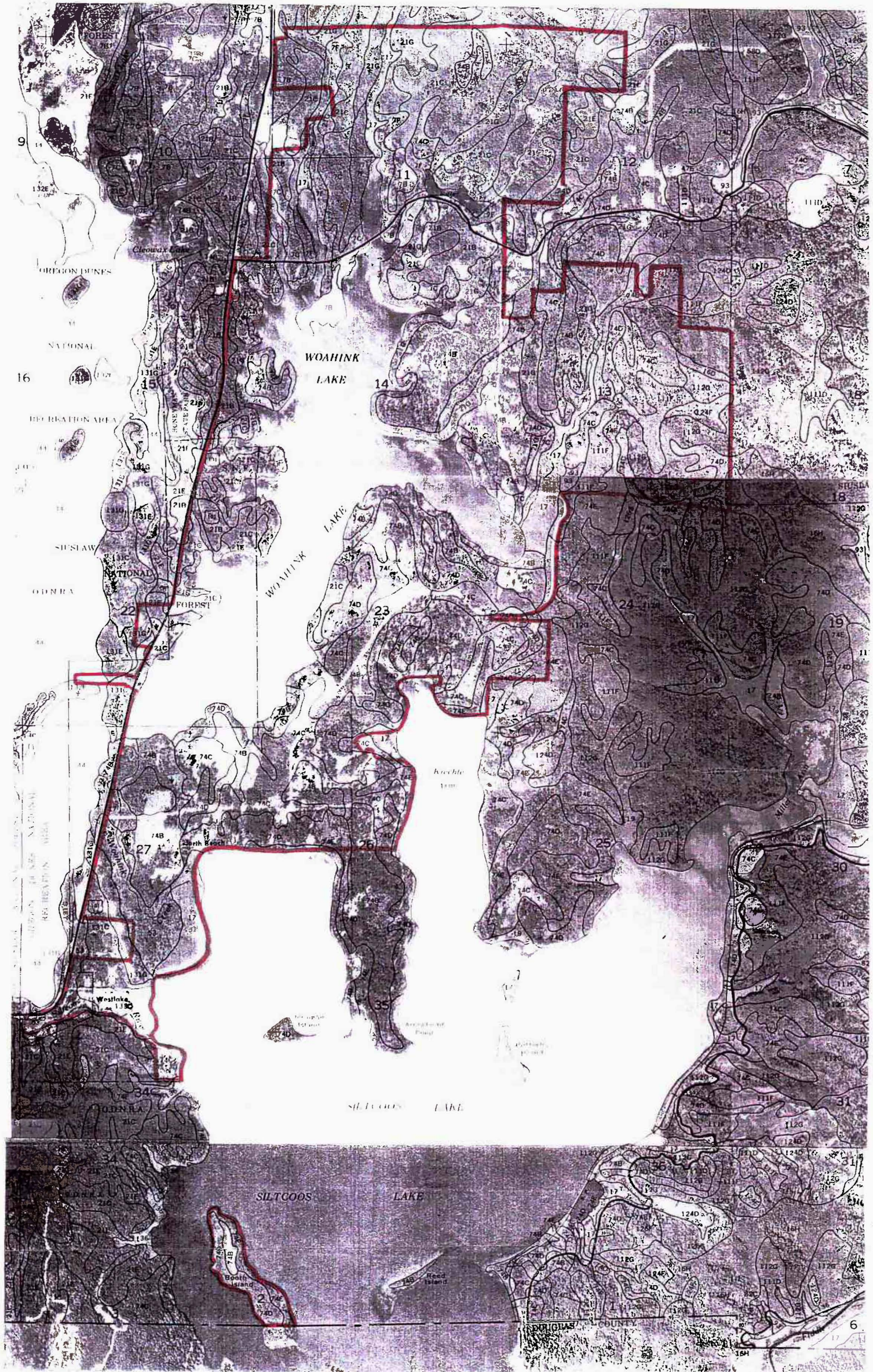
The inventory field work was originally scheduled to begin during the week of March 25, 1996. However, due to delays in receiving and mapping the locations of properties that could not be accessed, the field work did not begin until May 3 and ended on August 8, 1996. In retrospect this delay was probably fortunate, because it allowed the high water levels observed in the Dunes City area during the winter and early spring to abate. During the late summer, many of the groundwater-driven wetlands did not contain standing water. The accuracy of the inventory, therefore, was not affected by the large amount of rain received during the winter and early spring. We were able to observe the high water present in the wetlands in the spring and the relative drought conditions of late summer.

4.4 Soils

Table 2 lists the fifteen soils types that have been mapped within the Dunes City study area and Figure 2 illustrates the location of these soils.

Table 2: Soil Units and their Hydric Soils Status for the Dunes City Local Wetlands Inventory

Soil Symbol	Soil Name	Hydric Status
17	Brallier muck, drained	Hydric
53	Heceta fine sand	Hydric
7C	Bandon sandy loam, 7 to 12 percent slopes	Non-Hydric
7F	Bandon sandy loam, 12 to 50 percent slopes	Non-Hydric
21B	Bullards-Ferrelo loams, 0 to 7 percent slopes	Non-Hydric



DATE: _____
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Fig. 2

Table 2: Continued

Soil Symbol	Soil Name	Hydric Status
21C	Bullards-Ferrelo loams, 7 to 12 percent slopes	Non-Hydric
21E	Bullards-Ferrelo loams, 12 to 30 percent slopes	Non-Hydric
21G	Bullards-Ferrelo loams, 30 to 60 percent slopes	Non-Hydric
74B	Lint silt loam, 0 to 7 percent slopes, (Inclusion of poorly drained soil)	Non-Hydric
74C	Lint silt loam, 7 to 12 percent slopes, (Inclusion of poorly drained soil)	Non-Hydric
74D	Lint silt loam, 12 to 20 percent slopes(Inclusion of poorly drained soil)	Non-Hydric
111F	Preacher loam, 25 to 50 percent slopes	Non-Hydric
112G	Preacher-Bohannon-Slickrock complex, 50 to 75 percent slopes	Non-Hydric
133C	Waldport-Urban land complex, 0 to 12 percent slopes. Yaquina (hydric inclusion)	Non- Hydric
136	Willanch fine sandy loam	Hydric

Brallier muck, drained is a deep, very poorly drained, organic soil found in low tidal basins and on stream floodplains near tidelands. It formed in decomposed fibrous organic residue. Typically, the surface layer is very dark grayish brown muck about 3 inches thick. The substratum to a depth of 60 inches or more is dark brown , highly decomposed and partly decomposed muck.

Heceta fine sand is a deep, poorly drained soil found in depressional areas between dunes. It formed in eolian sand derived dominantly from weathered Tyee Sandstone. The surface layer is typically brown fine sand about 5 inches thick. The substratum to a depth of 60 inches or more is grayish brown, mottled fine sand.

Bandon sandy loam, 7 to 12 percent slopes, is a moderately deep, well drained soil found on marine terraces. It formed in marine and eolian sand. The surface is typically covered with a mat of needles, leaves, twigs, and moss about 2 inches thick. Typically, the surface layer is dark grayish brown sandy loam about 3 inches thick. The subsoil is dark brown and yellowish brown sandy loam and gravelly sandy loam about 32 inches thick. The next layer is a yellowish brown cemented layer about 8 inches thick. The substratum to a depth of 60 inches or more is yellowish brown fine sand.

Bandon sandy loam, 12 to 50 percent slopes is a moderately deep, well drained soil found on short, sharply incised terrace fronts and along deeply incised drainageways on old marine terraces. It formed in marine and eolian sand. The surface is typically covered with a mat of needles, leaves, twigs, and moss about 2 inches thick. The surface layer is dark grayish brown sandy loam about 3 inches thick. The subsoil is dark brown and yellowish brown sandy loam and gravelly sandy loam about 32 inches thick. The next layer is a yellowish brown cemented layer about 8 inches thick. The substratum to a depth of 60 inches or more is yellowish brown fine sand.

Bullards-Ferrelo loams, 0 to 7 percent slopes, is a deep and well drained soil found on marine terraces. It consists of 50 percent Bullards loam and 35 percent Ferrelo loam. Bullards soil was formed in sandy alluvial and eolian material, while Ferrelo soil was formed in marine sediment over eolian sand. The surface of both soils is typically covered with a mat of leaves, twigs and needles about 2 inches thick. The surface layer of Bullards is dark grayish brown loam about 4 inches thick. The subsoil is dark reddish brown gravelly loam and strong brown sandy loam about 54 inches thick. The substratum to a depth of 61 inches is strong brown and dark brown loamy fine sand. Ferrelo surface layer is a dark brown loam about 10 inches thick. The subsoil is dark brown and brown loam and silt loam about 37 inches thick. The substratum to a depth of 60 inches or more is brown fine sandy loam over reddish brown, weakly cemented fine sand.

Bullards-Ferrelo loams, 7 to 12 percent slopes, is a deep and well drained soil found on dissected marine terraces. It consists of 50 percent Bullards loam and 35 percent Ferrelo loam. Bullards soil was formed in sandy alluvial and eolian material, while Ferrelo soil was formed in marine sediment over eolian sand. The surface of both soils is typically covered with a mat of leaves, twigs and needles about 2 inches thick. The surface layer of Bullards is dark grayish brown loam about 4 inches thick. The subsoil is dark reddish brown gravelly loam and strong brown sandy loam about 54 inches thick. The substratum to a depth of 61 inches is strong brown and dark brown loamy fine sand. Ferrelo surface layer is a dark brown loam about 10 inches thick. The subsoil is dark brown and brown loam and silt loam about 37 inches thick. The substratum to a depth of 60 inches or more is brown fine sandy loam over reddish brown, weakly cemented fine sand.

Bullards-Ferrelo loams, 12 to 30 percent slopes, is a deep and well drained soil found on deeply dissected marine terraces. It consists of 45 percent Bullards loam and 40 percent Ferrelo loam. Bullards soil was formed in sandy alluvial and eolian material, while Ferrelo soil was formed in marine sediment over eolian sand. The surface of both soils is typically covered with a mat of leaves, twigs and needles about 2 inches thick. The surface layer of Bullards is dark grayish brown loam about 4 inches thick. The subsoil is dark reddish brown gravelly loam and strong brown sandy loam about 54 inches thick. The substratum to a depth of 61 inches is strong brown and dark brown loamy fine sand. Ferrelo surface layer is a dark brown loam about 10 inches thick. The subsoil is dark brown and brown loam and silt loam about 37 inches thick. The substratum to a depth of 60 inches or more is brown fine sandy loam over reddish brown, weakly cemented fine sand.

Bullards-Ferrelo loams, 30 to 60 percent slopes, is a deep and well drained soil found on deeply dissected marine terraces. It consists of 45 percent Bullards loam and 40 percent Ferrelo loam. Bullards soil was formed in sandy alluvial and eolian material, while Ferrelo soil was formed in marine sediment over eolian sand. The surface of both soils is typically covered with a mat of leaves, twigs and needles about 2 inches thick. The surface layer of Bullards is dark grayish brown loam about 4 inches thick. The subsoil is dark reddish brown gravelly loam and strong brown sandy loam about 54 inches thick. The substratum to a depth of 61 inches is strong brown and dark brown loamy fine sand. Ferrelo surface layer is a dark brown loam about 10 inches thick. The subsoil is dark brown and brown loam and silt loam

about 37 inches thick. The substratum to a depth of 60 inches or more is brown fine sandy loam over reddish brown, weakly cemented fine sand.

Lint silt loam, 0 to 7 percent slopes is a deep, well drained soil found on marine terraces and on ridgetops in areas of dissected terraces. It formed in mixed alluvium and volcanic ash. The surface is typically covered with a mat of needles and roots about 2 inches thick. The surface layer is a dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum to a depth of 69 inches is yellowish brown, mottled silty clay loam.

Lint silt loam, 7 to 12 percent slopes is a deep, well drained soil found on dissected marine terraces. It formed in mixed alluvium and volcanic ash. The surface is typically covered with a mat of needles and roots about 2 inches thick. The surface layer is a dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum, to a depth of 69 inches is yellowish brown, mottled silty clay loam.

Lint silt loam, 12 to 20 percent slopes is a deep, well drained soil found on dissected marine terraces. It formed in mixed alluvium and volcanic ash. The surface is typically covered with a mat of needles and roots about 2 inches thick. The surface layer is a dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum, to a depth of 69 inches is yellowish brown, mottled silty clay loam.

Preacher loam, 25 to 50 percent slopes is a deep, well drained soil found on side slopes of uplands in the Coast Range. It formed in colluvium and residuum derived from sedimentary rock. The surface layer is typically very dark gray and very dark grayish brown loam about 18 inches thick. The subsoil is dark yellowish brown loam about 34 inches thick. The substratum to a depth of 58 inches is dark yellowish brown loam. Weathered, fractured sandstone is at a depth of 59 inches. Depth to bedrock ranges from 40 to 60 inches.

Preacher-Bohannon-Slickrock complex, 50 to 75 percent slopes is a deep, well drained soil found on side slopes of upland in the Coast Range. It formed in colluvium and residuum derived from sedimentary rock. It consists of 35 percent Preacher loam, 30 percent Bohannon gravelly loam, and 20 percent Slickrock gravelly loam. The Bohannon soil is mainly on the upper part of downtrending ridges and headwalls, while the Slickrock soil is on small slump benches and toe slopes. The Preacher soil is in the intermediate positions. The surface layer is typically very dark grayish brown and very dark gray loam about 18 inches thick. The subsoil is dark yellowish brown loam about 34 inches thick. The substratum to a depth of 58 inches is dark yellowish brown loam. Weathered bedrock is at a depth of 58 inches. Depth to bedrock ranges from 40 to 60 inches.

Waldport-Urban land complex, 0 to 12 percent slopes is a deep and excessively drained soil. It formed in eolian sand of mixed origin. It consists of 40 percent relatively undisturbed Waldport fine sand, 10 percent disturbed Waldport fine sand and 40 percent Urban land. The surface is typically covered with a mat of leaves, needles, and twigs about 3 inches thick. The surface layer is very dark gray and very dark grayish brown fine sand about 5 inches thick. The substratum to a depth of 60 inches or more is yellowish brown fine sand.

Willanch fine sandy loam is a deep, poorly drained soil found on floodplains of streams in the Coast Range. It formed in mixed alluvium. The surface layer is typically very dark grayish brown, mottled fine sandy loam about 11 inches thick. The upper 23 inches of the substratum is strong brown, light brownish gray, and grayish brown, mottled fine sandy loam and the lower part to a depth of 60 inches is grayish brown and gray loamy sand. Many areas have thin strata of sand or silt throughout the profile.

4.5 Vegetation

4.5.1 Overview

Dunes City is located within the Sitka Spruce (*Picea sitchensis*) Forest Zone (as characterized by Franklin and Dyrness 1973). This vegetation zone occupies a low-elevation strip along the immediate coastline, often only a few miles wide, subject to a relatively wet and mild climate. The zone is essentially a variant of the Western Hemlock (*Tsuga heterophylla*) Zone, distinguished largely by the presence of Sitka spruce, frequent summer fogs, and proximity to the ocean. The climate provides nearly ideal growing conditions, accounting for the high productivity of forest stands, as well as prolific growth in shrub and herb-dominated communities.

Common trees found in this region include Sitka spruce, western hemlock, western red cedar (*Thuja plicata*), Douglas fir (*Pseudotsuga heterophylla*), shore pine (*Pinus contorta*), and red alder (*Alnus rubra*). Sites disturbed through fire or logging may develop into stands of mixed conifers including spruce, hemlock and Douglas fir. However, red alder may overtop the regenerating conifers and develop into a nearly pure alder forest. Dense shrub communities may also form on disturbed sites, often in conjunction with red alder; the dense understory may delay conifer colonization almost indefinitely. Thicket-forming shrubs common in the region include salmonberry (*Rubus spectabilis*), salal (*Gaultheria shallon*), and evergreen huckleberry (*Vaccinium ovatum*). Further discussion of coastal plant communities within the Sitka Spruce Zone can be found in *Natural Vegetation of Oregon and Washington* (Franklin and Dyrness 1973).

4.5.2 Vegetation Communities

Plant communities encountered within the Dunes City study area include upland coniferous forest, upland mixed coniferous/deciduous forest, upland deciduous-scrub/shrub, developed-urban, riparian, and wetland. Wetland communities can be further distinguished as palustrine/unconsolidated bottom, palustrine/emergent, palustrine/scrub-shrub, and palustrine/

forested, following the Cowardin classification system developed for the US Fish and Wildlife Service (Cowardin, et al. 1979). Each of the above communities is described in the sections below. Plant communities noticeably absent from this discussion include deflation plain, unconsolidated dunes, and estuarine systems. These and other associated systems are found near Dunes City but are not well represented within the study area itself.

Upland Coniferous Forest

The dominant species in the overstory are Douglas fir, Sitka spruce, western hemlock, western red cedar, and shore pine. Sitka spruce and shore pine are more common closer to the ocean, with the other species becoming more dominant inland. Understory plants vary greatly with the density of the tree canopy. A closed canopy often favors sparse shrub growth and a more diverse herbaceous groundcover, with species such as false lily of the valley (*Maianthemum dilatatum*) and sword fern (*Polystichum munitum*) commonly encountered. Openings in the canopy allow greater shrub development, with salmonberry, salal, Pacific rhododendron (*Rhododendron macrophyllum*), and evergreen huckleberry often evident.

Upland Mixed Coniferous-Deciduous Forest

Conifers listed above often codominate with deciduous hardwoods such as red alder, bigleaf maple (*Acer macrophyllum*), and willows (*Salix sp.*). Shrub understories are often well-developed given the more open tree overstory for much of the year. Common shrubs include salmonberry, red elderberry (*Sambucus racemosa*), evergreen huckleberry, salal, and Pacific wax myrtle (*Myrica californica*).

Upland Deciduous-Scrub/Shrub

Shrub communities are often associated with relatively recent disturbance (e.g. after logging, grading, or fire). Dominant species may include saplings of regenerating conifers such as Sitka spruce or Douglas fir, deciduous trees such as red alder, and shrubs such as salmonberry, thimbleberry (*Rubus parviflorus*), salal, evergreen huckleberry, rhododendron, Scots' broom (*Cytisus scoparius*), and blackberries (*Rubus sp.*). Herbaceous species are generally restricted to cleared openings due to the heavy shrub growth.

Developed-Urban

Plant communities in portions of the study area have been influenced by human activities for most of this century. Developed land in the Dunes City area is largely dispersed residential except along Highway 101, which includes some commercial properties. Residences, businesses, parking areas, roads, and sidewalks all represent unvegetated or landscaped areas. Vegetation is often of horticultural origin or weedy in these areas. The fringes of these developed areas may have been subject to disturbance as well and allowed to regenerate as red alder, salmonberry, or blackberry thickets. More frequent disturbance may maintain areas as open spaces dominated by weedy grasses and forbs.

Riparian and Lacustrine

Riparian forests are often similar to the upland mixed evergreen-deciduous forests, though species preferring wetter sites may be more common. Sitka spruce and shore pine may codominate with red alder and western red cedar; Douglas fir and western hemlock may also be present. The shrub layer may be quite dense, especially within a red alder or otherwise more open stand, and may consist of such species as salmonberry, salal, and evergreen huckleberry. Herbaceous species may dominate the understory under a closed evergreen canopy, with subarctic lady fern (*Athyrium filix-femina*), sword fern, or false lily-of-the-valley often present. Riparian communities are often transitional to or include wetland communities, especially along lake edges.

Wetland

Wetland areas are generally transitional between upland or riparian areas and include truly aquatic sites with permanently open water. Open water may or may not be present, in which case the wetland can occupy a position where the groundwater table comes close to the surface for an extended period at some time during the growing season.

Palustrine forested wetlands in the area are dominated by such species as Sitka spruce, shore pine, red alder, and western red cedar. Palustrine scrub/shrub wetlands often include saplings of the above species, along with such shrubs as Hooker's willow (*Salix hookeriana*), salmonberry, Douglas' spiraea (*Spiraea douglasii*), and four-line honeysuckle (*Lonicera involucrata*). Also encountered in these communities are Labrador tea (*Ledum glandulosum*) and Pacific wax myrtle. Palustrine emergent wetlands are dominated by herbaceous species such as slough sedge (*Carex obnupta*), water parsley (*Oenanthe sarmentosa*), hard-stem bulrush (*Scirpus acutus*), lady fern, and skunk cabbage (*Lysichitum americanum*).

4.5.3 Wetland and Upland Indicator Species

Species lists of commonly encountered plants, along with their status as indicators of wetland conditions, have been prepared for all regions of the country by the USFWS (1988). The status of a particular plant, as discussed in Section 2.0, is the probability of that plant occurring in a wetland. Many plants, however, are found in transitional areas between wetlands and uplands. These areas are usually characterized by flat to gradually sloping terrain where the species composition may not reflect true wetland boundaries. In such areas, a species with a status of FACU may extend into the wetland areas, just as FACW species may also be present in upland areas.

A non-comprehensive listing of species encountered within the project area, along with their wetland indicator status is included at the end of this report (Table 3, pages 32-37). If the species appeared on the Oregon Natural Heritage Program database this is indicated in a separate column.

4.6 Uncommon Wetland Plant Communities

Within the broad wetland community types listed above, several uncommon plant assemblages can be found in the Dunes City study area. The Oregon Natural Heritage Program (ONHP) maintains a statewide database that tracks not only the status of individual plant and animal species, but of increasingly rare plant communities as well (Roth et. al. OFWAM, 1996, Appendix G)(ONHP, 1995). Through linkages with Natural Heritage Program databases from other regions, certain plant communities have been assessed to have global as well as statewide significance; i.e. critically imperiled globally (G1; typically 5 or fewer occurrences), imperiled globally (G2; typically 6 to 20 occurrences), or uncommon but not imperiled (G3; typically 21 to 100 occurrences). Similar designations are given for statewide occurrences (S1, S2, S3). Each assemblage is becoming increasingly scarce for a variety of reasons, which may include competition from invasive plants, motorized recreation, residential development and logging.

Communities that have a relatively high priority for conservation efforts and that were encountered during the field study include a palustrine scrub-shrub assemblage. The Labrador-tea/Sphagnum (*Ledum glandulosum/ Sphagnum* spp.) bog association (G2S2) on organic soils and in association with the carnivorous California pitcher plant (*Darlingtonia californica*)(also G2S2) was observed in two locations (WOA-15 and WOA-19B). Other areas of *Darlingtonia* were observed adjacent to Woahink Lake, however they were not in association with Labrador-tea.

4.7 Rare, Threatened, and Endangered Species

As stated in Section 4.6, the Oregon Natural Heritage Program maintains a statewide database for individual plant and animal species as well as plant communities. The sensitivity of species to various influences, regardless of origin, is monitored through many sources, including public agencies, academic institutions, and private groups. Trends are reevaluated periodically to assess whether an individual species warrants legal protection under the federal and state Endangered Species Act.

Sensitive plants

The ONHP provided a database-derived list of plants known or expected to occur within a two mile radius of the Dunes City study area. Of the twelve plant species provided, none are listed or are candidates for federal or state listing as threatened or endangered. Instead, each was on ONHP's List 2, which contains species that are threatened, endangered, or possibly extirpated from Oregon, but are more common or stable elsewhere. Four of the species are lichens, two are liverworts, one is a moss, and the remaining five are vascular plants. One species, russet cotton-grass (*Eriophorum chamissonis*) was observed in two locations: WOA-15 and WOA-11. A listing of these species is included in Table 4 (page 23).

Table 4: Oregon Natural Heritage Program Listing of Rare, Threatened, or Endangered Species in the Dunes City Area

ANIMALS

NAME	Federal Listing	State Listing	ONHP
Western Snowy Plover (<i>Charadrius alexandrinus nivosus</i>)	LT	LT	
Common Loon (<i>Gavia immer</i>)			List 2
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	LT	LT	
Purple Martin (<i>Progne subis</i>)		SC	
American Marten (<i>Martes americana</i>)		SV	

PLANTS

Lichen (<i>Bryoria pseudocapillaris</i>)			List 2
Liverwort (<i>Calypogeia sphagnicola</i>)			List 2
Moss (<i>Campylopus schmidii</i>)			List 2
Lichen (<i>Erioderma solediatum</i>)			List 2
Lichen (<i>Leioderma solediatum</i>)			List 2
Liverwort (<i>Lophozia laxa</i>)			List 2
Lichen (<i>Usnea hesperina</i>)			List 2
Russet cotton-grass (<i>Eriophorum chamissonis</i>)			List 2
Northern bog clubmoss (<i>Lycopodiella inundata</i>)			List 2
Adder's-Tongue (<i>Ophioglossum pusillum</i>)			List 2
Henderson sidalcea (<i>Sidalcea hendersonii</i>)			List 2
Humped bladder-wort (<i>Utricularia gibba</i>)			List 2

LT = Listed Threatened SC = Sensitive critical SV = Sensitive vulnerable
 List 2 = Species which are threatened , endangered, or possibly extirpated from Oregon,
 but are more common or stable elsewhere

Sensitive animals

The ONHP database printout referenced above included five animal species as well. These include several state and/or federally listed sensitive species. Both the bald eagle (*Haliaeetus leucocephalus*) and western snowy plover (*Charadrius alexandrinus nivosus*) are listed as threatened under both the federal and state Endangered Species Acts. The purple martin (*Progne subis*) is listed as critical, and the American marten (*Martes americana*) as vulnerable, by the State of Oregon. The common loon (*Gavia immer*) is included on ONHP's List 2. (See Table 4).

Determining the presence or absence of these species (or of their habitat) within the Dunes City study area was not within the scope of this inventory.

4.8 Wildlife

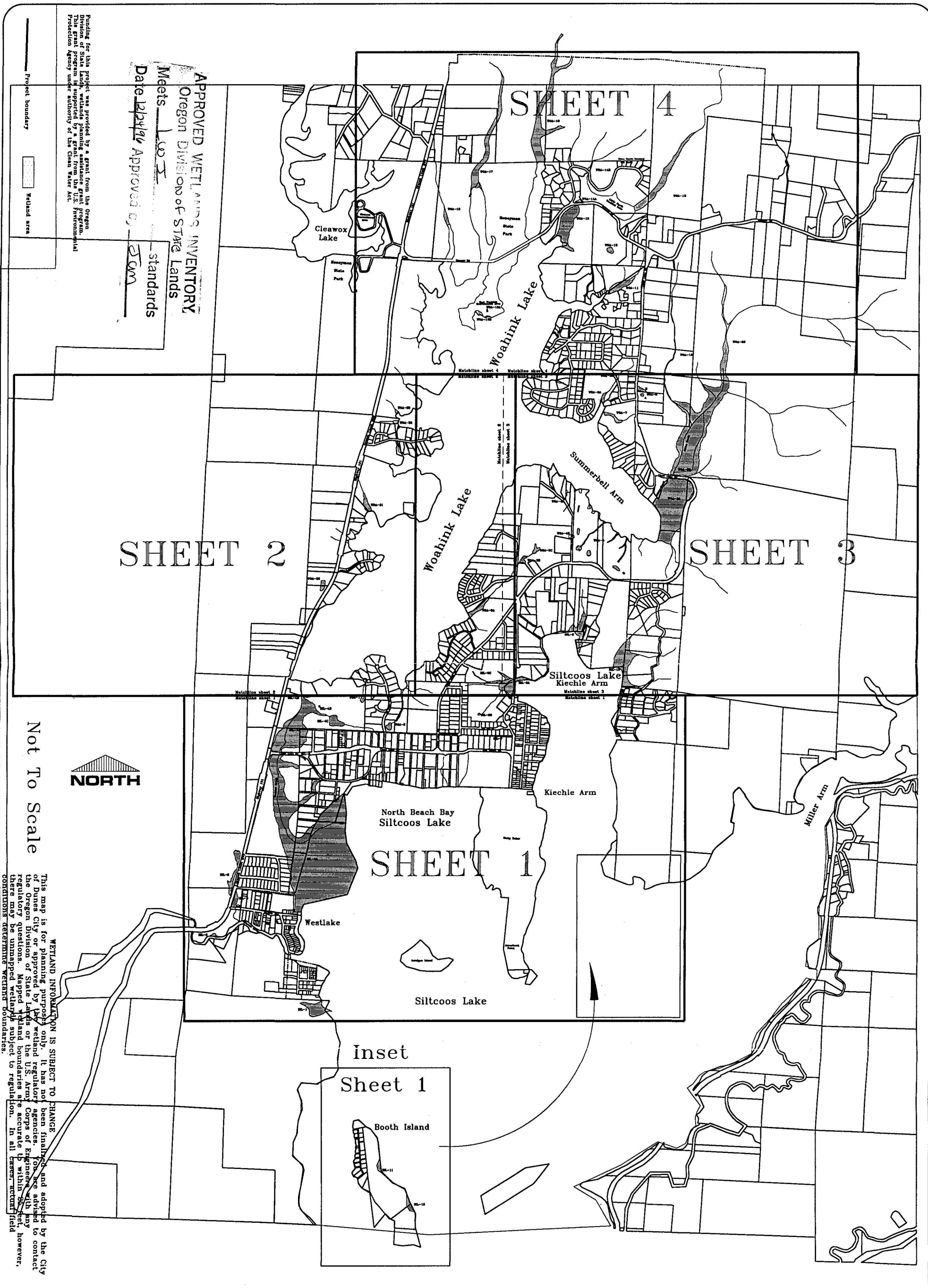
The Dunes City area provides valuable habitat for a variety of wildlife species due to the range of vegetation, proximity to both the Pacific Ocean and the Coast Range, the availability of freshwater lakes and several perennial streams, and the relative extent of undisturbed areas within the city limits. Large animals include black bear, black-tailed deer, and mountain lion, as well as many other smaller mammals such as river otter, beaver, raccoon and bobcat. Osprey nest in over a dozen locations adjacent to Siltcoos and Woahink lakes and salmonids are present in Gibbs Creek as well as several of the lake tributaries. A list of fish, wildlife and bird species likely to inhabit the area is included as Table 5 (pages 38-44) (Pers. com., Cottam).

5.0 LWI DISCUSSION AND CONCLUSIONS

5.1 U.S. Fish & Wildlife Service National Wetlands Inventory Areas

The U.S. Fish and Wildlife Service, as part of the National Wetland Inventory (NWI) program, has mapped wetlands in the study area (Figure 3). The NWI maps are generated primarily on the basis of interpretation of relatively small-scale color infrared aerial photographs (e.g., scale of 1:58,000) with limited "ground truthing" conducted to confirm the interpretations.

The NWI maps were extremely useful in the Dunes City area due to the heavy brush, lack of topographic information, and the lack of project area access. The majority of the NWI wetlands were also found during the LWI, in addition to several other wetlands. Two of the wetlands noted on the NWI were not observed: one along the northern bank of the Siltcoos River (SIL-2-2) and the other on a private peninsula on the western shore of Woahink Lake, south of Honeyman State Park. The former area was determined to be upland. The latter area has a different vegetation signature on the aerial photographs, however, it is located on an upland plateau and therefore was not mapped as wetland. Another two wetlands were indicated along the western edge of Woahink Lake. These wetlands were noted as wet fringes of the lacustrine system and were not given separate codes in the LWI.



Funding for this project was provided by a grant from the Oregon
 Division of State Lands, wetlands planning assistance grant program.
 This project was approved by a grant from the U.S. Environmental
 Protection Agency under authority of the Clean Water Act.

APPROVED WETLANDS INVENTORY
 Oregon Division of State Lands
 Meets 100% standards
 Date 12/24/94 Approved by DCM

NORTH
 Not To Scale

WETLAND INFORMATION IS SUBJECT TO CHANGE
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 of Dunes City or approved by any wetland regulatory agencies. For more information, contact
 the Oregon Division of State Lands or the U.S. Army Corps of Engineers. In all cases, actual field
 conditions determine wetland boundaries.

