Hood River
Local Wetlands Inventory
and
Wetlands Significance Determinations

Prepared for

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1.0 Introduction

This report documents the Hood River Local Wetlands Inventory (LWI) and the identification of locally significant wetlands in Hood River. The purpose of an LWI is to comprehensively identify and map wetlands within a designated area for planning and regulatory purposes. The LWI includes the location and extent of wetlands and an assessment of wetland functions and conditions. This information is used to identify locally significant wetlands (LSW) for local wetlands planning under Statewide Land Use Planning Goal 5, the natural resources goal. State administrative rules require that the LWI be submitted for review and approval by the Division of State Lands (DSL), the state agency with responsibility for wetlands regulation and management. Locally significant wetlands identification and local wetlands planning activities are reviewed by the Department of Land Conservation and Development (DLCD), the state agency that oversees local land use planning.

1.1 Definitions

"Wetlands" are those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (OAR 141-086-0200). Wetland characteristics and indicators include wetland hydrology, hydric soils and hydrophytic vegetation.

"Wetland hydrology" refers to the hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season. The presence of wetland hydrology has an overriding influence on soil and vegetation development due to anaerobic conditions.

"Hydric soils" are soils that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the definition of hydric soils.

"Hydrophytic vegetation" or "hydrophytes" are plant species that have special adaptations for life in permanently or seasonally saturated soils.

Wetland science, management and regulation include a variety of technical terms and acronyms used to describe the resources and the pertinent agencies, laws and regulations. Terms and acronyms used in this report are defined in the glossary.

1.2 LWI Uses and Limitations

The LWI maps and supporting information, wetland function and condition assessments, and locally significant wetlands determinations are useful for a variety of planning and regulatory purposes including local planning for wetlands and riparian corridors under Goal 5 of the statewide land use planning program, wetland identification for the wetland land use notification program, and for making preliminary wetland and waterway jurisdictional determinations under the Oregon Removal-Fill Law and the federal Clean Water Act Section 404 program. Local residents, landowners, watershed councils, government agencies, developers, resource professionals and others can use the LWI

information to plan for sustainable development, wetland mitigation, water quality improvement, species recovery, habitat restoration, recreation and open space acquisition.

1.2.1 Goal 5 Land Use Planning

Local governments are required to use the LWI and list of significant wetlands when completing the requirements of state planning Goal 5. The purpose of Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. The goal requires local governments to adopt programs that will protect natural resources, including locally significant wetlands.

1.2.2 Wetland Land Use Notification

Cities and counties are required to check LWI maps (or less precise National Wetlands Inventory maps if there is no LWI) when reviewing development proposals and notify the applicant, landowner and DSL when a proposed development site contains a mapped wetland. DSL reviews the information and additional maps, and within 30 days notifies the local government, the applicant and the landowner if a state removal-fill permit may be required.

1.2.3 Preliminary Jurisdictional Determinations for State and Federal Regulatory Programs

LWI maps identify wetlands, streams and other waters potentially subject to permit requirements under the Oregon Removal-Fill Law, administered by DSL, and the federal Clean Water Act Section 404 program, administered by the U.S. Army Corps of Engineers (COE). The maps can be used as preliminary jurisdictional determinations, i.e. as an initial source of information on the presence and locations of potentially regulated wetlands and waterways. LWI maps are not adequate for regulatory purposes due to the limitations of the inventory methods, small map scale and because wetlands less than 0.5 acres in size are generally not mapped. Site-specific jurisdictional determinations can only be made by the regulatory agencies.

Note: Some DSL-approved wetland delineations were included on the Hood River LWI maps. The original wetland delineation maps are more precise and should be used for site-specific planning.

The minimum size threshold for wetland mapping was 0.5 acres in most cases. Smaller wetlands in DSL-approved wetland delineation reports were also included on the LWI maps because DSL has already made jurisdictional determinations for these sites. Other wetlands smaller than 0.5 acres that were noted during the LWI process were identified on the LWI maps with a point labeled “PW” for “Possible Wetland”. The approximate boundaries of larger PWs were also mapped. However, there still may be small unmapped wetlands within the study area. Areas around streams, drainages, canals, ditches, ponds, springs, seeps or other waterways are the areas most likely to contain small unmapped wetlands.

Streams shown on the LWI maps appear to meet the DSL definition for natural waterways (which includes channelized, rerouted, dammed or otherwise altered streams) and should be considered subject to state and federal permit requirements pending site-specific jurisdictional determination by the regulatory agencies. Unmapped drainages,

ponds and ditches may be regulated by DSL and/or COE, depending on site-specific conditions.

Prior to site development or alteration activities such as clearing, grading, excavation, ditching, channel modifications, fill material placement or other potentially regulated activities the jurisdictional boundaries of all wetlands and other waters should be located and marked in the field. The City of Hood River Planning Department, DSL and COE can be contacted for assistance in making jurisdictional determinations and locating wetland and waterway boundaries for regulatory purposes. On-site wetland delineation by qualified professionals may be required to meet state and federal regulatory requirements. In all cases on-site conditions determine wetland jurisdictional locations for regulatory purposes.

2.0 Study Methods

The study area is the Hood River city limits and the Hood River urban growth boundary area (UGB) and is located in Hood River County, Oregon approximately 60 miles east of the Portland at the confluence of the Hood River and Columbia River (Figure 1).

Joel Shaich, a certified Professional Wetland Scientist, produced the LWI. A qualifications summary is in Appendix I.

Methods for local wetland inventories, wetland function and condition assessments and locally significant wetlands determinations are prescribed in the following Oregon Administrative Rules (OARs):

- *Local Wetlands Inventory Standards and Guidelines* (OAR 141-86-180 to 240)
- *Identifying Significant Wetlands* (OAR 141-86-300 to 350)
- *Procedures and Requirements for Complying With Goal 5* (OAR 660-23-100)

Specific procedures used to complete the Hood River LWI and identify locally significant wetlands are described in the following sections.

2.1 Local Wetlands Inventory

A Local Wetland Inventory (LWI) is a systematic survey of an area to identify, characterize, and map the approximate boundaries of wetland resources. Inventory methodology is defined in OAR 141-86-180 through 141-86-240.

2.1.1 Identification of Potential Wetlands and Other Waters

Potential wetlands are areas identified from off-site sources that have one or more wetland characteristics. Potential wetlands are candidates for field-verification to determine if they meet wetland criteria. Only potential wetland sites 0.5 acres and larger were field verified in accordance with LWI mapping standards. Other waters included in the inventory were rivers, streams, lakes and ponds. Artificially-created channels in the study area (small irrigation laterals and roadside drainage ditches) were not included.

The following information sources were reviewed to identify potential wetlands and other waters:

- DSL regulatory files including permit files, DSL wetland determinations and private consultant wetland delineations submitted for DSL review.
- Available wetland delineations by private consultants that have not been reviewed by DSL.
- True color aerial photography taken May 29, 1999, provided by Hood River County.
- *Soil Survey of Hood River County Area, Oregon*, 1981, US Department of Agriculture (USDA). Soils maps are at a 1:20,000 scale. A USDA digital version of the soils mapping was also used.
- Hydric Soils List for Hood River County

- National Wetlands Inventory (NWI) maps produced by the US Fish and Wildlife Service (USFWS) at a scale of 1:24,000. Maps used included the Hood River and White Salmon quadrangles. Wetlands on the NWI maps were identified from aerial photographs taken August 1981. USFWS digital versions of the NWI mapping were also used.
- Topographic quadrangle maps produced by the US Geological Survey (USGS) at a scale of 1:24,000. Maps used included digital copies of the Hood River, OR and White Salmon, WA quadrangles.
- *Hood River Capital Facilities Plan: Stormwater Utility*: the Hood River stormwater management plan, produced in 2001
- Topographic contour mapping (2' interval) provided in digital format by the City of Hood River.
- Irrigation system features mapping provided by Farmers Irrigation District.
- Natural areas mapping produced by the Hood River Planning Commission. The mapping was based on photo interpretation of the May 1999 aerial photographs and was not field verified.

The information was synthesized to create the Hood River Study Areas for Potential Wetlands, Riparian Corridors and Upland Wildlife Habitat map at a scale of 1:6000 (1 inch = 500 feet) on an aerial photograph base. The map was presented to the public at an open house meeting in Hood River on December 3, 2002. Additional potential wetland and other waters sites were marked on the map based on public comments at the meeting.

2.1.2 Verification of Potential Wetlands and Other Waters

The Hood River Study Areas for Potential Wetlands, Riparian Corridors and Upland Wildlife Habitat map was used to identify properties for field verification. Owners of properties mapped as study areas for potential wetlands, riparian corridors and upland wildlife habitat were sent a letter that described the project and requested access permission. Access requests were sent for approximately 400 tax lots. Access was granted for 120 of the properties and site visits were made to 60 of these properties. Many of the remaining potential wetlands were on public land or public rights-of-way. Not all potential wetland locations were accessible or visible. Inaccessible sites were verified by off-site methods that included interpretation of aerial photography and, when possible, observations from adjacent publicly accessible sites.

Verification of potential wetlands was conducted using the Corps of Engineers Wetland Delineation Manual (Environmental Laboratory 1987) and applicable federal and state guidance documents. Standard wetland sample plot data sheets were used to record field observations of vegetation, soils and hydrology.

Field maps were created at a scale of 1:4800 (1 inch = 400 feet) on an aerial photograph base. Wetland boundaries, stream locations, sample plot locations, ground photograph locations and other observations were marked with permanent ink markers on overlays.

Field verification was conducted from January 6 - 20, 2003. Winter plant identification methods were used. Identifications were based on bark and twig characteristics and

remnant leaves, flowers, fruits and stems. Vegetation lists from wetland delineation reports were used to calibrate plant identifications.

Hood River experienced below normal precipitation before and during the field work. Average precipitation in Hood River for the period October 1 – January 20 is 16.56 inches. Precipitation for this period in 2002-2003 was 10.17 inches, 61% of average (Oregon Climate Service 2003).

2.1.3 Wetlands Mapping

The LWI map was created digitally using ArcView™ v. 3.2a mapping software. A digital tax lot layer provided by Hood River County was the geographic reference base. The 1999 aerial photographs were scanned at a resolution of 600 dpi and then "warped" and rectified to fit the digital tax lot layer. Field-verified wetlands were transferred from the field maps by digitizing them on-screen on the rectified aerial photographs. Wetlands with DSL-approved wetland delineations were transferred from paper maps in the delineation reports using a digitizing tablet. Delineation maps were of varying scales from 1:600 to 1:2400. Tax lot boundaries were used as a shared georeference for the digitizing process. The warped photos matched the tax lot layer quite well. Horizontal alignment errors were limited and appeared to be no more than 15 feet. Minor post-digitizing adjustments to selected wetlands were made to more accurately align the wetlands with the affected tax lots.

Each mapped wetland was given a unique identification code. The code format is AA-1a where the first two letters are the drainage basin code and the number is the unique identification number. The lower case letter was only used when needed to identify separate portions of wetlands that were composed of a group of related, but separate units. Wetlands were numbered beginning at the downstream end of each basin and increasing upstream.

2.1.4 Wetlands Smaller Than 0.5 Acres

Wetlands smaller than 0.5 acres with DSL-approved wetland delineations were digitized and mapped as described in the previous section. Additional wetlands smaller than 0.5 acres were identified during the inventory process, primarily from aerial photographs and during fieldwork. These sites were identified on the LWI maps as points labeled PW for "Possible Wetland". The approximate boundaries of larger PWs were also mapped. No attempt was made to field verify these sites.

2.1.5 Other Waters Mapping

Hood River waterways include wetlands, ponds, rivers, streams, irrigation canals and ditches. Ponds were mapped as wetlands using the procedures described in the preceding sections. Streams were mapped by using aerial photographs, 2' interval topographic contour mapping, the USGS quadrangle maps, NWI maps and the Hood River Capital Plan: Stormwater Utility (Thomas/Wright, Inc. 2001) and public input to identify features that appeared to be natural streams (including channelized, rerouted, dammed or otherwise altered streams). All of the features were field verified and mapped on the field maps. The field mapping was digitized on-screen over the digital aerial photographs.

2.1.6 Map Completion

The LWI map includes wetlands, possible wetlands, wetland sample plot locations, rivers, streams and drainage basins. Areas that have DSL-approved wetland delineations are outlined and labeled with DSL file numbers for reference. Wetlands that were field verified are also identified. Additional map features include the urban growth boundary, city limits, public land survey system (section boundaries), tax lots and railroads. The LWI map was printed in black and white on a 34" x 44" sheet at a scale of 1:6000 (1 inch = 500 feet).

2.2 Wetlands Assessment

Wetland functions and conditions were assessed using the Oregon Freshwater Wetland Assessment Methodology (OFWAM) (Roth et al. 1996). The steps in completing the assessment are shown in Figure 2. Only wetlands 0.5 acres in size and larger were assessed.

Wetlands that are uncommon, already in a resource management plan, or protected by regulatory rules or statutes are identified as "wetlands of special interest for protection". This includes any wetlands in the study area that meet the following criteria:

- contain or provide critical habitat for species that are rare, threatened, or endangered;
- dedicated as a state or federal natural area or natural heritage conservation area;
- dedicated as a Nature Conservancy Preserve;
- of regional or national significance for migratory birds;
- protected by local management plans under Goal 5 or 17;
- designated a State Outstanding Resource Water;
- in a protected area in a park management plan;
- protected mitigation site;
- federal restoration or conservation reserve program; or
- rare or unique in Oregon.

Federal, state, local and non-profit agencies, reference materials and internet sites were the sources of information to identify wetlands of special interest for protection.

The general OFWAM assessment is based on a watershed characterization and a site-specific wetland characterization that requires field observation and measurement. The watershed characterization required collecting information on the watershed setting, drainage basins, land uses within the watershed, water quality, and biologic characteristics of the watershed. The wetland characterization included information on wetland structure and relationship to the surrounding landscape, wetland habitat, fisheries habitat, wetland hydrology, public access, recreation and aesthetics. The watershed and wetland characterization information was obtained from state and local agencies, reference materials, internet sites and by using GIS analysis. Digital data for the analysis was obtained from Hood River County and a number of state agencies. Some portions of

the wetland characterization have different procedures depending on whether the wetland is in an urban or rural area. Wetlands CO-4 and CO-5, located on Wells Island and outside the urban growth boundary, were considered to be in a rural area. All of the other wetlands were considered urban. Some of the wetland characterization questions can only be answered in the field. A field data form was developed for these questions and completed for each site during field verification.

The watershed and wetland characterization information was used to evaluate wetlands for nine functions and conditions: wildlife habitat, fish habitat, water quality, hydrologic control, education, recreation, aesthetic quality, sensitivity to impact and enhancement potential (Table 1). For each wetland the watershed and wetland characterization information was used to answer a set of questions for each function and condition. Assessment criteria for each function and condition was applied to the answers and the result was a description of the level of function or condition provided by the wetland. There are three possible levels for each function and condition. For example, a wetland's wildlife habitat function can be described as *provides diverse habitat for wildlife*, *provides habitat for some wildlife species*, or *lost or not present*.