DATE: October 30, 1996
 BASE MAP INFO: Supplied by Lane Council of Governments
: City of Dunes City
 JOB NO.: 6-1224

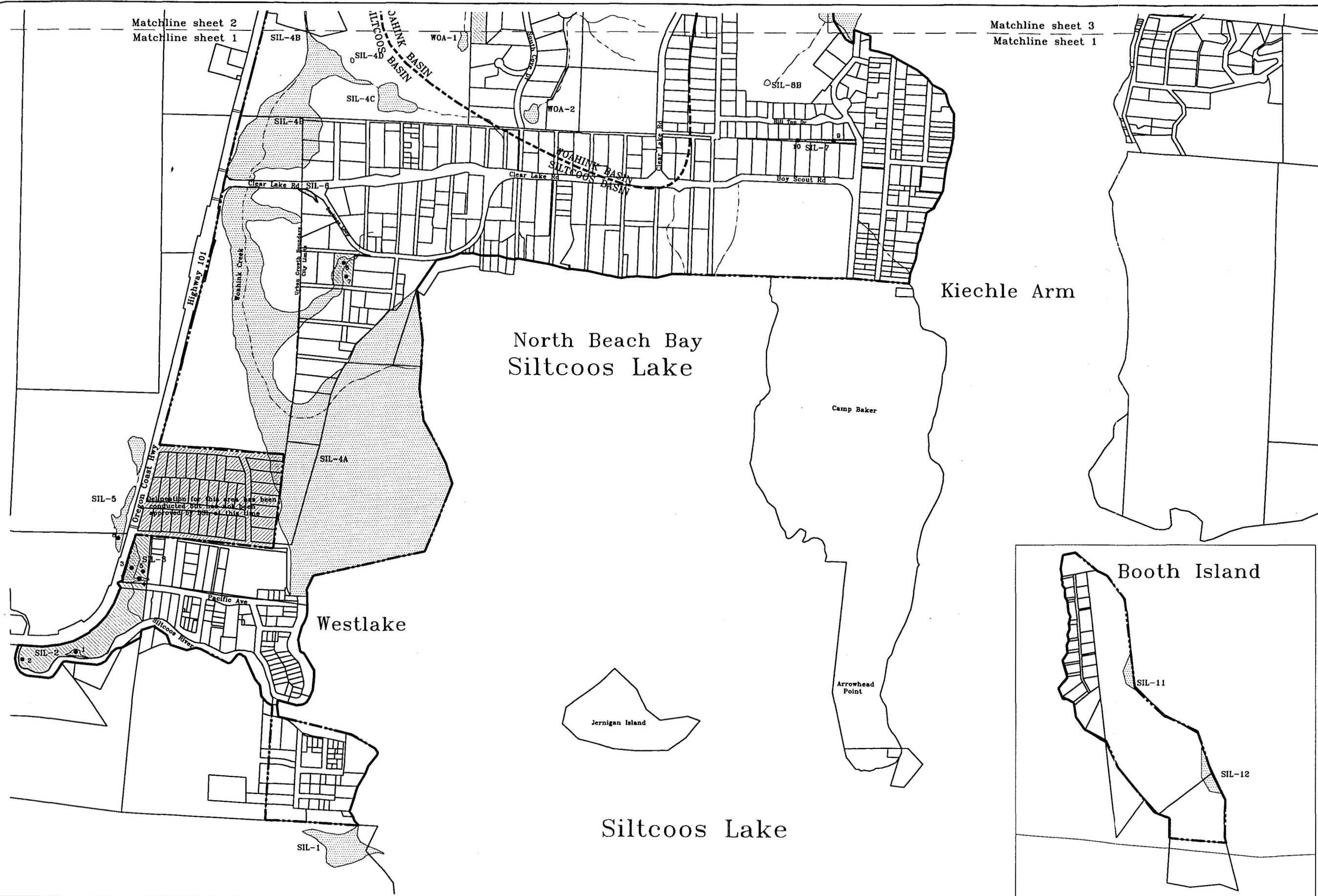
Dunes City Local Wetlands Inventory

9450 SW Commerce Circle, Suite 180
 Wilsonville, Oregon 97070
 Phone: (503) 570-0800


Fig. 4A

Matchline sheet 2
Matchline sheet 1

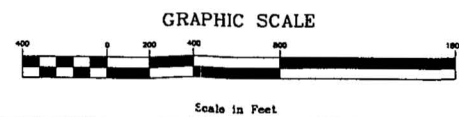
Matchline sheet 3
Matchline sheet 1



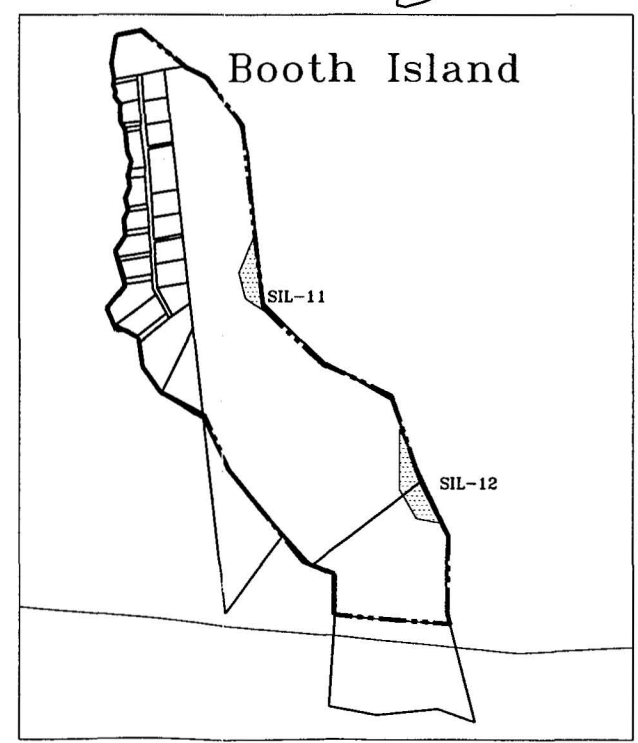
Delineation for this area has been conducted but has not been approved by me at this time

●	Sample site	▨	Wetland area
SIL-3	Wetland code	▨	On Site Wetland Determination
---	Watershed boundary	▨	Prior Wetland Delineation
---	Project boundary	---	Drainage

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6440 SW Commerce Circle, Suite 160
Wilsonville, Oregon 97070
Phone: (503) 970-0800



Dunes City Local Wetlands Inventory

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City of Dunes City

JOB NO.: 6-1224

Fig. 4B



Matchline sheet 4
Matchline sheet 2

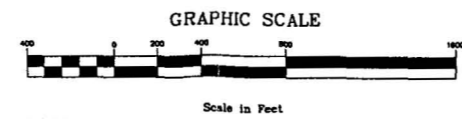
Urban Growth Boundary
City Limits

Matchline sheet 2

Matchline sheet 2
Matchline sheet 1

● 6	Sample site		Wetland area
SIL-3	Wetland code		On Site Wetland Determination
	Watershed boundary		Prior Wetland Delineation
	Project boundary		Drainage

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Westport, Oregon 97143
Phone: (503) 970-0800



Dunes City Local Wetlands Inventory

Fig. 4C

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City of Dunes City

JOB NO.: 6-1224

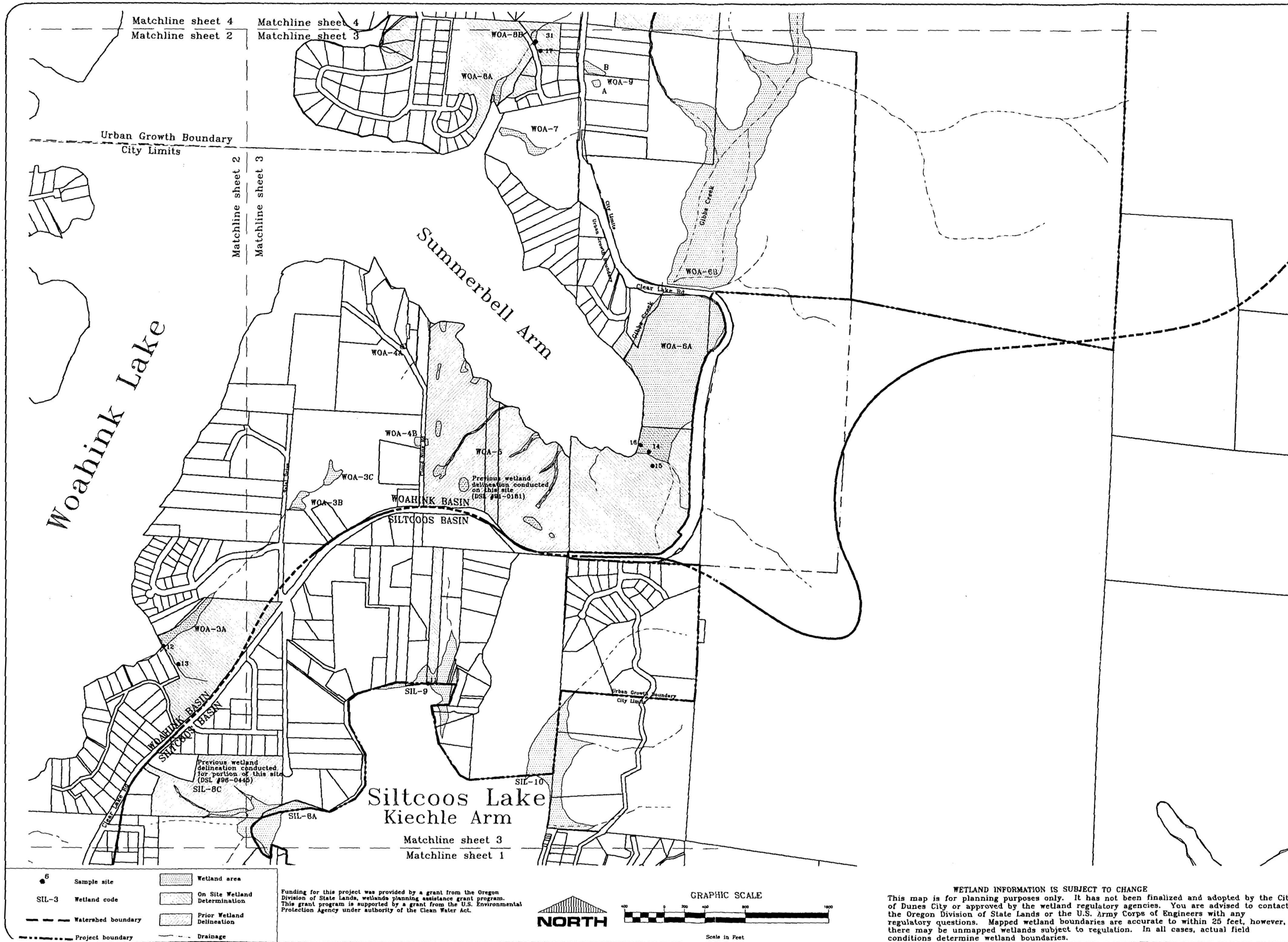
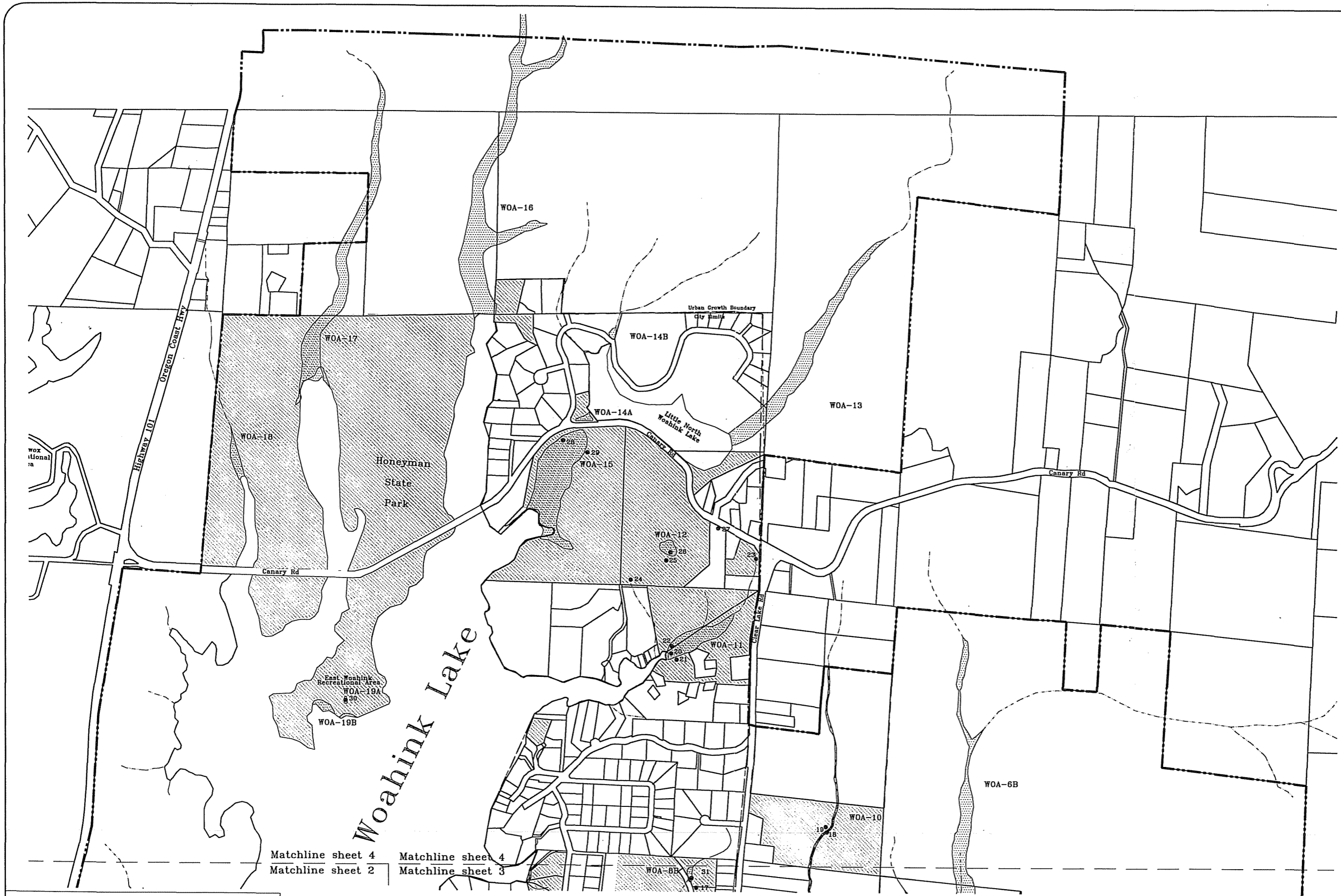


Fig. 4D

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Wilsonville, Oregon 97070
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Dunes City Local Wetlands Inventory

DATE: October 30, 1996
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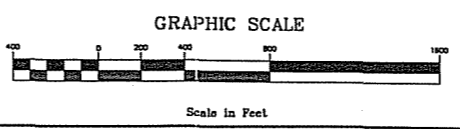


● 6	Sample site		Wetland area
SIL-3	Wetland code		On Site Wetland Determination
	Watershed boundary		Prior Wetland Delineation
	Project boundary		Drainage

Matchline sheet 4
Matchline sheet 2

Matchline sheet 4
Matchline sheet 3

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Pacific Habitat Services, Inc.
1000 NE Oregon St., Suite 100
Wilsonville, Oregon 97070
Phone: (503) 570-0000

Dunes City Local Wetlands Inventory

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 : City of Dunes City
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Fig. 4E

Most of the wetlands within the study area are classified as palustrine. Palustrine wetlands are vegetated wetlands traditionally called marshes, swamps, bogs, fens, wet prairies, and small, shallow, permanent or intermittent water bodies called ponds. Other jurisdictional bodies of water include lacustrine systems associated with the lakes, and riverine systems associated with perennial and intermittent drainages.

The majority of the wetlands mapped by the NWI are palustrine scrub-shrub, with emergent and forested equally represented. The scrub-shrub areas are widely dispersed throughout the project area, with the largest extents occurring at the convergence of perennial streams and the lakes. These areas are classified as palustrine, scrub-shrub, seasonally flooded (PSSC) bodies of water. The palustrine forested areas occur predominantly in association with Gibbs and Woahink Creeks. These areas are classified as palustrine, forested, temporarily or seasonally flooded (PFOA, PFOC) bodies of water. Large palustrine emergent seasonally flooded (PEMC) wetlands occur at the north end of Woahink Lake, and at the Woahink Creek/Siltcoos Lake fringe.

5.2 Local Wetlands Inventory Results

5.2.1 Wetland Acreage and Distribution

A total of forty-eight (48) wetlands were identified in the project area; thirty-one (31) in the Woahink Basin and seventeen (17) in the Siltcoos Basin (Figures 4A - 4E). Total wetland acreage is approximately 228 acres. Only 15 (37%) of the wetlands were determined on-site, with the majority (63%) being offsite determinations. Nine of the wetlands are larger than 5 acres in size, nine are between 1 and 5 acres in size, and 29 are less than 1 acre. The largest wetland in the project area is SIL-4A which is 88.68 acres.

The largest wetland areas in the Siltcoos Basin are associated with Woahink Creek (SIL-4A, 4B) and with three small drainages to Siltcoos Lake at the north end of Kiechle Arm (SIL-8A, 9, 10). The largest of these areas are the Woahink Creek wetlands which total 103.70 acres. Total wetland area within the Siltcoos Basin is approximately 100 acres.

The Woahink Basin has several large (greater than 5 acres in size) wetlands associated with Gibbs Creek (WOA-6A, 6B) and the northern arms of Woahink Lake (WOA-13, 15, 16, and 17). The largest of these is WOA-6B which extends north of Clear Lake Road and incorporates several tributaries of Gibbs Creek. The majority of wetlands in this basin are less than 1 acre in size. Total wetland area within the Woahink Basin is approximately 128 acres.

5.2.2 Wetland Classification

Table 6 (page 26) lists the Cowardin wetland classifications and acreages found within the Dunes City study area. The majority of the 228 acres of wetlands in the project area can be classified as palustrine scrub-shrub (45%), with palustrine forested and palustrine emergent relatively evenly represented (26% and 27%, respectively). The remainder were palustrine

Table 6: Wetland Classifications and Acreages within the Dunes City Local Wetlands Inventory Study Area

Wetland Code	USFWS Wetland Classification					Total
	PEM	PFO	PSS	PUB	PAB	
SIL-1	0.99		2.00			2.99
SIL-2			0.15			0.15
SIL-3			0.97			0.97
SIL-4A	26.50	35.68	26.50			88.68
SIL-4B	0.80	9.98	4.20			14.98
SIL-4C		0.53	1.00			1.53
SIL-4D	0.03					0.03
SIL-5		1.70				1.70
SIL-6			0.14			0.14
SIL-7	0.58					0.58
SIL-8A	1.49		1.96			3.45
SIL-8B	0.06					0.06
SIL-8C	0.42					0.42
SIL-9	1.86		1.86			3.72
SIL-10			7.39			7.39
SIL-11	0.50					0.50
SIL-12	0.82					0.82
WOA-1			0.30			0.30
WOA-2	0.42					0.42
WOA-3A			1.27			1.27
WOA-3B			0.39			0.39
WOA-3C	0.45					0.45
WOA-4A	0.05					0.05
WOA-4B		0.16				0.16
WOA-5	0.63		1.77			2.40
WOA-6A	5.55		16.66			22.21
WOA-6B	5.00	9.30	18.89			33.19
WOA-7				0.79		0.79
WOA-8A			0.44			0.44
WOA-8B				0.13		0.13
WOA-9A				0.15		0.15
WOA-9B			0.34			0.34
WOA-10	0.25					0.25
WOA-11	0.17		1.97			2.14
WOA-12			0.41			0.41
WOA-13	1.15	1.38	3.65			6.18
WOA-14A					0.15	0.15
WOA-14B		0.11				0.11
WOA-15	6.73					6.73
WOA-16	5.19		6.35			11.54
WOA-17	1.72		2.75	2.30		6.77
WOA-18			0.62			0.62
WOA-19A	0.04					0.04
WOA-19B			0.34			0.34
WOA-20			0.18			0.18
WOA-21			1.06			1.06
WOA-22				0.56		0.56
WOA-23			0.11			0.11
TOTAL	61.40	58.84	103.67	3.93	0.15	227.99

PEM	Palustrine emergent	61.40
PFO	Palustrine forested	58.84
PSS	Palustrine scrub shrub	103.67
PUB	Palustrine unconsolidated bottom	3.93
PAB	Palustrine aquatic bed	0.15
Total Wetland area:		227.99

Dunes City

Local Wetlands Inventory and Riparian Inventory

unconsolidated bottom, with one area classified as palustrine aquatic bed (WOA-14A). Off-site classifications were based on the review of aerial photographs and the NWI classifications. Table 7 summarizes the wetland classifications.

Table 7: Summary of Wetland Classifications within the Dunes City Local Wetlands Inventory Study Area

Wetland Classification	Area (acres)	Percent
Palustrine scrub-shrub	103.67	45%
Palustrine emergent	61.40	27%
Palustrine forested	58.84	26%
Palustrine unconsolidated bottom	3.93	~2%
Palustrine aquatic bed	0.15	<1%

Appendix B includes a wetland characterization sheet for each inventoried wetland. This summarizes the plant communities, Cowardin classes, hydrology, location and any general notes about adjacent upland areas. Table 8 summarizes the wetland acreage within each drainage basin.

Table 8: Wetland Areas within Drainage Basins of the Dunes City Local Wetlands Inventory Study Area

Drainage Basin	Area (acres)	Wetland (acres)	Percent in basin
Woahink	2,110	127.99	56%
Siltcoos	710	100.00	44%
Total Project Acreage	2,820	227.99	100%

5.3 Oregon Freshwater Wetland Assessment Methodology Results

5.3.1 Wetlands of Special Interest for Protection

Each of the wetlands were assessed according to the ten questions in this section of the Oregon Method. Due to the limited access in the project area, certain questions regarding the presence of federal or state listed threatened, endangered or sensitive species (Question 1) were answered “no” or “unknown” for the majority of the wetlands. Questions 2 through 9 were answered “no” for all the wetlands. These questions relate to existing management plans, conservation plans, protected mitigation areas, critical habitat, and wetland reserve areas. Question 10 is related to the presence of uncommon wetland plant communities in Oregon. These plant communities are listed in Appendix G of OFWAM. This question was answered “yes” for the following wetlands: WOA-15 and WOA-19B. A “yes” answer places these wetlands in the “Wetlands of Special Interest for Protection” category and management decisions should be made to protect the sites. It is possible that other wetlands in the study area may also contain uncommon wetland plant communities, however, due to the lack of site access, they may not have been readily observed.

5.3.2 Wetland Quality Assessment

An assessment of the quality for each of the 48 wetlands identified through the inventory was conducted using the *Oregon Freshwater Assessment Methodology* (OFWAM) (Roth et al, April 1996). OFWAM assesses 6 functions and 3 conditions, as described in Section 2.5.2. Appendix C contains the results for each of the wetlands assessed by the methodology and a summary sheet of the functions and conditions results, and the rationale for the results.

Although OFWAM provides qualitative information on the relative value of wetlands and does not have a numerical ranking, numbers were assigned to the assessment criteria in order to easily compare the results. Table 9 (page 45) is a key to the numbers assigned to the assessment criteria for each of the functions and conditions. A number 1 was assigned to wetlands receiving highest function or condition result (e.g. intact, diverse), a number 3 was assigned to the wetlands receiving the lowest result (lost or not present, not appropriate), and a 2 was assigned to the results which do not fit the other criteria (potential, impacted or degraded). Table 10 (pages 46-47) shows the results of the assessment conducted on all of the wetlands identified through the inventory using the above numerical ranking. Some functions or conditions were not applicable to certain wetlands. For instance the methodology states that if a wetland receives an assessment of “diverse wildlife habitat” the enhancement potential assessment is not applicable. In addition, if there was no likelihood of fish habitat in the wetland, the fish habitat assessment was not completed. In general, the wetlands in the project area are all of relatively high quality due to the proximity of open water, the variety of wetland types and associated uplands, and the large areas of undeveloped “open space”. All of these factors increase the wildlife and fish habitat value and the aesthetic quality functions of the wetlands. Several of the wetlands and both Woahink and Siltcoos Lakes are also known to support populations of “sensitive” fish species. None of the wetlands received the lowest assessment (function lost or not present) for the fish or wildlife habitat sections, due to the connections to other wetlands or open water. Fish and wildlife habitat may have been impacted or degraded if the wetland was located in a developed area, had minimal buffers, or had been disturbed or modified, such as an excavated pond. In addition, Siltcoos Lake is listed as a water quality limited waterbody on the Oregon Department of Environmental Quality 303(d) list due to aquatic weeds and algae (DEQ 1996).

The water quality function was assessed as impacted or degraded in many wetlands if the primary source of hydrology was groundwater and the dominant existing land use is open space. The rationale is that wetlands which are groundwater-driven or surrounded by open space may not play as significant a water quality function as wetlands derived from surface water or surrounded by developed lands. Hydrologic control was generally assessed as intact, due to “downstream” development around the perimeter of the lakes. Recreational and educational functions were considered “not appropriate” or “does not provide” in a majority of the wetlands due to the lack of public access or developed paths and safety concerns associated with public access and handicap access. In addition, the majority of the wetlands are not easily viewed and may only be seen by the public from the lakes.

6.0 RIPARIAN DISCUSSION AND CONCLUSIONS

6.1 Riparian Inventory Results

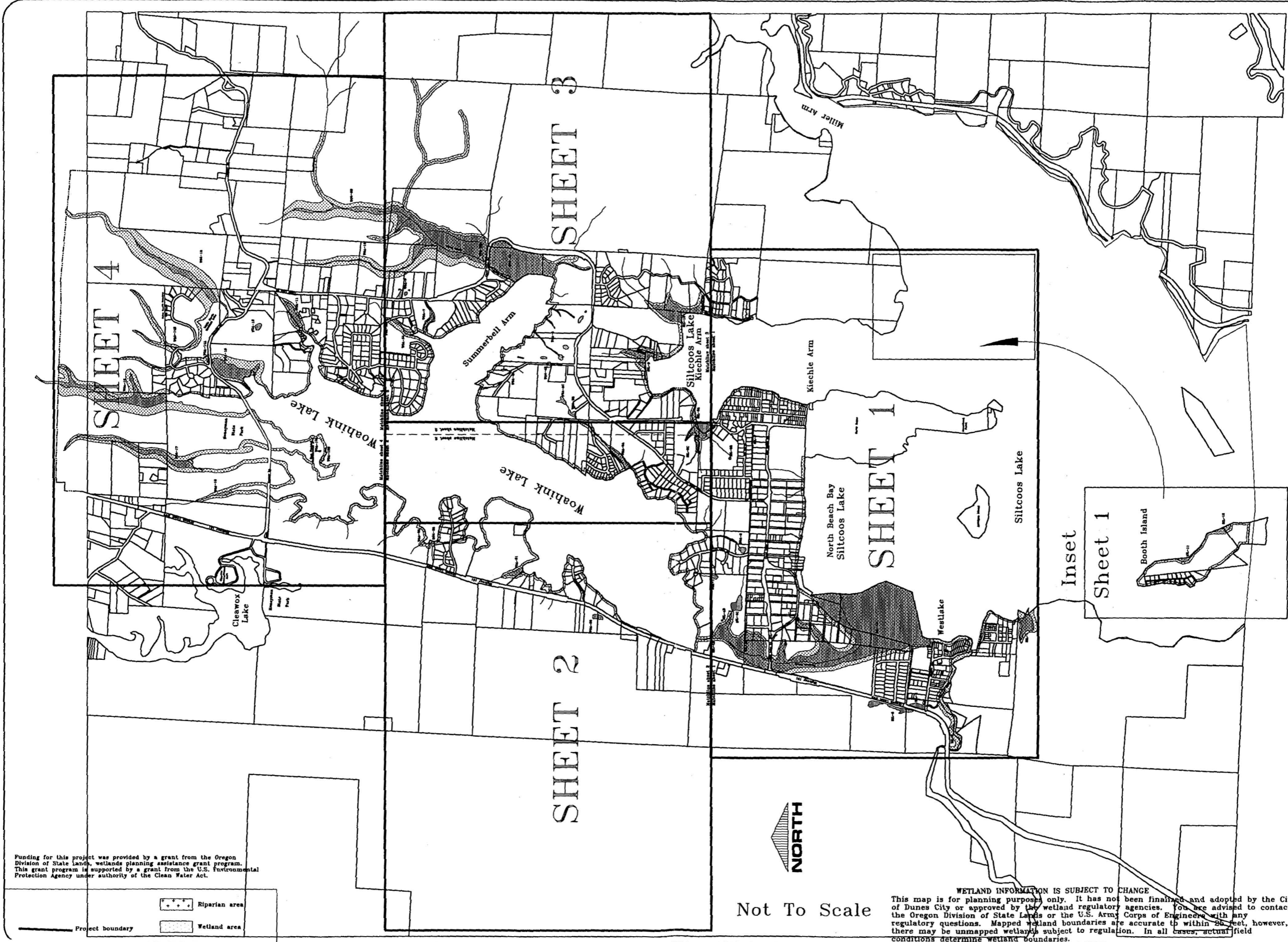
Eighteen riparian assessments were conducted for drainages in the project area. (Figures 5A-5E) These drainages are either perennial creeks or connect several wetlands determined during the LWI. Each riparian area was assigned a code with a prefix DCR- and numbered consecutively from south to north. A data sheet was compiled which documents the existing channel and vegetation conditions and estimates riparian measurements. The majority of the assessments were based on limited on-site observation, due to the lack of project area access. Several of the major riparian areas were only visible from a public road or from a boat on the lake. In addition, there were no topographic maps available of the project area, other than the USGS series. Therefore, the majority of the riparian areas were assessed with a combination of on-site observation, an aerial reconnaissance flight, aerial photographs, and the USGS topographic maps.

Riparian width was a subjective measurement based on an approximate horizontal width from the top of the bank to the outer edge of the watershed or area of functional or physical contribution. This may be to the top of the nearest ridge in a topographically defined area, or to the approximate extent of shade and organic contribution in a level area. This width may or may not include wetlands, depending on the area. In a steep ravine the distance between the top of the bank and the top of the ridge may be relatively narrow, as measured horizontally. In contrast, a broad floodplain/wetland area may have a significantly wider distance to a break in slope.

In general, the riparian areas of Dunes City were well defined by topography and confined to narrow, relatively steep banked ravines. Riparian widths in the smaller or upper drainages ranged from 20 to 75 feet on each side, as measured from the top of the bank or centerline of the drainage.

The widest riparian areas were located at the confluence of the drainages and the lakes where associated wetlands and floodplains were broader, such as the Woahink Creek and Gibbs Creek systems. These areas range from 50 to 250 feet in width on each side, with the widest areas associated with Woahink Lake northern drainages (DCR-11, 14, 15), Woahink Creek (DCR-4A), and Gibbs Creek (DCR-8). These widths were measured from the edge of the associated wetlands, as many of these areas encompass numerous braided channels and broad floodplains.

Riparian areas around Siltcoos, Woahink and Little Woahink lakes are mapped as extending 50 feet from the top of the bank. This standard width was established in the Statewide Planning Goal 5 guidelines for riparian corridors (OAR 660-23-090) along lakes. The standard width was used due to the degree of lakeside residential development and steep banks.