Table 1. OFWAM Wetland Functions and Conditions

Wetland Function/Condition	Definition	Assessment Result Descriptions
Wildlife habitat	Evaluates the habitat diversity for species typically associated with wetlands and wetland edges. No single species is emphasized.	1. Provides diverse habitat for wildlife
		2. Provides habitat for some wildlife species
		3. Lost or not present
Fish habitat	Evaluates how the wetland contributes to fish habitat in streams, ponds or lakes associated with the wetland including warm water and coldwater fisheries. No single species or group of species is emphasized.	1. Intact
		2. Impacted or degraded
		3. Lost or not present
Water quality	Evaluates the potential of a wetland to reduce the impacts that excess nutrients in storm water runoff will have on downstream waters.	1. Intact
		2. Impacted or degraded
		3. Lost or not present
Hydrologic control	Evaluates the effectiveness of a wetland in storing floodwaters and reducing downstream flood peaks.	1. Intact
		2. Impacted or degraded
		3. Lost or not present
Sensitivity to impact	Evaluates the susceptibility of a wetland to secondary effects of impacts.	1. Not sensitive to future impacts
		2. Potentially sensitive to future impacts
		3. Sensitive to future impacts
Enhancement potential	Evaluates the suitability of a degraded wetland site for enhancement.	1. High enhancement potential
		2. Moderate enhancement potential
		3. Little enhancement potential
Education	Evaluates the suitability of a wetland as a site for an "outdoor classroom."	1. Has educational uses
		2. Potential for education uses
		3. Not appropriate for educational uses
Recreation	Evaluates the suitability of the wetland and associated watercourses for non-powered boating, fishing and similar recreational activities.	1. Provides recreational opportunities
		2. Potential to provide recreation opportunities
		3. Not appropriate/does not provide recreational opportunities
Aesthetic quality	Evaluates the visual and aesthetic quality of the wetland.	1. Pleasing
		2. Moderately pleasing
		3. Not pleasing

2.3 Locally Significant Wetlands Determinations

Wetlands were reviewed to determine if they met state criteria as locally significant wetlands (LSW). The criteria for identifying LSW are in DSL administrative rules (OAR 141-86-300 to 141-86-350) and rely on the results of the OFWAM assessment, the Wetlands of Special Interest for Protection results and other information (Table 2). Certain types of wetlands are excluded outright and are not reviewed under the LSW criteria. These include certain artificially created wetlands, ponds, and ditches as well as wetlands contaminated with hazardous materials. All other wetlands are reviewed under the mandatory criteria. A local government may also apply two optional criteria at its discretion.

Table 2. Locally Significant Wetlands Criteria

Mandatory Criteria

(a) The wetland performs at any of the following functional levels based on the OFWAM assessment:

(A) "Diverse" wildlife habitat; or

(B) "Intact" fish habitat; or

(C) "Intact" water quality function; or

(D) "Intact" hydrologic control function.

(b) The wetland or a portion of the wetland occurs within one-fourth mile from a water quality limited water body (DEQ 303 (d) list), and the wetland's water quality function is described as "intact" or "impacted or degraded" using OFWAM.

(c) The wetland contains one or more rare plant communities.

(d) The wetland is inhabited by any species listed by the state or federal government as sensitive, threatened or endangered.

(e) The wetland has a direct surface water connection to a stream segment mapped by ODFW as habitat for indigenous anadromous salmonids, and the wetland is determined to have "intact" or "impacted or degraded" fish habitat function using OFWAM.

Optional Criteria

At the discretion of the local government, wetlands that meet one or more of the following criteria may be identified as locally significant wetlands:

(a) The wetland represents a locally unique native plant community: wetland is or contains the only representative of a particular native wetland plant community in the urban growth boundary or unincorporated urban center

(b) The wetland is publicly owned and determined to "have educational uses" using OFWAM, and such use by a school or organization is documented for that site.

Source: OAR 141-86-350

3.0 Study Area Characteristics

3.1 Location and Size

The study area is the Hood River city limits and the Hood River urban growth boundary area (UGB) and is located in Hood River County, Oregon approximately 60 miles east of the Portland at the confluence of the Hood River and Columbia River (Figure 1). The Hood River city limits currently include 1820 acres. The UGB includes an additional 1033 acres outside the city limits for a total study area of 2853 acres (4.5 square miles). About 700 acres, or 25% of the study area is in the Columbia River.

3.2 Landscape Setting and Topography

Hood River is located on the south shore of the Columbia River at the mouth of the Hood River. The city is in the Columbia River Gorge National Scenic Area and is at the transition between the ecological and climatic zones of western and eastern Oregon. Elevations range from approximately 77 feet above sea level along the Columbia River shoreline to 600 feet in the southwest corner of the study area (Figure 3). The land along the Columbia River is flat around the mouth of the Hood River. South of the shoreline the land rises steeply to the south-southwest. The southeastern portion of the study area is relatively flat with elevations around 500 feet except for the ravine and canyon of Indian Creek that traverses the area from the southwest to the northeast. The canyon is over 250 feet deep where it leaves the study area. The Columbia River shoreline west of the Hood River mouth area has steep cliffs that rise to an elevation of approximately 280 feet. The land south of the cliffs is a relatively flat narrow east-west strip that then rises steeply to the south edge of the study area. Wells Island is a low-lying 34 acre island in the Columbia River just offshore from Hood River. The eastern portion of Wells Island is included in the study area.

3.2.1 Climate, Precipitation and Growing Season

Marine air moving west through the Columbia River Gorge has a moderating effect on Hood River's weather in both summer and winter. In most years summer temperatures will not exceed 100° F. Winter temperature minimums average about 32° F. Rainfall averages 26 - 32 inches per year. Summer rainfall is extremely light with more frequent rains from late fall through spring (USDA 81, OCS 2003).

Growing season start and end dates are based on USDA estimates of 28-degree air temperature thresholds at a frequency of 5 years in 10. For Hood River the USDA estimates that the growing season begins April 2 and ends November 2, a period of 215 days (USDA 81).

3.3 Hydrology

The study area is in the Hood River and Columbia Gorge Tributaries East watersheds of the Middle Columbia Drainage Basin (Figure 4). The Hood River watershed is approximately 339 square miles and the Columbia Gorge Tributaries East watershed is approximately 143 square miles. For the purposes of the LWI the study area was divided into five local drainage basins (figure 5). The Phelps Creek basin includes Phelps Creek

and its tributaries and is located at the west end of the study area. Immediately adjacent to the east is the Henderson Creek basin that includes Henderson Creek and its tributaries. The Columbia River basin includes the center of the study area and contains Adams Creek and several small unnamed streams that drain into the Columbia River. The basin also includes all the areas adjacent to the Columbia River that drain directly to the river. The Hood River basin includes areas that drain directly into the Hood River. The Indian Creek basin covers the southern portion of the study area and contains Indian Creek, a tributary of the Hood River.

Streams in the study area all have reaches that have been modified through channelization, underground piping and removal of riparian vegetation. The Phelps Creek basin is less developed than other parts of the study area. Portions of Phelps Creek and its tributaries in the western part of the basin retain substantial riparian vegetation. Stream reaches in the eastern part of the Phelps Creek basin have had more extensive removal of riparian vegetation, channelization and placing of short segments in underground pipes. The south end of Henderson Creek passes through historically agricultural areas and has had significant removal of riparian vegetation and channelization. The section of the stream between Cascade Avenue and Interstate 84 was placed in an underground pipe during construction of a Wal-Mart store in the early 1990s. Adams Creek and the other streams in the Columbia River basin pass through the more developed part of Hood River and have large sections in underground pipes. Indian Creek is relatively intact for an urban stream. The portion downstream (east) of 12th Street is in a deep forested canyon and in a natural condition. The portion upstream of 12th Street is still in a natural channel and retains a strip of native riparian vegetation approximately 50’ wide along most its length.

The Columbia River and the Hood River within the study area are part of the Bonneville Pool, the reservoir behind Bonneville Dam. Reservoir water levels are generally maintained between 72 and 77’ above sea level. Full pool elevation is 77’.

Farmers Irrigation District operates a network of irrigation canals in the study area. Irrigation supply is provided from streams in the Hood River watershed upstream from the study area. The irrigation season is generally from April 15 to October 31. Irrigation runoff during the dry season maintains year-round flows in most of the streams in the study area. Irrigation leakage and runoff also contribute to local wetland hydrology.

3.4 Soils

Soils mapping is shown in Figure 6. There are no hydric soils mapped in the study area. Two soils with “wet spots” are mapped in the study area: 24B Van Horn Variant Loam and 30A Xerofluvents (USDA 90).

3.5 Vegetation

Plant species found in Hood River wetlands are listed in Table 3. Aerial photographs and field observations show that native wetland plant communities in Hood River have been altered by farming, urban development activities and flooding behind Bonneville dam.

Table 3. Plant Species Found in Hood River Wetlands

Common Name	Scientific Name	Wetland Indicator Status*
	TREES	
Black cottonwood	Populus balsamifera	FAC
Oregon ash	Fraxinus latifolia	FACW
Red alder	Alnus rubra	FAC
Rocky mountain maple	Acer glabrum	FAC
Willow	Salix sp.	FAC-OBL
	SHRUBS	
Black Hawthorn	Crataegus douglasii	FAC
Douglas spirea	Spiraea douglasii	FACW
Himalayan blackberry	Rubus discolor	FACU
Nootka rose	Rosa nutkana	FAC
Pacific ninebark	Physocarpus capitatus	FACW-
Red osier dogwood	Cornus stolonifera	FACW
Sweetbrier rose	Rosa eglanteria	FACW
Willow	Salix sp.	FAC-OBL
	HERBS	
Alpine lady fern	Athyrium distentifolium	FAC
American speedwell	Veronica Americana	OBL
Bittersweet nightshade	Solanum dulcamara	FAC+
Common cattail	Typha latifolia	OBL
Creeping buttercup	Ranunculus repens	FACW
Dense flower spike primrose	Boisduvalia densiflora	FACW-
Fowl bluegrass	Poa palustris	FAC
Foxtail barley	Hordeum jubatum	FAC
Hardstem bulrush	Scripus acutus	OBL
Kentucky bluegrass	Poa pratensis	FAC
Meadow foxtail	Alopecurus pratensis	FACW
Musk monkeyflower	Mimulus moschatus	NOL
Nodding beggarticks	Bidens cernua	FACW+
Pennsylvania bittercress	Cardamine pensylvanica	FACW-
Peppermint	Mentha piperita	FACW+
Red fescue	Festuca rubra	FAC
Reed-canary grass	Phalaris arundinacea	FACW
Scouring rush	Equisetum hyemale	FACW
Skunk cabbage	Lysichitum americanum	OBL
Slender rush	Juncus tenuis	FAC

Table 3. Plant Species Found in Hood River Wetlands (continued)

Common Name	Scientific Name	Wetland Indicator Status*
Slough sedge	Carex obnupta	OBL
Small-fruited bulrush	Scirpus microcarpus	OBL
Soft rush	Juncus effusus	FACW
Spreading bentgrass	Agrostis stolonifera	FAC+
Spreading rush	Juncus patens	FACW
Stinging nettle	Urtica dioica	FAC+
Tall mannagrass	Glyceria grandis	OBL
Teasel	Dipsacus sylvestris	FAC
Velvet grass	Holcus lanatus	FAC
Water cress	Rorippa nasturtium	OBL
Watson willowherb	Epilobium ciliatum	FACW-
Wooly sedge	Carex lanuginosa	OBL

Source: Field observations and wetland delineation reports

***Wetland Indicator Status**

The U.S. Fish and Wildlife Service National Wetlands Inventory program has assigned a "wetland indicator status" to plant species that occur in wetlands using the following codes. The wetland indicator status is an estimated probability of the frequency of the plant species occurrence in wetlands.

OBL: Obligate wetland plants almost always (estimated probability >99%) occur under natural conditions in wetlands.

FACW: Facultative Wetland plants usually occur in wetlands (estimated probability 67-99%), but are occasionally found in non-wetlands.

FAC: Facultative plants are equally likely to occur in wetlands or non-wetlands (estimated probability 34-66%).

FACU: Facultative Upland plants usually occur in non-wetlands (estimated probability 67-99%), but are occasionally found in wetlands (estimated probability 1-33%).

NOL: Not On List plants occur almost always under natural conditions in non-wetlands, and are considered representative of upland habitats.

NI: No Indicator-no status determined

4.0 Local Wetlands Inventory Results

4.1 Wetlands

Seventeen wetlands 0.5 acres or larger were mapped, totaling 52 acres. An additional 20 wetlands smaller than 0.5 acres were mapped from DSL-approved wetland delineations. These small wetlands totaled less than 2 acres. Each wetland is described on a wetland summary sheet (Appendix A). Wetland sample plot field data forms are in Appendix B. The wetlands are mapped on one LWI map sheet at a scale of 1:6,000 (1 inch = 500 feet) (Appendix C).

4.2 Possible Wetlands

Forty-five possible wetlands (areas smaller than 0.5 acres with wetland characteristics) were mapped as points and labeled "PW" on the LWI map. The approximate boundaries of the larger possible wetland areas were also mapped. Wetland indicators observed included ponded water, dominance by wetland vegetation and low topographic positions. No attempt was made to field verify possible wetlands.

5.0 Wetlands Assessment Results

5.1 Wetlands of Special Interest for Protection

Wetlands CO-1, CO-2, CO-3, CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 met one or more criteria as wetlands of special interest for protection.

Steelhead, chinook and chum salmon in the Columbia River are listed as threatened under the federal Endangered Species Act (ESA). Coho salmon are a candidate for federal listing. Steelhead and bull trout in the Hood River are listed as threatened under the federal ESA. Wetlands CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 all have surface water connections to the Columbia or Hood Rivers and could by used as habitat by listed fish species.

Critical habitat for steelhead, chinook and chum salmon was designated by the National Marine Fisheries Service on February 16, 2000 (Federal Register 2000) and includes streams, riparian areas (defined functionally) and off-channel habitat in the current range of the species in the Columbia and Hood Rivers. Wetlands CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are adjacent to have surface water connections with the Columbia or Hood Rivers and are presumably critical habitat.

Wintering bald eagles can be found along the Columbia River from the mouth of the Hood River to Ruthton Point. Eagles roost on Wells Island and feed on wintering waterfowl (USFS 1993). Bald eagles are listed as threatened under the Oregon and federal ESAs. Wetlands CO-1, CO-2, CO-3, CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are all potentially used by bald eagles.

Peregrine falcons prey on waterfowl and songbirds on Wells Island. Peregrine falcons are listed as endangered under the Oregon ESA. Wetlands CO-4 and CO-5 are potentially used by peregrine falcons.

Wells Island is heavily used by nesting Canada geese. Wetland CO-1, the port area around the Hook, Wells Island and the water area near Ruthton Point are used heavily in the winter by waterfowl (ODFW 2003, USFS 1993). Based on this information it appears that wetlands CO-1, CO-2, CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are of at least regional significance for migratory birds.

Wells Island is designated as open space in the Columbia River Gorge National Scenic Area Management Plan. The U.S. Forest Service owns the island and developed an open space management plan to meet the requirements of the National Scenic Area Management Plan. The plan establishes the following management goals:

- Protect the island its ecosystem of riverine forest and meadows
- Protect, enhance, and manage habitat diversity to promote viability of biodiversity for both flora and fauna
- Return the island to a less developed visual character
- Allow low levels of dispersed recreation in seasons and locations which do not impact the known wildlife values

- Retain the structures with potential value to the history of the island

The City of Hood River has zoned the portion of Wells Island in the city limits as open space under Goal 5 which includes wetlands CO-4 and CO-5. City code (Ord 1657, 1992) prohibits the city from issuing permits which would be inconsistent with the Columbia River Gorge National Scenic Area Management Plan (City of Hood River Comprehensive Plan, City of Hood River 1983?).

No wetlands met any of the other criteria for wetlands of special interest for protection. The full results are in Appendix D.

5.2 Wetland Functions and Conditions Assessment Results

Wetlands assessment results are in Table 4. Wetland function and condition summary sheets for each assessment unit are in Appendix G. Answers to wetland function and condition questions are in Appendix F. Watershed and wetland characterization results are in Appendix E.

The assessment results for Enhancement Potential should be considered with some skepticism. Wetlands CO-5, CO-6, HE-6, HO-1, HO-2, HO-3, IN-1 and PH-9 all ranked "high" for enhancement potential, yet all have a predominance of native vegetation and relatively intact hydrology. Enhancement opportunities are extremely limited for these wetlands. Other than perhaps attempting to remove Reed canarygrass, the wetlands would generally be better off left undisturbed. These inaccurate results appear to be due to limitations in the methodology.

Table 4. OFWAM Results

Wetland Code	Size (acres)	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Sensitivity to Impact	Enhancement Potential	Education	Recreation	Aesthetic Quality
CO-1	6.11	2	2	2	1	1	1	1	2	2
CO-2	3.71	2	2	2	1	1	1	3	2	3
CO-3	1.42	2	N/A	1	1	1	1	3	3	3
CO-4	0.90	2	2	2	2	1	1	1	1	1
CO-5	0.94	2	2	1	2	1	1	1	1	2
CO-6	7.94	2	2	1	1	1	1	1	2	2
HE-1	1.50	2	1	2	2	1	1	3	3	2
HE-6	1.79	2	2	2	2	2	1	2	2	2
HE-11	0.84	2	N/A	1	2	2	1	1	2	2
HO-1	1.46	2	2	1	2	2	1	1	1	1
HO-2	1.83	2	2	1	2	2	1	1	1	2
HO-3	2.24	2	2	1	2	2	1	2	2	3
IN-1	1.91	2	2	2	2	2	1	2	1	3
IN-2	15.57	2	2	1	1	2	1	2	1	2
PH-1	1.09	2	N/A	2	3	2	2	2	1	2
PH-9	0.50	2	N/A	2	2	2	1	2	2	2
PH-13	2.22	2	2	2	2	2	1	1	1	1

(see Table 1 for key to results)

6.0 Locally Significant Wetlands Results

Thirteen of the 17 wetlands met at least one of the required criteria for locally significant wetlands (Table 5). Figure 7 shows the locations of locally significant wetlands. Locally significant wetlands checklists for each wetland are in Appendix H. Ten wetlands rated at the highest functional level for one of the four ecological functions evaluated by OFWAM: wildlife habitat, fish habitat, water quality or hydrologic control. Ten wetlands met the criterion of having *intact* or *impacted or degraded* water quality function and being located within ¼ mile of a DEQ-designated water quality limited stream. Seven wetlands have direct surface water connections to the Columbia River or Hood River that are mapped as habitat for indigenous anadromous salmonids by ODFW. No wetlands met either of the optional significance criteria.

Table 5. Locally Significant Wetlands Results

			Mandatory Criteria					*Optional Criteria*		
Wetland Code	**Size (acres)**	**Exempt**	**OFWAM Key Functions**	**1/4 Mile of WQL Stream**	**Rare Plant Community**	**Listed Species**	**Connects to Salmon Habitat**	**Local Unique Native Plant Community**	**Public With Educational Use**	**Significant**
CO-1	6.11		√	√						YES
CO-2	3.71			√						YES
CO-3	1.42		√	√						YES
CO-4	0.90			√			√			YES
CO-5	0.94		√	√			√			YES
CO-6	7.94		√	√			√			YES
HE-1	1.50		√	√			√			YES
HE-6	1.79									NO
HE-11	0.84		√							YES
HO-1	1.46		√	√			√			YES
HO-2	1.83		√				√			YES
HO-3	2.24		√				√			YES
IN-1	1.91			√						YES
IN-2	15.57		√	√						YES
PH-1	1.09									NO
PH-9	0.50									NO
PH-13	2.22									NO

7.0 Potential Wetland Mitigation and Restoration Sites

Potential wetland mitigation or restoration sites are defined by DSL as "vacant, former wetlands, consisting mostly of relict (dewatered) hydric soils, which are five acres or larger in size." There are no areas in the study area that meet the definition. There are no mapped hydric soils in the study area and no areas of former wetlands were observed during the field work.

8.0 Study Area Summary

Summary information for the study area is provided in Table 6.

Table 6. Study Area Summary

Total acreage in study area	2853 acres
Total wetland acreage	54 acres
Number of wetlands 0.5 acres and larger	17
Number of significant wetlands	13

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Glossary

Anadromous: Species of fish that hatch in fresh water, migrate to saltwater where they spend most of their adult lives, and return to fresh water to lay eggs.

Anaerobic: Biogeochemical processes that occur without oxygen.

Aquatic bed: A wetland class dominated by plants that are completely submerged or float on the water's surface.

Areal cover: A measure of dominance defining the degree to which the portions of plants above the ground cover the ground surface.

Artificially created: The creation of a wetland or other water entirely from an upland (non-wetland) area as a result of human activity.

Bankfull Stage: Stage or elevation at which water overflows the natural banks of streams or other waters of this state and begins to inundate the upland. In the absence of physical evidence, the two-year recurrence interval flood elevation may be used to approximate the bankfull stage.

Bed or banks: the physical container of the waters of this state lying below bankfull stage.

Channel: An open conduit either naturally or artificially created which periodically or continuously contains moving water.

Channelize: To straighten the bed or banks of a stream or river or to line them with concrete or other materials.

Compensatory mitigation site: Replaced or substituted wetlands or water resources which are created, enhanced or restored.

Comprehensive Plan: A local document that guides a community's land use, conservation of natural resources, economic development, and public services. Plans contain data and information called the inventory, and the policy element. The policy element sets forth the community's long-range objectives and the policies by which they will be achieved. The plan in adopted by ordinance and has the force of law.

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

Cowardin class: The wetland classification according to the U.S. Fish and Wildlife Service's Classification of Wetlands and Deepwater Habitats of the United States, Cowardin et al., 1979.

DEQ: Department of Environmental Quality

Deep-water habitat: Aquatic habitat, such as portions of lakes, rivers, estuaries, and marine water, where surface water is permanent and deeper than 6.6 feet most of the year.

Degraded: Lowered in quality from adverse impacts such as vegetation removal, invasion of nonnative species and or/draining.

Detention: Temporary storage of water.

DLCD: Department of Land Conservation and Development, the State of Oregon's land use planning agency.

Dominant: Plant species with the largest proportion of areal coverage.

DSL: Division of State Lands. State agency that administers Oregon's state-owned lands and regulates removal and fill in waterways and wetlands.

EPA: U.S. Environmental Protection Agency

Ecosystem: An organic community of plants and animals, viewed within its physical environment (habitat). The ecosystem results from the interaction between soil, climate, vegetation, and animal life.

Emergents: Erect, rooted herbaceous plants that can tolerate flooded soil conditions, but cannot tolerate being submerged for extended periods; e.g. cattails, reeds and pickerel weeds.

Emergent wetland: A wetland class dominated by emergent plants. Emergent wetlands include marshes and wet meadows.

FEMA: Federal Emergency Management Agency. The federal agency that manages emergency response and hazard mitigation planning. Administers the National Flood Insurance Program (NFIP); and creates or reviews maps that define the location and elevation of the 1-percent chance flood (100 year floodplain).

Field-Verify or Field Verification: To walk over and/or visually check an area to make a wetland determination and map wetlands. This may or may not include collecting sample plot data.

Forested wetland: A wetland class in which the soil is saturates and often inundated, and woody plants taller than 20 feet form the dominant cover, e.g. Oregon ash, alders, and cottonwoods. Water-tolerant shrubs often form a second layer beneath the forest canopy, with a layer of herbaceous plants growing beneath the shrubs.

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

Georeference or Geographical Reference: Linking geographic data to known coordinates on the surface of the earth.

GIS or Geographical Information System: A system of hardware, software and data storage that allows for the analysis and display of information that has been geographically referenced.

Groundwater: Water found at and beneath the water table in the zones of saturate soil and bedrock.

Groundwater discharge: Groundwater that emerges at the land surface in the form of springs or seepage areas. Groundwater can also discharge into rivers (via bank seepage) and sustain flow during the drier months.

Habitat: The environment in which the requirements of a specific plant or animal are met.

Headwaters: Tributary stream located in upper portions of a watershed.

Herbaceous vegetation: A plant, whether annual, biennial, or perennial, with non-woody stems that die back to the ground at the end of the growing season.

HGM class or subclass: the hydrogeomorphic classification of the wetland based upon its landscape position and hydrology characteristics, according to the HGM key developed by the Division of State Lands.

Hydric soil: A soil that formed under conditions of saturation, flooding or ponding long enough during the growing season to develop anaerobic conditions in the upper part. The concept of hydric soils includes soils developed under sufficiently wet conditions to support the growth and regeneration of hydrophytic vegetation. Soils that are sufficiently wet because of artificial measures are included in the concept of hydric soils.

Intermittent stream: A waterway that flows for part of the year.

Indicator: Soil, vegetation, and hydrology characteristics or other field evidence that indicate that wetlands are present.

Large woody debris: Dead material from trees and shrubs that is large enough to persist more than one season.

LWI: Local Wetland Inventory. A systematic survey of an area to identify, classify and map the approximate boundaries of wetlands, and includes the supporting documentation required by Division of State Lands administrative rules.

Marsh: An emergent wetland that is flooded either seasonally or permanently. Marshes support the growth of emergent plants such as cattails, bulrushes, reeds, and sedges; floating-leaved plant such as pondweeds and submergents.

Natural waterways: Waterways created naturally by geological and hydrological processes, waterways that would be natural but for human-caused disturbances (e.g., channelized or culverted streams, impounded waters, partially drained wetlands or ponds created in wetlands) and that otherwise meet the definition of waters of the state, and certain artificially created waterways as defined in OAR 141-85-0010 (29).

Nonpoint source: Pollution sources that are diffuse and do not have a single point of origin or are not introduced into a receiving stream from a specific outlet.

NWI: National Wetland Inventory, database designed and established by the United States Fish and Wildlife Service (USFWS) that maps and classifies wetlands in the United States based on interpretation of aerial photographs.

Open water: A wetland class consisting of areas of water with little or no wetland vegetation. Submerged or floating-leaved plants may inhabit the shallower portions along the edges of the body of water.

OAR: Oregon Administrative Rules. A body of law that describes how legislation and other laws will be implemented.

ODFW: Oregon Department of Fish and Wildlife.

Offsite Determination: A wetland determination conducted without field verification using remote sensing sources such as NWI maps, soils maps, or aerial photographs.

OFWAM: Oregon Freshwater Wetland Assessment Methodology is an assessment method that qualitatively assesses wetland functions and conditions. OFWAM is intended for planning and educational uses and not detailed impact analysis on individual wetlands.

Other Waters: Waters of the state other than wetlands, such as streams and non-vegetated ponds.

Palustrine: Palustrine wetlands included all freshwater wetlands dominated by trees, shrubs, emergents, mosses or lichens. They also include wetlands lacking such vegetation but with all of the following characteristics: areas less than 20 acres, lacking active wave-formed or bedrock shorelines, maximum water depth less than 6.6 feet, and salinity less that 0.5 percent.

Perennial stream: A waterway that has water flow throughout the year.

Possible wetland: An area noted during the course of LWI development that appears to meet wetland criteria but is too small (<0.5 acres) to require detailed mapping or assessment in the LWI. Possible wetlands are mapped as points labeled "PW" on the LWI maps.

Potential wetland: An area identified from off-site sources that has one or more wetland characteristics. Potential wetlands are candidates for field-verification.

Preliminary Jurisdictional Determination (PJD): An advisory determination issued orally or in writing stating that wetlands or other waters of the state are present or not present on a parcel of land. Because a PJD is advisory in nature it has no specified duration or expiration and is not subject to appeal. PJDs include all wetland determinations by any person other than the Division, and also include wetlands mapped on the NWI or on a LWI.

Riparian area: The area immediately adjacent to surface water such as rivers, streams, ponds, lakes, wetlands, and springs consisting of transition areas between an aquatic ecosystem to terrestrial ecosystem.

Riverine wetland: Wetland and deepwater habitats contained within the channel except: (1) wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and (2) habitat with water containing ocean derived salts in excess of 0.5 ‰. Water is usually flowing.

Runoff: That part of precipitation, snow melt, or irrigation that flows across the land surface and into streams or other waterways. It can carry pollutants from the air and land into the receiving waters.

Sample plot: A specific area on the ground where soils, vegetation and hydrology data are recorded on a field data form in order to make a wetland determination.

Scrub-shrub wetland: A wetland class dominated by shrubs and woody plants less than 20 feet tall, e.g. red-osier dogwoods, Douglas hawthorns, serviceberry, Pacific ninebark, etc. Water levels in shrub swamps can range from permanent to intermittent flooding.

Spring: A flow of water above ground level that occurs where the water table (groundwater) intercepts the ground surface. Springs and lines of springs are often found at breaks in slope, at contacts between different types of rocks or soils, and along faults. Springs may be associated with wetland and/or riparian areas and increased hazard of unstable slopes.

Statewide Planning Goal 5: Oregon's statewide planning goal that addresses open space, scenic and historic areas, and natural resources. The purpose of the goal is to conserve open space and protect natural and scenic resources.

Stream: A watercourse created by natural processes, or one that would be in a natural state if it were not for human-caused alterations.

Surface water: All water naturally open to the atmosphere (rivers, lakes, reservoirs, streams, impoundments, seas, estuaries) and all springs, wells, or other collectors that are directly influenced by surface water.

Submergent: Plants that grow and reproduce while completely submerged in water.

Swamp: A wetland in which the soil is saturated and often inundated and that is dominated by a woody cover.

Terrace: A nearly flat portion of the landscape terminated by a steep edge. Formed by a variety of processes including the action of rivers, glaciers, and soil movement.

UGB: Urban Growth Boundary. A line drawn around a geographic area which separates urban use lands from resource, or rural, use lands; and shows where the city intends to grow.

Vernal pools: Seasonally flooded depressions on soils with an impermeable layer such as a hardpan or clay pan. The impermeable layer allows the pools to retain water longer then the surrounding uplands; nonetheless, the pools are shallow enough to dry up each season. Only plants and animals that are adapted to this cycle of wetting and drying can survive in vernal pools over time.

Water table: The level of groundwater. The upper surface of the zone where all open spaces in the earth materials are filled with water.

Waters of the state: Natural waterways including all tidal and nontidal bays, intermittent streams, constantly flowing streams, lakes, wetlands and other bodies of water in this state, navigable and nonnavigable, including that portion of the Pacific Ocean which is in the boundaries of this state.

Watershed: The area from which a surface water course receives its water. An area of land that contributes runoff to one specific delivery point. Large watersheds can be composed of several smaller "subwatersheds", each of which contributes runoff to different locations that ultimately combine at a delivery point.

Wet meadow: Emergent wetlands that are generally seasonally flooded and have saturated soils for much of the growing season. Wet meadows are dominated by grasses, sedges and rushes and are often cultivated or pastured.

Wetland: Those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Wetland boundary: A line marked on a map that identifies the approximate wetland/non-wetland boundary.

Wetland delineation: A determination of wetland presence that includes marking the wetland boundaries on the ground and/or on a detailed map prepared by professional land survey or similar accurate methods.

Wetland delineation report: A written document that contains the methods, data, conclusions and maps used to determine if wetlands and/or other waters of the state are present on a land parcel and, if so, describes and maps their location and geographic extent.

Wetland determination: Identifying an area as wetland or non-wetland.

Wetland/upland mosaic: A complex of several wetlands smaller than one-half (0.50) acres in size each that are interspersed between areas of non-wetland.

Woody vegetation: A plant with woody stems that persist throughout the growing season.