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DATE: October 30, 1996
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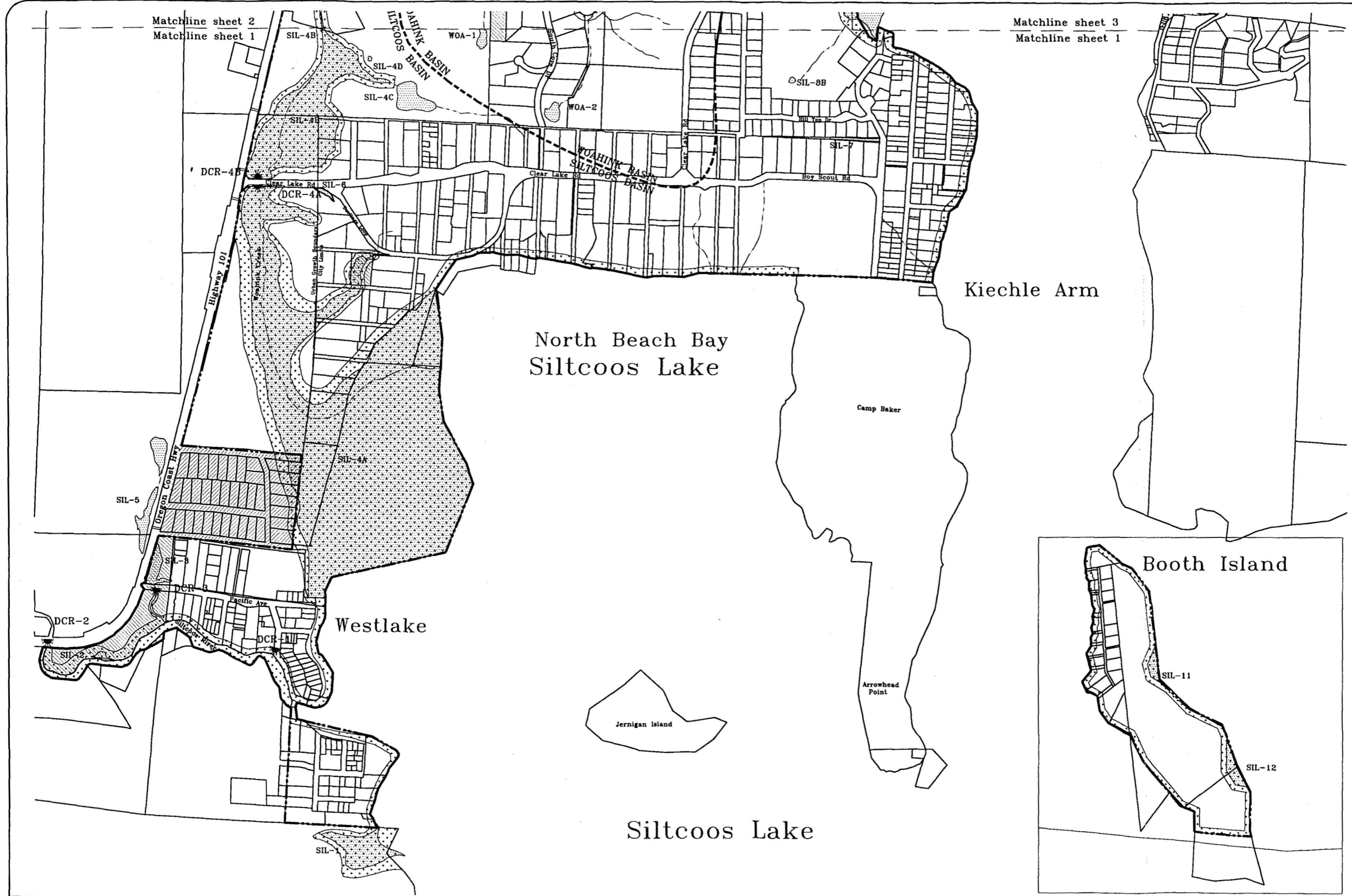
Dunes City Riparian Inventory



Fig. 5A

Matchline sheet 2
Matchline sheet 1

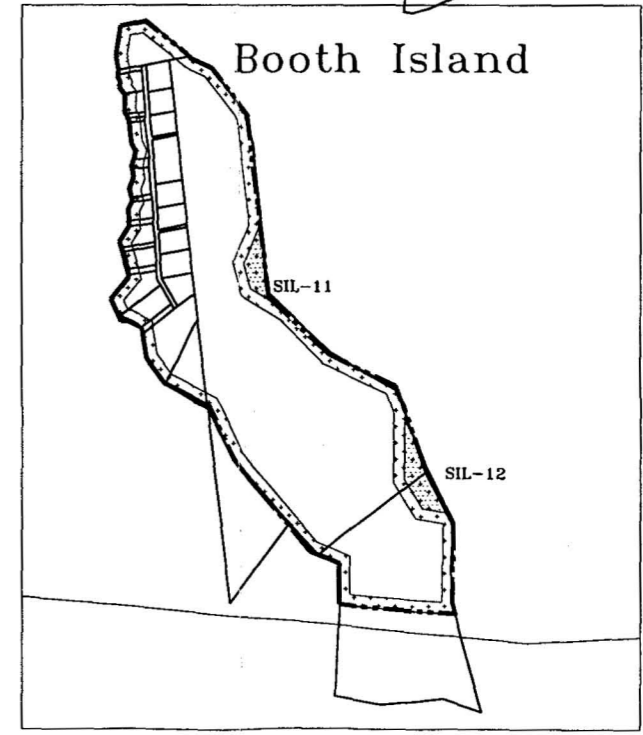
Matchline sheet 3
Matchline sheet 1



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Wilsonville, Oregon 97070
Phone: (503) 570-0800

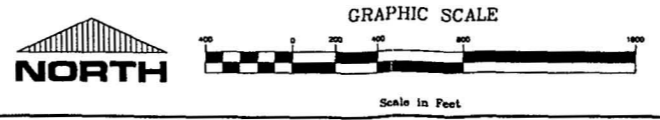
Dunes City Riparian Inventory

Fig. 5B



- DCR-9 Riparian code
- SIL-3 Wetland code
- Watershed boundary
- Project boundary
- Riparian sample site
- Riparian area
- Wetland area
- Drainage

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Fig. 5C



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 Wilsonville, Oregon 97070
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Dunes City Riparian Inventory

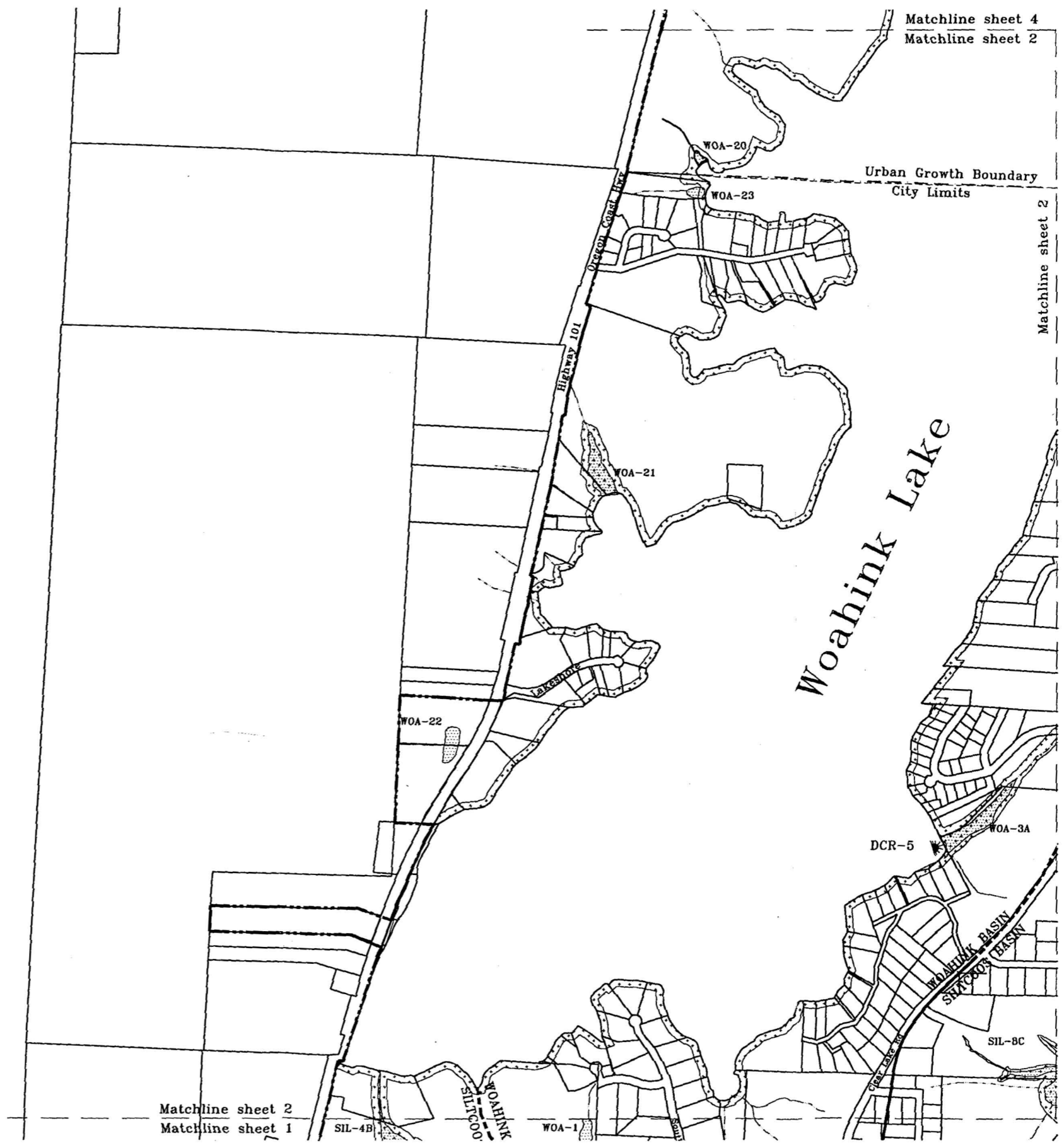
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Matchline sheet 4
 Matchline sheet 2

Matchline sheet 2

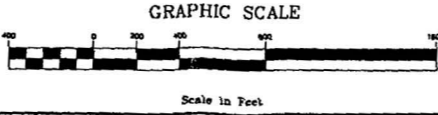
Urban Growth Boundary
 City Limits



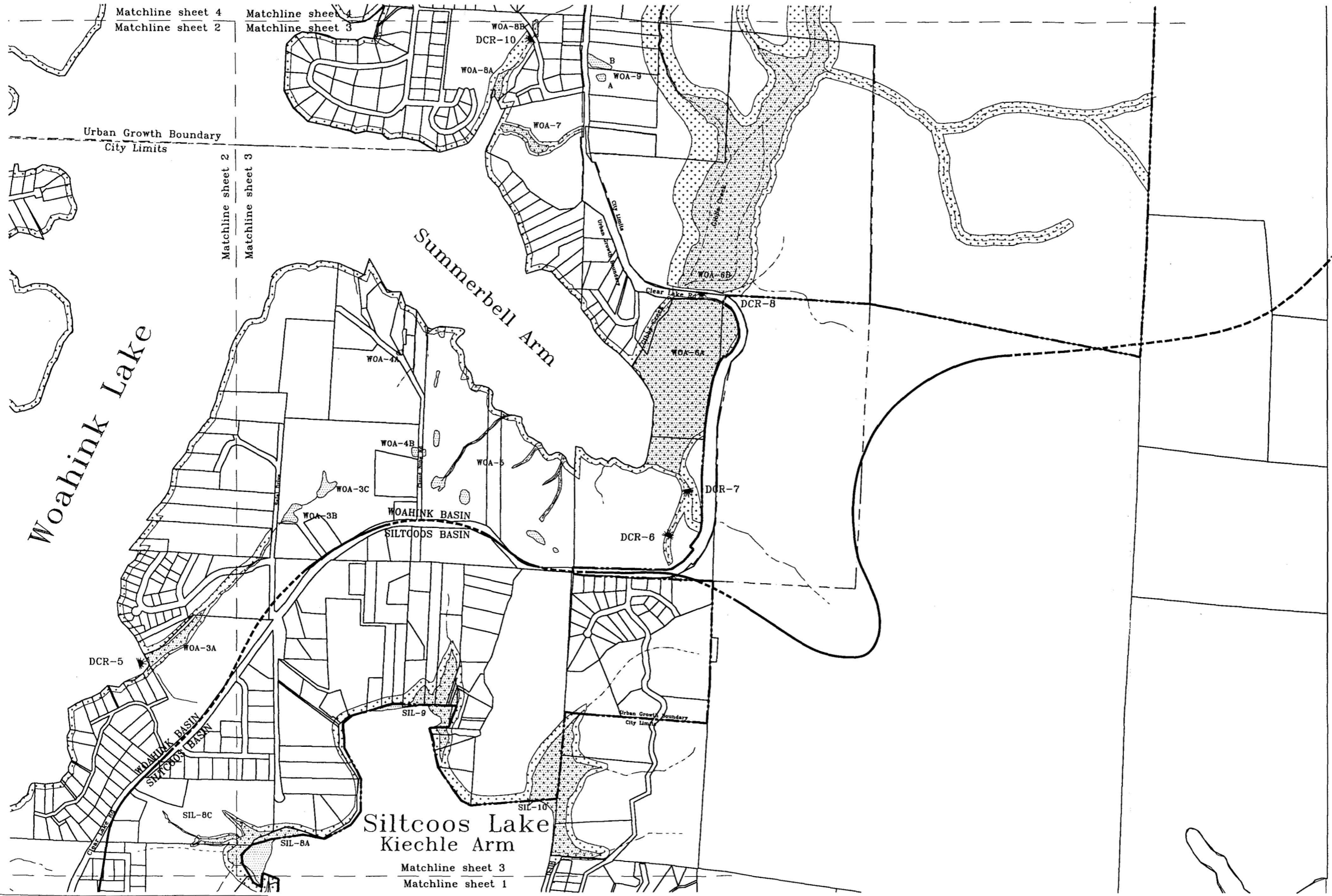
Matchline sheet 2
 Matchline sheet 1

DCR-9 Riparian code		Riparian sample site
SIL-3 Wetland code		Riparian area
		Wetland area
		Drainage

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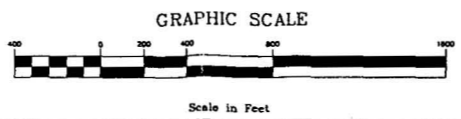
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DCR-9 Riparian code
 SIL-3 Wetland code
 --- Watershed boundary
 - - - Project boundary

Riparian sample site
 Riparian area
 Wetland area
 Drainage

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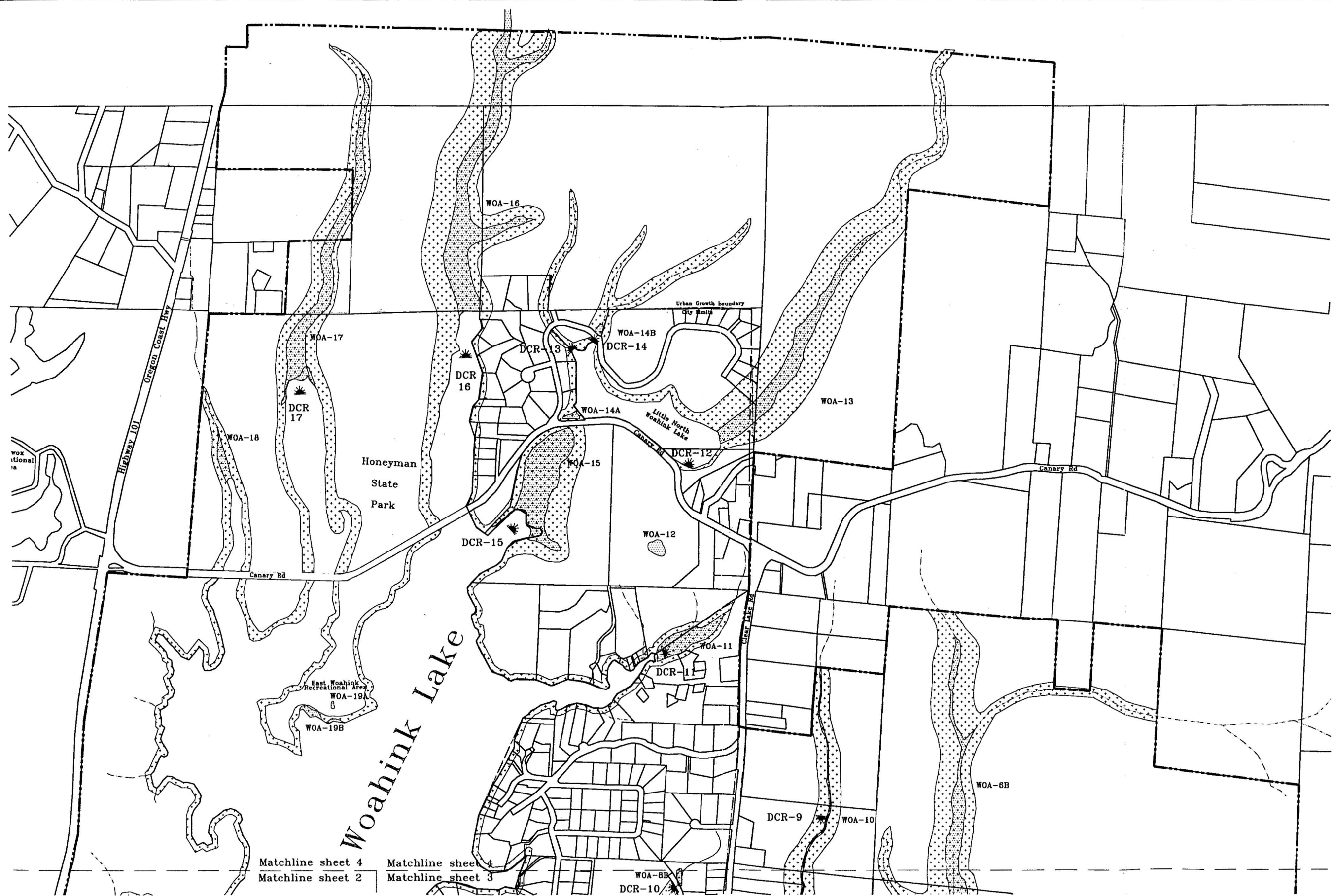
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 City of Dunes City

Fig. 5D

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 Wilsonville, Oregon 97070
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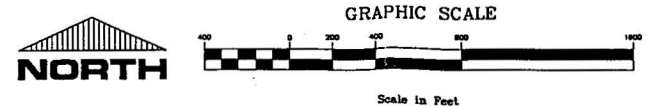
Dunes City
 Riparian Inventory

JOB NO.: 6-1224



- DCR-9 Riparian code
- SIL-3 Wetland code
- Watershed boundary
- Project boundary
- Riparian sample site
- Riparian area
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Fig. 5E

**Dunes City
Riparian Inventory**

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 9460 SW Commerce Circle, Suite 100
 Wilsonville, Oregon 97070
 Phone: (503) 370-0800

P.H.S.

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6.2 Riparian Assessment Results

The riparian inventory formed the basis for the riparian quality assessment. A series of questions were answered relating to the riparian functions. Questions generally were answered "A" for higher quality or more pristine areas, and "C" for disturbed or lower quality riparian zones, similar to OFWAM. A majority of "A" answers received a high value rating; a majority of "C" answers received a low value, and a mix of "A" and "C" answers or a majority of "B" answers received a moderate value rating.

Due to the relatively undeveloped nature of the project area, the majority of the riparian areas were assessed as having high functional values for thermoregulation, erosion control, and wildlife habitat. The riparian areas were generally either high or moderate value for the flood control/water quality function. This is primarily due to the fact that the drainages have unrestricted outlets and narrow floodplains in the all but the lower reaches. The riparian areas which received lower assessment values were disturbed through adjacent development or land-use practices such as logging; showed evidence of erosion; were dominated by herbaceous species or unvegetated; and did not have adjacent wetlands. Appendix D includes the data sheets for the riparian assessment areas, and Appendix E contains the riparian quality assessment questions and results. Table 11 summarizes the results of the riparian quality assessment.

Table 11: Summary of Riparian Quality Assessment Results for Dunes City

Riparian Code	Thermal Regulation	Erosion Control	Flood Control Water Quality	Wildlife Habitat
DCR-1	Low	Low	Moderate	Moderate
DCR-2	High	High	Moderate	High
DCR-3	Moderate	Moderate	Moderate	High
DCR-4A	High	High	High	High
DCR-4B	High	High	High	High
DCR-5	High	High	High	High
DCR-6	High	High	Moderate	High
DCR-7	High	High	Moderate	High
DCR-8	Moderate	High	High	High
DCR-9	Low	Low	Low	Moderate
DCR-10	High	Moderate	Moderate	High
DCR-11	High	High	High	High
DCR-12	High	High	High	High
DCR-13	High	High	Moderate	High
DCR-14	High	High	Moderate	High
DCR-15	Moderate	High	High	High
DCR-16	High	High	High	High
DCR-17	High	High	High	High

7.0 PROJECT SUMMARY

- Pacific Habitat Services was selected in April 1996 to conduct a Local Wetlands Inventory and Riparian Inventory for the City of Dunes City, Oregon.
- Field work for the project was conducted between May and August 1996. Each wetland was assigned a code based on drainage basin (Siltcoos or Woahink) and a wetland characterization and wetland assessment was done for each wetland. The wetland assessment was based on the April 1996 version of the *Oregon Freshwater Wetland Assessment Methodology*.
- Due to lack of project area access, the majority (63%) of the inventory work was off-site. Only 37% of the wetlands were determined from on-site determinations.
- A total of 48 wetlands were identified in the Dunes City project area, totaling approximately 228 acres. The largest wetlands are associated with Woahink and Gibbs Creek drainages (SIL-4A, 4B and WOA-6A, 6B respectively).
- The Woahink Basin has approximately 128 acres of wetlands and the Siltcoos Basin has approximately 100 acres of wetlands.
- The majority of the wetlands (45%) are palustrine scrub-shrub, with palustrine forested and palustrine emergent relatively evenly represented (26% and 27%, respectively).
- The majority of the wetlands are of high quality, based on the OFWAM results. This is due to the proximity of the lakes, the hydrologic connection between the wetlands, and the relatively undeveloped nature of the project area.
- An uncommon wetland plant community (*Ledum glandulosum/Sphagnum/Darlingtonia*) was observed in two locations adjacent to Woahink Lake, WOA-15 and WOA-19B. In addition, russet cotton-grass (*Eriophorum chamissonis*), which is listed by ONHP, was observed at two locations (WOA-15 and WOA-11).
- The riparian inventory identified 18 areas associated with Woahink, Little Woahink, and Siltcoos Lakes, the Siltcoos River, and several perennial and intermittent drainages in the basins.

Table 3: Plant Species within the Dunes City Local Wetlands Inventory Study Area

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
HERBS				
<i>Achillea millefolium</i>	yarrow	FACU	x	
<i>Agrostis alba</i>	redtop	FAC	x	
<i>Agrostis tenuis</i>	colonial bentgrass	FAC		
<i>Allotropa virgata</i>	candystick	UPL		
<i>Ammophila arenaria</i>	European beachgrass	FACU		
<i>Anagallis arvensis</i>	scarlet pimpernel	FAC	x	
<i>Anaphilis margaritacea</i>	pearly everlasting	UPL	x	
<i>Angelica lucida</i>	seawatch angelica	FAC+		
<i>Anthoxanthum odoratum</i>	sweet vernal grass	FACU	x	
<i>Arrhenatherum elatius</i>	tall oatgrass	UPL		
<i>Aster chilensis</i>	common California aster	FAC		
<i>Athyrium filix-femina</i>	subarctic lady fern	FAC	x	
<i>Bellis perennis</i>	English daisy	UPL	x	
<i>Bidens frondosa</i>	devil's beggar-tick	FACW+		
<i>Blechnum spicant</i>	deer fern	FAC+	x	
<i>Botrychium multifidum</i>	leathery grapefern	FAC		
<i>Boykinia elata</i>	coast boykinia	FAC	x	
<i>Bromus sp.</i>	brome	FACU	x	
<i>Callitriche stagnalis</i>	pond water-starwort	OBL	x	
<i>Cardamine angulata</i>	seaside bitter-cress	FACW	x	
<i>Cardionema ramosissima</i>	sandmat	UPL		
<i>Carex lenticularis</i>	shore sedge	FACW+		
<i>Carex lyngbyei</i>	Lyngby's sedge	OBL		
<i>Carex obnupta</i>	slough sedge	OBL	x	
<i>Carex oederi var. viridula</i>	green sedge	FACW+		
<i>Carex sitchensis</i>	sitka sedge	OBL	x	
<i>Carex sp.</i>	sedge	FACW		
<i>Carex viridula</i>	little green sedge	FACW+		
<i>Centaureum umbellatum</i>	centaury	FAC		
<i>Chenopodium rubrum</i>	red goosefoot	FACW+		
<i>Chrysanthemum leucanthemum</i>	oxeye daisy	UPL	x	
<i>Chrysosplenium glechomefolium</i>	Pacific golden-saxifrage	OBL		
<i>Cirsium arvense</i>	Canada thistle	FACU+	x	
<i>Cirsium vulgare</i>	bull thistle	FACU	x	
<i>Claytonia sibirica</i>	Siberian spring beauty	FAC	x	
<i>Convolvulus arvense</i>	field morning-glory	UPL	x	

Table 3: Continued

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
<i>Convolvulus sepium</i>	hedge bindweed	UPL		
<i>Conyza canadensis</i>	Canada horseweed	FACU		
<i>Cuscuta salina</i>	salt-marsh dodder	NI		
<i>Cynosurus echinatus</i>	hedgehog dogtail	UPL	x	
<i>Cyperus sp.</i>	flatsedge	FACW	x	
<i>Dactylis glomerata</i>	orchard grass	FACU	x	
<i>Darlingtonia californica</i>	California pitcher-plant	OBL	x	
<i>Daucus carota</i>	Queen Anne's lace	UPL	x	
<i>Deschampsia cespitosa</i>	tufted hairgrass	FACW		
<i>Dicentra formosa</i>	Pacific bleedingheart	UPL		
<i>Digitalis purpurea</i>	foxglove	FACU		
<i>Distichlis spicata</i>	seashore saltgrass	FACW		
<i>Drosera rotundifolia</i>	round leaf sundew	OBL		
<i>Dryopteris arguta</i>	coastal shield-fern	UPL		
<i>Dryopteris austriaca</i>	mountain woodfern	FAC		
<i>Dulichium arundinaceum</i>	dulichium	OBL	x	
<i>Eleocharis ovata</i>	ovate spikerush	OBL		
<i>Eleocharis palustris</i>	common spikerush	OBL	x	
<i>Elymus glaucus</i>	blue wild-rye	FACU		
<i>Elymus mollis</i>	American dunegrass	UPL		
<i>Epilobium angustifolium</i>	fireweed	FACU+	x	
<i>Epilobium watsonii</i>	Watson's willow-herb	FACW-		
<i>Epipactus gigantea</i>	giant helleborine	OBL	x	
<i>Equisetum arvense</i>	field horsetail	FAC	x	
<i>Erechtites minima</i>	toothed coast fireweed	UPL	x	
<i>Eriophorum chamissonis</i>	russet cotton-grass	OBL	x	x
<i>Festuca arundinacea</i>	Kentucky fescue	FAC-	x	
<i>Festuca rubra</i>	red fescue	FAC		
<i>Foeniculum vulgare</i>	sweet fennel	FACU		
<i>Fragaria chiloensis</i>	coastal strawberry	UPL		
<i>Fragaria virginiana</i>	Virginia strawberry	UPL	x	
<i>Galium aparine</i>	catchweed bedstraw	FACU	x	
<i>Galium bifolium</i>	low mountain bedstraw	UPL		
<i>Gentiana sceptrum</i>	Pacific gentian	OBL		
<i>Glehnia leiocarpa</i>	American glehnia	UPL		
<i>Glyceria elata</i>	tall manna grass	FACW+	x	
<i>Gnaphalium sp.</i>	cudweed	FAC		
<i>Grindelia integrifolia</i>	Puget Sound gumweed	FACW		
<i>Holcus lanatus</i>	common velvet grass	FAC	x	

Table 3: Continued

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
<i>Hordeum brachyantherum</i>	meadow barley	FACW-		
<i>Hydrocotyle ranunculoides</i>	floating pennywort	OBL		
<i>Hydrophyllum tenuipes</i>	Pacific water-leaf	UPL	x	
<i>Hypericum anagalloides</i>	bog St. John's wort	OBL		
<i>Hypericum perforatum</i>	common St. John's wort	UPL	x	
<i>Hypochaeris radicata</i>	hairy cats-ear	UPL	x	
<i>Iris pseudacorus</i>	yellow iris	OBL		
<i>Iris tenax</i>	Oregon iris	FACW		
<i>Isoetes</i> sp.	quillwort	OBL		
<i>Jaumea carnosa</i>	fleshy jaumea	OBL		
<i>Juncus acuminatus</i>	tapered rush	OBL		
<i>Juncus articulatus</i>	jointed rush	OBL		
<i>Juncus balticus</i>	Baltic rush	FACW+		
<i>Juncus bolanderi</i>	Bolander's rush	OBL		
<i>Juncus bufonius</i>	toad rush	FACW	x	
<i>Juncus effusus</i>	soft rush	FACW	x	
<i>Juncus ensifolius</i>	three-stamen rush	FACW	x	
<i>Juncus falcatus</i>	sickle leaf rush	FACW-		
<i>Juncus lesueurii</i>	salt rush	FACW		
<i>Juncus nevadensis</i>	sierra rush	FACW		
<i>Juncus supiniformis</i>	spreading rush	OBL		
<i>Juncus tenuis</i>	slender rush	FACW-	x	
<i>Lathyrus japonicus</i>	beach pea	FACU-		
<i>Leontodon nudicaulis</i>	hairy hawkbit	UPL	x	
<i>Lilaeopsis occidentalis</i>	Western lilaeopsis	OBL		
<i>Lolium multiflorum</i>	Italian ryegrass	UPL		
<i>Lotus corniculatus</i>	birds-foot trefoil	FAC	x	
<i>Lotus formosissimus</i>	seaside lotus	FACW+		
<i>Lupinus arboreus</i>	tree lupine	UPL		
<i>Lupinus littoralis</i>	seashore lupine	UPL		
<i>Luzula campestris</i>	field woodrush	FACU	x	
<i>Lycopus americanus</i>	American bugleweed	OBL	x	
<i>Lysichitum americanum</i>	yellow skunk-cabbage	OBL	x	
<i>Maianthemum dilatatum</i>	false lily-of-the-valley	FAC	x	
<i>Melilotus alba</i>	white sweet-clover	FACU	x	
<i>Mentha arvensis</i>	field mint	FACW-	x	
<i>Menyanthes trifoliata</i>	buckbean	OBL		x
<i>Nuphar polysepalum</i>	yellow cow-lily	OBL	x	
<i>Oenanthe sarmentosa</i>	water-parsley	OBL	x	

Table 3: Continued

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
<i>Oenothera hookeri</i>	Hooker's evening-primrose	UPL	x	
<i>Ophioglossum pusillum</i>	adder's tongue	FACW		x
<i>Panicum capillare</i>	witchgrass	FACU+		
<i>Petasites frigidus</i>	coltsfoot	FACW	x	
<i>Phalaris arundinacea</i>	reed canary grass	FACW	x	
<i>Plantago lanceolata</i>	English plantain	FAC	x	
<i>Plantago maritima</i>	seaside plantain	FACW+		
<i>Poa annua</i>	annual bluegrass	FAC	x	
<i>Poa pratensis</i>	Kentucky bluegrass	FAC	x	
<i>Poa sp.</i>	bluegrass	FACU		
<i>Polygonum aviculare</i>	prostrate knotweed	FACW-		
<i>Polygonum paronychia</i>	beach knotweed	NI		
<i>Polygonum persicaria</i>	ladysthumb	FACW	x	
<i>Polypogon monspeliensis</i>	annual rabbit-foot grass	FACW	x	
<i>Polystichum munitum</i>	sword fern	FACU	x	
<i>Potamogeton natans</i>	floating pondweed	OBL		
<i>Potamogeton richardsonii</i>	Richardson's pondweed	OBL		
<i>Potentilla anserina</i>	Pacific silverweed	OBL	x	
<i>Potentilla palustris</i>	purple cinquefoil	OBL	x	
<i>Prunella vulgaris</i>	heal-all	FACU+	x	
<i>Pteridium aquilinum</i>	bracken fern	FACU	x	
<i>Ranunculus flammula</i>	small creeping buttercup	FACW		
<i>Ranunculus repens</i>	creeping buttercup	FACW	x	
<i>Rumex acetosella</i>	sour dock	FACU+	x	
<i>Rumex crispus</i>	curly dock	FAC+	x	
<i>Salicornia virginica</i>	pickleweed	OBL		
<i>Scirpus acutus</i>	hard-stem bulrush	OBL	x	
<i>Scirpus maritimus</i>	seacoast bulrush	OBL		
<i>Scirpus microcarpus</i>	small-fruit bulrush	OBL	x	
<i>Scirpus olneyi</i>	Olney's bulrush	OBL		
<i>Scirpus subterminalis</i>	subterminate bulrush	OBL		
<i>Scirpus validus</i>	soft-term bulrush	OBL		
<i>Sidalcea hendersonii</i>	Henderson's sidalcea	FACW+		x
<i>Sisyrinchium californicum</i>	golden blue-eye grass	FACW+		
<i>Smilacina racemosa</i>	feather false-solomon's seal	FAC-	x	
<i>Smilacina stellata</i>	starry false-solomon's seal	FAC-		
<i>Sonchus asper</i>	prickly sowthistle	FAC-	x	
<i>Sparganium emersum</i>	simplestem burreed	OBL		
<i>Spiranthes romanzoffiana</i>	hooded ladies-tresses	FACW		

Table 3: Continued

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
<i>Stachys mexicana</i>	great betony	FACW		
<i>Stachys palustris</i>	marsh hedgenettle	FACW+		
<i>Stellaria media</i>	common chickweed	FACU	x	
<i>Taraxacum officinale</i>	common dandelion	FACU	x	
<i>Tellima grandiflora</i>	fringecup	UPL	x	
<i>Tolmiea menziesii</i>	piggy-back plant	FAC	x	
<i>Trifolium arvense</i>	hare's foot	UPL	x	
<i>Trifolium pratense</i>	red clover	FACU		
<i>Trifolium repens</i>	white clover	FAC	x	
<i>Trifolium wormskioldii</i>	clover, marsh	FACW+		
<i>Triglochin maritimum</i>	seaside arrow-grass	OBL		
<i>Trillium ovatum</i>	western trillium	NI	x	
<i>Typha latifolia</i>	broad-leaf cattail	OBL	x	
<i>Urtica dioica</i>	stinging nettle	FAC+		
<i>Utricularia gibba</i>	humped bladder-wort	OBL		x
<i>Veronica americana</i>	American speedwell	OBL	x	
<i>Veronica scutellata</i>	marsh speedwell	OBL		
<i>Vicia gigantea</i>	giant vetch	FAC-		
SHRUBS				
<i>Arctostaphylos columbiana</i>	hairy manzanita	UPL	x	
<i>Arctostaphylos uva-ursi</i>	kinnickinnick	FACU-	x	
<i>Baccharis pilularis</i>	chapparel broom	UPL		
<i>Corylus cornuta</i>	beaked hazel-nut	FACU	x	
<i>Crataegus douglasii</i>	Douglas' hawthorn	FAC		
<i>Cytisus scoparius</i>	Scot's broom	UPL	x	
<i>Gaultheria shallon</i>	salal	FACU	x	
<i>Hedera helix</i>	English ivy	UPL	x	
<i>Ledum glandulosum</i>	Labrador-tea	FACW+	x	
<i>Lonicera involucrata</i>	four-line honeysuckle	FAC	x	
<i>Malus fusca</i>	Pacific crabapple	FACW		
<i>Menziesia ferruginea</i>	mock-azalea	FACU+	x	
<i>Myrica californica</i>	Pacific wax myrtle	FACW	x	
<i>Oemleria cerasiformis</i>	Indian plum	FACU	x	
<i>Physocarpus capitatus</i>	Pacific ninebark	FACW-		
<i>Pyrus fusca</i>	western crabapple	FACW	x	
<i>Rhamnus purshiana</i>	cascares buckthorn	FAC-	x	
<i>Rhododendron macrophyllum</i>	Pacific rhododendron	UPL	x	
<i>Ribes sanguineum</i>	red-flowering currant	UPL		
<i>Rubus discolor</i>	Himalayan blackberry	FACU	x	

Table 3: Continued

<i>Scientific Name</i>	<i>Common Name</i>	<i>R9-Ind.</i>	<i>Dunes City</i>	<i>ONHP</i>
Rubus laciniatus	evergreen blackberry	FACU+	x	
Rubus parviflorus	western thimbleberry	FAC-	x	
Rubus spectabilis	salmonberry	FAC+	x	
Rubus ursinus	California blackberry	FACU	x	
Salix hookeriana	hooker willow	FACW-	x	
Salix sitchensis	Sitka willow	FAC		
Sambucus racemosa	red elderberry	FACU	x	
Spiraea douglasii	Douglas' spiraea	FACW	x	
Ulex europeus	gorse	UPL		
Vaccinium ovatum	evergreen huckleberry	UPL	x	
Vaccinium parvifolium	red huckleberry	UPL	x	
Vaccinium uliginosum	bog blueberry	FACW+		
Prunus sp.	ornamental cherry	UPL		
TREES				
Acer macrophyllum	big leaf maple	FACU		
Alnus rubra	red alder	FAC		
Chamaecyparis lawsoniana	Port-Orford cedar	FACU+		
Picea sitchensis	Sitka spruce	FAC	x	
Pinus contorta	shore pine	FAC	x	
Pseudotsuga menziesii	Douglas Fir	UPL	x	
Salix lasiandra	Pacific willow	FACW+		
Thuja plicata	western red cedar	FAC	x	
Tsuga heterophylla	western hemlock	FACU-	x	
MOSSES AND LICHENS				
Bryoria pseudocapillaris	lichen			x
Calypogeia sphagnicola	liverwort			x
Campylopus schmidii	moss			x
Erioderma soledium	lichen			x
Leioderma soledium	lichen			x
Lophozia laxa	liverwort			
Lycopodiella inundata	northern bog clubmoss			x
Sphagnum sp.	moss		x	
Usnea hesperina	lichen			x

Table 5: Wildlife Species within the Dunes City Study Area

Scientific Name	Common Name
BIRDS	
<i>Accipiter cooperii</i>	Cooper's Hawk
<i>Accipiter gentilis</i>	Northern Goshawk
<i>Accipiter striatus</i>	Sharp-shinned Hawk
<i>Aechmophorus clarkii</i>	Clark's Grebe
<i>Aechmophorus occidentalis</i>	Western Grebe
<i>Aegolius acadicus</i>	Saw-whet Owl
<i>Agelaius phoeniceus</i>	Red-winged Blackbird
<i>Aix sponsa</i>	Wood Duck
<i>Anas acuta</i>	Northern Pintail
<i>Anas americana</i>	American Wigeon
<i>Anas crecca</i>	Green-winged Teal
<i>Anas clypeata</i>	Northern Shoveler
<i>Anas cyanoptera</i>	Cinnamon Teal
<i>Anas penelope</i>	Eurasian Wigeon
<i>Anas platyrhynchos</i>	Mallard
<i>Anas strepera</i>	Gadwall
<i>Anthus rubescens</i>	American Pipit
<i>Aphelocoma coerulescens</i>	Scrub Jay
<i>Ardea herodias</i>	Great Blue Heron
<i>Arenaria malanocephala</i>	Black Turnstone
<i>Aythya affinis</i>	Lesser Scaup
<i>Aythya americana</i>	Redhead
<i>Aythya collaris</i>	Ring-necked duck
<i>Aythya marila</i>	Greater Scaup
<i>Aythya valisineria</i>	Canvasback
<i>Bombycilla cedrorum</i>	Cedar Waxwing
<i>Bonasa umbellus</i>	Ruffed Grouse
<i>Botaurus lentiginosus</i>	American Bittern
<i>Brachyramphus marmoratus</i>	Marbled Murrelet
<i>Branta bernicla</i>	Brant
<i>Branta canadensis</i>	Canada Goose
<i>Bubo virginianus</i>	Great Horned Owl
<i>Bubulcus ibis</i>	Cattle Egret
<i>Bucephala albeola</i>	Bufflehead
<i>Bucephala clangula</i>	Common Goldeneye
<i>Bucephala islandica</i>	Barrow's Goldeneye
<i>Buteo jamaicensis</i>	Red-tailed Hawk
<i>Buteo lagopus</i>	Rough-legged Hawk
<i>Butorides striatus</i>	Green-backed Heron

Table 5: Continued

Scientific Name	Common Name
<i>Calidris alba</i>	Sanderling
<i>Calidris alpina</i>	Dunlin
<i>Calidris mauri</i>	Western Sandpiper
<i>Calidris minutilla</i>	Least Sandpiper
<i>Calypte anna</i>	Anna's Hummingbird
<i>Carduelis pinus</i>	Pine Siskin
<i>Carduelis tristis</i>	American Goldfinch
<i>Carpodacus mexicanus</i>	House Finch
<i>Carpodacus purpureus</i>	Purple Finch
<i>Casmerodius albus</i>	Great Egret
<i>Cathartes aura</i>	Turkey Vulture
<i>Catharus guttatus</i>	Hermit Thrush
<i>Catharus ustulatus</i>	Swainson's Thrush
<i>Catoptrophorus semipalmatus</i>	Willet
<i>Cephus columba</i>	Pigeon Guillemot
<i>Cerorhinca monocerata</i>	Rhinoceros Auklet
<i>Certhia americana</i>	Brown Creeper
<i>Ceryle alcyon</i>	Belted Kingfisher
<i>Charadrius alexandrinus nivosus</i>	Western Snowy Plover
<i>Charadrius semipalmatus</i>	Semipalmated Plover
<i>Charadrius vociferus</i>	Killdeer
<i>Chaetura vauxi</i>	Vaux's Swift
<i>Cinclus mexicanus</i>	American Dipper
<i>Circus cyaneus</i>	Northern Harrier
<i>Cistothorus palustris</i>	Marsh Wren
<i>Clangula hyemalis</i>	Oldsquaw
<i>Coccothraustes vespertinus</i>	Evening Grosbeak
<i>Colaptes auratus</i>	Red-shafted Flicker
<i>Columba fasciata</i>	Band Tailed Pigeon
<i>Columba livia</i>	Rock Dove
<i>Contopus borealis</i>	Olive-sided Flycatcher
<i>Contopus sordidulus</i>	Western Wood-Pewee
<i>Corvus corax</i>	Raven
<i>Corvus brachyrhynchos</i>	American Crow
<i>Cyanocitta stelleri</i>	Stellar's Jay
<i>Cygnus columbianus</i>	Tundra Swan
<i>Dendragapus obscurus</i>	Blue Grouse
<i>Dendroica coronata</i>	Yellow-rumped Warbler
<i>Dendroica nigrescens</i>	Black-throated Gray Warbler
<i>Dendroica occidentalis</i>	Hermit Warbler

Table 5: Continued

Scientific Name	Common Name
<i>Dendroica petechia</i>	Yellow Warbler
<i>Dendroica townsendi</i>	Townsend's Warbler
<i>Dendroica virens</i>	Black-throated Green Warbler
<i>Dryocopus pileatus</i>	Pileated Woodpecker
<i>Elanus caeruleus</i>	Black-shouldered Kite
<i>Empidonax difficilis</i>	Pacific-slope Flycatcher
<i>Empidonax traillii</i>	Willow Flycatcher
<i>Euphagus cyanocephalus</i>	Brewer's Blackbird
<i>Falco columbarius</i>	Merlin
<i>Falco peregrinus</i>	Peregrine Falcon
<i>Falco sparverius</i>	Sparrow Hawk/American Kestrel
<i>Fulica americana</i>	American Coot
<i>Fulmarus glacialis</i>	Northern Fulmar
<i>Gavia immer</i>	Common Loon
<i>Gavia pacifica</i>	Pacific Loon
<i>Gavia stellata</i>	Red-throated Loon
<i>Geothlypis trichas</i>	Common Yellowthroat
<i>Glaucidium gnoma</i>	Northern Pygmy Owl
<i>Haliaeetus leucocephalus</i>	Bald Eagle
<i>Haematopus bachmani</i>	Black Oystercatcher
<i>Hirundo rustica</i>	Barn Swallow
<i>Histrionicus histrionicus</i>	Harlequin Duck
<i>Icterus galbula</i>	Northern Oriole
<i>Ixoreus naevius</i>	Varied Thrush
<i>Junco hyemalis</i>	Oregon Junco
<i>Lanius excubitor</i>	Northern Shrike
<i>Larus argentatus</i>	Herring Gull
<i>Larus californicus</i>	California Gull
<i>Larus canus</i>	Mew Gull
<i>Larus delawarensis</i>	Ring-billed Gull
<i>Larus glaucescens</i>	Glaucous-winged Gull
<i>Larus hyperboreus</i>	Glaucous Gull
<i>Larus occidentalis</i>	Western Gull
<i>Larus philadelphia</i>	Bonparte's Gull
<i>Larus thayeri</i>	Thayer's Gull
<i>Limnodramus scolopaceus</i>	Long-billed Dowitcher
<i>Lophodytes cucullatus</i>	Hooded Merganser
<i>Melanitta perspicillata</i>	Surf Scoter
<i>Melospiza melodia</i>	Song Sparrow
<i>Mergus merganser</i>	Common Merganser

Dunes City

Local Wetlands Inventory and Riparian Inventory

Table 5: Continued

Scientific Name	Common Name
<i>Melanitta fusca</i>	White-winged Scoter
<i>Melanitta nigra</i>	Black Scoter
<i>Mergus serrator</i>	Red-breasted Merganser
<i>Molothrus ater</i>	Brown-headed Cowbird
<i>Myadestes townsendi</i>	Townsend's Solitaire
<i>Numenius americanus</i>	Long-billed Curlew
<i>Numenius phaeopus</i>	Whimbrel
<i>Nycticorax nycticorax</i>	Black-crowned Night Heron
<i>Oporonis tolmiei</i>	Macgillivray's Warbler
<i>Oreortyx pictus</i>	Mountain Quail
<i>Otus kennicottii</i>	Western Screech-Owl
<i>Pandion haliaetus</i>	Osprey
<i>Parus atricapillus</i>	Black-capped Chickadee
<i>Parus rufescens</i>	Chestnut-backed Chickadee
<i>Passer domesticus</i>	House Sparrow
<i>Passerculus sandwichensis</i>	Savannah Sparrow
<i>Passerella iliaca</i>	Fox Sparrow
<i>Pelecanus occidentalis</i>	Brown Pelican
<i>Perisoreus canadensis</i>	Gray Jay
<i>Phalacrocorax auritus</i>	Double-crested Cormorant
<i>Phalacrocorax pelagicus</i>	Pelagic Cormorant
<i>Phalacrocorax pencillatus</i>	Brandt's Cormorant
<i>Phalaropus tricolor</i>	Wilson's Phalarope
<i>Pheucticus melanocephalus</i>	Black-Headed Grosbeak
<i>Picoides pubescens</i>	Downy Woodpecker
<i>Picoides villosus</i>	Hairy Woodpecker
<i>Piranga ludoviciana</i>	Western Tanager
<i>Pipilo erythrophthalmus</i>	Rufus-sided Towhee
<i>Podiceps auritus</i>	Horned Grebe
<i>Podiceps grisegena</i>	Red-necked Grebe
<i>Podiceps nigricollis</i>	Eared Grebe
<i>Podilymbus podiceps</i>	Pied-billed Grebe
<i>Porzana carolina</i>	Sora
<i>Progne subis</i>	Purple Martin
<i>Psaltriparus minimus</i>	Bushtit
<i>Ptychoramphus aleuticus</i>	Cassin's Auklet
<i>Puffinus griseus</i>	Sooty Shearwater
<i>Rallus limicola</i>	Virginia Rail
<i>Regulus calendula</i>	Ruby-crowned Kinglet
<i>Regulus satrapa</i>	Golden-crowned Kinglet

Table 5: Continued

Scientific Name	Common Name
<i>Riparia riparia</i>	Bank Swallow
<i>Rissa tridactyla</i>	Black-Legged Kittiwake
<i>Selasphorus rufus</i>	Rufous Hummingbird
<i>Sialia mexicana</i>	Western Bluebird
<i>Sitta canadensis</i>	Red-breasted Nuthatch
<i>Sitta carolinensis</i>	White-breasted Nuthatch
<i>Sphyrapicus ruber</i>	Red-breasted Sapsucker
<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker
<i>Spizella passerina</i>	Chipping Sparrow
<i>Stelgidopteryx serripennis</i>	Northern Rough-winged Swallow
<i>Sterna caspia</i>	Caspian Tern
<i>Sturnella neglecta</i>	Western Meadowlark
<i>Sturnus vulgaris</i>	European Starling
<i>Tachycineta bicolor</i>	Tree Swallow
<i>Tachycineta thalassina</i>	Violet-green Swallow
<i>Tringa melanoleuca</i>	Greater Yellowlegs
<i>Thryomanes bewickii</i>	Bewick's Wren
<i>Troglodytes troglodytes</i>	Winter Wren
<i>Troglodytes aedon</i>	House Wren
<i>Turdus migratorius</i>	Robin
<i>Tyto alba</i>	Barn Owl
<i>Uria aalge</i>	Common Murre
<i>Vermivora celata</i>	Orange-crowned Warbler
<i>Vermivora ruficapilla</i>	Nashville Warbler
<i>Vireo gilvus</i>	Warbling Vireo
<i>Vireo huttoni</i>	Hutton's Vireo
<i>Vireo solitarius</i>	Solitary Vireo
<i>Wilsonia pusilla</i>	Wilson's Warbler
<i>Zenaida macroura</i>	Mourning Dove
<i>Zonotrichia atricapilla</i>	Golden-crowned Sparrow
<i>Zonotrichia leucophrys</i>	White-crowned Sparrow
MAMMALS	
<i>Canis latrans</i>	Coyote
<i>Castor canadensis</i>	Beaver
<i>Cervus elaphus</i>	Elk
<i>Eptesicus fuscus</i>	Big Brown Bat
<i>Felis concolor</i>	Mountain Lion/Cougar
<i>Glaucomys sabrinus</i>	Northern Flying Squirrel
<i>Lasionycteris noctivagans</i>	Silver Haired Bat
<i>Lasiurus cinereus</i>	Hoary Bat

Table 5: Continued

Scientific Name	Common Name
<i>Lutra canadensis</i>	River Otter
<i>Lynx rufus</i>	Bobcat
<i>Martes americana</i>	Marten
<i>Mephitis mephitis</i>	Striped Skunk
<i>Microtus oregoni</i>	Creeping Vole
<i>Microtus longicaudus</i>	Long-tailed Vole
<i>Mustela erminea</i>	Ermine
<i>Mustela frenata</i>	Long-tailed Weasel
<i>Mustela vison</i>	Mink
<i>Myotis californicus</i>	California Myotis
<i>Myotis evotis</i>	Long-eared Myotis
<i>Myotis lucifugus</i>	Little Brown Bat
<i>Myotis thysanodes</i>	Fringes Myotis
<i>Myotis volans</i>	Long-legged myotis
<i>Myotis yumanensis</i>	Yuma Myotis
<i>Neotoma cineria</i>	Bushytail Woodrat
<i>Neurotrichus gibbsii</i>	Shrew Mole
<i>Odocoileus hemionus columbianus</i>	Black-tailed Deer
<i>Ondatra zibethicus</i>	Muskrat
<i>Peromyscus maniculatus</i>	Deer Mouse
<i>Plecotus towensendii</i>	Townsend's Big-eared Bat
<i>Procyon lotor</i>	Raccoon
<i>Rattus rattus</i>	Black Rat
<i>Scapanus orarius</i>	Coast Mole
<i>Scapanus townsendii</i>	Townsend's Mole
<i>Sorex bendirii</i>	Pacific Water Shrew
<i>Sorex obscurus</i>	Dusky Shrew
<i>Sorex vagrans</i>	Vagrant Shrew
<i>Spermophilus beecheyi</i>	California Ground Squirrel
<i>Sylvilagus bachmani</i>	Brush Rabbit
<i>Tamias townsendii</i>	Townsend's Chipmunk
<i>Tamiasciurus douglasii</i>	Douglas Squirrel
<i>Thomomys mazama</i>	Western Pocket Gopher
<i>Ursus americanus</i>	Black Bear
<i>Zapus trinotatus</i>	Pacific Jumping Mouse

Table 5: Continued

Scientific Name	Common Name
FISH	
<i>Acipenseridae</i> Family	Sturgeon
<i>Catostomus</i> spp.	Sucker
<i>Cottus</i> spp.	Sculpin
<i>Dorosoma</i> spp.	Shad
<i>Gasterosteus aculeatus</i>	Three-Spine Stickleback
<i>Ictalurus nebulosus</i>	Brown Bullhead
<i>Ictalurus punctatus</i>	Channel Catfish
<i>Lampetra tridentata</i>	Pacific Lamprey
<i>Lepomis macrochirus</i>	Bluegill
<i>Micropterus salmoides</i>	Largemouth Bass
<i>Morone saxatilis</i>	Striped Bass
<i>Oncorhynchus kisutch</i>	Coho Salmon
<i>Oncorhynchus mykiss</i>	Rainbow Trout
<i>Oncorhynchus mykiss</i>	Steelhead
<i>Oncorhynchus nerka</i>	Kokanee
<i>Osmeridae</i> Family	Smelt
<i>Perca flavescens</i>	Yellow Perch
<i>Platichthys stellatus</i>	Starry Flounder
<i>Pomoxis annularis</i>	White Crappie
<i>Pomoxis nigromaculatus</i>	Black Crappie
<i>Ptychocheilus oregonensis</i>	Squawfish
<i>Richardsonius balteatus</i>	Redside Shiner
<i>Salmo clarki</i>	Cutthroat Trout
REPTILES AND AMPHIBIANS	
<i>Ambystoma gracile</i>	Northwestern Salamander
<i>Ascaphus truei</i>	Trailed Frog
<i>Dicamptodon tenebrosus</i>	Pacific Giant Salamander
<i>Elgaria coerulea</i>	Northern Alligator Lizard
<i>Ensatina eschscholtzii</i>	Ensatina
<i>Hyla regilla</i>	Pacific Treefrog
<i>Rana aurora</i>	Redlegged Frog
<i>Rana catesbeiana</i>	Bullfrog
<i>Rhyacotriton variegatus</i>	Southern Torrent Salamander
<i>Sceloporus occidentalis</i>	Western Fence Lizard
<i>Taricha granulosa</i>	Roughskin Newt
<i>Thamnophis ordinoides</i>	Northwestern Garter Snake
<i>Thamnophis sirtalis</i>	Common Garter Snake

Table 9: Key to the Oregon Freshwater Wetland Assessment Methodology Numerical Ranking

Wildlife Habitat	<ol style="list-style-type: none"> 1 <i>Wetland provides diverse wildlife habitat</i> 2 <i>Wetland provides habitat for some wildlife species</i> 3 <i>Wetland's does not provide wildlife habitat</i>
Fish Habitat	<ol style="list-style-type: none"> 1 <i>Wetland's fish habitat function is intact</i> 2 <i>Wetland's fish habitat function is impacted or degraded</i> 3 <i>Wetland's fish habitat function is lost or not present</i>
Water Quality	<ol style="list-style-type: none"> 1 <i>Wetland's water-quality function is intact</i> 2 <i>Wetland's water-quality function is impacted or degraded</i> 3 <i>Wetland's water-quality function is lost or not present</i>
Hydrologic Control	<ol style="list-style-type: none"> 1 <i>Wetland's hydrologic control function is intact</i> 2 <i>Wetland's hydrologic control is impacted or degraded</i> 3 <i>Wetland's hydrologic control function is lost or not present</i>
Sensitivity to Impact	<ol style="list-style-type: none"> 1 <i>Wetland is sensitive to future impacts</i> 2 <i>Wetland is potentially sensitive to future impacts</i> 3 <i>Wetland is not sensitive to future impacts</i>
Enhancement Potential	<ol style="list-style-type: none"> 1 <i>Wetland has high enhancement potential</i> 2 <i>Wetland has moderate potential for enhancement</i> 3 <i>Wetland has little enhancement potential</i>
Education	<ol style="list-style-type: none"> 1 <i>Wetland has educational uses</i> 2 <i>Wetland has potential for educational use</i> 3 <i>Wetland site is not appropriate for educational use</i>
Recreation	<ol style="list-style-type: none"> 1 <i>Wetland provides recreational opportunities</i> 2 <i>Wetland has the potential to provide recreational activities</i> 3 <i>Wetland is not appropriate for or does not provide recreational opportunities</i>
Aesthetic Quality	<ol style="list-style-type: none"> 1 <i>Wetland is considered to be pleasing</i> 2 <i>Wetland is considered to be moderately pleasing</i> 3 <i>Wetland is not pleasing</i>

**Table 10: Oregon Freshwater Wetland Assessment Methodology Numerical Ranking Results for the Dunes City
Local Wetlands Inventory**

Wetland Code	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologi Control	Sensitivity to Impact	Enhancemen Potential	Education	Recreation	Aesthetic Quality	Size (acres)
SIL-1	1	1	1	1	2	n/a	3	1	1	2.99
SIL-2	1	1	1	3	3	n/a	1	1	1	0.15
SIL-3	2	1	2	1	2	1	3	3	2	0.97
SIL-4A	1	1	1	1	2	n/a	3	1	1	88.68
SIL-4B	1	1	1	1	2	n/a	3	1	1	14.98
SIL-4C	1	1	2	2	2	n/a	3	3	1	1.53
SIL-4D	2	n/a	2	3	2	2	3	3	3	0.03
SIL-5	1	n/a	2	1	2	n/a	3	3	2	1.70
SIL-6	2	n/a	2	1	2	1	3	3	1	0.14
SIL-7	2	2	2	1	2	2	3	3	2	0.58
SIL-8A	1	2	1	1	2	n/a	3	1	2	3.33
SIL-8B	2	2	2	1	2	2	3	3	3	0.06
SIL-9	1	1	1	1	2	n/a	3	2	1	3.72
SIL-10	1	1	1	1	2	n/a	3	2	1	7.39
SIL-11	1	1	1	2	2	n/a	3	1	1	0.50
SIL-12	1	1	1	2	2	n/a	3	1	1	0.82
WOA-1	2	n/a	2	1	2	1	3	3	2	0.30
WOA-2	2	2	2	1	2	1	3	3	1	0.42
WOA-3A	1	1	1	1	2	n/a	3	2	2	1.27
WOA-3B	2	1	2	2	2	1	3	3	1	0.39
WOA-3C	2	1	2	2	2	1	3	3	1	0.45
WOA-4A	2	n/a	2	1	2	1	3	3	1	0.05
WOA-4B	2	n/a	2	1	2	1	3	3	1	0.12
WOA-5	1	1	2	1	2	n/a	3	2	2	2.40
WOA-6A	1	1	1	1	2	n/a	3	2	1	22.21
WOA-6B	1	1	1	1	2	n/a	3	2	1	33.19

Table 10: Continued

Wetland Code	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologi Control	Sensitivity to Impact	Enhancemen Potential	Education	Recreation	Aesthetic Quality	Size (acres)
WOA-7	2	1	2	1	2	1	3	3	2	0.79
WOA-8A	1	1	1	1	2	n/a	3	2	1	0.44
WOA-8B	2	1	2	1	2	1	3	3	1	0.13
WOA-9A	2	2	3	1	2	2	3	3	3	0.15
WOA-9B	2	n/a	2	1	2	1	3	3	2	0.34
WOA-10	2	1	2	2	2	1	3	3	3	0.25
WOA-11	1	1	1	1	2	n/a	3	2	1	2.14
WOA-12	1	2	3	1	2	n/a	3	3	1	0.41
WOA-13	1	1	1	1	2	n/a	3	2	1	6.18
WOA-14A	1	2	2	2	2	n/a	3	2	2	0.15
WOA-14B	1	1	1	1	2	n/a	3	3	2	0.11
WOA-15	1	1	1	1	2	n/a	3	2	1	6.73
WOA-16	1	1	1	1	2	n/a	3	1	1	11.54
WOA-17	1	1	1	1	2	n/a	2	1	1	6.77
WOA-18	1	1	1	1	2	n/a	2	1	1	0.62
WOA-19A	2	n/a	3	3	3	3	1	1	3	0.04
WOA-19B	1	1	1	2	2	n/a	1	1	1	0.34
WOA-20	1	1	1	1	2	n/a	3	1	1	0.18
WOA-21	1	1	1	1	2	n/a	3	2	1	1.06
WOA-22	2	1	2	1	2	1	3	3	1	0.56
WOA-23	2	2	2	1	2	1	3	3	1	0.11

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U.S. Geological Survey topographic map (*Florence, Fivemile Creek, OR, 1:24,000, 7.5-minute quadrangle, provisional edition 1984*).

Appendix A
Wetland Determination Data Forms

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-2-1

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 12 Inches Depth to saturation: 10 Inches Other:	Water marks: Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Heceta fine sand Classification: Typic Psammaquents	On Hydric Soils list?: Yes Drainage Class: poorly drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-8	A	10YR 3/2	SDL	7.5YR 4/6	few, diffuse		
8-12	B	2.5Y 5/4	SD				
12+	Bt	10YR 4/2	SDCL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (20%)		Status	% Cover	Herbaceous Stratum (45%)		Status	% Cover
<i>Salix hookeriana</i>		FACW-	100	<i>Oenanthe sarmentosa</i>		OBL	10
				<i>Carex obnupta</i>		OBL	50
				<i>Maianthemum dilatatum</i>		FAC	40
Shrub Stratum (35%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Salix hookeriana</i>		FACW-	40				
<i>Lonicera involucrata</i>		FAC	60				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments:
Dunes City/Tyee Campground, Westlake, adjacent to Hwy 101

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-2-2

HYDROLOGY Inundated (Yes/No): No **Water marks:**
 Depth of inundation: **Inches** **Drift lines:**
 Depth to free water: >18 **Inches** **Drainage patterns:**
 Depth to saturation: >18 **Inches** **Oxidized rhizospheres:**
 Other: **Sediment deposits:**

Criteria Met: No

SOILS **Mapped Series:** Heceta fine sand **On Hydric Soils list?:** Yes
Classification: Typic Psammaquents **Drainage Class:** poorly drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	A	10YR 3/2	SL				
4+	B	10YR 3/2	SDL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION

Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (35%)	Status	% Cover
			<i>Athyrium filix-femina</i>	FAC	5
			<i>Carex obnupta</i>	OBL	10
			<i>Maianthemum dilatatum</i>	FAC	35
			<i>Polystichum munitum</i>	FACU	5
Shrub Stratum (65%)	Status	% Cover	Trillium ovatum	FACU	10
<i>Salix hookeriana</i>	FACW-	30	<i>Vicia sativa</i>	UPL	10
<i>Lonicera involucrata</i>	FAC	20	<i>Claytonia sibirica</i>	FAC	15
<i>Gaultheria shallon</i>	FACU	30	<i>Galium aparine</i>	FACU	15
<i>Pyrus fusca</i>	FACW	10	Woody Vine Stratum (0%)	Status	% Cover

Percent of dominant species FAC, FACW, or OBL: 75%

Criteria Met: Yes

Comments:

Dunes City/by Bridge of 101 at south end of Tyee Campground by bank of Siltcoos River.

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-3-3

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 4 Inches Depth to saturation: 0 Inches Other:	Water marks: Yes Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
Criteria Met:		Yes

SOILS	Mapped Series: Heceta fine sand Classification: Typic Psammaquents	On Hydric Soils list?: Yes Drainage Class: poorly drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-2	H					organic	
2+	A	10YR 5/3	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (50%)	Status	% Cover		
			<i>Carex obnupta</i>	OBL	100		
Shrub Stratum (50%)	Status	% Cover					
<i>Spiraea douglasii</i>	FACW	100					
Woody Vine Stratum (0%)	Status	% Cover					

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments:
North side of Pacific Avenue in Westlake

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-3-4

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Waldport fine sand Classification: Typic Tropopsamments	On Hydric Soils list?: No Drainage Class: excessively drained	
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-1	H					organic layer 1/2"	
1-14	A	10YR 5/3	SDL			organic streaking	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (20%)	Status	% Cover			
			<i>Carex obnupta</i>	OBL	98			
Shrub Stratum (80%)	Status	% Cover						
<i>Salix hookeriana</i>	FACW-	40	Woody Vine Stratum (0%)		Status	% Cover		
<i>Spiraea douglasii</i>	FACW	60						

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments:
 Sample site on edge of wetland approximately 30 feet wide

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-3-5

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
Criteria Met:		No

SOILS	Mapped Series: Waldport fine sand Classification: Typic Tropopsamments	On Hydric Soils list?: No Drainage Class: excessively drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-6	O						Duff
6+	A	10YR 3/2	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION								
Tree Stratum (30%)			Status	% Cover	Herbaceous Stratum (0%)		Status	% Cover
<i>Pinus contorta</i>			FAC	60				
<i>Tsuga heterophylla</i>			FACU-	20				
<i>Picea sitchensis</i>			FAC	20				
Shrub Stratum (70%)			Status	% Cover				
<i>Vaccinium ovatum</i>			UPL	50				
<i>Gaultheria shallon</i>			FACU	25				
<i>Myrica californica</i>			FACW	15	Woody Vine Stratum (0%)		Status	% Cover

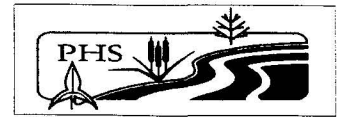
Percent of dominant species FAC, FACW, or OBL: 40% **Criteria Met:** No

Comments:
 Upland area to North of SIL-3-4 and East of SIL-3-3

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-4A-6

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 2 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Lint silt loam, 0 to 7% Classification: Typic Dystrandepts	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-18	H	10YR 3/3	muck			strong smell of H2S organic muck	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (70%)		Status	% Cover
<i>Picea sitchensis</i>			FAC	60	<i>Lysichitum americanum</i>		OBL	50
<i>Thuja plicata</i>			FAC	40	<i>Oenanthe sarmentosa</i>		OBL	10
					<i>Blechnum spicant</i>		FAC+	10
					<i>Gaultheria shallon</i>		FACU	10
Shrub Stratum (10%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Myrica californica</i>			FACW	50				
<i>Rhamnus purshiana</i>			FAC-	50				
<i>Spiraea douglasii</i>			FACW	10				

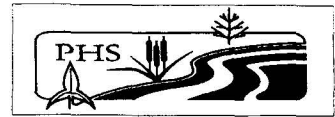
Percent of dominant species FAC, FACW, or OBL: 80% **Criteria Met:** Yes

Comments:
on Dier Road, 1 tax lot who gave us permission

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 27
Date: May 20, 1996	Investigator(s): JVS/PF	Sample Site: SIL-4A-7

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: No
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SOILS	Mapped Series: Lint silt loam, 0 to 7% Classification: Typic Dystrandeps	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-6	O						Duff
6-10	A	10YR 3/4	SL				
10-18	B	10YR 4/6	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION								
Tree Stratum (30%)			Status	% Cover	Herbaceous Stratum (0%)		Status	% Cover
<i>Picea sitchensis</i>			FAC	50				
<i>Tsuga heterophylla</i>			FACU	50				
Shrub Stratum (70%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Gaultheria shallon</i>			FACU	40				
<i>Rubus spectabilis</i>			FAC+	30				
<i>Vaccinium ovatum</i>			UPL	30				

Percent of dominant species FAC, FACW, or OBL: 40% **Criteria Met:** No

Comments:
Dier Road, in SE corner of lot

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments		Project: Dunes City LWI		Number: 6-1224	
County: Lane		Township: 19S		Range: 12W	
				Section: 27	
Date: August 8, 1996		Investigator(s): FS/PF		Sample Site: SIL-5-8	

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 4 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Heceta fine sand Classification: Typic Psammaquents	On Hydric Soils list?: Yes Drainage Class: poorly drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	H	10YR 2/2	SD	10YR 5/6	occasional, few	organic duff-peaty	
4-16+	A	5Y 3/2					

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (40%)			Status	% Cover	Herbaceous Stratum (25%)		Status	% Cover
<i>Alnus rubra</i>			FAC	70	<i>Carex obnupta</i>		OBL	60
<i>Pyrus fusca</i>			FACW	30	<i>Lysichitum americanum</i>		OBL	20
					<i>Oenanthe sarmentosa</i>		OBL	20
Shrub Stratum (35%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Rubus spectabilis</i>			FAC+	20				
<i>Spiraea douglasii</i>			FACW	40				
<i>Salix hookeriana</i>			FACW-	40				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments:

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 26
Date: August 2, 1996	Investigator(s): JVS/PF	Sample Site: SIL-7-9

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 1 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Lint silt loam 7-12% Classification: Typic Dystrandeps	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-.5	O					organic	
.5-12	A	10YR 3/6				mix of rock and soil	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: **Yes**

VEGETATION							
Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (75%)	Status	% Cover		
			<i>Blechnum spicant</i>	FAC+	20		
			<i>Lysichitum americanum</i>	OBL	80		
Shrub Stratum (25%)	Status	% Cover					
<i>Rubus spectabilis</i>	FAC+	100					
Woody Vine Stratum (0%)	Status	% Cover					

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** **Yes**

Comments:
Field work with Howard Browers

Determination: **Wetland**

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 26
Date: August 2, 1996	Investigator(s): JVS/PF	Sample Site: SIL-7-10

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: No
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SOILS	Mapped Series: Lint silt loam 0-7% Classification: Typic Dystrandeps	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-16	A	10YR 2/2	SL	10YR 3/6	faint, diffuse		

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (45%)		Status	% Cover
<i>Picea sitchensis</i>			FAC	100	<i>Blechnum spicant</i>		FAC+	10
					<i>Polystichum munitum</i>		FACU	15
					<i>Maianthemum dilatatum</i>		FAC	70
					<i>Hypochaeris radicata</i>		UPL	5
Shrub Stratum (35%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Rubus spectabilis</i>			FAC+	80				
<i>Vaccinium ovatum</i>			UPL	20				

Percent of dominant species FAC, FACW, or OBL: 75%

Criteria Met: Yes

Comments:
Field work with Howard Browers

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 23
Date: August 2, 1996	Investigator(s): JVS/PF	Sample Site: SIL-9-11

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 2 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Brallier muck, drained Classification: Typic Trophemists	On Hydric Soils list?: Yes Drainage Class: very poorly drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-14	A	7.5YR 3/2	S			organic, H2S odor	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (0%)		Status	% Cover	Herbaceous Stratum (65%)		Status	% Cover
				<i>Carex sitchensis</i>		OBL	30
				<i>Scirpus validus</i>		OBL	20
				<i>Phalaris arundinacea</i>		FACW	30
				<i>Potentilla palustris</i>		OBL	15
Shrub Stratum (35%)		Status	% Cover	<i>Galium aparine</i>		FACU	5
<i>Spiraea douglasii</i>		FACW	70				
<i>Salix hookeriana</i>		FACW-	30				
Woody Vine Stratum (0%)		Status	% Cover				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments:

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 23
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-3A-12

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 1 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Lint silt loam 12-20% Classification: Typic Dystrandepsts	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	H					organic layer	
4-14	A	10YR 3/3	SL			organic/soil mix	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION

Tree Stratum (35%)			Status	% Cover	Herbaceous Stratum (35%)			Status	% Cover
<i>Thuja plicata</i>			FAC	50	<i>Carex obnupta</i>			OBL	80
<i>Alnus rubra</i>			FAC	50	<i>Lysichitum americanum</i>			OBL	20
Shrub Stratum (30%)			Status	% Cover	Woody Vine Stratum (0%)			Status	% Cover
<i>Rubus spectabilis</i>			FAC+	30					
<i>Spiraea douglasii</i>			FACW	70					