Figures

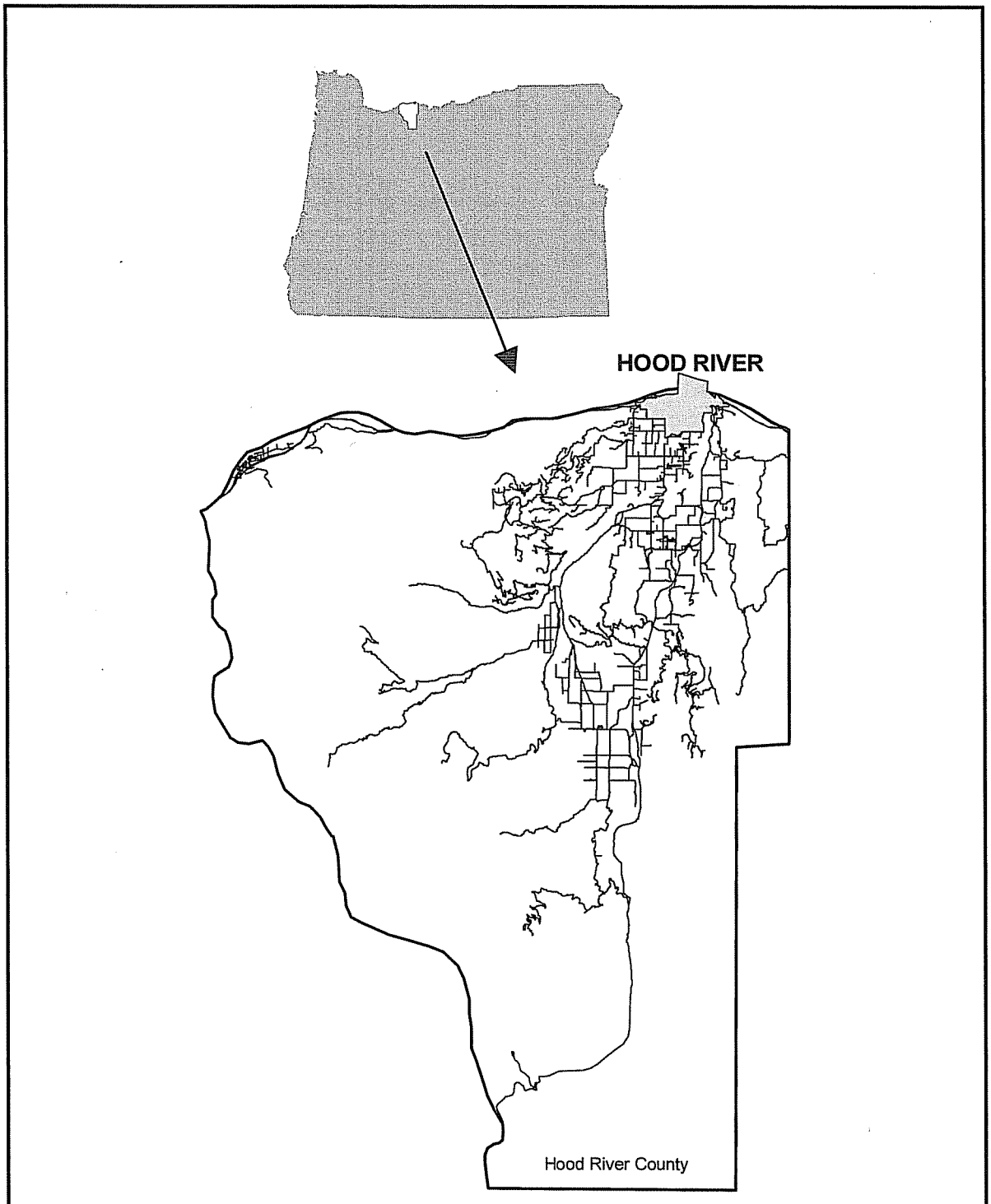


FIGURE 1. STUDY AREA LOCATION

NORTH
no scale

Source: Data provided by Oregon Geospatial Data Clearinghouse and Hood River County