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

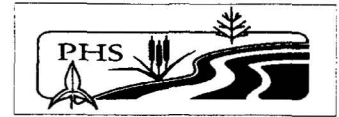
Comments:

On Burton property adjacent to lake

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 23
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-3A-13

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: No
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SOILS	Mapped Series: Lint silt loam 7-12% Classification: Typic Dystrandpts	On Hydric Soils list?: No Drainage Class: well drained	
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-2	O						Duff
2-14	A	10YR 4/3	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION								
Tree Stratum (75%)			Status	% Cover	Herbaceous Stratum (35%)		Status	% Cover
<i>Tsuga heterophylla</i>			FACU-	80	<i>Carex obnupta</i>		OBL	80
<i>Alnus rubra</i>			FAC	20	<i>Lysichitum americanum</i>		OBL	20
Shrub Stratum (20%)			Status	% Cover	Woody Vine Stratum (5%)		Status	% Cover
<i>Gaultheria shallon</i>			FACU	100	<i>Rubus ursinus</i>		FACU	100

Percent of dominant species FAC, FACW, or OBL: 50% **Criteria Met:** No

Comments:
In upland area adjacent to small stream on Burton's land

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 24
Date: June 7, 1996	Investigator(s): FS/DS	Sample Sites: WOA-6A-14

HYDROLOGY Inundated (Yes/No): No Water marks:
 Depth of inundation: Inches Drift lines:
 Depth to free water: Inches Drainage patterns:
 Depth to saturation: 0 Inches Oxidized rhizospheres:
 Other: Sediment deposits:

Criteria Met: Yes

SOILS Mapped Series: Lint silt loam 0-7% On Hydric Soils list?: No
 Classification: Typic Dystrandeps Drainage Class: well drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-18	A	10YR 3/2	S	7.5YR 4/4	numerous	high organics	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION

Tree Stratum (40%)		Status	% Cover	Herbaceous Stratum (50%)		Status	% Cover
<i>Alnus rubra</i>		FAC	100	<i>Phalaris arundinacea</i>		FACW	20
				<i>Lysichitum americanum</i>		OBL	75
				<i>Maianthemum dilatatum</i>		FAC	5
Shrub Stratum (10%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Pyrus fusca</i>		FACW	50				
<i>Rubus spectabilis</i>		FAC+	50				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments:

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments		Project: Dunes City LWI		Number: 6-1224	
County: Lane		Township: 19S		Range: 12W	
Date: June 7, 1996		Investigator(s): FS/DS		Section: 24	
Sample Sites: WOA-6A-15					

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Lint silt loam 7-12% Classification: Typic Dystrandepts	On Hydric Soils list?: No Drainage Class: well drained	
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-3	O						Duff
3-6	A	10YR 4/3	SL				
6-8	B	7.5YR 3/2	SCL				
8+	Bt	7.5YR 3/2	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

			Criteria Met: No
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VEGETATION							
Tree Stratum (50%)		Status	% Cover	Herbaceous Stratum (5%)		Status	% Cover
<i>Alnus rubra</i>		FAC	50	<i>Polystichum munitum</i>		FACU	45
<i>Picea sitchensis</i>		FAC	10	<i>Claytonia sibirica</i>		FAC	50
<i>Tsuga heterophylla</i>		FACU-	40	<i>Carex obnupta</i>		OBL	5
Shrub Stratum (45%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Sambucus racemosa</i>		FACU	50				
<i>Rubus spectabilis</i>		FAC+	50				

Percent of dominant species FAC, FACW, or OBL: 20%			Criteria Met: No
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Comments:			Determination: Upland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 24
Date: June 7, 1996	Investigator(s): FS/DS	Sample Sites: WOA-6A-16

HYDROLOGY	Inundated (Yes/No): Yes Depth of inundation: 3 Inches Depth to free water: Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Lint silt loam 0-7% Classification: Typic Dystrandeps	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-16	H	10YR 2/2	S			high organics/peaty	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (0%)		Status	% Cover	Herbaceous Stratum (70%)		Status	% Cover
				<i>Potentilla palustris</i>		OBL	5
				<i>Lysichitum americanum</i>		OBL	35
				<i>Carex obnupta</i>		OBL	40
				<i>Callitriche stagnalis</i>		OBL	10
Shrub Stratum (30%)		Status	% Cover	<i>Juncus effusus</i>		FACW	5
<i>Spiraea douglasii</i>		FACW	100	<i>Phalaris arundinacea</i>		FACW	5
Woody Vine Stratum (0%)		Status	% Cover				

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments:
 Within 20 feet of present lake shore

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 14
Date: June 6, 1996	Investigator(s): DS/FS	Sample Sites: WOA-8B-17

HYDROLOGY Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
Criteria Met: No	

SOILS	Mapped Series: Bullards-Ferrelo loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-16	A	10YR 4/6	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (10%)		Status	% Cover
<i>Thuja plicata</i>			FAC	10	<i>Blechnum spicant</i>		FAC+	45
<i>Alnus rubra</i>			FAC	45	<i>Polystichum munitum</i>		FACU	45
<i>Picea sitchensis</i>			FAC	45				
Shrub Stratum (65%)			Status	% Cover	Woody Vine Stratum (5%)		Status	% Cover
<i>Rubus spectabilis</i>			FAC+	40	<i>Rubus ursinus</i>		FACU	100
<i>Gaultheria shallon</i>			FACU	60				

Percent of dominant species FAC, FACW, or OBL: 57%	Criteria Met: Yes
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Comments: Mud Puppy Pond	Determination: Upland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12S	Section: 13
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-10-18

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 2 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Bullards-Ferrelo loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-16	A	10YR 3/1	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (80%)		Status	% Cover
<i>Picea sitchensis</i>			FAC	100	<i>Scirpus microcarpus</i>		OBL	40
					<i>Lysichitum americanum</i>		OBL	50
					<i>Juncus effusus</i>		FACW	10
Shrub Stratum (0%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover

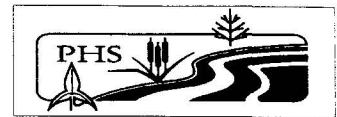
Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments:
 Channel 4-8 feet wide, flows to South. WL area adjacent to channel approximately 20 feet wide

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 13
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-10-19

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: >18 Inches Depth to free water: Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: No

SOILS	Mapped Series: Bullards-Ferrelo loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-3	O						Duff
0-10	A	10YR 2/2	SD				
>10	B	7.5YR 2.5/3	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met:	No
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VEGETATION

Tree Stratum (20%)	Status	% Cover	Herbaceous Stratum (30%)	Status	% Cover
<i>Picea sitchensis</i>	FAC	60	<i>Polystichum munitum</i>	FACU	100
<i>Tsuga heterophylla</i>	FACU-	40			
Shrub Stratum (40%)	Status	% Cover			
<i>Gaultheria shallon</i>	FACU	100			
			Woody Vine Stratum (0%)	Status	% Cover

Percent of dominant species FAC, FACW, or OBL: 25%	Criteria Met: No
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Comments:

On western slope of channel - Disturbed, logged slopes

Determination:	Upland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 6, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-11-20

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 1 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Sediment deposits:	Criteria Met: Yes
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SOILS	Mapped Series: Bullards-Ferrelo loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-14	H	10YR 3/3				organic muck	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION								
Tree Stratum (0%)			Status	% Cover	Herbaceous Stratum (80%)		Status	% Cover
					<i>Lysichitum americanum</i>		OBL	10
					<i>Carex sitchensis</i>		OBL	25
					<i>Nuphar luteum</i>		OBL	25
					<i>Oenanthe sarmentosa</i>		OBL	20
Shrub Stratum (20%)			Status	% Cover	<i>Potentilla palustris</i>		OBL	20
<i>Spiraea douglasii</i>			FACW	60				
<i>Salix hookeriana</i>			FACW-	40	Woody Vine Stratum (0%)		Status	% Cover

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments: This wetland has Eriophorum, in central portion of wetland. High quality wetland.

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 6, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-11-21

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
Criteria Met:		No

SOILS	Mapped Series: Bullards-Ferrello loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	O						Duff
4+	A	10YR 5/2	S				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (5%)		Status	% Cover
<i>Rhamnus purshiana</i>			FAC-	100	<i>Polystichum munitum</i>		FACU	100
Shrub Stratum (75%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Rubus spectabilis</i>			FAC+	15				
<i>Vaccinium parvifolium</i>			UPL	35				
<i>Acer circinatum</i>			FAC-	20				
<i>Gaultheria shallon</i>			FACU	30				

Percent of dominant species FAC, FACW, or OBL: 0% **Criteria Met:** No

Comments:
in upland area 20 feet above wetland area

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 6, 1996	Investigator(s): JVS/PF	Sample Site: WOA-11-22

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: 6 Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Bullards-Ferrello loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-3	H					organic layer, H ₂ S	
3-14	A	10YR 4/3	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met:	Yes
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VEGETATION								
Tree Stratum (20%)			Status	% Cover	Herbaceous Stratum (50%)		Status	% Cover
<i>Picea sitchensis</i>			FAC	60	<i>Lysichitum americanum</i>		OBL	30
<i>Thuja plicata</i>			FAC	40	<i>Carex obnupta</i>		OBL	45
					<i>Oenanthe sarmentosa</i>		OBL	10
					<i>Potentilla palustris</i>		OBL	10
Shrub Stratum (30%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Rubus spectabilis</i>			FAC+	35				
<i>Ledum glandulosum</i>			FACW+	10				
<i>Spiraea douglasii</i>			FACW	55				

Percent of dominant species FAC, FACW, or OBL: 100%	Criteria Met: Yes
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Comments:
Property with trail through woods to anchored log

Determination:	Wetland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-11-23

HYDROLOGY Inundated (Yes/No): No **Water marks:**
 Depth of inundation: Inches **Drift lines:**
 Depth to free water: >18 Inches **Drainage patterns:**
 Depth to saturation: Inches **Oxidized rhizospheres:**
 Other: **Sediment deposits:**

Criteria Met: No

SOILS **Mapped Series:** Bullards-Ferrelo loams 7-12% **On Hydric Soils list?:** No
Classification: Typic Haplorthods **Drainage Class:** well drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-16	A	10YR 3/4	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION

Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (60%)	Status	% Cover
			<i>Ranunculus repens</i>	FACW	30
			<i>Ranunculus occidentalis</i>	FAC	20
			<i>Stachys sp.</i>	FACW	10
			<i>Anthoxanthum odoratum</i>	FACU	20
Shrub Stratum (20%)	Status	% Cover			
			<i>Festuca arundinacea</i>	FAC-	10
<i>Rubus parviflorus</i>	FAC-	20	<i>Blechnum spicant</i>	FAC+	10
			Woody Vine Stratum (20%)	Status	% Cover
			<i>Rubus discolor</i>	FACU	100

Percent of dominant species FAC, FACW, or OBL: 40%

Criteria Met: No

Comments:

In small drainage at corner of Clear Lake and Canary. Flows South to Woahink Lake

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-11-24

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:	Criteria Met:	No
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SOILS	Mapped Series: Bandon sandy loam 7-12% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained		
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	A	10YR 2/2	S/Duff				
4+	B	10YR3/2	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

	Criteria Met:	No
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VEGETATION								
Tree Stratum (30%)			Status	% Cover	Herbaceous Stratum (0%)		Status	% Cover
<i>Rhamnus purshiana</i>			FAC-	100				
Shrub Stratum (70%)			Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Gaultheria shallon</i>			FACU	30				
<i>Vaccinium ovatum</i>			UPL	50				
<i>Rubus parviflorus</i>			FAC-	20				

Percent of dominant species FAC, FACW, or OBL: 0%	Criteria Met:	No
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Comments:
 South of driveway that supposedly floods. Topographic position, but no channel

	Determination:	Upland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-12-25

HYDROLOGY Inundated (Yes/No): No **Water marks:**

Depth of inundation: Inches **Drift lines:**

Depth to free water: >18 Inches **Drainage patterns:**

Depth to saturation: Inches **Oxidized rhizospheres:**

Other: **Sediment deposits:**

Criteria Met: No

SOILS **Mapped Series:** Bullards-Ferrello loams 0-7% **On Hydric Soils list?:** No

Classification: Typic Haplorthods **Drainage Class:** well drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-4	O						Duff
4-12	A	10YR 2/2	SL/Duff				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION

Tree Stratum (80%)		Status	% Cover	Herbaceous Stratum (0%)		Status	% Cover
<i>Alnus rubra</i>		FAC	20				
<i>Picea sitchensis</i>		FAC	80				
Shrub Stratum (20%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Gaultheria shallon</i>		FACU	50				
<i>Vaccinium ovatum</i>		UPL	50				

Percent of dominant species FAC, FACW, or OBL: 50% **Criteria Met:** No

Comments:

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-12-26

HYDROLOGY Inundated (Yes/No): Yes **Water marks:**

Depth of inundation: 3-5 Inches **Drift lines:**

Depth to free water: Inches **Drainage patterns:** Yes

Depth to saturation: Inches **Oxidized rhizospheres:**

Other: **Sediment deposits:**

Criteria Met: Yes

SOILS **Mapped Series:** Bullards-Ferrelo loams 0-7% **On Hydric Soils list?:** No

Classification: Typic Haplorthods **Drainage Class:** well drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-12	H					organic muck	
12-16	A	10YR 2/2	SDL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION

Tree Stratum (20%)		Status	% Cover	Herbaceous Stratum (50%)		Status	% Cover
<i>Alnus rubra</i>		FAC	100	<i>Carex obnupta</i>		OBL	100
Shrub Stratum (30%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover
<i>Spiraea douglasii</i>		FACW	100				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments: mapped on NWI some Myrica, Salix hookeriana
South of Canary Road by Greengate Road. Isolated depressional wetland

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 7, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-12-27

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other: signs of ponding	Water marks: Yes Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Sediment deposits: Yes	
Criteria Met:			Yes

SOILS	Mapped Series: Bullards-Ferrelo loams 0-7% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained	
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-2	O						Duff
2-18	A	10YR 3/3	SL				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met:	No
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VEGETATION							
Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (0%)	Status	% Cover		
Shrub Stratum (0%)	Status	% Cover	Woody Vine Stratum (0%)	Status	% Cover		

Percent of dominant species FAC, FACW, or OBL: 0%	Criteria Met: No
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Comments: No real vegetation layer, lots of leaves
 In the corner of Bob Sharen's land adjacent to Greengate Road.

Determination:	Upland
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Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 6, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-15-28

HYDROLOGY	Inundated (Yes/No): Yes Depth of inundation: 4 Inches Depth to free water: Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Brallier muck, drained Classification: Typic Tropohemists	On Hydric Soils list?: Yes Drainage Class: very poorly drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-5	H					organic streaking	
0-15	A	10YR 4/2	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (0%)		Status	% Cover	Herbaceous Stratum (60%)		Status	% Cover
				<i>Carex lyngbyei</i>		OBL	30
				<i>Potentilla anserina</i>		OBL	5
				<i>Sisyrinchium californicum</i>		FACW+	20
				<i>Lysichitum americanum</i>		OBL	20
Shrub Stratum (40%)		Status	% Cover	<i>Darlingtonia californica</i>		OBL	20
<i>Lonicera involucrata</i>		FAC	30				
<i>Ledum glandulosum</i>		FACW+	30	Woody Vine Stratum (0%)		Status	% Cover
<i>Spiraea douglasii</i>		FACW	10				
<i>Alnus rubra</i>		FAC	10				
<i>Myrica californica</i>		FACW	20				

Percent of dominant species FAC, FACW, or OBL: 100%

Criteria Met: Yes

Comments:
Area south of Canary Road by Little Woahink Lake

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S	Range: 12W Section: 14
Date: June 6, 1996	Investigator(s): JVS/PF	Sample Sites: WOA-15-29

HYDROLOGY Inundated (Yes/No): No Water marks:

Depth of inundation: Inches Drift lines:

Depth to free water: >18 Inches Drainage patterns:

Depth to saturation: Inches Oxidized rhizospheres:

Other: Sediment deposits:

Criteria Met: No

SOILS Mapped Series: Bullards-Ferrelo loams 30-60% On Hydric Soils list?: No

Classification: Typic Haplorthods Drainage Class: well drained

Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-6	O						Duff
6-15	A	10YR 2/2	SD/duff				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: No

VEGETATION

Tree Stratum (40%)		Status	% Cover	Herbaceous Stratum (60%)		Status	% Cover
<i>Picea sitchensis</i>		FAC	60	<i>Gaultheria shallon</i>		FACU	50
<i>Rhamnus purshiana</i>		FAC-	20	<i>Vaccinium ovatum</i>		UPL	30
<i>Thuja plicata</i>		FAC	20	<i>Rubus parviflorus</i>		FAC-	20
Shrub Stratum (0%)		Status	% Cover	Woody Vine Stratum (0%)		Status	% Cover

Percent of dominant species FAC, FACW, or OBL: 33% **Criteria Met:** No

Comments:
On east side of wetland by Canary Road

Determination: Upland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 14
Date: August 2, 1996	Investigator(s): JVS/PF	Sample Site: WOA-19A-30

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: >18 Inches Depth to saturation: Inches Other:	Water marks: Drift lines: Drainage patterns: Yes Oxidized rhizospheres: Yes Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Bandon sandy loam 0-7% Classification: Typic Haplothods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-1	H					organic	
1-3	A	10YR 3/6	SL				
3-5	B	10YR 3/3	SL				
5-7	Bt	10YR 4/6	S/SD				
7+	Bt	10YR 5/4	SD				

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met: Yes

VEGETATION							
Tree Stratum (0%)	Status	% Cover	Herbaceous Stratum (100%)	Status	% Cover		
			<i>Sisyrinchium californicum</i>	FACW+	20		
			<i>Carex obnupta</i>	OBL	20		
			<i>Hypochaeris radicata</i>	UPL	15		
			<i>Lotus corniculatus</i>	FAC	5		
Shrub Stratum (0%)	Status	% Cover					
			<i>Parentucellia viscosa</i>	FAC-	15		
			<i>Holcus lanatus</i>	FAC	10		
			<i>Festuca rubra</i>	FAC+	10		
			Woody Vine Stratum (0%)	Status	% Cover		

Percent of dominant species FAC, FACW, or OBL: 100% **Criteria Met:** Yes

Comments:
 In East Woahink Park on North end of lake in mowed lawn by picnic area

Determination: Wetland

Wetland Determination Data Form

Routine Onsite Method



Pacific Habitat Services, Inc.

Applicant: Lane Council of Governments	Project: Dunes City LWI	Number: 6-1224
County: Lane	Township: 19S Range: 12W	Section: 14
Date: June 7, 1996	Investigator(s): FS/DS	Sample Sites: WOA-8B-31

HYDROLOGY	Inundated (Yes/No): No Depth of inundation: Inches Depth to free water: Inches Depth to saturation: 0 Inches Other:	Water marks: Drift lines: Drainage patterns: Oxidized rhizospheres: Sediment deposits:
		Criteria Met: Yes

SOILS	Mapped Series: Bullards-Ferrelo loams 30-60% Classification: Typic Haplorthods	On Hydric Soils list?: No Drainage Class: well drained
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Depth (Inches)	Master Horizon	Matrix Color	Soil Texture*	Redox Concentrations		Other Hydric Soil Field Indicators	Comments
				Color	abundance/size/contrast		
0-12	A	10YR4/3	SD			organic streaks	

*SD=Sand, SDL=Sandy Loam, L=Loam, SDCL=Sandy Clay Loam, S=Silt, SL=Silt Loam, SCL=Silty Clay Loam, CL=Clay Loam, C=Clay

Criteria Met:	Yes
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VEGETATION							
Tree Stratum	(0%)	Status	% Cover	Herbaceous Stratum	(100%)	Status	% Cover
				<i>Lysichitum americanum</i>		OBL	100
Shrub Stratum	(0%)	Status	% Cover	Woody Vine Stratum	(0%)	Status	% Cover

Percent of dominant species FAC, FACW, or OBL: 100%	Criteria Met: Yes
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Comments: Mud Puppy Pond	Determination: Wetland
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Appendix B

Wetland Characterization



Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>OFF-SITE</i>	Wetland Mapping Code: <i>SIL-1</i>
Data Sheet Numbers:	Size (acres): <i>2.99</i>
Investigator(s):	Wetland Classification(s): <i>PSS, PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 34</i> Other: <i>Westlake, south of Laguna Lane</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19120000-800</i>
Soil -- Mapped series: <i>Willanch fine sandy loam (Hydric)</i>	
Hydrologic Source: <i>Surface water, groundwater</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off site determination. Wetland adjacent to Siltcoos Lake in undeveloped area.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent PUB = palustrine unconsolidated

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>May 20, 1996</i>	Wetland Mapping Code: <i>SIL-2</i>
Data Sheet Numbers: <i>1,2</i>	Size (acres): <i>0.15</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 27</i> Other: <i>Tyee Campground, bank of Siltcoos River</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19123420-100</i>
Soil -- Mapped series: <i>Heceta fine sand</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Salix hookeriana</i>	<i>Salix hookeriana</i>		<i>Maiathemum dilatatum</i>
	<i>Lonicera involucrata</i>		<i>Oenanthe sarmentosa</i>
			<i>Carex obnupta</i>

Comments:
 Small wetland area adjacent to Siltcoos River in campground. Groundwater.B49

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>May 20, 1996</i>	Wetland Mapping Code: <i>SIL-3</i>
Data Sheet Numbers: <i>3,4,5</i>	Size (acres): <i>0.97</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 27</i> Other: <i>North of Pacific Avenue, Westlake</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19123420-100</i> <i>19123421-900</i>
Soil -- Mapped series: <i>Heceta fine sand--Hydric</i> <i>Waldport fine sand</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Spiraea douglasii</i>		<i>Carex obnupta</i>
	<i>Salix hookeriana</i>		

Comments:
 Connected by culverts to SIL-5 on west side of Highway 101 and Tye Campground.
 Drains to Siltcoos River. Adjacent upland species: *Pinus contorta*, *Tsuga heterophylla*, *Picea sitchensis*, *Vaccinium ovatum*, *Gaultheria shallon*, and *Myrica californica*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>May 20, 1996</i>	Wetland Mapping Code: <i>SIL-4A</i>
Data Sheet Numbers: <i>6,7</i>	Size (acres): <i>88.68</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS, PFO, PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 27</i> Other: <i>South of Clear Lake Road, Woahink Creek</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19122720-701,</i> <i>19122730-3800,100</i> <i>200, 300</i> <i>19122740-2000, 2300</i> <i>2200, 2100, 1900, 1401</i> <i>1300, 900, 203, 202, 100</i>
Soil -- Mapped series: <i>Lint silt loam 0 to 7%</i>	
Hydrologic Source: <i>Surface water, groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
<i>Salix hookeriana</i>	<i>Myrica californica</i>		<i>Oenanthe sarmentosa</i>
<i>Thuja plicata</i>	<i>Spiraea douglasii</i>		<i>Blechnum spicant</i>
<i>Myrica californica</i>	<i>Rhamnus purshiana</i>		<i>Carex sp.</i>
			<i>Juncus sp.</i>

Comments:
 Majority of wetland is off-site determination. High quality wetland with variety of vegetation, adj. to Siltcoos Lake. Woahink Creek connects Woahink Lake to Siltcoos Lake. Culvert under Clear Lake Road connects SIL-4A to SIL-4B. Adjacent upland: *Picea sitchensis*, *Pinus contorta*, *Tsuga heterophylla*, *Vaccinium ovatum*, *Gaultheria shallon*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-4B
Data Sheet Numbers:	Size (acres): 14.98
Investigator(s):	Wetland Classification(s): PSS, PFO, PEM

Location -- Legal: T. 19S, R. 12W, SEC. 27 Other: North of Clear Lake Road, Woahink Creek Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122720-700, 101, 102 19122720-2713 2712, 2711, 2700
Soil -- Mapped series: Lint silt loam 0 to 7% Brallier muck, drained	
Hydrologic Source: Surface water, groundwater	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
<i>Salix hookeriana</i>	<i>Myrica californica</i>		<i>Oenanthe sarmentosa</i>
<i>Thuja plicata</i>	<i>Spiraea douglasii</i>		<i>Blechnum spicant</i>
<i>Myrica californica</i>	<i>Rhamnus purshiana</i>		<i>Carex sp.</i>
			<i>Juncus sp.</i>

Comments:
 Off-site determination. High quality wetland with variety of vegetation, between Woahink Lake and Clear Lake Rd. Woahink Creek connects Woahink Lake to Siltcoos Lake. Culvert under Clear Lake Road connects SIL-4A to SIL-4B. Adjacent upland: *Picea sitchensis*, *Pinus contorta*, *Tsuga heterophylla*, *Vaccinium ovatum*, *Gaultheria shallon*.
 Woahink Creek supposedly excavated, but has resumed natural characteristics, high quality wetland, snags, ponding. Woahink Creek used by anadromous fish.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-4C
Data Sheet Numbers:	Size (acres): 1.53
Investigator(s):	Wetland Classification(s): PSS, PFO

Location -- Legal: T. 19S, R. 12W, SEC. 27 Other: North of Clear Lake Road, west of S. Cove Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122720-102
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Scrub/shrub wetland drains to SIL-4B . Drains across field.
Small area of seasonal ponded water apparent in aerial photographs.

wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-4D
Data Sheet Numbers:	Size (acres): 0.03
Investigator(s):	Wetland Classification(s): PEM

Location -- Legal: T. 19S, R. 12W, SEC. 27 Other: North of Clear Lake Road, west of S. Cove Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122720-102
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Very small emergent area near house.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>August 8, 1996</i>	Wetland Mapping Code: <i>SIL-5</i>
Data Sheet Numbers: <i>8</i>	Size (acres): <i>1.70</i>
Investigator(s): <i>FS/PF</i>	Wetland Classification(s): <i>PFO</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 27</i> Other: <i>North of Pacific Avenue, west of Hwy. 101</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19123420-100</i> <i>19122730-3800</i>
Soil -- Mapped series: <i>Heceta fine sand</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Pyrus fusca</i>	<i>Spiraea douglasii</i>		<i>Lysichitum americanum</i>
<i>Thuja plicata</i>	<i>Salix hookeriana</i>		<i>Oenanthe sarmentosa</i>
			<i>Scirpus microcarpus</i>
			<i>Juncus ensifolius</i>
			<i>Sisyrinchium calif.</i>
			<i>Epipactus gigantea</i>
			<i>Epilobium sp.</i>
			<i>Erechtites minima</i>

Comments:
 Small forested, scrub-shrub wetland at base of dune on west side of Hwy. 101. Connects by culvert under Hwy. to SIL-3. Ditch adjacent to Highway has great variety of herbaceous wetland plants. Adjacent upland: *Rhododendron macrophyllum*, *Myrica californica*, *Vaccinium ovatum*, *Gaultheria shallon*, *Pinus contorta*.

wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-6
Data Sheet Numbers:	Size (acres): 0.14
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 27 Other: South of Clear Lake Rd., at Darlings Loop Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122720-2710, 701
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Salix hookeriana</i>	<i>Spiraea douglasii</i>		
	<i>Salix hookeriana</i>		

Comments:
Small isolated wetland dominated by scrub-shrub species. Off-site determination. May connect to SIL-4A (?).

Wetland Classification Codes:

PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>August 2, 1996</i>	Wetland Mapping Code: <i>SIL-7</i>
Data Sheet Numbers: <i>9,10</i>	Size (acres): <i>0.58</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 26</i> Other: <i>South of Hilltop Road, Petersdorff Park</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19122620-2701</i>
Soil -- Mapped series: <i>Lint silt loam, 7 to 12%</i> <i>Lint silt loam, 0 to 7%</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Rubus spectabilis</i>		<i>Blechnum spicant</i>
			<i>Lysichitum americanum</i>

Comments:
 Narrow drainage flows east, culverted at east end by Parkway Drive. Topographically defined by steep banks to north and south. Adjacent upland species: *Polystichum munitum*, *Picea sitchensis*, *Maianthemum dilatatum*, *Vaccinium ovatum*, *Tsuga heterophylla*, *Luzula campestris*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-8A
Data Sheet Numbers:	Size (acres): 3.45
Investigator(s):	Wetland Classification(s): PEM, PSS

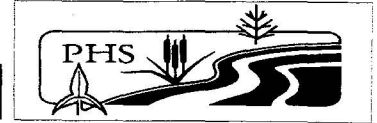
Location -- Legal: T. 19S, R. 12W, SEC. 23 Other: Kiechle Arm, Siltcoos Lake, East of Spruce Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122620-102, 176, 172 19122330-301, 610
Soil -- Mapped series: Brallier muck, drained	
Hydrologic Source: Surface water	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Emergent wetland adjacent to Siltcoos Lake. Several small drainages to wetland from the slopes to west. Some of this area recently logged. Hydrologically connected to SIL-8C.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-8B
Data Sheet Numbers:	Size (acres): 0.06
Investigator(s):	Wetland Classification(s): PEM

Location -- Legal: T. 19S, R. 12W, SEC. 23 Other: Kiechle Arm, Siltcoos Lake, East of Spruce Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122620-102,
Soil -- Mapped series: Lint silt loam, 7 to 12%	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Emergent wetland at upper end of small drainage to SIL-8A. This area has recently been logged.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-8C
Data Sheet Numbers:	Size (acres): 0.42
Investigator(s):	Wetland Classification(s): PFO

Location -- Legal: T. 19S, R. 12W, SEC. 23 Other: Kiechle Arm, Siltcoos Lake, East of Spruce Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122330-301
Soil -- Mapped series: Lint silt loam, 7 to 12%	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
 Delineation conducted by Wilbur Ternyik for portion of this site (DSL #96-0445). Majority of site has recently been logged. Hydrologically connected to SIL-8A.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>August 2, 1996</i>	Wetland Mapping Code: <i>SIL-9</i>
Data Sheet Numbers: <i>11</i>	Size (acres): <i>3.72</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS, PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 23</i> Other: <i>Kiechle Arm, Siltcoos Lake, Harmony Lane</i> Hydrologic basin: <i>Siltcoos Lake</i>	Tax lot(s): <i>19122310-300, 401, 1001, 1500, 1501, 1600, 2000, 2100, 2800,</i>
Soil -- Mapped series: <i>Brallier muck, drained</i>	
Hydrologic Source: <i>Surface water, groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Spiraea douglasii</i>		<i>Carex sitchensis</i>
	<i>Salix hookeriana</i>		<i>Scirpus validus</i>
	<i>Lonicera involucrata</i>		<i>Phalaris arundinacea</i>
	<i>Rubus spectabilis</i>		<i>Potentilla palustris</i>
			<i>Iris pseudacorus</i>
			<i>Nuphar polysepalum</i>
			<i>Lotus corniculatus</i>
			<i>Scirpus microcarpus</i>
			<i>Potamogeton natans</i>

Comments:
 Wetland extends to north into off-site area. Adjacent upland species: *Gaultheria shallon*, *Rhamnus purshiana*, *Hedera helix*, *Maianthemum dilatatum*, *Picea sitchensis*, *Rubus discolor*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-10
Data Sheet Numbers:	Size (acres): 7.39
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 23, 24 Other: Kiechle Arm, Siltcoos Lake Hydrologic basin: Siltcoos Lake	Tax lot(s): 19122340-100 19122400-500, 600, 400, 423, 432
Soil -- Mapped series: Brallier muck, drained	
Hydrologic Source: Surface water	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Large scrub/shrub wetland adjacent to Siltcoos Lake. Several small drainages to wetland from the slopes to east.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: SIL-11
Data Sheet Numbers:	Size (acres): 0.50
Investigator(s):	Wetland Classification(s): PEM

Location -- Legal: T. 20S, R. 12W, SEC. 3 Other: Booth Island Hydrologic basin: Siltcoos Lake	Tax lot(s): 20120000-200
Soil -- Mapped series: Lint silt loam, 20-40% slopes	
Hydrologic Source: Surface water	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Very small emergent area on east side of Booth Island.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>OFF-SITE</i>	Wetland Mapping Code: <i>SIL-12</i>
Data Sheet Numbers:	Size (acres): <i>0.82</i>
Investigator(s):	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 20S, R. 12W, SEC. 3</i> Other: <i>Booth Island</i> Hydrologic basin: <i>Sitcoos Lake</i>	Tax lot(s): <i>20120000-200</i>
Soil -- Mapped series: <i>Lint silt loam, 20-40% slopes</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Very small emergent area on east side of Booth Island.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-1
Data Sheet Numbers:	Size (acres): 0.30
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 26 Other: North of Clear Lake Road adj. to S. Cove Dev. Hydrologic basin: Woahink Lake	Tax lot(s): 19122720-102
Soil -- Mapped series: Lint silt loam, 7-12% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Salix hookeriana</i>		<i>Carex obnupta</i>
	<i>Vaccinium uliginosum</i>		
	<i>Spiraea douglasii</i>		

Comments:
 Small scrub-shrub dominated wetland in depressional area. Drains to north and Woahink Lake through the South Cove development. Intermittent, seasonal drainage.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-2
Data Sheet Numbers:	Size (acres): 0.42
Investigator(s):	Wetland Classification(s): PEM

Location -- Legal: T. 19S, R. 12W, SEC. 26 Other: N. of Clear Lake Road, S. Cove Develop. pond Hydrologic basin: Woahink Lake	Tax lot(s): 19122620-100, 200
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Small pond at entrance to South Cove development. Dominated by emergent species. Drains through intermittent creek to Woahink Lake. Off-site determination.

wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 7, 1996</i>	Wetland Mapping Code: <i>WOA-3A</i>
Data Sheet Numbers: <i>12,13</i>	Size (acres): <i>1.27</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 23</i> Other: <i>Woodland Lane, west of Clear Lake Road</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19122333-1500, 1400</i> <i>19122330-102, 101, 201</i> <i>19122320-402</i> <i>19122310-302</i>
Soil -- Mapped series: <i>Lint silt loam, 12-20%</i> <i>Lint silt loam, 7-12%</i> Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Thuja plicata</i>	<i>Gaultheria shallon</i>	<i>Rubus ursinus</i>	<i>Carex opnupta</i>
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
<i>Tsuga heterophylla</i>	<i>Spiraea douglasii</i>		<i>Potentilla palustris</i>
	<i>Lonicera involucrata</i>		<i>Dulichium arundinaceum</i>
			<i>Nuphar polysepalum</i>
			<i>Rannunculus repens</i>

Comments:

Scrub-shrub wetland on east edge of Woahink Lake. Small drainage extends from wetland northeast of Salal Street. Hydrologically connected to WOA-3B and 3C. Osprey nest nearby, to south. Tree farm east of drainage.