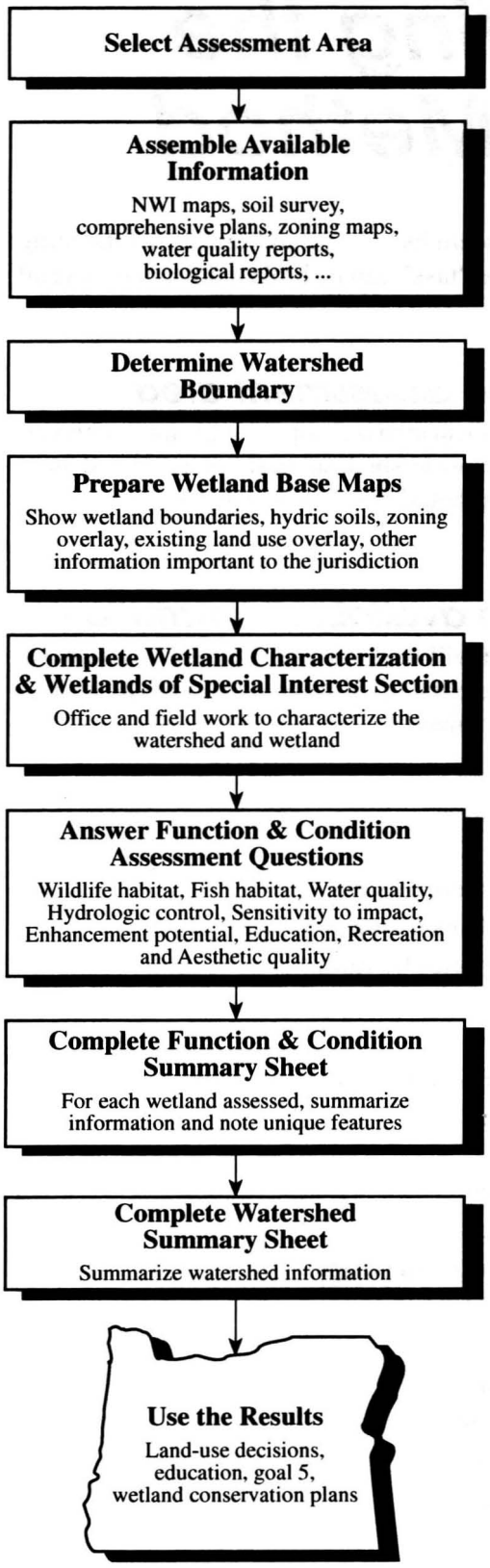


FIGURE 2. OFWAM PROCESS

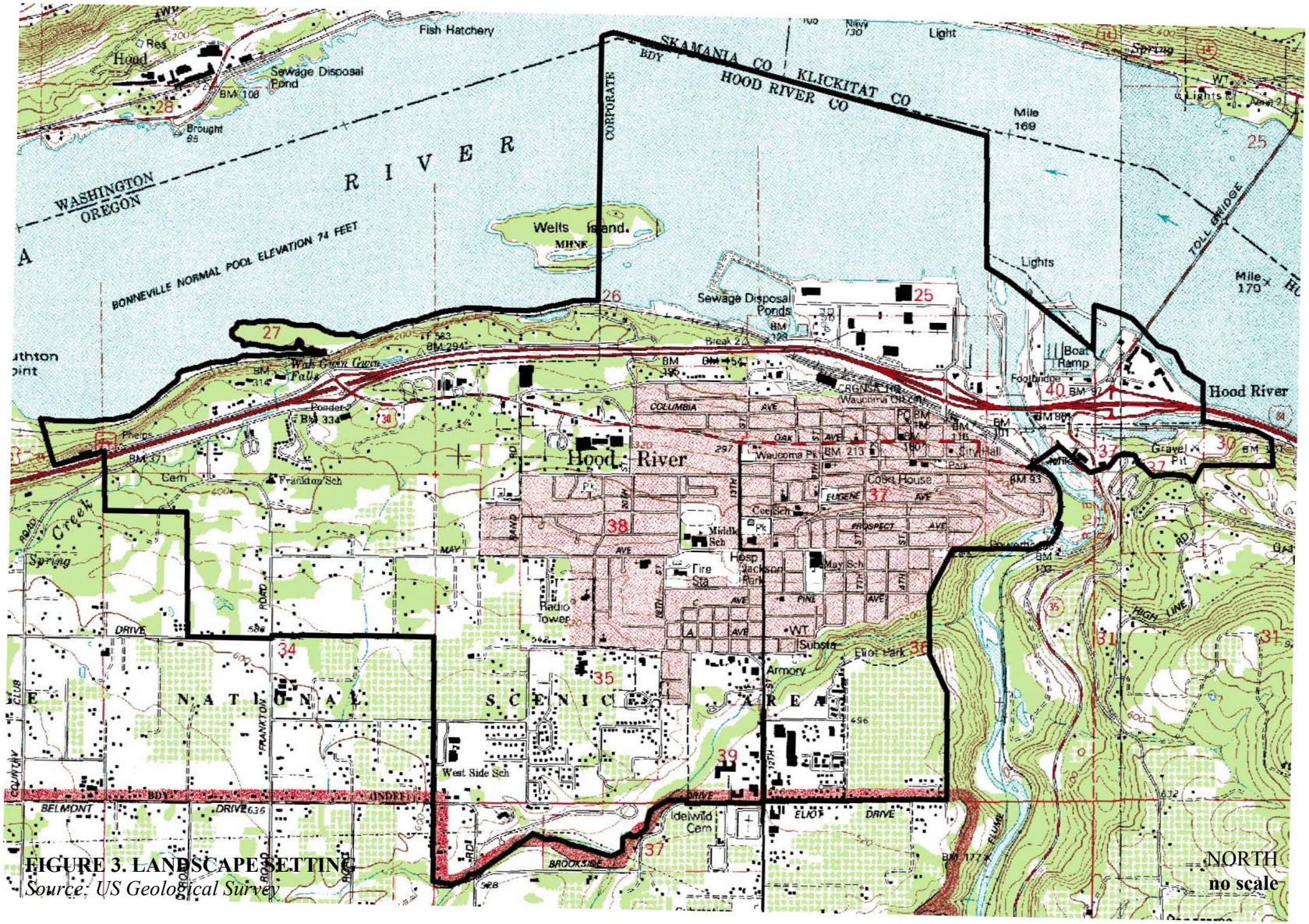


FIGURE 3. LANDSCAPE SETTING
Source: US Geological Survey

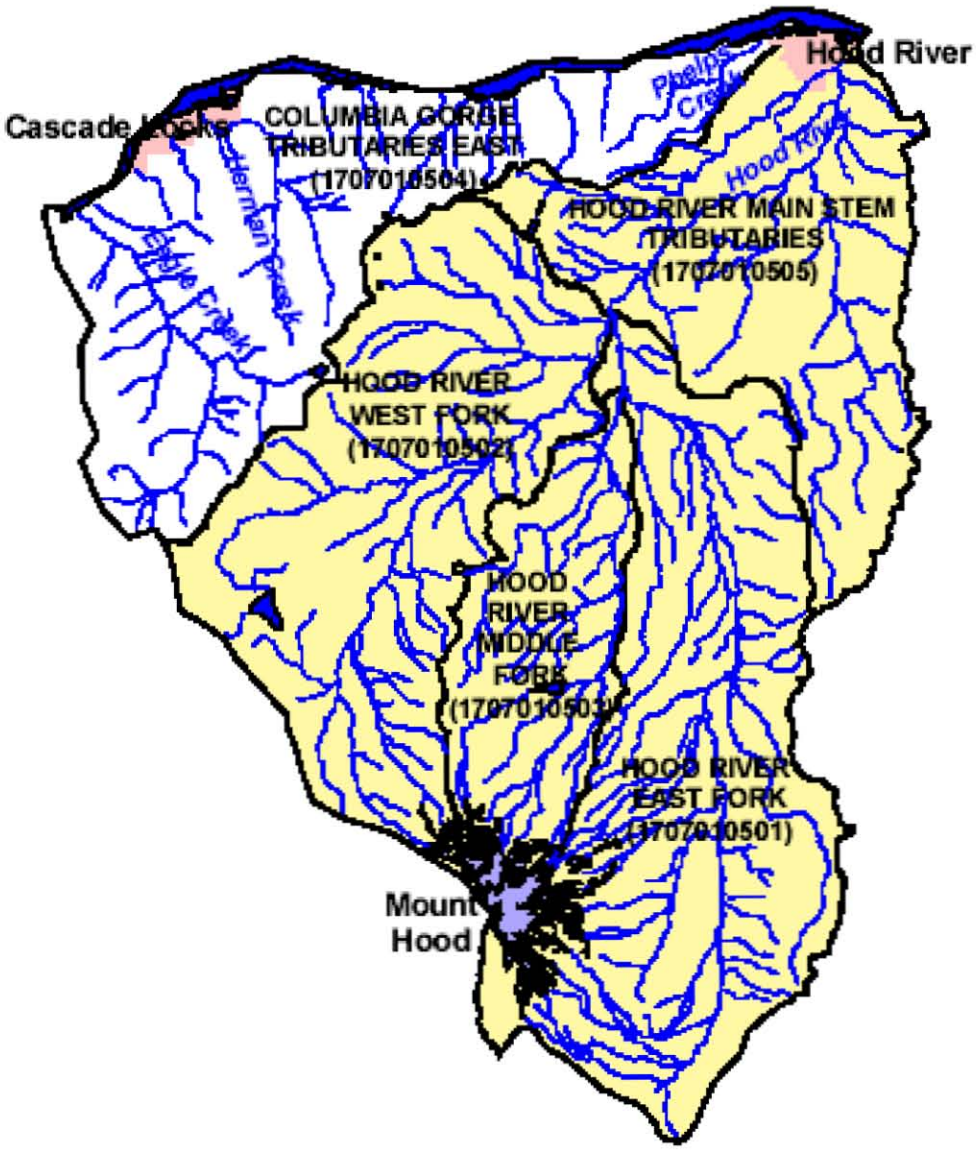


FIGURE 4. WATERSHEDS

Source: DEQ 2001

NORTH
no scale

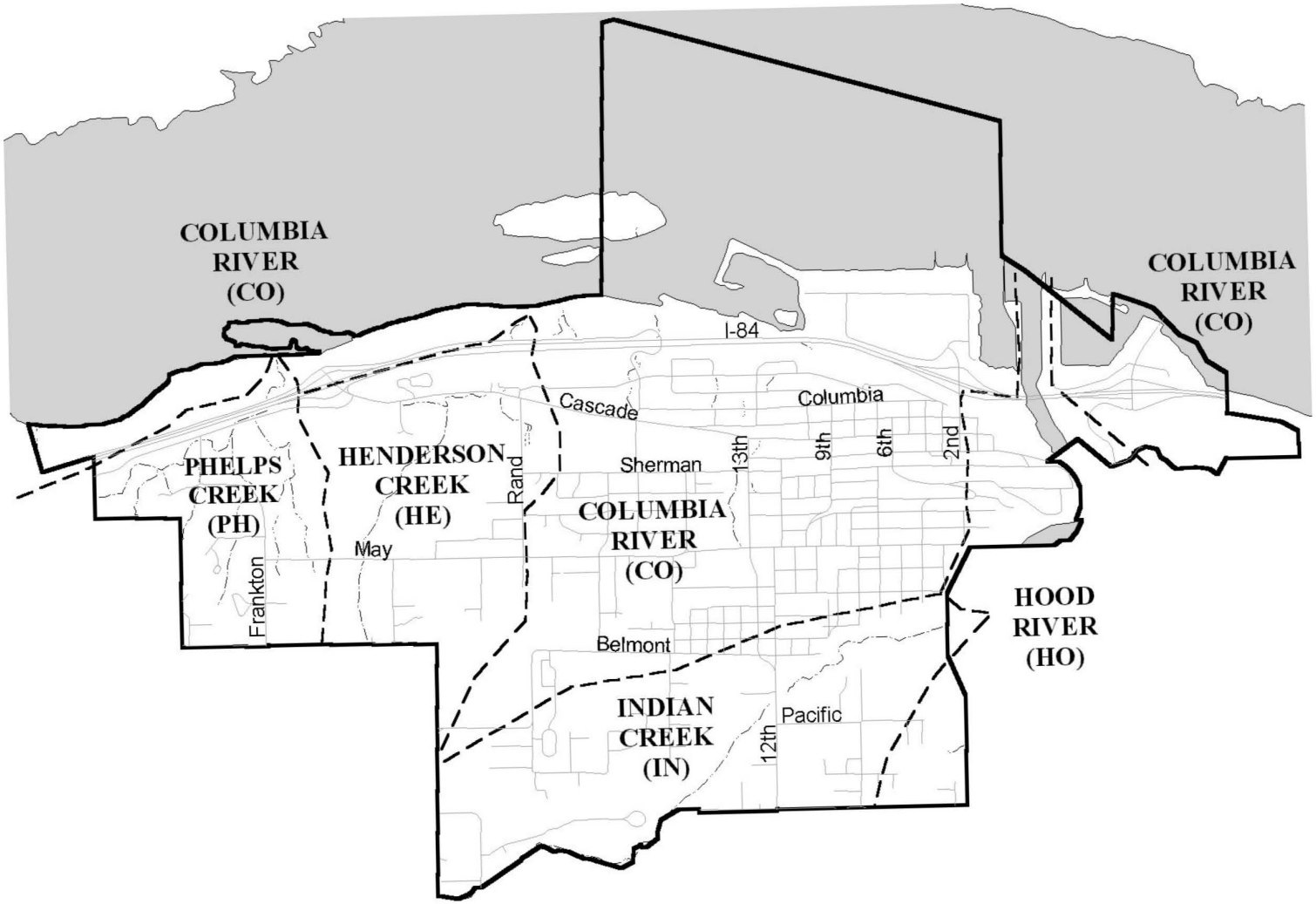


FIGURE 5. HOOD RIVER LOCAL DRAINAGE BASINS

NORTH
no scale

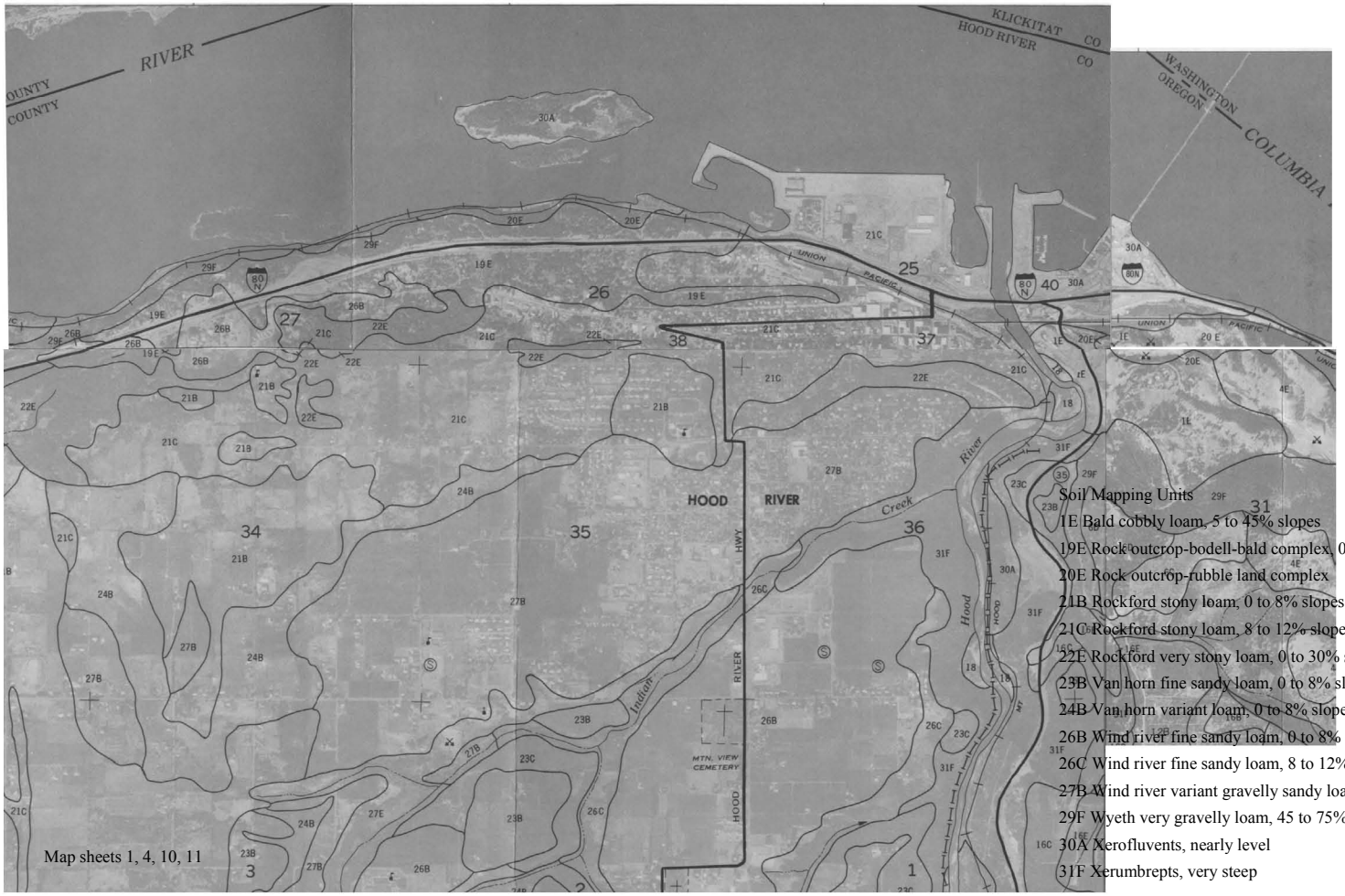


FIGURE 6. SOIL MAPPING UNITS

NORTH

Source: USDA 1981

no scale

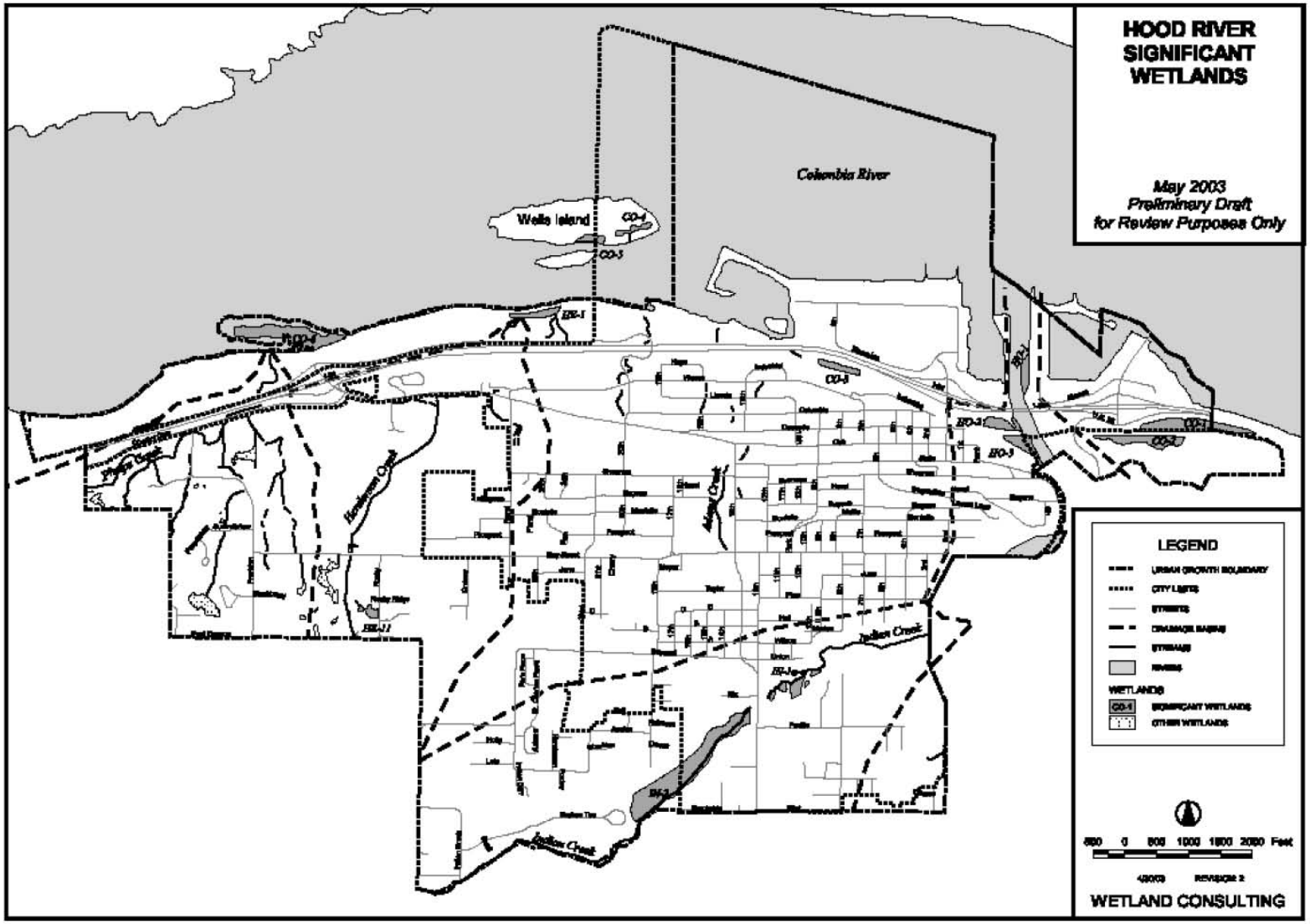
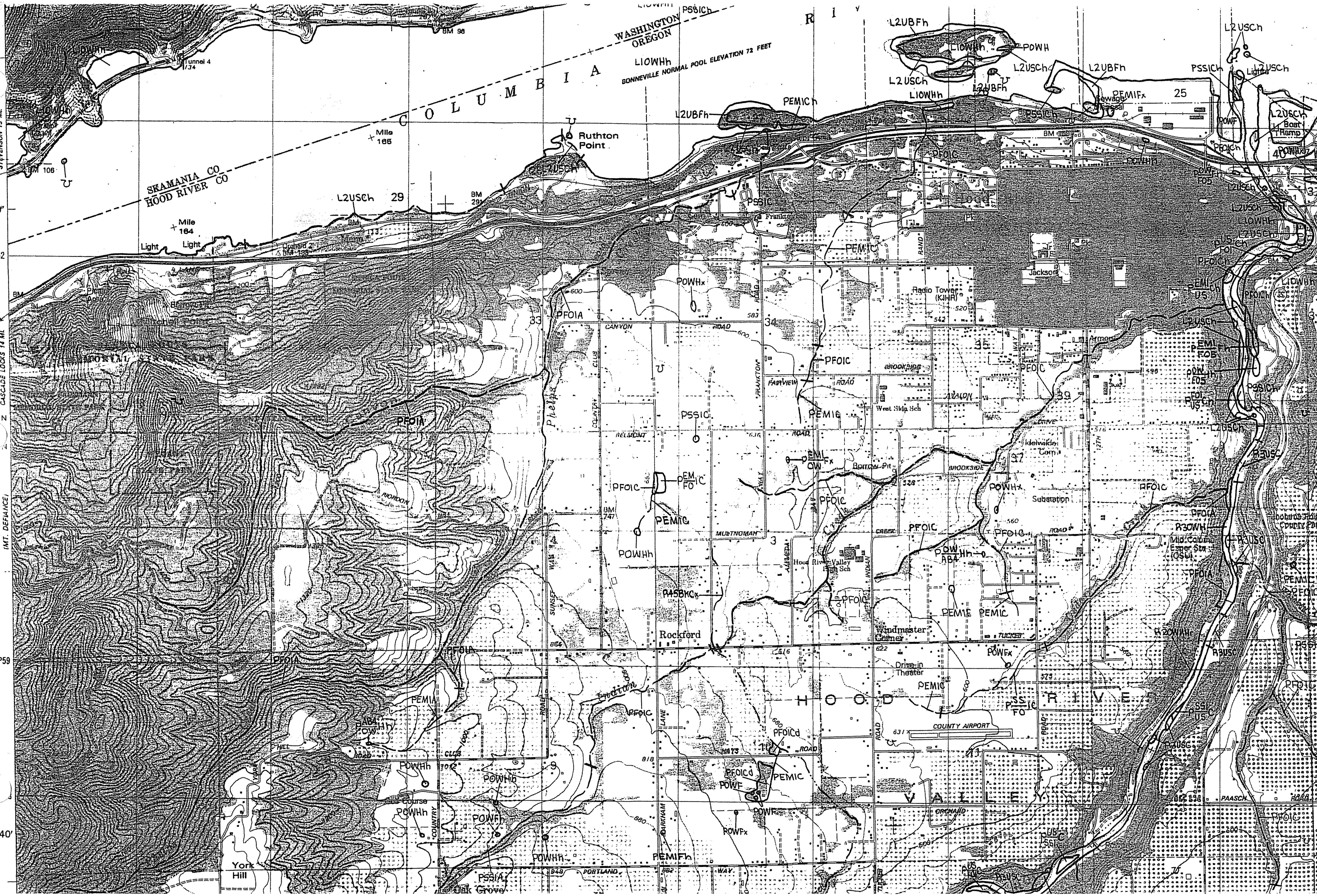


FIGURE 7. SIGNIFICANT WETLANDS


COLUMBIA RIVER
WASHINGTON
OREGON
SKAMANIA CO
HOOD RIVER CO
BONNEVILLE NORMAL POOL ELEVATION 72 FEET
STEVENSON 13 MI.
PORTLAND 54 MI.
CASCADE LOCKS 14 MI.
MOSIER EXIT 8 MI.
THE DALLES 21 MI.
(WHITE SALMON)
Tunnel 4
BM 106
BM 98
Mile 166
Mile 164
Light
Ruthton Point
L1OWHh
L2UBFh
PEMICh
L2USCh
POWH
PSSICh
PEMIFx
PSSIC
PFOIC
PEMIC
POWHx
PFOIA
PSSIC
POWHh
R4SBKCx
PFOICd
POWF
POWFx
PEMIFh
PSSIA
PEMIA
POWFh
R3USC
R3OWH
R2OWHr
PEMICh
Radio Tower (KIHR)
Jackson
Sewage Disposal
Boat Ramp
West Side Sch
Idelwilde Cem
Substation
Borrow Pit
Hood River Valley High Sch
Windmaster Corner
Rockford
Drive-in Theater
COUNTY AIRPORT
Mid-Columbia Exper Sta (OSU)
Tucker Bridge County Park
Golf Course
York Hill
Oak Grove
CANYON ROAD
BELMONT ROAD
FAIRVIEW ROAD
BROOKSIDE DRIVE
MULTNOMAH
CREEK ROAD
TUCKER
ORCHARD
PAASCH ROAD
PORTLAND WAY
HOOD RIVER VALLEY
Phelps
Indian
42'30"
40'
1 3 N

Hood River

THE DALLES NW
HOOD RIVER

HOOD RIVER, OREG.-WASH

SCALE 1:24 000

SPECIAL NOTE

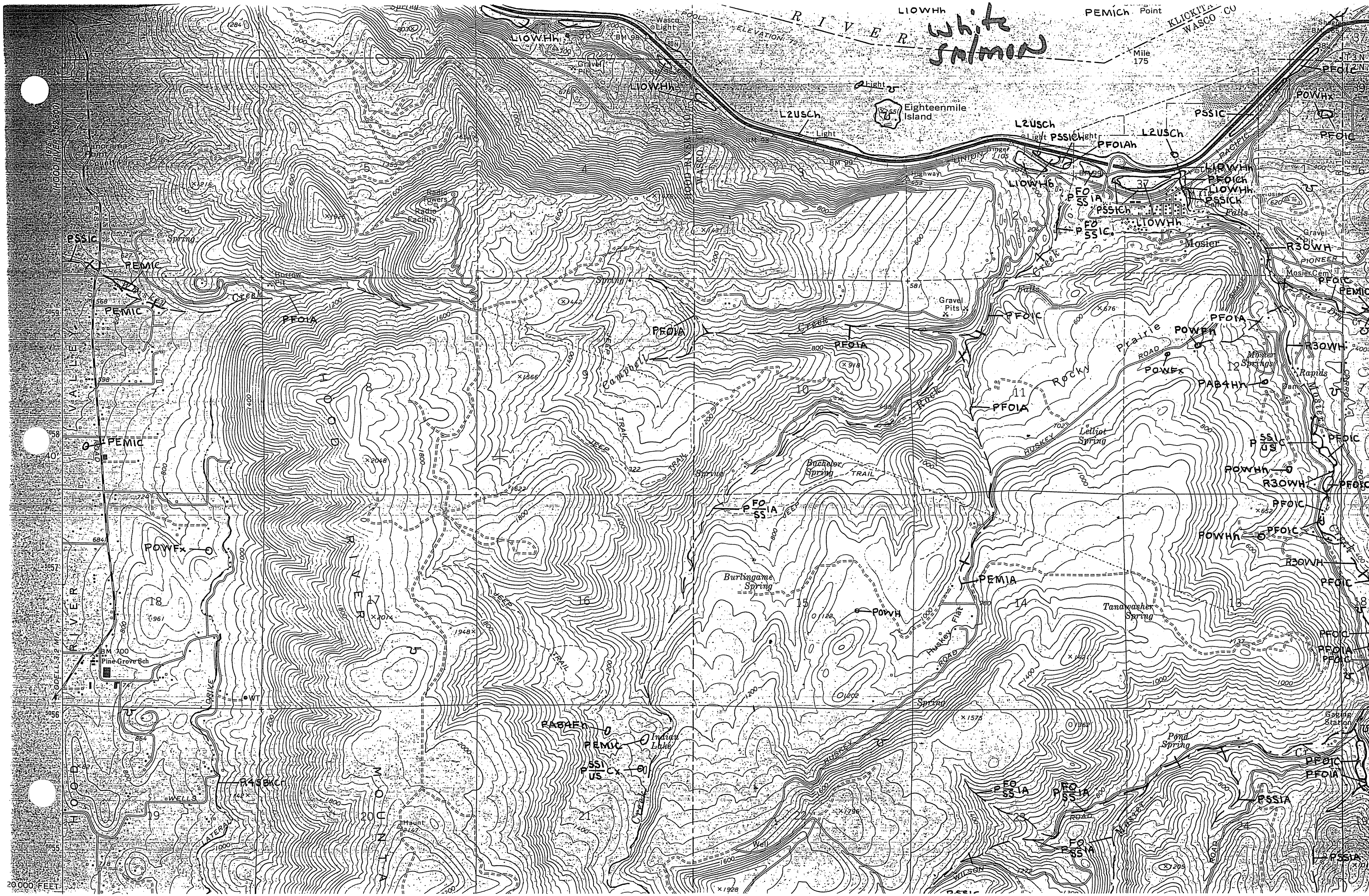
This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with **Classifica-**

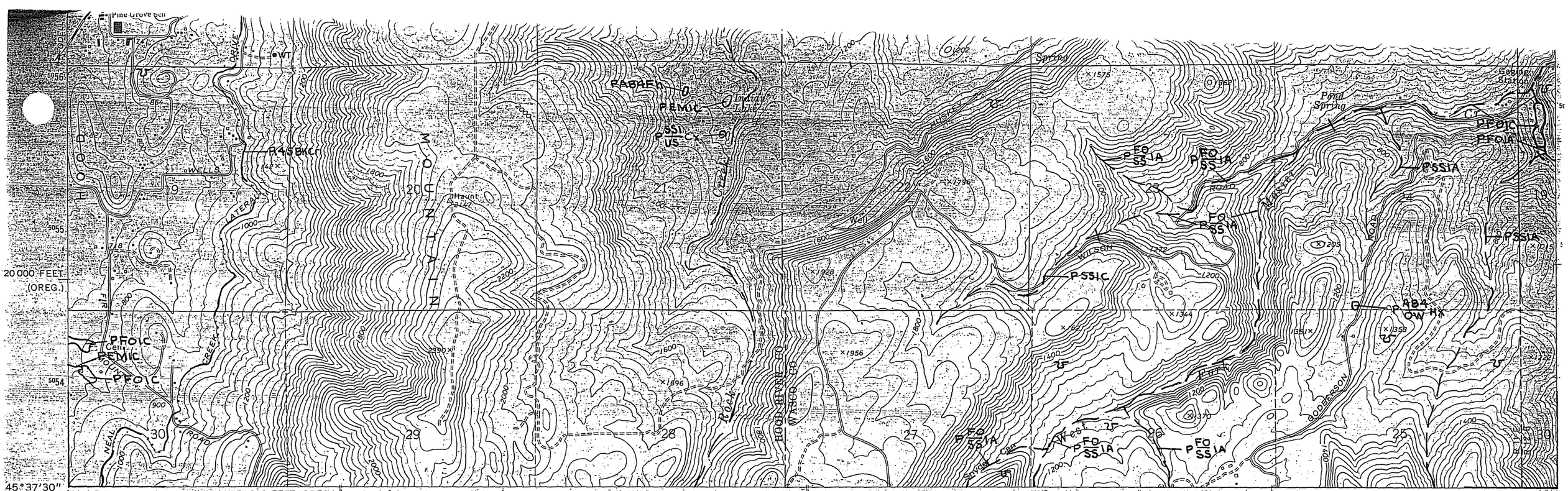
SYMBOLOGY EXAMPLE

SYSTEM

NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such


RIVER
POOL ELEVATION 72
white salmon
L1OWHh
PEMICh
Point
KLICKITAT
WASCO CO
Mile 175
Wasco Light
BM 98
Gravel Pit
Light
Eighteenmile Island
L2USCh
PSSICh
PFO1Ah
PSSIC
PFO1C
POWHx
L1OWHh
PFO1Ch
PSSICh
UNION
PACIFIC
Highway
Mosier
Falls
R3OWH
PIONEER
Mosier Cem.
PEMIC
Dry Cr.
Radio Towers
Radio Facility
Panorama Point County Park
HOOD RIVER
PSSIC
PEMIC
Spring
Borrow Pit
Creek
PFO1A
Campbell
Creek
Gravel Pits
Rock Creek
Prairie
ROAD
POWFh
POWFx
PAB4Hh
Mosier Springs
Rapids
Dam
Mosier
Rocky
HUSKEY
Lelliot Spring
P SS/US C
POWHh
JEEP TRAIL
Bachelor Spring
TRAIL
HOOD RIVER
VALLEY
POWFx
P FO/SS 1A
Burlingame Spring
PEM1A
POWH
Huskey Flat
ROAD
Tanawasher Spring
Pine Grove Sch
DRIVE
WELLS
LATERAL
R4SBKCr
PAB4Fh
PEMIC
Indian Lake
P SS1/US Cx
MOUNTAIN
Haunt
Creek
Well
Spring
Gaging Station
Pond Spring
Cr
PSS1A
WILSON
20 000 FEET
ODELL 3.2 MI.



THE DALLES NW

HOOD RIVER

WHITE SALMON, WASH.–OREG

SCALE 1:24 000

2 0 1 MILE

0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

er information concerning the wetland resources depicted
his document may be available. For information, contact:

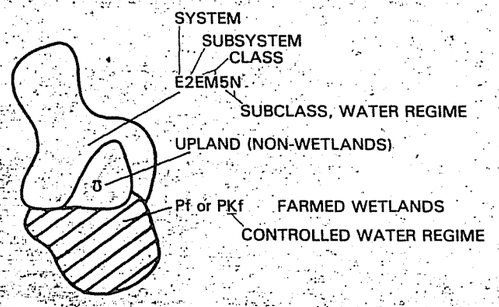
Regional Director (ARDE) Region I
U.S. Fish and Wildlife Service
Lloyd 500 Bldg., Suite 1692
500 N.E. Multnomah Street
Portland, Oregon 97232

SPECIAL NOTE

This document was prepared primarily by stereoscopic analysis of high altitude aerial photographs. Wetlands were identified on the photographs based on vegetation, visible hydrology, and geography in accordance with **Classification of Wetlands and Deep-Water Habitats of the United States** (An Operational Draft), Cowardin, et al, 1977. The aerial photographs typically reflect conditions during the specific year and season when they were taken. In addition, there is a margin of error inherent in the use of the aerial photographs. Thus, a detailed on the ground and historical analysis of a single site may result in a revision of the wetland boundaries established through photographic interpretation. In addition, some small wetlands and those obscured by dense forest cover may not be included on this document.

Federal, State and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, State or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, State or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

SYMBOLOGY EXAMPLE



NOTES TO THE USER

- Wetlands which have been field examined are indicated on the map by an asterisk (*).
- Dominance type (either vegetative or sedentary animal) can be added to the map by the interested user.
- Additions or corrections to the wetlands information displayed on this map are solicited. Please forward such information to the address indicated.
- Some areas designated R4SB, R4SBW, or R4SBJ (intermittent streams) may not meet the definition of wetlands.

AERIAL PHOTOGRAPHY

DATE: 8 / / 81
SCALE: 1:58 000
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DATE: / /
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U.S. DEPART

FISH AN

Prepared by
for the N

WETLAND LEGEND

The P... represents upland areas, but may include

Appendix A. Wetland Summary Sheets

This appendix contains:

Key

Key to the abbreviations used on wetland summary sheets

Index of Wetland Summary Sheets

The index of wetland summary sheets is organized alphabetically by wetland code. The code format is AA-1a where the first two letters are the drainage basin code and the number is the unique identification number. The lower case letter was only used when needed to identify separate portions of wetlands that were composed of a group of related, but separate units. Wetlands were numbered beginning at the downstream end of each basin and increasing upstream.

Wetland Summary Sheets

There are wetland summary sheets for each of the seventeen wetlands 0.5 acres and larger.

KEY TO ABBREVIATIONS USED ON WETLAND SUMMARY SHEETS

Drainage Basin Codes

CO	Columbia River and minor tributaries
HE	Henderson Creek
HO	Hood River
IN	Indian Creek
PH	Phelps Creek

Cowardin Classifications

PEM	Palustrine Emergent
PSS	Palustrine Scrub-Shrub
PFO	Palustrine Forested
PUB	Palustrine Unconsolidated Bottom

Special modifiers:

d	partially drained/ditched
h	diked/impounded
x	excavated

The Cowardin wetland classification system (also known as the U.S. Fish and Wildlife Service National Wetland Inventory system) is based on ecological system, substrate material, flooding regime and vegetative life form (Cowardin et al. 1979).

Hydrogeomorphic (HGM) Classifications

DCNP	Depressional Closed Nonpermanent
DCP	Depressional Closed Permanent
DO	Depressional Outflow
Flat	Flats
RFT	Riverine Flow-through
RI	Riverine Impounding
SH	Slope Headwater
SV	Slope Valley

The hydrogeomorphic classification system groups wetlands with similar functions according to their water source and topographic setting in the landscape (Adamus 2001).

WETLAND SUMMARY SHEETS INDEX

Wetland Code	Page	Locally Significant	DSL File Number(s)
CO-1	A-5	YES	
CO-2	A-6	YES	
CO-3	A-7	YES	
CO-4	A-8	YES	RF 5573
CO-5	A-9	YES	
CO-6	A-10	YES	
HE-1	A-11	YES	
HE-2	None (<0.5 acres)	NO	WD 99-0390
HE-3	None (<0.5 acres)	NO	WD 00-0431
HE-4	None (<0.5 acres)	NO	WD 00-0431
HE-5	None (<0.5 acres)	NO	WD 02-0265
HE-6	A-12	NO	WD 02-0265 APP 26403
HE-7	None (<0.5 acres)	NO	WD 02-0265
HE-8	None (<0.5 acres)	NO	WD 02-0265
HE-9	None (<0.5 acres)	NO	WD 02-0265
HE-10	None (<0.5 acres)	NO	WD 00-0063
HE-11	A-13	YES	WD 00-0063
HO-1	A-14	YES	
HO-2	A-15	YES	

Wetland Code	Page	Locally Significant	DSL File Number(s)
HO-3	A-16	YES	
IN-1	A-17	YES	WD 98-0003 FP 15278
IN-2	A-18	YES	
PH-1	A-19	NO	WD 02-0164 APP 25851
PH-2	None (<0.5 acres)	NO	WD 02-0164
PH-3	None (<0.5 acres)	NO	WD 02-0343
PH-4	None (<0.5 acres)	NO	WD 02-0343
PH-5	None (<0.5 acres)	NO	WD 02-0343
PH-6	None (<0.5 acres)	NO	WD 02-0368 APP26369
PH-7	None (<0.5 acres)	NO	WD 02-0368 APP26369
PH-8	None (<0.5 acres)	NO	WD 02-0368 APP26369
PH-9	A-20	NO	WD 02-0368
PH-10	None (<0.5 acres)	NO	WD 02-0368
PH-11	None (<0.5 acres)	NO	WD 02-0368 APP 26335
PH-12	None (<0.5 acres)	NO	WD 02-0368 APP 26335
PH-13	A-21	NO	WD 91-0027 RP 6047 RF 6520
PH-14	None (<0.5 acres)	NO	WD 02-0265
PH-15	None (<0.5 acres)	NO	WD 02-0265

Wetland Summary Sheet

Sample Plot Numbers:	**1**	Wetland Code(s):	**CO-1**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB PEM**	Size (acres):	**6.11**
HGM Classification(s):	**DCP**	Locally Significant:	**YES**

Legal: **T3N R11E 30D**	Hydrologic Basin: **Columbia River**
Tax Lots: Oregon Department of Transportation right-of-way	Location: **South of Interstate 84, southeast of exit 64, north of the Union Pacific railroad tracks**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **groundwater (Columbia River water through freeway fill)**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Reed canarygrass
		Hardstem bulrush
		Common cattail

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a permanent pond with patches of emergent vegetation. Wetland boundaries are defined by water marks on the surrounding steep fill slopes for the railroad line along the south side and Interstate 84 and the Highway 35 interchange on the north side and by an abrupt change from wetland to upland vegetation. A review of historical aerial photographs indicates that the site was an agricultural field that was flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The filling for construction of Interstate 84 in the late 1950s separated the area from the river resulting in an isolated pond. According to several local informants pond levels rise and fall with changes in Columbia River levels indicating the water moves between the river and the pond through the fill for Interstate 84. No culverts or other surface connection between the pond and the river were observed.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**CO-2**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB**	Size (acres):	**3.71**
HGM Classification(s):	**DCP**	Locally Significant:	**YES**

Legal: **T3N R11E 30D T3N R10E 25C** Tax Lots: 3N11E30 TL 500, 700	Hydrologic Basin: **Columbia River** Location: **South of the Union Pacific railroad tracks and east of Highway 35**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **groundwater (Columbia River water through RR and freeway fill)**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
None	**Willow**	**Reed canarygrass**
		Hardstem bulrush

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a permanent pond with patches of emergent vegetation. Wetland boundaries are defined by water marks on the steep fill slopes for the railroad line along the north side and steep slopes along the south, southwest and southeast sides. A review of historical aerial photographs suggests that the site was an undeveloped area that was flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The filling for construction of Interstate 84 in the late 1950s separated the area from the river resulting in an isolated pond. According to several local informants pond levels rise and fall with changes in Columbia River levels indicating the water moves between the river and the pond through the fill for Interstate 84. No culverts or other surface connection between the pond and the river were observed.

Wetland Summary Sheet

Sample Plot Numbers:	**8, 9**	Wetland Code(s):	**CO-3**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM PSS**	Size (acres):	**1.42**
HGM Classification(s):	**DCNP**	Locally Significant:	**YES**

Legal: **T3N R10E 25C**

Tax Lots: Oregon Department of Transportation and Union Pacific Railroad rights-of-way

Hydrologic Basin: **Columbia River**

Location: **North of Union Pacific RR tracks, south of Interstate 84, access off 7th Street**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **stormwater discharge from culverts and from ditch to east**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**not appropriate**
Water Quality:	**intact**	Aesthetics:	**not pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is in a linear depression between Interstate 84 and the Union Pacific railroad tracks. Wetland boundaries along the north and south sides are defined by the steep fill slopes along I-84 and the railroad tracks, ponded and saturated soils, and the change from a wetland plant community to Himalayan blackberries. Ponded water and saturated soils were observed in the wetland during the site visit. The wetland receives and stores a large volume of stormwater and piped stream flow and is an integral part of the municipal stormwater management system.

Wetland Summary Sheet

Sample Plot Numbers:	**10, 11**	Wetland Code(s):	**CO-4**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUBx**	Size (acres):	**0.90**
HGM Classification(s):	**RI**	Locally Significant:	**YES**

Legal: **T3N R10E 26A**
Tax Lots: 3N10E26 TL 200

Hydrologic Basin: **Columbia River**
Location: **Southeast portion of Wells Island**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **Channel connects to Columbia River, groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
	Red osier dogwood	**none**
	Willow	

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: Wetland is an excavated depression with a sand bottom. There is an excavated channel (south side of pond) that connects the pond to the river when the Bonneville reservoir is at or near full pool elevation. A second constructed channel at the east end of the pond has silted in and is completely blocked. Wetland boundaries are defined by the topographic change at the edges of the excavated area. A portion of the excavated area had ponded water during the site visit. There is woody vegetation and blackberries along the banks of the wetland. The wetland is a compensatory mitigation site for wetland fills in the Columbia River by the Port of Hood River in the early 1990s (DSL Permit File No. RF 5573).

Wetland Summary Sheet

Sample Plot Numbers:	**12**	Wetland Code(s):	**CO-5**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PSS**	Size (acres):	**0.94 (0.28 in study area)**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 26A**	Hydrologic Basin: **Columbia River**
Tax Lots: 3N10E26 TL 200	Location: **South side of Wells Island**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **Columbia River saturates and inundates wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Willow	**Willow**	**Slough sedge**
Red Alder	**Red osier dogwood**	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: Wetland borders the Columbia River . The wetland boundary is defined by a topographic change along the east and north sides, ponding and soil saturation, and the change from a wetland plant community to a Himalayan blackberry-Black cottonwood plant community. The wetland was saturated during the site visit.