Wetland Classification Codes:

PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-3B
Data Sheet Numbers:	Size (acres): 0.39
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 23 Other: N. of Clear Lake Road, east of Salal Street Hydrologic basin: Woahink Lake	Tax lot(s): 19122310-300, 302
Soil -- Mapped series: Lint silt loam, 7-12% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Small wetland to east of Salal Street. Off-site determination. Connected hydrologically to WOA-3A and 3C.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-3C
Data Sheet Numbers:	Size (acres): 0.45
Investigator(s):	Wetland Classification(s): PEM

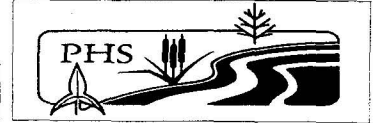
Location -- Legal: T. 19S, R. 12W, SEC.23 Other: North of Clear Lake Rd., east of Salal Street Hydrologic basin: Woahink Lake	Tax lot(s): 19122310-300
Soil -- Mapped series: Lint silt loam, 7-12% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Not visible from road. Top of drainage which connects WOA-3 wetlands.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>OFF-SITE</i>	Wetland Mapping Code: <i>WOA-4A</i>
Data Sheet Numbers:	Size (acres): <i>0.05</i>
Investigator(s):	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC.23</i> Other: <i>Cloud Nine Road, Bob Andersons</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19122310-206, 207</i>
Soil -- Mapped series: <i>Lint silt loam, 12-20% slopes</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
			<i>Carex obnupta</i>

Comments:
 Small depressional area with intermittent drainage to Woahink Lake.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-4B
Data Sheet Numbers:	Size (acres): 0.16
Investigator(s):	Wetland Classification(s): PFO

Location -- Legal: T. 19S, R. 12W, SEC.23 Other: Cloud Nine Road Hydrologic basin: Woahink Lake	Tax lot(s): 19122310-200, 300
Soil -- Mapped series: Lint silt loam, 12-20% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Picea sitchensis</i>			

Comments:
Small depressional area with intermittent drainage to Woahink Lake

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-5
Data Sheet Numbers:	Size (acres): 2.40
Investigator(s):	Wetland Classification(s): PEM, PSS

Location -- Legal: T. 19S, R. 12W, SEC.23 Other: Cloud Nine Road, Spruce Meadow Delineation Hydrologic basin: Woahink Lake	Tax lot(s): 19122310-901
Soil -- Mapped series: Lint silt loam, 7-12% slopes, Lint silt loam, 12-20% slopes	
Hydrologic Source: Groundwater, surface water	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Ledum glandulosum</i>		<i>Juncus effusus</i>
	<i>Spiraea douglasii</i>		<i>Carex obnupta</i>
	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
	<i>Salix hookeriana</i>		<i>Oenanthe sarmentosa</i>
			<i>Juncus patens</i>
			<i>Sparganium emersum</i>
			<i>Ranunculus repens</i>
			<i>Typha latifolia</i>
			<i>Darlingtonia californica</i>

Comments:
 Off-site determination. Wetland delineation completed for site (DSL #91-0181).
 Series of small drainages and depressional wetlands connected to Woahink Lake and extending upslope to Cloud Nine Road. Lake edge has small hummocks dominated by *Darlingtonia*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 7, 1996</i>	Wetland Mapping Code: <i>WOA-6A</i>
Data Sheet Numbers: <i>14,15,16</i>	Size (acres): <i>22.21</i>
Investigator(s): <i>FS/DS</i>	Wetland Classification(s): <i>PEM, PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 24</i> Other: <i>Gibbs/Miller Cr. wetland, S. of Clear Lk. Rd.</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19122400-200,</i> <i>210,206, 208</i>
Soil -- Mapped series: <i>Lint silt loam, 0 to 7%, 7-12%</i> <i>Brallier muck, drained</i> Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Pyrus fusca</i>		<i>Phalaris arundinacea</i>
	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
	<i>Spirea douglasii</i>		<i>Maianthemum dilatatum</i>
	<i>Salix hookeriana</i>		<i>Potamogeton natans</i>
			<i>Darlingtonia californica</i>
			<i>Carex obnupta</i>
			<i>Potentilla palustris</i>
			<i>Callitriche stagnalis</i>
			<i>Juncus effusus</i>

Comments:

Majority of wetland is off-site determination. High quality wetland associated with Gibbs Creek. Extends to north and east across Clear Lake Road (WOA-6B). Variety of wildlife: beaver, otter, wood ducks, osprey. Anadromous fish in Gibbs Creek and Woahink Lake.

Wetland Classification Codes:

PFO = palustrine forested

PSS = palustrine scrub-shrub

PEM = palustrine emergent

POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-6B
Data Sheet Numbers:	Size (acres): 33.19
Investigator(s):	Wetland Classification(s): PSS, PFO, PEM

Location -- Legal: T. 19S, R. 12W, SEC. 24, 13 Other: Gibbs/Miller Creek wetland, N. of Clear Lk. Rd. Hydrologic basin: Woahink Lake	Tax lot(s): 19121300-306, 200, 1501, 800, 308
Soil -- Mapped series: Brallier muck, drained	
Hydrologic Source: Surface water, groundwater	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
<i>Salix hookeriana</i>	<i>Spiraea douglasii</i>		<i>Darlingtonia californica</i>
	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
			<i>Potentilla palustris</i>
			<i>Carex sitchensis</i>

Comments:
 Off-site determination. High quality wetland associated with Gibbs Creek and connected to WOA-6A by culvert under Clear Lake Road. Extends north and divides into several sub-basins. Anadromous fish in Gibbs Creek. Logged areas to north.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-7
Data Sheet Numbers:	Size (acres): 0.79
Investigator(s):	Wetland Classification(s): PUB

Location -- Legal: T. 19S, R. 12W, SEC.14 Other: Collins Loop, Summerbell Arm, Woahink Lake Hydrologic basin: Woahink Lake	Tax lot(s): 19121440-101
Soil -- Mapped series: Bandon sandy loam, 12-50% slopes	
Hydrologic Source: Surface water	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
			<i>Nuphar polysepalum</i>
			<i>Potamogeton natans</i>

Comments:
Off-site determination. Small pond used as water supply for residents. Mostly open water.
Small drainage feeds pond from east. Separated from Woahink Lake by narrow band of upland.

Wetland Classification Codes: PUB = palustrine unconsolidated bottom
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>July 18, 1996</i>	Wetland Mapping Code: <i>WOA-8A</i>
Data Sheet Numbers:	Size (acres): <i>0.44</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC.14</i> Other: <i>Collins Loop, Summerbell Arm, Woahink Lake</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121440-100, 110</i>
Soil -- Mapped series: <i>Bullards-Ferrelo loams, 30-60% slopes</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Salix hookeriana</i>		<i>Carex sp.</i>
	<i>Alnus rubra</i>		<i>Juncus sp.</i>
	<i>Lonicera involucrata</i>		
	<i>Rubus spectabilis</i>		

Comments:
 Small scrub shrub wetland adjacent to Woahink Lake. Drainage extends upslope to east and connects to WOA-8B. Wetland area observed from boat, no data points due to topographically defined wetland boundary.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 6, 1996</i>	Wetland Mapping Code: <i>WOA-8B</i>
Data Sheet Numbers: <i>17,31</i>	Size (acres): <i>0.13</i>
Investigator(s): <i>FS/DS</i>	Wetland Classification(s): <i>PUB</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>Collins Loop., Mud Puppy Pond</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121440-110</i>
Soil -- Mapped series: <i>Bullards-Ferrelo loams 30 to 60%</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Thuja plicata</i>	<i>Rubus spectabilis</i>	<i>Rubus ursinus</i>	<i>Lysichitum americanum</i>
<i>Alnus rubra</i>			
<i>Picea sitchensis</i>			

Comments:
 Small excavated pond with steep banks. Predominantly unvegetated open water with a narrow emergent edge. Allegedly harbors mudpuppies (*Necturus maculosus*). Adjacent upland species: *Blechnum spicant*, *Polystichum munitum*, *Gaultheria shallon*.

Wetland Classification Codes: PUB = palustrine unconsolidated bottom
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-9A
Data Sheet Numbers:	Size (acres): 0.15
Investigator(s):	Wetland Classification(s): PUB

Location -- Legal: T. 19S, R. 12W, SEC.13 Other: East of Clear Lake Road Hydrologic basin: Woahink Lake	Tax lot(s): 19121300-1200
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Small excavated pond.

Wetland Classification Codes: PUB = palustrine unconsolidated bottom
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-9B
Data Sheet Numbers:	Size (acres): 0.34
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC.13 Other: East of Clear Lake Road Hydrologic basin: Woahink Lake	Tax lot(s): 19121300-1000,
Soil -- Mapped series: Lint silt loam, 0-7% slopes	
Hydrologic Source: Groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
	<i>Spiraea douglasii</i>		
	<i>Salix hookeriana</i>		
	<i>Alnus rubra</i>		

Comments:
Off-site determination. Small scrub-shrub area which appears to be isolated.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 6, 1996</i>	Wetland Mapping Code: <i>WOA-10</i>
Data Sheet Numbers: <i>18,19</i>	Size (acres): <i>0.25</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 13</i> Other: <i>East of Clear Lake Road, clearcut area</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121300-308, 800</i>
Soil -- Mapped series: <i>Bullards-Ferrelo loams 30 to 60%</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>			<i>Scirpus microcarpus</i>
			<i>Lysichitum americanum</i>
			<i>Juncus effusus</i>

Comments:
 Tributary of Gibbs Creek. Logged area. Drains to south and connects with large wetland (WOA-6A, 6B). Adjacent upland species: *Polystichum munitum*, *Gaultheria shallon*, *Tsuga heterophylla*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 6, 1996</i>	Wetland Mapping Code: <i>WOA-11</i>
Data Sheet Numbers: <i>20,21,22,23,24</i>	Size (acres): <i>2.14</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS, PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>West of Clear Lake Road, Lakeview</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121410-100, 200, 2100, 2101, 2400</i>
Soil -- Mapped series: <i>Bullards-Ferrelo loams 30 to 60%</i> <i>Bullards-Ferrelo loams 7 to 12%</i>	
Hydrologic Source: <i>Surface water</i>	

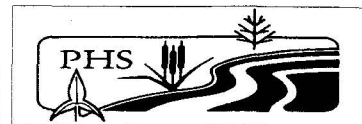
Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Thuja plicata</i>	<i>Spiraea douglasii</i>		<i>Lysichitum americanum</i>
<i>Picea sitchensis</i>	<i>Salix hookeriana</i>		<i>Carex sitchensis</i>
	<i>Rubus spectabilis</i>		<i>Nuphar polysepalum</i>
	<i>Ledum glandulosum</i>		<i>Oenanthe sarmentosa</i>
	<i>Rubus parviflorus</i>		<i>Potentilla palustris</i>
			<i>Eriophorum chamissonis</i>
			<i>Carex obnupta</i>
			<i>Ranunculus repens</i>
			<i>Ranunculus occidentalis</i>

Comments:
 High quality scrub-shrub wetland adjacent to Woahink Lake. Drainage extends south to wetland from Canary Road. Variety of plants, good wildlife habitat. Adjacent upland species: *Acer circinatum*, *Rhamnus purshiana*, *Vaccinium ovatum*, *Vaccinium parvifolium*, *Gaultheria shallon*, *Rubus discolor*, *Blechnum spicant*. Presence of sensitive species (*Eriophorum chamissonis*).

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 7, 1996</i>	Wetland Mapping Code: <i>WOA-12</i>
Data Sheet Numbers: <i>25,26,27</i>	Size (acres): <i>0.41</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>South of Canary Road, Greengate Road</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121140-1400</i>
Soil -- Mapped series: <i>Bullards-Ferrelo loams 0 to 7%</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Spiraea douglasii</i>		<i>Carex obnupta</i>
<i>Picea sitchensis</i>	<i>Salix hookeriana</i>		
	<i>Myrica californica</i>		

Comments:
 Small depressional wetland dominated by *Spiraea*. Surrounded by upland, but appears to overflow and drain to south, though no defined channel. Adjacent upland species: *Pinus contorta*, *Tsuga heterophylla*, *Rhamnus purshiana*, *Gaultheria shallon*, *Vaccinium ovatum*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-13
Data Sheet Numbers:	Size (acres): 6.18
Investigator(s):	Wetland Classification(s): PSS, PEM, PFO

Location -- Legal: T. 19S, R. 12W, SEC. 12, 13, 14 Other: N. of Canary Road, E. end of Lit. Woahink Lk. Hydrologic basin: Woahink Lake	Tax lot(s): 19121140-100, 19121200-500
Soil -- Mapped series: Bandon sandy loam, 12-50% slopes Bullards-Ferrelo loams, 30-60% slopes Hydrologic Source: Surface water	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Thuja plicata</i>	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
<i>Alnus rubra</i>	<i>Alnus rubra</i>		<i>Juncus effusus</i>
			<i>Nuphar polysepalum</i>

Comments:
High quality wetland at east end of Little Woahink Lake. Extends north and east.
Lots of snags and large woody debris. Adjacent upland species:
Pseudotsuga menziesii, *Gaultheria shallon*, *Rhododendron macrophyllum*.
Wetland characterization from viewpoint on Canary Road.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 6, 1996</i>	Wetland Mapping Code: <i>WOA-14A</i>
Data Sheet Numbers:	Size (acres): <i>0.15</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PAB</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>North of Canary Road, at Ltl. Woahink Drive</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121140-121</i>
Soil -- Mapped series: <i>Brallier muck, drained</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
			<i>Nuphar polysepalum</i>
			<i>Potamogeton natans</i>
			<i>Carex sitchensis</i>
			<i>Carex obnupta</i>

Comments:
 Small wetland at lower end of Little Woahink Lake, between dam and Canary Road.
 Dam blocks anadromous fish passage. Steep bank to north, road to south.
 No data points due to topographically defined wetland boundary. Wetland characterization from viewpoint on Canary Road.

Wetland Classification Codes: PAB = palustrine aquatic bed
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-14B
Data Sheet Numbers:	Size (acres): 0.11
Investigator(s):	Wetland Classification(s): PFO

Location -- Legal: T. 19S, R. 12W, SEC. 14 Other: North of Canary Road, at Ltl. Woahink Drive Hydrologic basin: Woahink Lake	Tax lot(s): 19121140-118, 129, 103
Soil -- Mapped series: Bandon sandy loam, Lint silt loam	
Hydrologic Source: Surface water	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
	<i>Alnus rubra</i>		<i>Lysichitum americanum</i>

Comments:
Off-site determination. Small wetland at northwest end of Little Woahink Lake. Narrow drainage extends north from road and south to Little Woahink Lake. Adjacent upland species include *Pseudotsuga menziesii*, *Rhamnus purshiana*, *Gaultheria shallon*, *Vaccinium parvifolium*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>June 6, 1996</i>	Wetland Mapping Code: <i>WOA-15</i>
Data Sheet Numbers: <i>28,29</i>	Size (acres): <i>6.73</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>South of Canary Road, NE end of Woahink Lk.</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121140-1300</i>
Soil -- Mapped series: <i>Brallier muck, drained--Hydric</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Lonicera involucrata</i>		<i>Carex lyngbyei</i>
	<i>Ledum glandulosum</i>		<i>Potentilla anserina</i>
	<i>Spiraea douglasii</i>		<i>Sisyrinchium californicum</i>
	<i>Alnus rubra</i>		<i>Lysichitum americanum</i>
			<i>Darlingtonia californica</i>
			<i>Eriophorum chamissonis</i>
			<i>Typha latifolia</i>

Comments:

High quality wetland at the northeast end of Woahink Lake. Connected to Little Woahink by culverts under Canary Road. Wide variety of wetland emergent plants, including Darlingtonia and Eriophorum. Defined by steep banks to the east and west. Good wildlife habitat. Anadromous fish. Adjacent upland species: *Picea sitchensis*, *Rhamnus purshiana*, *Myrica californica*, *Gaultheria shallon*, *Vaccinium ovatum*, *Polystichum munitum*. Presence of sensitive species (*Eriophorum*). UNCOMMON WETLAND PLANT COMMUNITY, WETLAND OF SPECIAL INTEREST

Wetland Classification Codes:

PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-16
Data Sheet Numbers:	Size (acres): 11.54
Investigator(s):	Wetland Classification(s): PEM, PSS

Location -- Legal: T. 19S, R. 12W, SEC. 2 Other: N. of Canary Road, NE arm of Woahink Lk. Hydrologic basin: Woahink Lake	Tax lot(s): 19121100-201,600 102, 100
Soil -- Mapped series: Brallier muck, drained	
Hydrologic Source: Surface water	

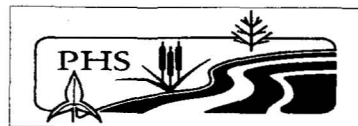
Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Spiraea douglasii</i>		<i>Carex obnupta</i>
	<i>Salix hookeriana</i>		<i>Nuphar polysepalum</i>
	<i>Alnus rubra</i>		<i>Potamogeton natans</i>
	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
	<i>Lonicera involucrata</i>		<i>Carex sp.</i>

Comments:
Off-site determination. High quality wetland extends to north and out of project boundary. Defined by steep banks to the east and west. Good wildlife habitat. Bear, osprey, coho. Emergent wetland at southern end, appears to become more scrub-shrub to the north. Adjacent upland species: *Picea sitchensis*, *Tsuga heterophylla*, *Rhododendron macrophyllum*, *Vaccinium ovatum*, *Gaultheria shallon*, *Polystichum munitum*.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>July 18, 1996</i>	Wetland Mapping Code: <i>WOA-17</i>
Data Sheet Numbers:	Size (acres): <i>6.77</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS, PUB, PEM</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 2</i> Other: <i>N. of Canary Road, middle arm of Woahink Lk.</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121100-600,</i> <i>302, 202, 201</i>
Soil -- Mapped series: <i>Brallier muck, drained</i> <i>Bandon sandy loam, 12-50% slopes</i> Hydrologic Source: <i>Surface water</i>	

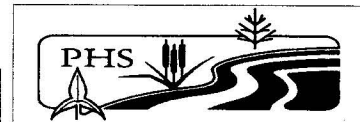
Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Salix hookeriana</i>		<i>Nuphar polysepalum</i>
	<i>Alnus rubra</i>		<i>Potamogeton natans</i>
	<i>Spiraea douglasii</i>		<i>Potentilla anserina</i>
	<i>Lonicera involucrata</i>		<i>Lysichitum americanum</i>
	<i>Ledum glandulosum</i>		<i>Carex obnupta</i>
			<i>Carex sp.</i>

Comments:
 High quality wetland extends north from Honeyman State Park. Dam just out of Park boundary with impounded water (old log ponds) which may block fish passage. Adjacent upland species: *Picea sitchensis*, *Tsuga heterophylla*, *Rhododendron macrophyllum*, *Vaccinium ovatum*, *Gaultheria shallon*, *Myrica californica*.
 Wetland observed from boat. No data points due to topographically defined wetland boundary.

Wetland Classification Codes: PUB = palustrine unconsolidated bottom
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>July 18, 1996</i>	Wetland Mapping Code: <i>WOA-18</i>
Data Sheet Numbers:	Size (acres): <i>0.62</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>North of Canary Road, NW arm of Woahink Lk.</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121100-600,</i>
Soil -- Mapped series: <i>Bandon sandy loam, 12-50% slopes</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
	<i>Spiraea douglasii</i>		<i>Nuphar polysepalum</i>
	<i>Alnus rubra</i>		<i>Potamogeton natans</i>
	<i>Lonicera involucrata</i>		<i>Carex sp.</i>
	<i>Rubus spectabilis</i>		<i>Juncus sp.</i>

Comments:
 Emergent wetland at southern end in Honeyman State Park. Extends north and west and becomes scrub-shrub. Defined by steep banks to east and west. Snags and large woody debris. Bear, Great Blue heron, kingfisher, osprey nest by Canary Road. Adjacent upland species: *Tsuga heterophylla*, *Picea sitchensis*, *Rhododendron*, *Vaccinium ovatum*, *Gaultheria shallon*, *Myrica californica*. Parrot feather aquatic weed present along water edge. Wetland observed from boat. No data points due to topographically defined wetland boundary.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>August 2, 1996</i>	Wetland Mapping Code: <i>WOA-19A</i>
Data Sheet Numbers: <i>30</i>	Size (acres): <i>0.04</i>
Investigator(s): <i>JVS/PF</i>	Wetland Classification(s): <i>PEM</i>

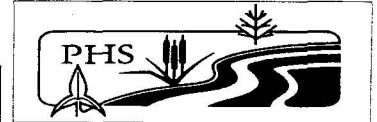
Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>East Woahink Recreation Area</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121100-600</i>
Soil -- Mapped series: <i>Bandon sandy loam, 0-7%</i>	
Hydrologic Source: <i>Groundwater, precipitation</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
			<i>Sisyrinchium californicum</i>
			<i>Carex obnupta</i>
			<i>Festuca rubra</i>
			<i>Lotus corniculatus</i>
			<i>Holcus lanatus</i>

Comments:
 Honeyman State Park recreation area. Small depressional wetland in mowed lawn area.
 Marginal hydrology.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>August 2, 1996</i>	Wetland Mapping Code: <i>WOA-19B</i>
Data Sheet Numbers:	Size (acres): <i>0.34</i>
Investigator(s): <i>JVS, PF</i>	Wetland Classification(s): <i>PSS</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC. 14</i> Other: <i>East Woahink Recreation Area</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19121100-600</i>
Soil -- Mapped series: <i>Bandon sandy loam, 0-7% slopes</i>	
Hydrologic Source: <i>Surface water</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
	<i>Alnus rubra</i>		<i>Lysichitum americanum</i>
	<i>Ledum glandulosum</i>		<i>Darlingtonia californica</i>
	<i>Salix hookeriana</i>		<i>Juncus effusus</i>
	<i>Spiraea douglasii</i>		<i>Carex obnupta</i>

Comments:
 Small wetland edge along recreation area adjacent to Woahink Lake.

UNCOMMON WETLAND PLANT COMMUNITY, WETLAND OF SPECIAL INTEREST.

Wetland Classification Codes:

PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-20
Data Sheet Numbers:	Size (acres): 0.18
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 15 Other: E. of Hwy 101, Ford Way, W. Woahink Lk. Hydrologic basin: Woahink Lake	Tax lot(s): 19121500-100
Soil -- Mapped series: Bullards-Ferrelo loams, 30-60% sloes	
Hydrologic Source: Surface water, groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS
	<i>Alnus rubra</i>		<i>Nuphar polysepalum</i>
	<i>Spiraea douglasii</i>		<i>Potamogeton natans</i>
	<i>Salix hookeriana</i>		<i>Carex obnupta</i>
			<i>Carex sp.</i>

Comments:
Off-site determination. Small wetland at base of short drainage adjacent to Woahink Lake.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-21
Data Sheet Numbers:	Size (acres): 1.06
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 23 Other: East of Hwy 101, W. edge of Woahink Lake Hydrologic basin: Woahink Lake	Tax lot(s): 19122210-100, 400
Soil -- Mapped series: Bullards-Ferrelo loams, 7-12% slopes	
Hydrologic Source: Surface water	

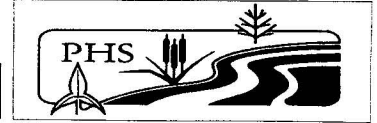
Dominant Wetland Vegetation

TREES	SHRUBS	VINES	HERBS
	<i>Salix hookeriana</i>		<i>Carex sp.</i>
	<i>Spiraea douglasii</i>		<i>Nuphar polysepalum</i>
	<i>Alnus rubra</i>		<i>Eleocharis palustris</i>
	<i>Lonicera involucrata</i>		<i>Potamogeton natans</i>

Comments:
Off-site determination. Scrub shrub wetland at lake edge. Small drainage extends to Hwy. 101.
Osprey nest to east.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: <i>OFF-SITE</i>	Wetland Mapping Code: <i>WOA-22</i>
Data Sheet Numbers:	Size (acres): <i>0.56</i>
Investigator(s):	Wetland Classification(s): <i>PUB</i>

Location -- Legal: <i>T. 19S, R. 12W, SEC.22</i> Other: <i>West of Hwy. 101, south of Lakeshore</i> Hydrologic basin: <i>Woahink Lake</i>	Tax lot(s): <i>19122240-800</i>
Soil -- Mapped series: <i>Lint silt loam, 12-20% slopes</i>	
Hydrologic Source: <i>Groundwater</i>	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off site determination. Small excavated pond with intermittent drainage to Woahink Lake.

Wetland Classification Codes: PUB = palustrine unconsolidated bottom
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Wetland Characterization Sheet



Project Name: Dunes City Local Wetlands Inventory

Date(s) of field verification: OFF-SITE	Wetland Mapping Code: WOA-23
Data Sheet Numbers:	Size (acres): 0.11
Investigator(s):	Wetland Classification(s): PSS

Location -- Legal: T. 19S, R. 12W, SEC. 15 Other: E. of Hwy 101, Ford Way, W. Woahink Lk. Hydrologic basin: Woahink Lake	Tax lot(s): 19121540-1000
Soil -- Mapped series: Bullards-Ferrelo loams, 30-60% sloes	
Hydrologic Source: Surface water, groundwater	

Dominant Wetland Vegetation			
TREES	SHRUBS	VINES	HERBS

Comments:
Off-site determination. Small wetland at base of short drainage adjacent to Woahink Lake.
Possibly excavated? Cannot be viewed from road or lake.

Wetland Classification Codes:
 PFO = palustrine forested PSS = palustrine scrub-shrub PEM = palustrine emergent POW = palustrine open water

Appendix C
OFWAM Data and Summary



Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Westlake, Siltcoos Lake	Offsite Assessment?:	Yes
Wetland Code:	SIL-1	Wetland Type(s):	PSS, PEM
Wetland Location:	South of Laguna Lane		
Approx. Area (acres)	2.99	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	C	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	A	Q-6	C
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	B
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-1

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Pleasing	Large portion of wetland visible, no visual detractors, variety of vegetation

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Westlake, Siltcoos Lake	Offsite Assessment?:	No
Wetland Code:	SIL-2	Wetland Type(s):	PSS
Wetland Location:	Tye Campground, adjacent to Siltcoos River		
Approx. Area (acres)	0.15	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	C	Q-5	C
Q-6	A	Q-6	A	Q-6	A	Q-6	C	Q-6	B
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is lost or not present
Sensitivity to Impact	Wetland is not sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	A	Q-1	A	Q-1	B
Q-2		Q-2	A	Q-2	A	Q-2	A
Q-3		Q-3	B	Q-3	A	Q-3	A
Q-4		Q-4	A	Q-4	B	Q-4	A
Q-5B		Q-5	A	Q-5	A	Q-5	A
Q-6		Q-6	A	Q-6	B	Q-6	B

Results:

Enhancement Potential	N/A
Education	Wetland has educational uses
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-2

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	adjacent to Siltcoos River, open space, mix of vegetation
Fish Habitat	Intact	Adjacent to river, sensitive species in river,
Water Quality	Impacted or degraded	Dominant land use is open space, evidence of ponding, good vegetation cover, surface water
Hydrologic Control	Lost or not present	Small, unrestricted outlet, National Recreation Area downstream
Sensitivity to Impact	Not sensitive to future impacts	In public campground
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Has educational uses	In public campground, adjacent to Siltcoos River, safe access
Recreation	Provides recreational opportunities	Adjacent to river, boat launch area, fishing
Aesthetic Quality	Pleasing	Large portion of wetland visible, no visual detractors, noise from Hwy. 101

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Westlake, Siltcoos Lake	Offsite Assessment?:	No
Wetland Code:	SIL-3	Wetland Type(s):	PSS
Wetland Location:	North of Pacific Avenue, adjacent to Hwy. 101		
Approx. Area (acres)	0.97	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	B	Q-3	A	Q-3	B	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5	C	Q-5	A	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	B
Q-2	B	Q-2	B	Q-2	C	Q-2	C
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	B	Q-4	B	Q-4	B	Q-4	A
Q-5B	B	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	B	Q-6	B	Q-6	B

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-3

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	Adjacent to residential/Hwy. 101, less than 0.5 acre of open water
Fish Habitat	Intact	Adjacent to residential development
Water Quality	Impacted or degraded	Groundwater source, good water quality
Hydrologic Control	Intact	Restricted outlet, downstream development urbanizing area, woody vegetation
Sensitivity to Impact	Potentially sensitive to future impacts	Developing area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate educational uses	No public access, adjacent to busy roads
Recreation	Not appropriate or does not provide recreational opportunities	Private land, no fishing
Aesthetic Quality	Moderately pleasing	Only small portion of wetland visible, no visual detractors, noise from Hwy. 101

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-4A	Wetland Type(s):	PSS, PEM, PFO
Wetland Location:	South of Clear Lake Road, adj. to Hwy. 101, Woahink Cr.		
Approx. Area (acres)	88.68	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	C	Q-4	A	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	C
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	B

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-4A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors, variety of vegetation

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-4B	Wetland Type(s):	PSS, PEM, PFO
Wetland Location:	North of Clear Lake Road, adj. to Hwy. 101, Woahink Cr.		
Approx. Area (acres)	14.98	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	B	Q-4	A	Q-4	A	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	C
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	B

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-4B

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors, variety of vegetation

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-4C	Wetland Type(s):	PSS, PFO
Wetland Location:	North of Clear Lake Road, west of South Cove Development		
Approx. Area (acres)	1.53	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	B	Q-3	A	Q-3	B	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	B	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	A	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	B	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-4C

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Woody vegetation, variety of vegetation, connected by surface water to other wetlands
Fish Habitat	Intact	Connected to Woahink Creek, sensitive species in creek, high percentage of cover
Water Quality	Impacted or degraded	Dominant land use is open space groundwater source
Hydrologic Control	Impacted or degraded	Small size, open space downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Zoned for development
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate for or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors, variety of vegetation

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-4D	Wetland Type(s):	PEM
Wetland Location:	North of Clear Lake Road, west of South Cove Development		
Approx. Area (acres)	0.03	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1		Q-1	C	Q-1	B	Q-1	A
Q-2	B	Q-2		Q-2	A	Q-2	A	Q-2	A
Q-3	C	Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	C	Q-4	C	Q-4	A
Q-5	B	Q-5		Q-5	A	Q-5	C	Q-5	A
Q-6	B	Q-6		Q-6	C	Q-6	C	Q-6	B
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is lost or not present
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4	C	Q-4	B	Q-4	B	Q-4	B
Q-5B	C	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has moderate potential for enhancement
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-4D

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife	Small area, no buffer, adjacent to house, no open water
Fish Habitat	N/A	No fish habitat
Water Quality	Impacted or degraded	Not connected by surface water, groundwater source
Hydrologic Control	Lost or not present	Small size, open space downstream, dominated by emergent/wet meadow veg.
Sensitivity to Impact	Potentially sensitive to future impacts	Zoned for development, isolated
Enhancement Potential	Moderate enhancement potential	Other functions degraded, small size, groundwater
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate for or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Not Pleasing	Only one Cowardin class, immediately adjacent to house

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-5	Wetland Type(s):	PFO
Wetland Location:	West of Hwy 101, north of Pacific Avenue		
Approx. Area (acres)	1.70	Investigator(s):	FS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3		Q-3	A	Q-3	B	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5		Q-5	C	Q-5	A	Q-5	C
Q-6	A	Q-6		Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	B	Q-5	B
Q-6		Q-6	B	Q-6	B	Q-6	B

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-5

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Mix of vegetation, surrounded by open space
Fish Habitat	N/A	Not directly connected to lake or river
Water Quality	Impacted or degraded	Groundwater source, adjacent to National Recreation Area
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	Unsafe access, safety hazards associated with Hwy. 101
Recreation	Not appropriate or does not provide recreational opportunities	Unsafe access, no hunting or fishing
Aesthetic Quality	Moderately pleasing	Continous traffic noise from Hwy. 101, entire wetland not visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-6	Wetland Type(s):	PSS
Wetland Location:	South of Clear Lake Road and Darlings Loop		
Approx. Area (acres)	0.14	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3		Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5	B	Q-5		Q-5	A	Q-5	A	Q-5	A
Q-6	B	Q-6		Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	B
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	B
Q-4	C	Q-4	B	Q-4	B	Q-4	B
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-6

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area, adjacent to busy road
Fish Habitat	N/A	Not directly connected to lake or river
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	Unsafe access, safety hazards associated with Clear Lake Road
Recreation	Not appropriate or does not provide recreational opportunities	Unsafe access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	SIL-7	Wetland Type(s):	PEM
Wetland Location:	South of Hilltop Road, Peterdorff Park		
Approx. Area (acres)	0.58	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	C	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	C	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	C	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	B
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has moderate potential for enhancement
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-7

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	Impacted or degraded	Not directly connected to lake or river adjacent to development, culverted
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In residential area
Enhancement Potential	Moderate enhancement potential	Small size, restricted flow
Education	Not appropriate for educational uses	No access
Recreation	Not appropriate or does not provide recreational opportunities	No access, no hunting or fishing
Aesthetic Quality	Moderately pleasing	One Cowardin class