Wetland Summary Sheet

Sample Plot Numbers:	**13**	Wetland Code(s):	**CO-6**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PEM**	Size (acres):	**7.94**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 27C T3N R10E 27D**
Tax Lots: 3N10E27 TL 201
3N10E27D TL 200
Union Pacific Railroad right-of-way

Hydrologic Basin: **Columbia River**
Location: **Peninsula in Columbia River, north of Interstate 84 exit 62**

Soil – Mapped Series: None, mapped as part of Columbia River

Hydrology Source(s): **Columbia River saturates and inundates wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
Willow	**Red osier dogwood**	**Scouring rush**
		Stinging nettle

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a low peninsula extending from the Columbia River shoreline into the river. The wetland boundary at the southeast end of the peninsula is the steep fill slope for the Union Pacific Railroad grade. The wetland was not saturated or ponded during the site visit but water marks on trees at the highest portion of the peninsula and drift deposits indicate that the area is regularly flooded by the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-1**
Field Verification Date(s):	**1/14/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB**	Size (acres):	**1.50**
HGM Classification(s):	**RI**	Locally Significant:	**YES**

Legal:	**T3N R10E 26C**	Hydrologic Basin:	**Henderson Creek**
Tax Lots:	3N10E26CA TL 500, 600, 800, 900, 1000, 1001 & Union Pacific Railroad right-of-way	Location:	**South of Union Pacific Railroad tracks at the mouth of Henderson Creek**

Soil – Mapped Series:	None, mapped as part of Columbia River
Hydrology Source(s):	**Henderson Creek, unnamed stream, Columbia River via culvert**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
	Red osier dogwood	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**intact**	Recreation:	**not appropriate**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a pond separated from the Columbia River by fill material for the Union Pacific Railroad grade. The only vegetated portion of the wetland is a narrow fringe where Henderson Creek enters the pond. A culvert connects the pond to the river and functions as an outlet. The Bonneville full pool reservoir level is above the culvert outlet, allowing water to flow both ways when the reservoir is full. Wetland boundaries are defined by water marks on the steep fill slopes of the railroad fill and on the cliffs on the south side and by the presence of Himalayan blackberry.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-6 (6a & 6b)**
Field Verification Date(s):	**1/14/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**1.79**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 34A**	Hydrologic Basin: **Henderson Creek**
Tax Lots: 3N10E34A TL 2100	Location: **3875 May Street, south side of May Street**

Soil – Mapped Series:	**27B Wind River variant gravelly sandy loam, 0-8% slopes**
Hydrology Source(s):	**Groundwater, irrigation supply**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Soft rush
		Common cattail
		Small-fruited bulrush
		Reed canarygrass

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is fed by groundwater discharge and by irrigation runoff in ditches that drain into the wetland. HE-6a is the main part of the wetland. HE-6b is a small area that was isolated by construction of the access road through the property. There is a small excavated pond in the wetland. Wetland boundaries are the transition from the wetland plant community to a tall fescue-timothy-wheatgrass-diffuse knapweed plant community. The wetland was delineated by Real Ecology LLC (DSL File No. WD 02-0265). A permit has been issued by DSL to develop a residential subdivision on the site. The proposed project includes three road crossings in the wetland and creation of additional wetland area as compensatory mitigation (DSL File No. APP 26403).

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-11**
Field Verification Date(s):	**1/9/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**0.84**
HGM Classification(s):	**Flat**	Locally Significant:	**YES**

Legal: **T3N R10E 34A**	Hydrologic Basin: **Henderson Creek**
Tax Lots: 3N10E34A TL 2501	Location: **West of Rocky Road, south of Rocky Ridge Road**

Soil – Mapped Series:	**27B Wind River variant gravelly sandy loam, 0-8% slopes**
Hydrology Source(s):	**precipitation, irrigation runoff, groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Soft rush
		Wooly sedge
		American speedwell
		Short awn foxtail

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is in a shallow depression. Wetland boundaries are the transition from a wetland plant community to a bulbous bluegrass-chervil-tall oatgrass-Kentucky bluegrass plant community. The wetland was delineated by Fishman Environmental Services, LLC (DSL File No. WD 00-0063).

Wetland Summary Sheet

Sample Plot Numbers:	**2, 3**	Wetland Code(s):	**HO-1**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PSS PFO**	Size (acres):	**1.46**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**	Hydrologic Basin: **Hood River**
Tax Lots: 3N10E25 TL 100	Location: **East side of the Hood River, north of Interstate 84**

Soil – Mapped Series: None, mapped as part of Hood River

Hydrology Source(s): **Hood River saturates and inundates the wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
	Red osier dogwood	**Scouring rush**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is a vegetated sand bar area within the banks of the Hood River. Wetland boundaries are the steep, riprapped river bank. The wetland was not saturated or inundated during the site visit but had drift lines, drainage patterns and sediment deposits, indicators of wetland hydrology. Most of the site is at or below 77' elevation, the Bonneville full pool elevation.

Wetland Summary Sheet

Sample Plot Numbers:	**4, 5**	Wetland Code(s):	**HO-2**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM PUB**	Size (acres):	**1.83**
HGM Classification(s):	**RI RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**
Tax Lots: 3N10E25DC TL 7600

Hydrologic Basin: **Hood River**
Location: **West of Hood River, south of Interstate 84, north of Union Pacific railroad tracks**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **Channel in southeast portion of wetland connects to Hood River**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Willow**	**Hardstem bulrush**
	Black cottonwood	**Scouring rush**
	Red alder	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is a pond/emergent marsh behind a low natural levee that separates the wetland from the Hood River except where a small channel connects to the river in the southeast portion of the wetland. The wetland also has shrub-dominated sand bars along the Hood River. Wetland boundaries on the north and south sides are steep fill slopes of Interstate 84 and the Union Pacific railroad tracks and a gentler natural slope on the west end. The wetland boundary has a distinct change from wetland vegetation to Himalayan blackberry and other upland species. A review of historical aerial photographs indicates that the site was part of the delta at the mouth of the Hood River that was then flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The construction of Interstate 84 in the 1950s isolated the site from the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**6, 7**	Wetland Code(s):	**HO-3**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PSS**	Size (acres):	**2.24**
HGM Classification(s):	**RI RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**	Hydrologic Basin: **Hood River**
Tax Lots: Union Pacific and Mount Hood Railroad right-of-way	Location: **West of Hood River, south of the Union Pacific railroad tracks**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **Natural and excavated channels connects to the Hood River**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
	Red osier dogwood	**Scouring rush**
	Red alder	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland has shrub-dominated sand bars along the Hood River. A low natural levee separates the shrub portion from forested wetland and a small pond at the west end of the wetland complex. Water from the Hood River flows throughout the wetland from several natural channels and an excavated channel along the north edge of the wetland. Wetland boundaries are mostly steep fill slopes of the Union Pacific and Mount Hood Railroad tracks. The wetland boundary has a distinct change from wetland vegetation to Himalayan blackberry and other upland species. A review of historical aerial photographs indicates that the site was part of the delta at the mouth of the Hood River that was then flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The construction of Interstate 84 in the 1950s isolated the site from the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**IN-1 (1a-1e)**
Field Verification Date(s):	**1/10/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO**	Size (acres):	**1.91**
HGM Classification(s):	**SV**	Locally Significant:	**YES**

Legal: **T3N R10E 36C**
Tax Lots: 3N10E36CB TL 3100, 3200, 3300

Hydrologic Basin: **Indian Creek**
Location: **On south slope above Indian Creek, between 12th Street and 9th Court**

Soil – Mapped Series: **26C Wind River fine sandy loam, 8-12% slopes**
31F Xerumbrepts, very steep
Hydrology Source(s): **groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Red osier dogwood**	**Skunk cabbage**
Red alder		**Reed canarygrass**
Rocky mountain maple		**Alpine lady fern**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetlands are a complex of five areas fed by seeps that discharge along the south slope above Indian Creek. Wetland boundaries are determined by the transition from the wetland plant community to a big-leaf maple-ponderosa pine-sword fern-snowberry plant community. The wetland was delineated by Joe and Jennifer Kelly (DSL File No. WD 98-0003). A portion of IN-1e was filled under DSL permit (DSL File No. FP 15278). Compensatory mitigation for the fill was enhancement of IN-1d and the remaining part of IN-1e.

Wetland Summary Sheet

Sample Plot Numbers:	**14, 15, 16**	Wetland Code(s):	**IN-2**
Field Verification Date(s):	**1/11/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PEM**	Size (acres):	**15.57**
HGM Classification(s):	**RFT SV**	Locally Significant:	**YES**

Legal: **T3N R10E 35D T2N R10E 02A**

Tax Lots: 3N10E35DA TL 4999, 5000, 5200
3N10E35DC TL 800, 2300
3N10E35DD TL 101, 300, 400, 1000
2N10E02AB TL 100, 200

Hydrologic Basin: **Indian Creek**

Location: **Along Indian Creek between 12th Street and the west end of Broken Tee Drive**

Soil – Mapped Series: **26C Wind River fine sandy loam, 8-12% slopes**

Hydrology Source(s): **Indian Creek, surface runoff**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Red alder	**Red osier dogwood**	**Reed canarygrass**
Oregon ash	**Douglas spirea**	**Scouring rush**
	Pacific ninebark	
	Nootka rose	

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is in the floodplain of Indian Creek. Wetland boundaries are distinct topographic changes; steep slopes on the north side of Indian Creek and moderate slopes at the edge of the floodplain on the north side of the creek. Vegetation changes from a wetland plant community to a Himalayan blackberry- Scot's broom-Oregon white oak plant community. There is an excavated ditch that was used historically to divert water from Indian Creek. The ditch begins on the north side of the creek in approximately the center of the wetland and runs east to the northeast corner of the wetland.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-1 (1a & 1b)**
Field Verification Date(s):	**1/11/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**1.09**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 27C**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E27C TL 2100	Location: **In southeast corner of tax lot**

Soil – Mapped Series:	**26B Wind River fine sandy loam, 0-8% slopes**
Hydrology Source(s):	**groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Douglas spirea**	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**lost or not present**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**moderate**		

Comments: The wetland is in a field. Wetland boundaries are determined by the transition from reed canarygrass to a brome grass-tall fescue-knapweed plant community. The wetland was delineated by Terrascience, Inc. (DSL File No. WD 02-0164). A permit application (DSL File No. 25851 has been submitted to construct a Wal-Mart store on the site.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-9**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO**	Size (acres):	**0.50**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 34B**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E34B TL 1505	Location: **North of Summitview Way at its west end (road under construction at this time)**

Soil – Mapped Series:	**22E Rockford very stony loam, 0-30% slopes**
Hydrology Source(s):	**groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Red osier dogwood**	**Skunk cabbage**
Red alder		

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: Wetland is fed by seeps. Wetland boundary is transition from wetland vegetation to an Oregon ash-Douglas fir-snowberry-sword fern plant community. The wetland was delineated by Real Ecology, LLC (DSL File No. WD 02-368).

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-13**
Field Verification Date(s):	**1/9/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEMx**	Size (acres):	**2.22**
HGM Classification(s):	**DO**	Locally Significant:	**NO**

Legal: **T3N R10E 34B**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E34BD TL 400, 405, 424	Location: **at the end of Haven Drive in the Stonegate Subdivision**

Soil – Mapped Series: **21B Rockford stony loam, 0-8% slopes**

Hydrology Source(s): **Irrigation supply, surface runoff**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Willow**	**Reed canarygrass**
Black cottonwood	**Red osier dogwood**	**Soft rush**
		Bittersweet nightshade
		Horsetail
		Velvet grass

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is fenced off and maintained as a natural area by the Stonegate Subdivision Homeowners Association. The wetland contains an excavated pond, formerly used for irrigation that has been enhanced and enlarged for habitat improvement (DSL File No. RP 6047). A portion of the enhancement was compensatory mitigation for the culverting of a section of Henderson Creek during construction of the Wal-Mart store (DSL File No. RF 6520). The wetland boundaries are based on the transition from wetland vegetation to tall oatgrass-Oregon white oak-snowberry-tall Oregon grape.

Appendix B. Wetland Sample Plot Data Forms

WETLAND DETERMINATION DATA FORM

DATE: 1/6/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T2N R11E 30D
PLOT LOCATION: emergent wetland in center of pond
RECENT WEATHER: below average precipitation
PLOT NUMBER: 1
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	80
2. *Scirpus acutus*	OBL	60
3. *Typha latifolia*	OBL	20
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 30A Xerofluvents, nearly level
Taxonomy: ____
Drainage Class: well drained to moderately well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-3		5 YR 2.5/2			organic	
3-7		10 YR 4/1			sand	
7-12		2.5 YR 4/0			sand	

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☒ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☒ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: 5" Depth to Free Water: 9"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☒ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/6/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25D
PLOT LOCATION: north end of shrub-dominated sandbar
RECENT WEATHER: below average precipitation
PLOT NUMBER: 2
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 80%		
1. *Salix sp.*	FAC-OBL	80
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: T		
1. *Phalaris arundinacea*	FACW	T
2.		
3.		20
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: none, mapped as part of Hood River
Taxonomy: ____
Drainage Class: ____
On Hydric Soils List? ☐ Yes ☐ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-20		10 YR 3/2			sand	

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☒ Other: atypical situation, accreting sandbar

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >20" Depth to Free Water: >20"

Primary Hydrology Indicators:

☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☒ Drift Lines
☒ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):

☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☒ Other: site is at or below 77' elevation of Bonneville full pool

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/6/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25D
PLOT LOCATION: southeast portion of sand bar
RECENT WEATHER: below average precipitation
PLOT NUMBER: 3
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : _____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: _____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 100%		
1. *Populus balsamifera*	FAC	100
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 80%		
1. *Phalaris arundinacea*	FACW	60
2. *Equisetum hyemale*	FACW	20
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: _____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: none, mapped as part of Hood River
Taxonomy: _____
Drainage Class: _____
On Hydric Soils List? ☐ Yes ☐ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-20"		10 YR 3/2			sand	

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☒ Other: atypical situation, accreting sandbar

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other _____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >20" Depth to Free Water: >20"

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☒ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☒ Other: site is at or below 77' elevation of Bonneville full pool

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: _____

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25D
PLOT LOCATION: north edge of pond
RECENT WEATHER: below average precipitation
PLOT NUMBER: 4
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Scirpus acutus*	OBL	100
2. *Typha latifolia*	OBL	20
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
no	sample	taken				

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☒ Other: site inundated

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: >12" Depth to Saturation: ____ Depth to Free Water: ____

Primary Hydrology Indicators:
☒ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☒ Other: lowest portions of site at or below 77' elevation of Bonneville full pool

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25D
PLOT LOCATION: center of low natural levee along Hood River
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 5
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 20%		
1. *Fraxinus latifolia*	FACW	20
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 100%		
1. *Rubus discolor*	FACU	100
2. *Populus balsamifera*	FAC	20
3. *Salix sp.*	FAC-OBL	20
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 60%		
1. *Equisetum hyemale*	FACW	60
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 80
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-20"		10 YR 3/2			sand	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☐ **YES** ☒ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >20" Depth to Free Water: >20"

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☐ **NO** ☒

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☐**YES** ☒**NO** Comments: levee is slightly higher than surrounding areas, dominated by blackberry

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25D
PLOT LOCATION: north center of forested area
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 6
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 80%		
1. *Populus balsamifera*	FAC	80
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 40%		
1. *Cornus stolonifera*	FACW	20
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	60
2. *Equisetum hyemale*	FACW	60
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-6"		10 YR 2/2			sandy loam	
6-20"		10 YR 3/2	fff		sandy loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: surface Depth to Free Water: 14"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☐**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PLOT NUMBER: 7
PROJECT: Hood River Local Wetland Inventory
DETERMINATION BY: Joel Shaich, Wetland Consulting
LEGAL DESCRIPTION: T3N R10E 25D
COUNTY: Hood River
PLOT LOCATION: island/sand bar in Hood River, viewed from railroad bridge
RECENT WEATHER: below normal precipitation
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 80%		
1. *Salix sp.*	FAC-OBL	60
2. *Alnus rubra*	FAC	20
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: T		
1. *Phalaris arundinacea*	FACW	T
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Drainage Class: well drained
Taxonomy: ____
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
no	sample	taken				