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City, Siltcoos Lake	Offsite Assessment?:	Yes
Wetland Code:	SIL-8A	Wetland Type(s):	PSS, PEM
Wetland Location:	Kiechle Arm, Siltcoos Lake, East of Spruce		
Approx. Area (acres)	3.33	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	A
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	C	Q-4	B	Q-4	C	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	A	Q-6	C
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	A	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	C
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-8A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Impacted or degraded	Adjacent to lake, sensitive species in lake, high percentage of cover: area developed H2O quality limited
Water Quality	Intact	Dominant land use is open space
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Moderately pleasing	More than 2 Cowardin classes, recently logged

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-8B	Wetland Type(s):	PEM
Wetland Location:	Kiechle Arm, Siltcoos Lake, East of Spruce		
Approx. Area (acres)	0.06	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	C	Q-1	B	Q-1	A
Q-2	C	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	C	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	C	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	B
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4	C	Q-4	B	Q-4	B	Q-4	C
Q-5B	C	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has moderate potential for enhancement
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-8B

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area, recently logged area
Fish Habitat	Impacted or degraded	Not shaded, no open water, in developed area
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	Moderate enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Not pleasing	One Cowardin class, logged area

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Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-8C	Wetland Type(s):	PEM
Wetland Location:	Kiechle Arm, Siltcoos Lake, East of Spruce		
Approx. Area (acres)	0.42	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	C	Q-1	B	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	C	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	C	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	C
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4	C	Q-4	B	Q-4	B	Q-4	C
Q-5B	C	Q-5	C	Q-5	A	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has moderate potential for enhancement
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-8C

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area, recently logged area
Fish Habitat	Impacted or degraded	Not shaded, no open water, in developed area
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Woody vegetation, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	Moderate enhancement potential	Other functions degraded, small area
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	No public access, no hunting, fishing in adjacent Siltcoos Lake
Aesthetic Quality	Not pleasing	One Cowardin class, logged area

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	SIL-9	Wetland Type(s):	PEM, PSS
Wetland Location:	Kiechle Arm, Siltcoos Lake, Harmony Lane		
Approx. Area (acres)	3.72	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	C	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	C	Q-6	A
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	B
Q-3		Q-3	A	Q-3	B	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-9

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	In developed area, good vegetation cover, evidence of flooding or ponding, large size
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	No access or boat launch area, no trails fishing and diverse wildlife
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors

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(Revised Edition, April, 1996)



Project Name:	Dunes City LWI		Date:	August 13, 1996
Project Location:	Dunes City		Offsite Assessment?:	Yes
Wetland Code:	SIL-10	Wetland Type(s):	PSS	
Wetland Location:	Kiechle Arm, Siltcoos Lake, Erhart Road			
Approx. Area (acres)	7.39	Investigator(s):	JVS, PF, FS	

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	C	Q-4	A	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	C	Q-6	A
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	B
Q-3		Q-3	A	Q-3	B	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-10

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	In developed area, good vegetation cover, evidence of flooding or ponding, large size
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	No access or boat launch area, no trails fishing and diverse wildlife
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors

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(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-11	Wetland Type(s):	PEM
Wetland Location:	Booth Island, Siltcoos Lake		
Approx. Area (acres)	0.50	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	B	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	C	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	C	Q-6	C
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	C
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-11

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	High vegetation cover and buffer, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, provides function for water quality limited Siltcoos Lake
Hydrologic Control	Impacted or degraded	Floodplain, urbanizing area, unrestricted outflow
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Pleasing	Large portion of wetland visible, no visual detractors, adjacent to Lake

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	SIL-12	Wetland Type(s):	PEM
Wetland Location:	Booth Island, Siltcoos Lake		
Approx. Area (acres)	0.82	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	B	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	C	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	A	Q-6	C	Q-6	C
Q-7	C					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	C
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: SIL-12

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	High vegetation cover and buffer, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, provides function for water quality limited Siltcoos Lake
Hydrologic Control	Impacted or degraded	Floodplain, urbanizing area, unrestricted outflow
Sensitivity to Impact	Potentially sensitive to future impacts	Siltcoos Lake is water quality limited zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, boat launch area, fishing
Aesthetic Quality	Pleasing	Large portion of wetland visible, no visual detractors, adjacent to Lake

Oregon Freshwater Wetland Assessment Methodology
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Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-1	Wetland Type(s):	PSS
Wetland Location:	North of Clear Lake Road, adj. to South Cove Development		
Approx. Area (acres)	0.30	Investigator(s):	FS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3		Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5		Q-5	A	Q-5	A	Q-5	A
Q-6	A	Q-6		Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	B
Q-2	B	Q-2	B	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	B	Q-4	B	Q-4	B	Q-4	B
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-1

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	N/A	No open water or direct connection to lake
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Moderately pleasing	More than 1 Cowardin class, in residential area

Oregon Freshwater Wetland Assessment Methodology
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Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-2	Wetland Type(s):	PEM
Wetland Location:	North of Clear Lake Road, South Cove Development pond		
Approx. Area (acres)	0.42	Investigator(s):	FS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	C	Q-3	B	Q-3	B	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	B	Q-4	B	Q-4	B	Q-4	B
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-2

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	In residential area, no vegetated buffer
Fish Habitat	Impacted or degraded	No vegetated buffer, in residential area
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Mix of vegetation, entire wetland visible

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Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-3A	Wetland Type(s):	PSS
Wetland Location:	Woodland Lane, west of Clear Lake Road		
Approx. Area (acres)	1.27	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	B	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	B	Q-2	C
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be moderately pleasing

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-3A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	In developed area, good vegetation cover, evidence of flooding or ponding
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	In developing area
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	No access or boat launch area, no trails, fishing and diverse wildlife
Aesthetic Quality	Moderately pleasing	No visual detractors, entire wetland not visible

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Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-3B	Wetland Type(s):	PSS
Wetland Location:	North of Clear Lake Road, Salal Street		
Approx. Area (acres)	0.39	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	C	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	C	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	B
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-3B

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	Intact	Natural channel connects wetland to lake, shaded stream, sensitive species in adjacent lake
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Impacted or degraded	Small size, surrounded by open space, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	No visual detractors, entire wetland visible

Oregon Freshwater Wetland Assessment Methodology

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Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-3C	Wetland Type(s):	PEM
Wetland Location:	North of Clear Lake Road, Salal Street		
Approx. Area (acres)	0.45	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	C	Q-1	B	Q-1	B
Q-2	C	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	C	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	B
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-3C

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	Intact	Natural channel connects wetlands, shaded stream
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Impacted or degraded	Small size, surrounded by open space, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

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Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-4A	Wetland Type(s):	PEM
Wetland Location:	Cloud Nine Road, Bob Andersons		
Approx. Area (acres)	0.05	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	C	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3		Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5		Q-5	A	Q-5	C	Q-5	A
Q-6	A	Q-6		Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	B								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	B
Q-5B	B	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-4A

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	N/A	No open water, intermittent channel to lake
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-4B	Wetland Type(s):	PFO
Wetland Location:	Cloud Nine Road		
Approx. Area (acres)	0.16	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3		Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5		Q-5	A	Q-5	C	Q-5	A
Q-6	A	Q-6		Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	B								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	A	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	B
Q-5B	B	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-4B

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	No open water, in residential area
Fish Habitat	N/A	No open water, intermittent channel to lake
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI		Date:	August 13, 1996
Project Location:	Dunes City		Offsite Assessment?:	Yes
Wetland Code:	WOA-5	Wetland Type(s):	PEM, PSS	
Wetland Location:	Cloud Nine Road, Spruce Meadow Delineation			
Approx. Area (acres)	2.40	Investigator(s):	JVS, PF	

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	C	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	B	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-5

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Adjacent to lake, variety of vegetation open space
Fish Habitat	Intact	Connected to lake, variety of vegetation, natural channels
Water Quality	Impacted or degraded	Groundwater source, surrounded by undeveloped land
Hydrologic Control	Intact	Floodplain of lake, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	No public access, fishing in lake
Aesthetic Quality	Moderately pleasing	Entire wetland not visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-6A	Wetland Type(s):	PEM, PSS
Wetland Location:	Gibbs Creek wetland, to south of Clear Lake Rd.		
Approx. Area (acres)	22.21	Investigator(s):	JVS, PF, FS,DRS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	A	Q-4	A	Q-4	A	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-6A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasant	More than 2 Cowardin classes, no visual detractors

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-6B	Wetland Type(s):	PEM, PSS, PFO
Wetland Location:	Gibbs/Miller Creek wetland, to north of Clear Lake Rd.		
Approx. Area (acres)	33.19	Investigator(s):	JVS, PF, FS,DRS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	B	Q-4	A	Q-4	A	Q-4	B	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-6B

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	Diverse wildlife, no public access
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-7	Wetland Type(s):	PUB
Wetland Location:	Collins Loop, Summerbell Arm, Woahink Lake		
Approx. Area (acres)	0.79	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	B	Q-3	C	Q-3	B	Q-3	C
Q-4	B	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	B	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-7

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	Low interspersion, small area of open water in residential area adjacent to lake
Fish Habitat	Intact	Excavated pond, in residential area
Water Quality	Impacted or degraded	Groundwater source, low vegetation cover
Hydrologic Control	Intact	Restricted outlet, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no fishing or hunting
Aesthetic Quality	Moderately pleasing	One Cowardin class, entire wetland visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-8A	Wetland Type(s):	PSS
Wetland Location:	Collins Lp., Summerbell Arm, Woahink Lake		
Approx. Area (acres)	0.44	Investigator(s):	FS, DRS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	C
Q-2		Q-2	B	Q-2	B	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-8A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover; area developed, water quality limited
Water Quality	Intact	Floodplain of lake, evidence of flooding or ponding, connected to other wetlands
Hydrologic Control	Intact	Floodplain, urbanizing area
Sensitivity to Impact	Potentially sensitive to future impacts	Area zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	Adjacent to lake, fishing
Aesthetic Quality	Pleasing	No visual detractors, diverse wildlife

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI		Date:	August 13, 1996	
Project Location:	Dunes City		Offsite Assessment?:	Yes	
Wetland Code:	WOA-8B	Wetland Type(s):	PUB		
Wetland Location:	Collins Lp., mudpuppy pond				
Approx. Area (acres)	0.13	Investigator(s):	FS, DRS		

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	C	Q-1	B	Q-1	C	Q-1	B	Q-1	A
Q-2	B	Q-2	C	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	A	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	B	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-8B

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	Low interspersion, small area of open water excavated pond
Fish Habitat	Intact	Excavated pond, in residential area
Water Quality	Lost or not present	Groundwater source
Hydrologic Control	Intact	Restricted outlet, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no fishing or hunting
Aesthetic Quality	Moderately pleasing	No visual detractors, entire wetland visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-9A	Wetland Type(s):	PUB
Wetland Location:	East of Clear Lake Road		
Approx. Area (acres)	0.15	Investigator(s):	FS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	B	Q-1	C	Q-1	B	Q-1	A
Q-2	B	Q-2	C	Q-2	A	Q-2	A	Q-2	A
Q-3	C	Q-3	C	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	C	Q-4	A	Q-4	A
Q-5	B	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is lost or not present
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4	A	Q-4	B	Q-4	B	Q-4	B
Q-5B	C	Q-5	C	Q-5	B	Q-5	A
Q-6	C	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has moderate potential for enhancement
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-9A

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife	Small area, no buffer, low vegetation variety
Fish Habitat	Impacted or degraded	Small agricultural pond, no cover or shade
Water Quality	Lost or not present	Not connected by surface water, groundwater source
Hydrologic Control	Intact	Small size, open space downstream, restricted outlet
Sensitivity to Impact	Potentially sensitive to future impacts	Zoned for development, isolated
Enhancement Potential	Moderate enhancement potential	Other functions degraded, small size, groundwater
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate for or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Not Pleasing	Only one Cowardin class, in agricultural field

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-9B	Wetland Type(s):	PSS
Wetland Location:	East of Clear Lake Road		
Approx. Area (acres)	0.34	Investigator(s):	FS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1		Q-1	C	Q-1	B	Q-1	A
Q-2	A	Q-2		Q-2	A	Q-2	A	Q-2	A
Q-3	C	Q-3		Q-3	B	Q-3	B	Q-3	C
Q-4	C	Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5		Q-5	A	Q-5	A	Q-5	A
Q-6	A	Q-6		Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	B								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	B
Q-2	B	Q-2	B	Q-2	C	Q-2	B
Q-3		Q-3	B	Q-3	C	Q-3	B
Q-4	B	Q-4	B	Q-4	B	Q-4	B
Q-5B	B	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-9B

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife	Small area, one Cowardin class, in residential area
Fish Habitat	N/A	No fish habitat
Water Quality	Impacted or degraded	Not connected by surface water, groundwater source
Hydrologic Control	Intact	Small size, open space downstream, restricted outlet
Sensitivity to Impact	Potentially sensitive to future impacts	Zoned for development, isolated
Enhancement Potential	High enhancement potential	Other functions degraded, small size, groundwater
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate for or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Moderately Pleasing	Only one Cowardin class, entire wetland not visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-10	Wetland Type(s):	PEM
Wetland Location:	East of Clear Lake Road, clearcut area		
Approx. Area (acres)	0.25	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	A	Q-1	B	Q-1	A
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	B	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	C
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	A	Q-2	B	Q-2	C	Q-2	A
Q-3	B	Q-3	B	Q-3	C	Q-3	C
Q-4	B	Q-4	B	Q-4	B	Q-4	C
Q-5B	C	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-10

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	Low interspersion, small area of open water, logged riparian area
Fish Habitat	Intact	Connected to Woahink Lake, mostly shaded sensitive species present
Water Quality	Impacted or degraded	Low vegetation cover, small area
Hydrologic Control	Impacted or degraded	Unrestricted outlet, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no fishing or hunting
Aesthetic Quality	Not pleasing	Logged area adjacent to drainage, little vegetation cover

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI		Date:	August 13, 1996	
Project Location:	Dunes City		Offsite Assessment?:	No	
Wetland Code:	WOA-11	Wetland Type(s):	PEM, PSS		
Wetland Location:	West of Clear Lake Road, Lakeview				
Approx. Area (acres)	2.14	Investigator(s):	JVS, PF		

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	B	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	B
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-11

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasing	More than 2 Cowardin classes, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-12	Wetland Type(s):	PSS
Wetland Location:	South of Canary Road, Greengate Road		
Approx. Area (acres)	0.41	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	B	Q-1	B
Q-2	A	Q-2	B	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	C	Q-4	C	Q-4	A	Q-4	C
Q-5	B	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	B	Q-6	C	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is lost or not present
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	B	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-12

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Structural diversity, open water
Fish Habitat	Impacted or degraded	Not directly connected to other water body, not shaded
Water Quality	Lost or not present	Groundwater, small area, no surface connection
Hydrologic Control	Intact	Restricted outlet, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no fishing or hunting
Aesthetic Quality	Pleasing	no visual detractors, entire wetland visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-13	Wetland Type(s):	PEM, PSS, PFO
Wetland Location:	North of Canary Road, east end of Little Woahink Lake		
Approx. Area (acres)	6.18	Investigator(s):	JVS, PF, FS, DRS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	B	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	A	Q-4	A	Q-4	A	Q-4	B	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	C
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	C
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

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Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-13

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Potential to provide recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasing	no visual detractors, diverse habitat

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-14A	Wetland Type(s):	PAB
Wetland Location:	North of Canary Road, at Little Woahink Drive		
Approx. Area (acres)	0.15	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	A	Q-1	B	Q-1	A
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	B	Q-3	C	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	A	Q-5	C	Q-5	A	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	B	Q-2	B	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	C
Q-4		Q-4	B	Q-4	B	Q-4	B
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-14A

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Connected to other wetlands, good water quality, open space
Fish Habitat	Impacted or degraded	Limited fish passage, channel modifications unshaded
Water Quality	Impacted or degraded	Moderate vegetation cover, no upstream pollution
Hydrologic Control	Impacted or degraded	Upstream open space, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	In area zoned for development, adjacent to Canary Road
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access, dangerous viewpoint
Recreation	Potential to provide recreational opportunities	No public access, no fishing or hunting
Aesthetic Quality	Moderately pleasing	Adjacent to road, small dam

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-14B	Wetland Type(s):	PFO
Wetland Location:	North of Canary Road, north of Little Woahink Drive		
Approx. Area (acres)	0.11	Investigator(s):	JVS, PF, FS

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	B	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	B
Q-2		Q-2	A	Q-2	C	Q-2	B
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	B	Q-5	A
Q-6		Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be moderately pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-14B

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding
Hydrologic Control	Intact	Restricted outlet, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, zoned for development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No boating, hunting or fishing
Aesthetic Quality	Moderately Pleasing	No visual detractors, majority of wetland visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-15	Wetland Type(s):	PEM
Wetland Location:	South of Canary Road, on northeast end of Woahink Lake		
Approx. Area (acres)	6.73	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	A	Q-4	A	Q-4	A	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	B	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland has the potential to provide recreational activities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-15

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Adjacent to road/development surrounded by open space
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access, dangerous viewpoint
Recreation	Potential to provide recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasing	Variety of vegetation, entire wetland visible, diverse wildlife habitat

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-16	Wetland Type(s):	PEM, PSS
Wetland Location:	North of Canary Road, northeast arm of Woahink Lake		
Approx. Area (acres)	11.54	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	A	Q-4	A	Q-4	A	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	B
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	A	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



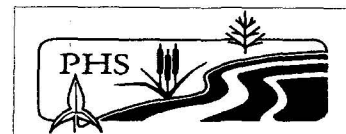
Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-16

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, some upstream development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasant	Variety of vegetation, large amount visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-17	Wetland Type(s):	PEM, PSS, PUB
Wetland Location:	North of Canary Road, north-middle arm of Woahink Lake		
Approx. Area (acres)	6.77	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	B	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	A	Q-3	C
Q-4	A	Q-4	A	Q-4	A	Q-4	B	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	A	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	B
Q-3		Q-3	A	Q-3	B	Q-3	A
Q-4		Q-4	A	Q-4	A	Q-4	A
Q-5B		Q-5	B	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland has potential for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-17

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, some upstream development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Potential to provide educational uses	Honeyman State Park access
Recreation	Provides recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasing	Variety of vegetation, no visual detractors

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-18	Wetland Type(s):	PSS
Wetland Location:	North of Canary Road, northwest arm of Woahink Lake		
Approx. Area (acres)	0.62	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	B	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	B	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	A	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	B	Q-3	A
Q-4		Q-4	A	Q-4	A	Q-4	A
Q-5B		Q-5	B	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland has potential for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-18

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Variety of wetland classes, woody vegetation, connected to other body of water or wetland
Fish Habitat	Intact	Adjacent to lake, sensitive species in lake, high percentage of cover
Water Quality	Intact	Dominant land use is open space, evidence of flooding or ponding, large wetland
Hydrologic Control	Intact	Floodplain, urbanizing area downstream
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, some upstream development
Enhancement Potential	N/A	Provides diverse wildlife habitat
Education	Potential to provide educational uses	Honeyman State Park access
Recreation	Provides recreational opportunities	Adjacent to lake, fishing and diverse wildlife
Aesthetic Quality	Pleasing	Variety of vegetation, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Project Name:	Dunes City LWI		Date:	August 13, 1996	
Project Location:	Dunes City		Offsite Assessment?:	No	
Wetland Code:	WOA-19A	Wetland Type(s):	PEM		
Wetland Location:	East Woahink Recreation Area				
Approx. Area (acres)	0.04	Investigator(s):	JVS, PF		

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1		Q-1	C	Q-1	B	Q-1	B
Q-2	C	Q-2		Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3		Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4		Q-4	C	Q-4	C	Q-4	C
Q-5	B	Q-5		Q-5	C	Q-5	C	Q-5	C
Q-6	B	Q-6		Q-6	C	Q-6	C	Q-6	B
Q-7	A					Q-7	C		
Q-8	A								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	N/A
Water Quality	Wetland's water-quality function is lost or not present
Hydrologic Control	Wetland's hydrologic control function is lost or not present
Sensitivity to Impact	Wetland is not sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	A	Q-1	A	Q-1	C
Q-2	B	Q-2	A	Q-2	A	Q-2	A
Q-3	A	Q-3	B	Q-3	A	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	B
Q-5B	C	Q-5	A	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has little enhancement potential
Education	Wetland has educational uses
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is not pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-19A

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	Low interspersion, no buffer
Fish Habitat	N/A	No fish habitat
Water Quality	Lost or not present	Groundwater, small area, in open space area
Hydrologic Control	Lost or not present	Unrestricted outlet, small area, dominated by wet meadow
Sensitivity to Impact	Not sensitive to future impacts	In State Park, dominated by emergent/wet meadow species
Enhancement Potential	Little enhancement potential	Small size, groundwater, no buffer
Education	Provides educational uses	Public access, access for people with limited mobility, adjacent to Lake
Recreation	Provides recreational opportunities	Public access, adjacent to Lake
Aesthetic Quality	Not pleasing	One Cowardin class, little variety, visual detractors

Oregon Freshwater Wetland Assessment Methodology
 (Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	October 25, 1996
Project Location:	Dunes City	Offsite Assessment?:	No
Wetland Code:	WOA-19B	Wetland Type(s):	PSS
Wetland Location:	East Woahink Recreational Area		
Approx. Area (acres)	0.34	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	B	Q-2	C	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	B	Q-3	A	Q-3	C	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	B	Q-5	C
Q-6	A	Q-6	A	Q-6	C	Q-6	C	Q-6	A
Q-7	A					Q-7	A		
Q-8	A								
Q-9A									
Q-9B	C								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control is impacted or degraded
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	A	Q-1	A	Q-1	C
Q-2		Q-2	A	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	A	Q-3	A
Q-4		Q-4	A	Q-4	A	Q-4	A
Q-5B		Q-5	A	Q-5	A	Q-5	A
Q-6		Q-6	A	Q-6	B	Q-6	A

Results:

Enhancement Potential	N/A
Education	Wetland has educational uses
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-19B

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Adjacent to Lake, in designated open space, variety of vegetation
Fish Habitat	Intact	Adjacent to Lake, sensitive species in Lake
Water Quality	Intact	Floodplain, dominant land use is open space
Hydrologic Control	Impacted or degraded	Unrestricted outlet, small area
Sensitivity to Impact	Potentially sensitive to future impacts	Surrounded by open space
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Provides educational uses	Public access, access for people with limited mobility, adjacent to Lake
Recreation	Provides recreational opportunities	Public access, adjacent to Lake
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-20	Wetland Type(s):	PSS
Wetland Location:	East of Hwy 101, Ford Way, West edge of Woahink Lake		
Approx. Area (acres)	0.18	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	C	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	C	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	A	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	B

Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-20

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Adjacent to lake, buffer, mix of vegetation
Fish Habitat	Intact	Shaded, good water quality
Water Quality	Intact	High vegetation cover
Hydrologic Control	Intact	Floodplain, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, some upstream development
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology
(Revised Edition, April, 1996)



Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-21	Wetland Type(s):	PSS
Wetland Location:	East of Hwy 101, West edge of Woahink Lake		
Approx. Area (acres)	1.06	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A	Q-1	B
Q-2	A	Q-2	A	Q-2	A	Q-2	A	Q-2	B
Q-3	A	Q-3	A	Q-3	A	Q-3	B	Q-3	C
Q-4	A	Q-4	A	Q-4	B	Q-4	C	Q-4	C
Q-5	A	Q-5	A	Q-5	C	Q-5	A	Q-5	A
Q-6	A	Q-6	A	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides diverse wildlife habitat
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is intact
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1		Q-1	C	Q-1	C	Q-1	A
Q-2		Q-2	B	Q-2	A	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4		Q-4	B	Q-4	B	Q-4	A
Q-5B		Q-5	C	Q-5	A	Q-5	A
Q-6		Q-6	B	Q-6	B	Q-6	B

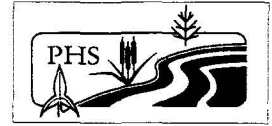
Results:

Enhancement Potential	N/A
Education	Wetland site is not appropriate for educational use
Recreation	Wetland provides recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-21

Function	Assessment	Rationale
Wildlife Habitat	Provides diverse habitat for wildlife	Adjacent to lake, buffer, mix of vegetation
Fish Habitat	Intact	Good vegetation cover, shaded, adjacent to lake, sensitive species
Water Quality	Intact	High vegetation cover, downstream development
Hydrologic Control	Intact	Floodplain, downstream development
Sensitivity to Impact	Potentially sensitive to future impacts	Dominated by woody vegetation, some upstream development
Enhancement Potential	N/A	Diverse wildlife habitat
Education	Not appropriate for educational uses	No public access
Recreation	Provides recreational opportunities	Adjacent to lake, fishing
Aesthetic Quality	Pleasing	Entire wetland visible, no visual detractors

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-22	Wetland Type(s):	PUB
Wetland Location:	West of Hwy. 101, south of Lakeshore		
Approx. Area (acres)	0.56	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	B	Q-1	C	Q-1	B	Q-1	B
Q-2	B	Q-2	C	Q-2	A	Q-2	A	Q-2	B
Q-3	C	Q-3	A	Q-3	C	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	B	Q-4	A	Q-4	A
Q-5	B	Q-5	A	Q-5	A	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	C	Q-6	A	Q-6	C
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is intact
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	B
Q-4	C	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	B
Q-6	B	Q-6	B	Q-6	B	Q-6	B

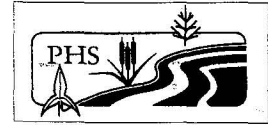
Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-22

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	One Cowardin class, small size, near Highway 101
Fish Habitat	Intact	Intermittent channel to lake, some open water
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April, 1996)



Pacific Habitat Services, Inc.

Project Name:	Dunes City LWI	Date:	August 13, 1996
Project Location:	Dunes City	Offsite Assessment?:	Yes
Wetland Code:	WOA-23	Wetland Type(s):	PSS
Wetland Location:	East of Hwy 101, Ford Way, West edge of Woahink Lake		
Approx. Area (acres)	0.11	Investigator(s):	JVS, PF

Function and Condition Assessment Answers:

Wildlife Habitat		Fish Habitat		Water Quality		Hydrologic Control		Sensitivity to Impact	
Q	A	Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	B	Q-1	C	Q-1	A	Q-1	A
Q-2	A	Q-2	C	Q-2	A	Q-2	A	Q-2	A
Q-3	C	Q-3	A	Q-3	A	Q-3	C	Q-3	C
Q-4	C	Q-4	A	Q-4	C	Q-4	A	Q-4	A
Q-5	B	Q-5	C	Q-5	A	Q-5	A	Q-5	A
Q-6	B	Q-6	B	Q-6	C	Q-6	A	Q-6	A
Q-7	A					Q-7	A		
Q-8	C								
Q-9A									
Q-9B	A								

Results:

Wildlife Habitat	Wetland provides habitat for some wildlife species
Fish Habitat	Wetland's fish habitat function is impacted or degraded
Water Quality	Wetland's water-quality function is impacted or degraded
Hydrologic Control	Wetland's hydrologic control function is intact
Sensitivity to Impact	Wetland is potentially sensitive to future impacts

Function and Condition Assessment Answers:

Enhancement Potential		Education		Recreation		Aesthetic Quality	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	C	Q-1	C
Q-2	B	Q-2	B	Q-2	C	Q-2	A
Q-3		Q-3	B	Q-3	C	Q-3	A
Q-4	C	Q-4	B	Q-4	B	Q-4	A
Q-5B	A	Q-5	C	Q-5	B	Q-5	A
Q-6	B	Q-6	B	Q-6	B	Q-6	A

Results:

Enhancement Potential	Wetland has high enhancement potential
Education	Wetland site is not appropriate for educational use
Recreation	Wetland is not appropriate or does not provide recreational opportunities
Aesthetic Quality	Wetland is considered to be pleasing

Oregon Freshwater Wetland Assessment Methodology

(Revised Edition, April 1996)

Function and Condition Summary Sheet for OFWAM



Project Name: Dunes City Local Wetlands Inventory

Wetland Code: WOA-23

Function	Assessment	Rationale
Wildlife Habitat	Provides habitat for some wildlife species	One Cowardin class, small size, low interspersion
Fish Habitat	Impacted or degraded	Small area, isolated from lake
Water Quality	Impacted or degraded	Groundwater source
Hydrologic Control	Intact	Restricted outlet, development downstream
Sensitivity to Impact	Potentially sensitive to future impacts	In developed area
Enhancement Potential	High enhancement potential	Other functions degraded
Education	Not appropriate for educational uses	No public access
Recreation	Not appropriate or does not provide recreational opportunities	No public access, no hunting or fishing
Aesthetic Quality	Pleasing	Entire wetland visible

Appendix D
Riparian Data



Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	<i>Siltcoos River</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-1</i>
Location:	<i>Spruce Street near City</i>	Reach Length:	
	<i>Hall at Siltcoos River</i>		
Hydrologic basin:	<i>Siltcoos River</i>	Stream Order:	<i>1st</i>

Associated Wetlands:	<i>none</i>	Tax lot(s):	<i>19123420 7000</i>
Adjacent Land-Use:	<i>Residential</i>		
Soil -- Mapped series:	<i>Waldport Urban Land complex</i>		
Stream Flow Direction:	<i>West</i>		

Channel Characteristics:

Channel Width: 100 feet Bank Full Depth: 10+ feet Est. Depth of OHW: 10+ feet

Bank Condition: Stable: _____ Minor Erosion: x Severe Erosion: _____

Percent Shaded: 0-25%: x 26-50%: _____ 51-75%: _____ >75%: _____

Riparian Classes %*: FOD: 50 FOC: 50 SS: _____ EM: _____

Woody Debris: Present: x Not Present: _____

Substrate: Organic: _____ Sand: _____ Silt: x Gravel: _____ Other: _____

Degree of Human Channel Modification: High: _____ Moderate: x Low: _____

Comments: River depth indeterminate at this location

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Holodiscus discolor</i>	<i>Rubus discolor</i>	<i>Carex obnupta</i>
<i>Picea sitchensis</i>	<i>Lonicera involucrata</i>		<i>Polystichum munitum</i>
<i>Thuja plicata</i>	<i>Salix hookeriana</i>		
<i>Prunus avium</i>	<i>Gaultheria shallon</i>		
	<i>Rhododendron macrophyllum</i>		

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 80 feet Right: 80 feet

Dist. TOB to Veg. Community Change: Left: 130 feet Right: 150 feet

Slope of Riparian Zone : Left: 0-10% _____ 11-19% x >20%
 Right: 0-10% _____ 11-19% _____ >20% x

Degree of Riparian Zone Disturbance: High: _____ Moderate: x Low: _____

Width of Riparian Zone Looking Downstream: Left: 80 feet Right: 80 feet

Rationale/Comments:

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-3</i>
Location:	<i>Tyee Campground</i>	Reach Length:	
<i>shallow stream (intermittent) flowing through USFS campground</i>			
Hydrologic basin:	<i>Siltcoos</i>	Stream Order:	<i>3rd</i>

Associated Wetlands:	<i>none</i>	Tax lot(s):	
Adjacent Land-Use:	<i>Recreation</i>		<i>19123420 -100</i>
Soil -- Mapped series:	<i>Heceta fine sand</i>		
Stream Flow Direction:	<i>South</i>		

Channel Characteristics:

Channel Width: 3 feet Bank Full Depth: 1 feet Est. Depth of OHW: 0.5 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 50 FOC: 50 SS: EM:

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: Shallow channel passing through campground--disturbed adjacent areas

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Pseudotsuga menziesii</i>	<i>Vaccinium ovatum</i>		<i>Polystichum munitum</i>
<i>Thuja plicata</i>	<i>Gaultheria shallon</i>		<i>Lysichitum americanum</i>
			<i>Maianthemum dilatatum</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 10 feet Right: 10 feet

Dist. TOB to Veg. Community Change: Left: n/a feet Right: n/a feet

Slope of Riparian Zone : Left: 0-10% 11-19% >20%

Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 20 feet Right: 20 feet

Rationale/Comments: Narrow riparian area due to adjacent campground disturbance and intermittent drainage

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	<i>Woahink Creek</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-4A</i>
Location:	<i>Woahink Creek at Clear Lake Road Crossing</i>	Reach Length:	<i>~200 feet</i>
Hydrologic basin:	<i>Siltcoos</i>	Stream Order:	

Associated Wetlands:	<i>SIL-4A</i>	Tax lot(s):	<i>19122720 - 701</i>
Adjacent Land-Use:	<i>Forest, Single family residential, recreation</i>		
Soil -- Mapped series:	<i>Heceta fine sand, Brallier muck</i>		
Stream Flow Direction:	<i>South</i>		

Channel Characteristics:

Channel Width: 15 feet Bank Full Depth: 5 feet Est. Depth of OHW: 3 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 5 FOC: 60 SS: 20 EM: 15

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: Channel culverted under Clear Creek Road 2 (4x6) corrugated pipes, meanders thru large floodplain

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Lonicera involucrata</i>		<i>Carex obnupta</i>
<i>Pinus contorta</i>	<i>Salix hookeriana</i>		<i>Lysichitum americanum</i>
<i>Picea sitchensis</i>	<i>Pyrus fusca</i>		<i>Menyanthes trifoliata</i>
	<i>Spiraea douglasii</i>		

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 50 feet Right: 150 feet

Dist. TOB to Veg. Community Change: Left: 100 feet Right: 150 feet

Slope of Riparian Zone : Left: 0-10% 11-19% >20%
Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 150 feet Right: 150 feet

Rationale/Comments: Riparian area narrow at road/viewpoint, but widens to south. Large wetland at SIL-4A at confluence of Woahink Creek and Siltcoos Lake.

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	<i>Woahink Creek</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-4B</i>
Location:	<i>Woahink Creek at Clear Lake Road crossing, looking north</i>	Reach Length:	<i>~200 feet</i>
Hydrologic basin:	<i>Siltcoos</i>	Stream Order:	

Associated Wetlands:	<i>SIL-4A</i>	Tax lot(s):	<i>19122720- 700</i>
Adjacent Land-Use:	<i>Forest, single family residential, recreation</i>		
Soil -- Mapped series:	<i>Brallier muck, Lint silt loam</i>		
Stream Flow Direction:	<i>South</i>		

Channel Characteristics:

Channel Width: 15 feet Bank Full Depth: 5 feet Est. Depth of OHW: 3 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 20 FOC: 50 SS: 20 EM: 10

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments:

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Pyrus fusca</i>		<i>Carex obnupta</i>
<i>Pinus contorta</i>	<i>Spiraea douglasii</i>		<i>Lysichitum americanum</i>
<i>Picea sitchensis</i>	<i>Salix hookeriana</i>		
	<i>Lonicera involucrata</i>		

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 100 feet Right: 150 feet

Dist. TOB to Veg. Community Change: Left: 100 feet Right: 150 feet

Slope of Riparian Zone : Left: 0-10% 11-19% >20%
Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 100 feet Right: 150 feet

Rationale/Comments: *Narrow riparian area at northern end, near Woahink Lake, widens to south and associated with SIL-4B wetland.*

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 7, 1996</i>	Stream Name:	<i>Woahink Lake</i>
Investigator(s):	<i>PF/JVS</i>	Stream Reach:	<i>DCR-5</i>
Location:	<i>Woodland Lane, west of Clear Lake Road</i>	Reach Length:	<i>1600 feet</i>
Hydrologic basin:	<i>Woahink</i>	Stream Order:	

Associated Wetlands:	<i>WOA-3A</i>	Tax lot(s):	
Adjacent Land-Use:	<i>Single family residential</i>		<i>19122333-1500, 1400</i>
Soil -- Mapped series:	<i>Lint silt loam</i>		<i>19122330-102, 101,</i>
Stream Flow Direction:	<i>Southwest</i>		<i>19122320-402</i>

Channel Characteristics:

Channel Width: 3 feet Bank Full Depth: 1 feet Est. Depth of OHW: 0.8 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 20 FOC: 80 SS: EM:

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: *Narrow drainage extends from lake to north east of Salal Drive.*

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Carex obnupta</i>
<i>Tsuga heterophylla</i>	<i>Vaccinium ovatum</i>		<i>Lysichitum americanum</i>
<i>Myrica californica</i>	<i>Rhamnus purshiana</i>		<i>Potentilla palustris</i>
<i>Alnus rubra</i>	<i>Gaultheria shallon</i>		<i>Dulichium arundinaceum</i>
	<i>Lonicera involucrata</i>		

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 40 feet Right: 40 feet

Dist. TOB to Veg. Community Change: Left: 40 feet Right: 40 feet

Slope of Riparian Zone: Left: 0-10% 11-19% >20%

Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 40 feet Right: 40 feet

Rationale/Comments: *Riparian width based on horizontal distance to top of slope*

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 7, 1996</i>	Stream Name:	<i>n/a</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-6</i>
Location:	<i>South of WOA-6A</i>	Reach Length:	
	<i>Between Woahink Lake and Clear Lake Rd.</i>		
Hydrologic basin:	<i>Woahink</i>	Stream Order:	

Associated Wetlands:	<i>WOA-6A</i>	Tax lot(s):	<i>19122400- 206</i>
Adjacent Land-Use:	<i>Single family residential</i>		
Soil -- Mapped series:	<i>Lint silt loam</i>		
Stream Flow Direction:	<i>Northwest</i>		

Channel Characteristics:

Channel Width: 2 feet Bank Full Depth: 2 feet Est. Depth of OHW: 2 feet

Bank Condition: Stable: _____ Minor Erosion: x Severe Erosion: _____

Percent Shaded: 0-25%: _____ 26-50%: _____ 51-75%: _____ >75%: x

Riparian Classes %*: FOD: 60 FOC: 15 SS: 20 EM: 5

Woody Debris: Present: _____ Not Present: _____

Substrate: Organic: _____ Sand: x Silt: x Gravel: _____ Other: _____

Degree of Human Channel Modification: High: _____ Moderate: x Low: _____

Comments: Culverted beneath residential access road. Small intermittent drainage.

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
<i>Alnus rubra</i>	<i>Sambucus racemosa</i>		<i>Polystichum munitum</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 20 feet Right: 40 feet

Dist. TOB to Veg. Community Change: Left: 15 feet Right: 15 feet

Slope of Riparian Zone : Left: 0-10% _____ 11-19% x >20%
 Right: 0-10% _____ 11-19% x >20%

Degree of Riparian Zone Disturbance: High: _____ Moderate: _____ Low: x

Width of Riparian Zone Looking Downstream: Left: 20 feet Right: 40 feet

Rationale/Comments: Minor tributary of large wetland WOA-6A. Drains to Woahink Lake.

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 7, 1996</i>	Stream Name:	<i>n/a</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-7</i>
Location:	<i>est of Clear Creek Road</i>	Reach Length:	
	<i>feeds into large WOA-6A</i>		
Hydrologic basin:	<i>Woahink</i>	Stream Order:	

Associated Wetlands:	<i>WOA-6A</i>	Tax lot(s):	<i>19122300 - 206</i>
Adjacent Land-Use:	<i>Single family residential</i>		
Soil -- Mapped series:	<i>Lint silt loam</i>		
Stream Flow Direction:	<i>Northwest</i>		

Channel Characteristics:

Channel Width: 3 feet Bank Full Depth: 1 feet Est. Depth of OHW: .9 feet

Bank Condition: Stable: x Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%: x

Riparian Classes %*: FOD: 50 FOC: 15 SS: 30 EM: 5

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: x Gravel: Other: x, cobbles

Degree of Human Channel Modification: High: Moderate: Low: x

Comments: Stretch of stream extending SE of Clear Creek Road has been logged; much more disturbed canopy structure in stretch SE of road is immature in comparison to NW side

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Lysichitum americanum</i>
<i>Alnus rubra</i>	<i>Sambucus racemosa</i>		<i>Polystichum munitum</i>
			<i>Athyrium filix-femina</i>
			<i>Maianthemum dilatatum</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 100 feet Right: 100 feet

Dist. TOB to Veg. Community Change: Left: 75 feet Right: 75 feet

Slope of Riparian Zone :

Left: 0-10% 11-19% >20% x

Right: 0-10% 11-19% >20 x

Degree of Riparian Zone Disturbance: High: Moderate: Low: x

Width of Riparian Zone Looking Downstream: Left: 75 feet Right: 75 feet

Rationale/Comments: Narrow secondary drainage to large wetland (WOA-6A) and Woahink Lake.

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	<i>Gibbs Creek</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-8</i>
Location:	<i>SE side of Woahink Lake</i>	Reach Length:	<i>approx. 1/2 mile</i>
<i>Clear Lk. Rd. crossing of Gibbs Cr.; Woahink Lake</i>			
Hydrologic basin:	<i>Woahink</i>	Stream Order:	

Associated Wetlands:	<i>WOA-6A</i>	Tax lot(s):	
Adjacent Land-Use:	<i>Wood lot, single family residential</i>		<i>19122400- 200</i>
Soil -- Mapped series:	<i>Brallier muck</i>		<i>19122400- 208</i>
Stream Flow Direction:	<i>West</i>		

Channel Characteristics:

Channel Width: 20 feet Bank Full Depth: 6 feet Est. Depth of OHW: 4 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 5 FOC: 5 SS: 80 EM: 10

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: Broad scrub-shrub wetland to east of Gibbs Creek. Salmonids, otter, beaver, Darlingtonia

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Spiraea douglasii</i>		<i>Phalaris arundinacea</i>
<i>Picea sitchensis</i>	<i>Lonicera involucrata</i>		<i>Lysichitum americanum</i>
	<i>Salix hookeriana</i>		<i>Scirpus microcarpus</i>
			<i>Nuphar polysepalum</i>
			<i>Potamogeton natans</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 500+ feet Right: 35 feet

Dist. TOB to Veg. Community Change: Left: 500+ feet Right: 50 feet

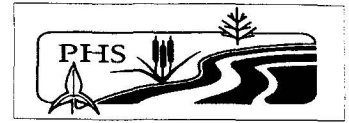
Slope of Riparian Zone : Left: 0-10% 11-19% >20%
 Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 500+ feet Right: 50 feet

Rationale/Comments: comments generally applicable to reach of same drainage extending to north of road

Dunes City Riparian Inventory



Date(s) of field work:	<i>June 6, 1996</i>	Stream Name:	<i>n/a</i>
Investigator(s):	<i>FS/DS</i>	Stream Reach:	<i>DCR-10</i>
Location:	<i>drainage below mud puppy pond</i>	Reach Length:	
Hydrologic basin:	<i>Woahink</i>	Stream Order:	

Associated Wetlands:	<i>WOA-8B (pond)</i>	Tax lot(s):	<i>19121440 - 100,110</i>
Adjacent Land-Use:	<i>Forestry, single family residential (proposed)</i>		
Soil -- Mapped series:	<i>Bullards-Ferrelo loams</i>		
Stream Flow Direction:	<i>South</i>		

Channel Characteristics:

Channel Width: 15 feet Bank Full Depth: 2 feet Est. Depth of OHW: 0.5 feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: 50 FOC: 35 SS: 15 EM: trace

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: Drainage connects excavated pond to Woahink Lake at WOA-8A wetland.

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Alnus rubra</i>	<i>Rubus spectabilis</i>		<i>Blechnum spicant</i>
<i>Thuja plicata</i>	<i>Vaccinium ovatum</i>		<i>Lysichiton americanum</i>
<i>Picea sitchensis</i>			
<i>Pseudotsuga menziesii</i>			

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 60 feet Right: 100 feet

Dist. TOB to Veg. Community Change: Left: 10 feet Right: 10 feet

Slope of Riparian Zone : Left: 0-10% 11-19% >20%

Right: 0-10% 11-19% >20%

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 60 feet Right: 100 feet

Rationale/Comments: Topographically defined drainage.

Dunes City Riparian Inventory



Date(s) of field work: **June 6, 1996** Stream Name: **Trib. of Woahink Lake**
 Investigator(s): **PF/JVS** Stream Reach: **DCR-16**
 Location: **North of Canary Road at northern tributary of Woahink Lake.** Reach Length:
 Hydrologic basin: **Woahink** Stream Order:

Associated Wetlands: WOA-16	Tax lot(s):
Adjacent Land-Use: Residential, Honeyman State Park	19121100 - 201, 600,
Soil -- Mapped series: Brallier muck, Bandon sandy loam	102, 100
Stream Flow Direction: South	

Channel Characteristics:
 Channel Width: n/a feet Bank Full Depth: n/a feet Est. Depth of OHW: n/a feet
 Bank Condition: Stable: Minor Erosion: _____ Severe Erosion: _____
 Percent Shaded: 0-25%: _____ 26-50%: _____ 51-75%: >75%: _____
 Riparian Classes %*: FOD: _____ FOC: 60 SS: 30 EM: 10
 Woody Debris: Present: Not Present: _____
 Substrate: Organic: _____ Sand: Silt: Gravel: _____ Other: _____
 Degree of Human Channel Modification: High: _____ Moderate: _____ Low:
 Comments: Only viewed from boat on Woahink Lake. Topographically defined.

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Polystichum munitum</i>
<i>Tsuga heterophylla</i>	<i>Vaccinium ovatum</i>		<i>Blechnum spicant</i>
<i>Thuja plicata</i>	<i>Lonicera involucrata</i>		<i>Carex obnupta</i>
<i>Alnus rubra</i>	<i>Gaultheria shallon</i>		<i>Lysichitum americanum</i>
	<i>Rhododendron macrophyllum</i>		<i>Potamogeton natans</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 100 feet Right: 200 feet
 Dist. TOB to Veg. Community Change: Left: 50 feet Right: 100 feet
 Slope of Riparian Zone : Left: 0-10% _____ 11-19% _____ >20%:
 Right: 0-10% _____ 11-19%: >20% _____
 Degree of Riparian Zone Disturbance: High: _____ Moderate: _____ Low:
 Width of Riparian Zone Looking Downstream: Left: 100 feet Right: 200 feet
 Rationale/Comments: Riparian width based on horizontal distance to top of slope. Encompasses wetland WOA-16.

Dunes City Riparian Inventory



Date(s) of field work:	June 6, 1996	Stream Name:	Trib. of Woahink Lake
Investigator(s):	PF/JVS	Stream Reach:	DCR-17
Location:	North of Canary Road at northern tributary of Woahink Lake.	Reach Length:	
Hydrologic basin:	Woahink	Stream Order:	

Associated Wetlands:	WOA-17	Tax lot(s):	
Adjacent Land-Use:	Honeyman State Park	19121100 - 201, 600,	
Soil -- Mapped series:	Brallier muck, Bandon sandy loam	302, 202	
Stream Flow Direction:	South		

Channel Characteristics:

Channel Width: n/a feet Bank Full Depth: n/a feet Est. Depth of OHW: n/a feet

Bank Condition: Stable: Minor Erosion: Severe Erosion:

Percent Shaded: 0-25%: 26-50%: 51-75%: >75%:

Riparian Classes %*: FOD: FOC: 60 SS: 30 EM: 10

Woody Debris: Present: Not Present:

Substrate: Organic: Sand: Silt: Gravel: Other:

Degree of Human Channel Modification: High: Moderate: Low:

Comments: Only viewed from boat on Woahink Lake. Topographically defined.

Dominant Riparian Vegetation			
TREES	SHRUBS	VINES	HERBS
<i>Picea sitchensis</i>	<i>Rubus spectabilis</i>		<i>Polystichum munitum</i>
<i>Tsuga heterophylla</i>	<i>Vaccinium ovatum</i>		<i>Blechnum spicant</i>
<i>Thuja plicata</i>	<i>Lonicera involucrata</i>		<i>Carex obnupta</i>
<i>Alnus rubra</i>	<i>Gaultheria shallon</i>		<i>Potentiall anserina</i>
	<i>Rhododendron macrophyllum</i>		<i>Potamogeton natans</i>

Riparian Measurements: (Measured from Top of Bank (TOB), Looking Downstream)

Dist. TOB to Break in Slope: Left: 100 feet Right: 150 feet

Dist. TOB to Veg. Community Change: Left: 50 feet Right: 50 feet

Slope of Riparian Zone : Left: 0-10% 11-19% >20%

Right: 0-10% 11-19% >20

Degree of Riparian Zone Disturbance: High: Moderate: Low:

Width of Riparian Zone Looking Downstream: Left: 100 feet Right: 200 feet

Rationale/Comments: Riparian width based on horizontal distance to top of slope. Encompasses wetland WOA-17.

Appendix E

Riparian Assessment



Dunes City Riparian Inventory

Riparian Functions and Assessment Rationale

Functions:

- **Thermal Regulation**

1. **Dominant Vegetation Type (Tree, shrub, herbaceous) and Height**

Highest value given to riparian area dominated by tree canopy > 20 feet in height. Tall canopy provides greatest shading throughout day; shrub and herbaceous communities may provide significant shading at some times of day or on a seasonal basis, but are less effective than trees, especially along larger streams. Herbaceous cover provides the least amount of shading.

2. **Percent Shade** (estimated percent of stream reach shaded by riparian vegetation)

Estimate of shade produced by above community; higher percent cover is best for temperature moderation.

3. **Slope** (average estimated bank angle)

A greater bank angle provides more shade, even with sparse vegetation cover and especially when overhanging stretches of open water.

4. **Degree of Disturbance**

The most common disturbance involves the removal of vegetation (shade-producing plants) close to the stream. Changes to the stream banks may also expose more of the stream to direct sun.

- **Erosion Control**

1. **Adjacent slope** (average bank angle in riparian area)

Gentler slopes are less prone to erosion by surface runoff during storm events

2. **Degree of Disturbance** (disturbance to the riparian area and adjacent slopes).

Erosion potential is much higher in areas where the soils have been disturbed, or where vegetation cover has been removed.

3. **Bank condition** (general streambank condition)

Evidence of active or recent erosion within channel means the stream has not reached equilibrium, or is being subjected to changing conditions (e.g. unusually high runoff, change in structure following road construction, etc.).

4. **Soil Type** (erosion hazard according to SCS soil survey)

Soils rated for hazard based on particle size, structure, landform factors

5. **Vegetation Cover** (percent of riparian area vegetated)

A high percentage of vegetation cover generally indicates an undisturbed condition with soils intact.

• **Flood Control/Water Quality**

1. **Percent woody vegetation** (dominant riparian vegetation class)

Dominance by woody vegetation provides area with greater bank stability and will slow floodwaters more effectively. Herbaceous cover may provide good soil stability, but generally is less effective at moderating runoff velocities.

2. **Presence of wetlands**

If present, wetlands provide greater floodwater storage capacity during peak flows.

3. **Floodplain width**

Broader floodplain width relative to channel size provides greater flood control during overbank flood events and moderates erosive force of runoff.

4. **Restricted flow** (e.g. culvert, beaver dam)

Runoff velocities are slowed by raising water levels and temporarily detaining floodwaters behind the restriction. Erosional forces are reduced and flooding intensity is reduced downstream.

- **Wildlife Habitat**

1. **Vegetation diversity** (dominant vegetation type)

Woody vegetation provides a greater structural diversity, shade, and organic input to the stream. This means more diverse niches for wildlife species and a food source for lower organisms such as insects, amphibians, etc.

2. **Presence of large woody debris in stream**

Large woody debris (LWD) in the stream provides additional diversity of habitats within and along the stream for aquatic insects and other invertebrates, herptiles, and fish. LWD provides steady source of organic matter and food for many of the same organisms. The structural changes to the stream channel introduces turbulence and helps oxygenate the water.

3. **Duration of water** (perennial or intermittent stream flow)

Perennial or year-round surface water flow provides a constant water supply and associated food source for numerous species of wildlife. Intermittent stream flow is generally only a seasonal source of water for wildlife.

4. **Presence of wetlands**

Wetlands provide a greater diversity of habitats for wildlife. They also generally retain surface water within riparian areas for longer periods.

5. **Width of riparian areas**

Greater width of an intact riparian area also provides more diversity of habitats, more effective corridor for travel along and away from the stream, and a buffer from disturbance in adjacent developed areas.

6. **Structural Diversity** (vegetation strata present)

More structurally diverse plant communities (i.e. those with multiple layers) provide greater opportunities for escape, food, nesting, and thermal cover than less complex communities. High quality communities may have overstory tree, understory tree or tall shrub, low shrub, and herbaceous layers. Lower quality communities may have only an herbaceous layer or may be subject to disturbance.

7. **Degree of disturbance**

Undisturbed areas provide the greatest value for wildlife, especially in areas with high structural diversity (as stated above). Developed areas have generally been degraded in one or more functions essential to wildlife usage, and may have ongoing noise or sight disturbances that impact many species.

RIPARIAN ASSESSMENT QUESTIONS

THERMAL REGULATION

Question 1

What is the dominant riparian plant community layer?

- a. Tree/canopy/> 20' height
- b. Shrub/understory/< 20' height
- c. Herbaceous/ground cover

Question 2

What percentage of the stream reach is shaded by riparian vegetation?

- a. More than 75%
- b. Between 50% and 75%
- c. Less than 50%

Question 3

What is the average estimated bank angle in the riparian area?

- a. More than 20%
- b. Between 10% and 20%
- c. Less than 10%

Question 4

What is the degree of disturbance in the riparian area and adjacent slopes?

- a. Undisturbed
- b. Some disturbance or development
- c. Disturbed/Developed

EROSION CONTROL

Question 1

What is the average estimated bank angle in the riparian area?

- a. Less than 10%
 - b. Between 10% and 20%
 - c. More than 20%
-

Question 2

What is the degree of disturbance in the riparian area and adjacent slopes?

- a. Undisturbed
 - b. Some disturbance or development
 - c. Disturbed/Developed
-

Question 3

What is the general streambank condition?

- a. Stable
 - b. Minor Erosion
 - c. Severe Erosion
-

Question 4

What is the hazard of erosion for the dominant soil type according to the SCS soil survey?

- a. Slight
 - b. Moderate
 - c. Severe
-

Question 5

What percentage of the riparian area is vegetated?

- a. More than 75%
- b. Between 50% and 75%
- c. Less than 50%

FLOOD CONTROL/WATER QUALITY

Question 1

What is the dominant riparian vegetation class?

- a. Woody vegetation
 - b. Herbaceous vegetation, unmaintained
 - c. Herbaceous vegetation, maintained
 - d. Other (e.g. pavement, walls, riprap...)
-

Question 2

Are there wetlands adjacent to the riparian area?

- a. Wetlands present
 - b. Wetlands not present
-

Question 3

What is the approximate total floodplain width in the stream reach?

- a. More than 50 feet
 - b. Between 20 and 50 feet
 - c. Less than 20 feet
-

Question 4

Is the waterflow restricted (e.g. by culvert, beaver dam, or woody debris) within the stream reach?

- a. Yes
- b. No, but restricted within 100 feet downstream of stream reach
- c. No

WILDLIFE HABITAT

Question 1

What is the dominant vegetation cover type?

- a. Woody vegetation
 - b. Herbaceous vegetation and areas of ponding or open water
 - c. Herbaceous vegetation
-

Question 2

Is there large woody debris present within the stream reach?

- a. Yes
 - b. No
-

Question 3

Is the stream perennial or intermittent

- a. Perennial
 - b. Intermittent
-

Question 4

Are there wetlands present in the adjacent riparian area?

- a. Wetlands present
 - b. Wetlands not present
-

Question 5

What is the estimated width of the riparian area in the stream reach?

- a. More than 50 feet
- b. Between 20 and 50 feet
- c. Less than 20 feet

Wildlife Habitat (con't)

Question 6

How many vegetation strata are represented in the plant communities within the stream reach (e.g. canopy, midstory, groundcover)?

- a. 3 or more strata present
- b. 2 strata present
- c. 1 stratum present or unvegetated

Question 7

What is the degree of disturbance in the riparian area and adjacent slopes?

- a. Undisturbed
- b. Some disturbance or development
- c. Disturbed/Developed

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		Siltcoos River, South of Westlake, developed reach	
Riparian Code:		DCR-1	
Approximate Riparian Width:		300 feet	
Associated Wetland Codes:		n/a	
Date:	September, 1996	Investigator(s):	FS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	C	Q-1	B	Q-1	B	Q-1	C
Q-2	B	Q-2	C	Q-2	B	Q-2	B
Q-3	B	Q-3	C	Q-3	A	Q-3	A
Q-4	C	Q-4	A	Q-4	C	Q-4	B
		Q-5	B			Q-5	A
						Q-6	B
						Q-7	C

RESULTS:

Thermal Regulation	Low Value
Erosion Control	Low Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	Moderate Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-1

Function	Assessment	Rationale
Thermal Regulation	Low	Herbaceous, developed area adjacent to Siltcoos River
Erosion Control	Low	Some adjacent development some erosion evident
Flood Control/ Water Quality	Moderate	wetlands <u>not</u> present herbaceous vegetation no flow restrictions
Wildlife Habitat	Moderate	large woody debris present perennial stream

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	Highway 101 bridge crossing of Siltcoos River		
Riparian Code:	DCR-2		
Approximate Riparian Width:	120 feet		
Associated Wetland Codes:	n/a		
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	B	Q-2	A
Q-3	B	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	A	Q-4	C	Q-4	B
		Q-5	A			Q-5	B
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology

Function and Condition Summary Sheet for Riparian Areas

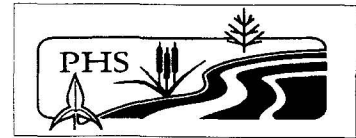


Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-2

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	Moderate	Wetlands present no flow restrictions
Wildlife Habitat	High	large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	Tyee Campground (near Hwy 101 & Pacific Ave)		
Riparian Code:	DCR-3		
Approximate Riparian Width:	40 feet		
Associated Wetland Codes:	n/a		
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	B	Q-2	A
Q-3	C	Q-3	A	Q-3	C	Q-3	A
Q-4	B	Q-4	A	Q-4	A	Q-4	B
		Q-5	A			Q-5	B
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	Moderate Value
Erosion Control	Moderate Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology

Function and Condition Summary Sheet for Riparian Areas



Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-3

Function	Assessment	Rationale
Thermal Regulation	Moderate	Tree canopy dominant, low banks, some disturbance associated with campground
Erosion Control	Moderate	Some disturbance, low banks, well vegetated
Flood Control/ Water Quality	Moderate	Wetlands not present no flow restrictions, narrow channel and floodplain
Wildlife Habitat	High	Woody debris present, perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		Clear Lake Road near Hwy. 101	
Riparian Code:		DCR-4A	
Approximate Riparian Width:		300 feet	
Associated Wetland Codes:		SIL 4A	
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	A	Q-4	A	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-4A

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, no flow restrictions
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		Clear Lake Road near Hwy. 101	
Riparian Code:		DCR-4B	
Approximate Riparian Width:		400 feet	
Associated Wetland Codes:		SIL 4B	
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	A	Q-4	B	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-4B

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, flow restriction at road
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		North of Clear Lake Road, both west & east of Salal St.	
Riparian Code:		DCR-5	
Approximate Riparian Width:		100 feet	
Associated Wetland Codes:		WOA-3A, 3B, 3C	
Date:	June, 1996	Investigator(s):	FS,DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	A	Q-3	B
Q-4	B	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-5

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, unrestricted flow
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	Clear Lk Rd east of Woahink Lk, south of WOA-6A		
Riparian Code:	DCR-6		
Approximate Riparian Width:	60 feet		
Associated Wetland Codes:	WOA-6A		
Date:	June 7, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	C	Q-3	B
Q-4	B	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	B
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology

Function and Condition Summary Sheet for Riparian Areas



Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-6

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	Moderate	Wetlands present, narrow floodplain, unrestricted flow
Wildlife Habitat	High	Woody debris present mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		Clear Lake Rd.; discharges to WOA-6A	
Riparian Code:		DCR-7	
Approximate Riparian Width:		150 feet	
Associated Wetland Codes:		WOA-6A	
Date:	June 7, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A
Q-3	A	Q-3	A	Q-3	C	Q-3	A
Q-4	A	Q-4	A	Q-4	C	Q-4	B
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-7

Function	Assessment	Rationale
Thermal Regulation	High	Tree canopy dominant, steep banks, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	Moderate	Wetlands present, narrow floodplain, unrestricted flow
Wildlife Habitat	High	Woody debris present mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		SE end of Woahink Lake, Gibbs Creek floodplain	
Riparian Code:		DCR-8	
Approximate Riparian Width:		>550 ft (includes extensive floodplain wetlands)	
Associated Wetland Codes:		WOA-6A	
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	C	Q-1	A	Q-1	A
Q-2	C	Q-2	A	Q-2	A	Q-2	A
Q-3	C	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	Moderate Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-8

Function	Assessment	Rationale
Thermal Regulation	Moderate	Shrub layer dominant, shallow slopes, undisturbed
Erosion Control	High	Undisturbed, stable banks, well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, unrestricted flow
Wildlife Habitat	High	Woody debris present mix of vegetation strata, undisturbed, perennial creek

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		east of Clear Lake Rd., near Alder Ln.	
Riparian Code:		DCR-9	
Approximate Riparian Width:		60 feet	
Associated Wetland Codes:		WOA-10	
Date:	June 7, 1996	Investigator(s):	JVS/PAF

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	C	Q-1	C	Q-1	A	Q-1	A
Q-2	B	Q-2	C	Q-2	B	Q-2	B
Q-3	A	Q-3	C	Q-3	C	Q-3	A
Q-4	C	Q-4	A	Q-4	C	Q-4	B
		Q-5	C			Q-5	A
						Q-6	C
						Q-7	C

RESULTS:

Thermal Regulation	Low Value
Erosion Control	Low Value
Flood Control/Water Quality	Low Value
Wildlife Habitat	Moderate Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-9

Function	Assessment	Rationale
Thermal Regulation	Low	Herbaceous, disturbed area, steep banks
Erosion Control	Low	Disturbance and erosion steep banks
Flood Control/ Water Quality	Moderate	Narrow floodplain, limited wetlands, unrestricted outflow
Wildlife Habitat	Moderate	Some woody debris present, perennial stream

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	drainage below 'mud puppy pond' off Peninsula Rd.		
Riparian Code:	DCR-10		
Approximate Riparian Width:	160 feet		
Associated Wetland Codes:	WOA 8B		
Date:	June 6, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	B	Q-2	A
Q-3	A	Q-3	B	Q-3	A	Q-3	B
Q-4	A	Q-4	A	Q-4	C	Q-4	B
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	Moderate Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-10

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, steep slopes, undisturbed
Erosion Control	Moderate	Undisturbed, stable banks, steep banks
Flood Control/ Water Quality	Moderate	Wetlands present, wide floodplain, unrestricted flow
Wildlife Habitat	High	Woody debris present mix of vegetation strata, undisturbed, intermittent drainage

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		Woahink Lake at WOA-11	
Riparian Code:		DCR-11	
Approximate Riparian Width:		200 feet	
Associated Wetland Codes:		WOA-11	
Date:	June 7, 1996	Investigator(s):	JVS/PF

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	A	Q-3	B
Q-4	B	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-11

Function	Assessment	Rationale
Thermal Regulation	High	Shrub layer dominant, steep banks, minor disturbance
Erosion Control	High	Stable banks, well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, no flow restrictions
Wildlife Habitat	High	Large woody debris present intermittent stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		NE corner of Little Woahink Lake	
Riparian Code:		DCR-12	
Approximate Riparian Width:		500 feet	
Associated Wetland Codes:		WOA-13	
Date:	June 7, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	A	Q-1	A
Q-2	B	Q-2	A	Q-2	A	Q-2	A
Q-3	A	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	A	Q-4	A	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-12

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, steep banks, undisturbed
Erosion Control	High	Stable banks, undisturbed well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, flow restricted at Little Woahink Lake
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		west of DCR-14; road north of Little Woahink Lk.	
Riparian Code:		DCR-13	
Approximate Riparian Width:		80 feet	
Associated Wetland Codes:		n/a	
Date:	June 7, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	B	Q-2	A
Q-3	A	Q-3	A	Q-3	C	Q-3	A
Q-4	B	Q-4	A	Q-4	B	Q-4	B
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-13

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, steep banks, undisturbed
Erosion Control	High	Stable banks, undisturbed well vegetated
Flood Control/ Water Quality	Moderate	Wetlands not present, narrow floodplain, flow restricted at Little Woahink Lake
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		North side of Little Woahink Lk., off dirt road	
Riparian Code:		DCR-14	
Approximate Riparian Width:		150 feet	
Associated Wetland Codes:		WOA-14B	
Date:	June 7, 1996	Investigator(s):	FS/DS

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	A	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A
Q-3	A	Q-3	A	Q-3	B	Q-3	A
Q-4	A	Q-4	A	Q-4	B	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	Moderate Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-14

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, steep banks, undisturbed
Erosion Control	High	Stable banks, undisturbed well vegetated
Flood Control/ Water Quality	Moderate	Wetlands present, narrow floodplain, restricted outlet at Little Woahink Lake
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:		Dunes City Riparian Inventory and Assessment	
Location:		NE corner of Woahink Lake	
Riparian Code:		DCR-15	
Approximate Riparian Width:		>500 feet	
Associated Wetland Codes:		WOA-15	
Date:	June, 1996	Investigator(s):	JVS/PF

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	B	Q-1	B	Q-1	A	Q-1	A
Q-2	B	Q-2	B	Q-2	A	Q-2	B
Q-3	B	Q-3	A	Q-3	A	Q-3	A
Q-4	B	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	Moderate Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-15

Function	Assessment	Rationale
Thermal Regulation	Moderate	Shrub layer dominant, some unshaded areas, some disturbance associated with Canary Road
Erosion Control	High	Stable banks, minor disturbance well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, unrestricted outlet
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	Northern tributary of Woahink Lake		
Riparian Code:	DCR-16		
Approximate Riparian Width:	>500 feet		
Associated Wetland Codes:	WOA-16		
Date:	June, 1996	Investigator(s):	JVS/PF

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	C	Q-1	A	Q-1	A
Q-2	A	Q-2	A	Q-2	A	Q-2	A
Q-3	A	Q-3	A	Q-3	A	Q-3	A
Q-4	A	Q-4	A	Q-4	C	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	A

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-16

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, shaded, steep banks, undisturbed
Erosion Control	High	Stable banks, undisturbed well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, unrestricted outlet
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata

Riparian Assessment Methodology



Pacific Habitat Services, Inc.

Project Name:	Dunes City Riparian Inventory and Assessment		
Location:	Northern tributary of Woahink Lake		
Riparian Code:	DCR-17		
Approximate Riparian Width:	>500 feet		
Associated Wetland Codes:	WOA-17		
Date:	June, 1996	Investigator(s):	JVS/PF

Thermal Regulation		Erosion Control		Flood Control Water Quality		Wildlife Habitat	
Q	A	Q	A	Q	A	Q	A
Q-1	A	Q-1	B	Q-1	A	Q-1	A
Q-2	A	Q-2	B	Q-2	A	Q-2	A
Q-3	B	Q-3	A	Q-3	A	Q-3	A
Q-4	B	Q-4	A	Q-4	A	Q-4	A
		Q-5	A			Q-5	A
						Q-6	A
						Q-7	B

RESULTS:

Thermal Regulation	High Value
Erosion Control	High Value
Flood Control/Water Quality	High Value
Wildlife Habitat	High Value

Riparian Assessment Methodology



Function and Condition Summary Sheet for Riparian Areas

Project Name: Dunes City Riparian Inventory

Riparian Code: DCR-17

Function	Assessment	Rationale
Thermal Regulation	High	Tree layer dominant, shaded, steep banks, minor disturbance
Erosion Control	High	Stable banks, some disturbance well vegetated
Flood Control/ Water Quality	High	Wetlands present, wide floodplain, unrestricted outlet
Wildlife Habitat	High	Large woody debris present perennial stream, mix of vegetation strata