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☒ Other: atypical situation, accreting sandbar

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: unknown Depth to Free Water: unknown

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☒ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25C
PLOT LOCATION: east end of shrub thicket
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 8
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : _____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: _____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 100%		
1. *Salix sp.*	FAC-OBL	100
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: _____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Taxonomy: _____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
no	sample	taken				

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☒ Other: inundated

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other _____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: 2-4" Depth to Saturation: _____ Depth to Free Water: _____

Primary Hydrology Indicators:
☒ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: _____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: _____

WETLAND DETERMINATION DATA FORM

DATE: 1/7/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 25C
PLOT LOCATION: center of reed canarygrass patch
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 9
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100		
1. *Phalaris arundinacea*	FACW	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 21C Rockford stony loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-5"		10 YR 2/2			silt loam	
5-12"		10 YR 4/1	5 YR 3/4 ffd		silty clay loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: surface Depth to Free Water: 1"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/17/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 26A
PLOT LOCATION: pond bottom, east end
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 10
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 20%		
1. *Populus balsamifera*	FAC	20
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 20%		
1. *Cornus stolonifera*	FACW	10
2. *Salix sp.*	FAC-OBL	10
3.		
4.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: --vegetation is on pond bank

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 30A Xerofluvents, nearly level
Taxonomy: ____
Drainage Class: well drained to moderately well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-4"		10 YR 3/1	7.5 YR 4/6 cmd		sand	
4-16"		10 YR 3/2	7.5 YR 4/6 fff		sand	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: 9" Depth to Free Water: 14"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☒ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: nearby ponding, site is below 77' elevation, Bonneville full pool level

WETLAND DETERMINATION DATA FORM

DATE: 1/17/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 26A
PLOT LOCATION: north of plot 10, on top of pond bank
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 11
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 40%		
1. *Populus balsamifera*	FAC	20
2. *Crataegus douglasii*	FAC	20
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Holcus lanatus*	FAC	60
2. *Poa sp.*	?	40
3. *Erodium cicutarium*	NOL-UPL	20
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 60-80%
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 30A Xerofluvents, nearly level
Taxonomy: ____
Drainage Class: well drained to moderately well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-5"		10 YR 2/2			sandy loam	
5-18"		10 YR 3/2			sandy loam	

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☐ **YES** ☒ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >18" Depth to Free Water: >18"

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☐ **NO** ☒

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☐**YES** ☒**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/17/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 26A
PLOT LOCATION: small inlet, east end of wetland
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 12
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 40%		
1. *Salix sp.*	FAC-OBL	40
2. *Alnus rubra*	FAC	20
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 60%		
1. *Cornus stolonifera*	FACW	60
2.		
3.		
4.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 20%		
1. *2 unknowns*		20
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 60-100%
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 30A Xerofluvents, nearly level
Taxonomy: ____
Drainage Class: well drained to moderately well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-10"		10 YR 3/1	5 YR 4/6 mcd		sand	
10-16"		2.5 Y 2/0			sandy clay loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☒ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: surface Depth to Free Water: 14"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☒ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/17/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 27D
PLOT LOCATION: east end of peninsula in reed canarygrass patch
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 13
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 60%		
1. *Salix sp.*	FAC-OBL	60
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 20		
1. *Salix sp.*	FAC-OBL	20
2.		
3.		
4.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: none, mapped as part of Columbia River
Taxonomy: ____
Drainage Class: ____
On Hydric Soils List? ☐ Yes ☐ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-6"		10 YR 2/1			silty clay loam	
6-20"		10 YR 2/1-3/1			silty clay loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☒ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >20" Depth to Free Water: >20"

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☒ Water Marks
☒ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☒ Other: water marks on trees and drift deposits above sample elevation, much of site is at or below 77' elevation of Bonneville full pool

Criteria Met? **YES** ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/11/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 35D
PLOT LOCATION: hillside above floodplain
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 14
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 20%		
1. *Cytisus scoparius*	NOL-UPL	20
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Festuca arundinacea?*	FAC-	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 0-50
Other Notable Species: ____

CRITERIA MET? ☐ **YES** ☒ **NO**

SOILS

Map Unit Name: 26C Wind River fine sandy loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-20"		5 YR 3/2			sandy clay loam	

Hydric Soil Indicators:

☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☐ Gleyed
☐ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☐ **YES** ☒ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: >20" Depth to Free Water: >20"

Primary Hydrology Indicators:
☐ Inundated
☐ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☐ **NO** ☒

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☐**YES** ☒**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/11/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 35D
PLOT LOCATION: reed canarygrass area in floodplain, 30' below blackberries
RECENT WEATHER: below normal precipitation
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

PLOT NUMBER: 15
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 0		
1.		
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: T		
1. *Spiraea douglasii*	FACW	T
2.		
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 100
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 26C Wind River fine sandy loam, 8-12% slopes
Taxonomy: ____

Drainage Class: well drained
On Hydric Soils List? ☐ Yes ☒ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-10"		10 YR 2/1			silt loam	
10-16"		2.5 Y 2/0			silty clay loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☒ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: surface Depth to Free Water: 8"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

WETLAND DETERMINATION DATA FORM

DATE: 1/11/03
PROJECT: Hood River Local Wetland Inventory
LEGAL DESCRIPTION: T3N R10E 35D
PLOT LOCATION: in trees near creek/ditch junction
RECENT WEATHER: below normal precipitation
PLOT NUMBER: 16
DETERMINATION BY: Joel Shaich, Wetland Consulting
COUNTY: Hood River
Do normal environmental conditions exist? ☒**YES** / ☐**NO** (check one). If NO, explain : ____
Has ☐ vegetation, ☐ soils, and/or ☐ hydrology been significantly disturbed? ☐**YES** / ☒**NO** (check one)
If YES, check which ones and explain: ____

VEGETATION

DOMINANT SPECIES	STATUS	% COVER
Tree Stratum		
Total Cover: 60%		
1. *Alnus rubra*	FAC	60
2.		
3.		
4.		
Sapling/Shrub Stratum		
Total Cover: 30%		
1. *Cornus stolonifiera*	FACW	20
2. *Rubus discolor*	FACU	20
3.		
4.		
5.		

DOMINANT SPECIES	STATUS	% COVER
Herb Stratum		
Total Cover: 100%		
1. *Phalaris arundinacea*	FACW	100
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Percent of dominant **SPECIES** that are OBL, FACW, or FAC: 75
Other Notable Species: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

SOILS

Map Unit Name: 26C Wind River fine sandy loam, 8-12% slopes
Taxonomy: ____
Drainage Class: well drained
On Hydric Soils List? ☒ Yes ☐ No

Depth	Horizon	Matrix Color	Redox Concentrations*	Redox Depletions*	Texture	Structure
0-6"		10 YR 2/1			silt loam	
6-16"		2.5 Y 2/0			silty clay loam	

Hydric Soil Indicators:
☐ Histosol
☐ Histic Epipedon
☐ Sulfidic Odor
☐ Reducing Conditions (tests positive)
☒ Gleyed
☒ Redox. features (w/in 10")
☐ Concretions/Nodules (w/in 3"; > 2mm)
☐ High organic content in surface (in Sandy Soils)
☐ Organic streaking (in Sandy Soils)
☐ Organic pan (in Sandy Soils)
☐ On Hydric Soils List (and soil profile matches)
☐ Other: ____

CRITERIA MET? ☒ **YES** ☐ **NO**

*abund./size/contrast/color/location (matrix or pores/peds)

HYDROLOGY

☒ Recorded Data Available: ☒ Aerial Photos ☐ Stream Gauge ☐ Other ____ ☐ No Recorded Data Available

Field Data: Depth of Inundation: none Depth to Saturation: surface Depth to Free Water: 8"

Primary Hydrology Indicators:
☐ Inundated
☒ Saturated in upper 12 inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns

Secondary Hydrology Indicators (2 or more required):
☐ Oxidized Root Channels (upper 12")
☐ Water-stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other: ____

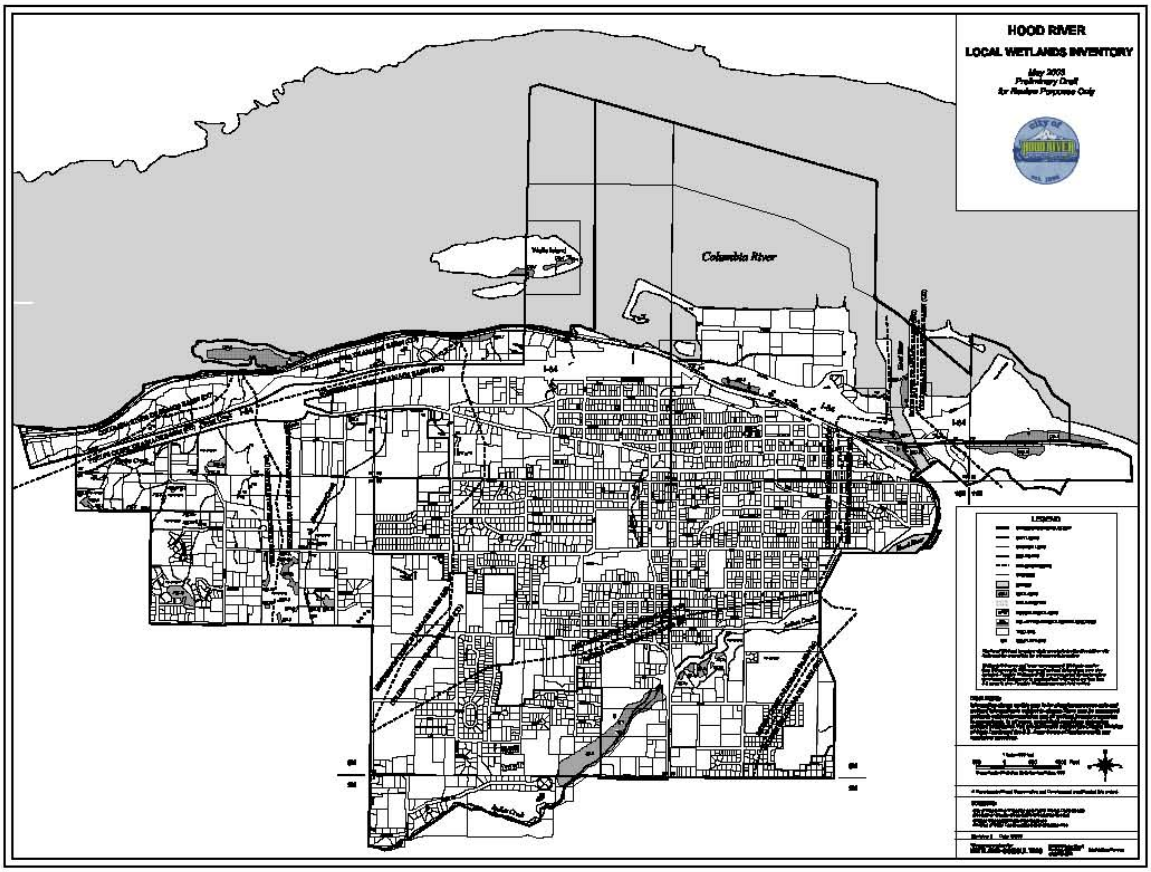
Criteria Met? YES ☒ **NO** ☐

JURISDICTIONAL WETLAND DETERMINATION

WETLAND? ☒**YES** ☐**NO** Comments: ____

Appendix C. Local Wetland Inventory Map

The Hood River Local Wetland Inventory Map is on a separate 34” x 44” map sheet (scale 1:6000).



Appendix D. OFWAM Wetlands of Special Interest for Protection

Wetlands that are uncommon, already in a resource management plan, or protected by regulatory rules or statutes were identified as "wetlands of special interest for protection" as part of the Oregon Freshwater Wetlands Assessment Methodology. The methodology includes ten questions used to determine if any wetlands in the study area meet the following criteria:

- contain or provide critical habitat for species that are rare, threatened, or endangered;
- dedicated as a state or federal natural area or natural heritage conservation area;
- dedicated as a Nature Conservancy Preserve;
- of regional or national significance for migratory birds;
- protected by local management plans under Goal 5 or 17;
- designated a State Outstanding Resource Water;
- in a protected area in a park management plan;
- protected mitigation site;
- federal restoration or conservation reserve program; or
- rare or unique in Oregon.

A variety of federal, state, local and non-profit agencies, reference materials and internet sites were the sources of information to complete this section. The detailed responses to the questions follow.

1. *Does the wetland contain threatened, endangered or sensitive species of wildlife, plants, invertebrates or fish? (Either federal or state-listed. Include species.)*

The Oregon Department of Fish and Wildlife (ODFW 2003), Oregon Natural Heritage Program database (ONHP 2002), Hood River Watershed Assessment (HRWG 1999) and Wells Island Open Space Plan (USFS 1993) were consulted for observations of threatened, endangered or sensitive species of wildlife, plants, invertebrates, and fish.

Steelhead, chinook and chum salmon in the Columbia River are listed as threatened under the federal Endangered Species Act (ESA). Coho salmon are a candidate for federal listing. Steelhead and bull trout in the Hood River are listed as threatened under the federal ESA. Wetlands CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 all have surface water connections to the Columbia or Hood Rivers and could by used as habitat by listed fish species.

Wintering bald eagles can be found along the Columbia River from the mouth of the Hood River to Ruthton Point. Eagles roost on Wells Island and feed on wintering

waterfowl (USFS 1993). Bald eagles are listed as threatened under the Oregon and federal ESAs. Wetlands CO-1, CO-2, CO-3, CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are all potentially used by bald eagles.

Peregrine falcons prey on waterfowl and songbirds on Wells Island. Peregrine falcons are listed as endangered under the Oregon ESA. Wetlands CO-4 and CO-5 are potentially used by peregrine falcons.

A Purple martin colony is located on abandoned pilings along the Columbia River shoreline at the west end of the study area but not in any wetlands in the study area (ONHP 2002). Purple martin is listed as a federal species of concern and as a state sensitive-critical species.

2. *Is the wetland designated as critical habitat or essential habitat for federal- or state-listed threatened, endangered or sensitive species of wildlife, plants, invertebrates or fish? If yes, list species.*

Critical habitat for steelhead, chinook and chum salmon was designated by the National Marine Fisheries Service on February 16, 2000 (Federal Register 2000) and includes streams, riparian areas (defined functionally) and off-channel habitat in the current range of the species in the Columbia and Hood Rivers. Wetlands CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are adjacent to and have surface water connections with the Columbia or Hood Rivers and are presumably critical habitat.

The Hood River is mapped as "essential salmonid habitat" by the Division of State Lands (DSL 2001). The mapping is based on information from ODFW.

3. *Is the wetland a dedicated or proposed Registered State Natural Area or Area of Critical Environmental Concern, State Natural Heritage Conservation Area, Federal Research Natural Area, or Nature Conservancy Preserve?*

No wetlands in the study area are dedicated or proposed as Registered State Natural Areas, Areas of Critical Environmental Concern, State Natural Heritage Conservation Area, Federal Research Natural Area, or Nature Conservancy Preserve (ONHP 1998).

4. *Is the wetland of regional or national significance for migratory birds?*

Wells Island is heavily used by nesting Canada geese. Wetland CO-1, the port area around the Hook, Wells Island and the water area near Ruthton Point are heavily used in the winter by waterfowl (ODFW 2003, USFS 1993). Based on this information it appears that wetlands CO-1, CO-2, CO-4, CO-5, CO-6, HE-1, HO-1, HO-2 and HO-3 are of at least regional significance for migratory birds.

5. *Is the wetland protected in a local wetland conservation plan or a local comprehensive plan as a Goal 5 or Goal 17 resource?*

The City of Hood River has zoned the portion of Wells Island in the city limits as open space under Goal 5 which includes wetlands CO-4 and CO-5. City code (Ord 1657, 1992) prohibits the city from issuing permits which would be inconsistent with the Columbia River Gorge National Scenic Area Management Plan (City of Hood River Comprehensive Plan, City of Hood River 1983?). See no. 7 below for details on the Columbia River Gorge National Scenic Area Management Plan.

6. *Is the wetland a designated State Outstanding Resource Water?*

There are no waters designated as State Outstanding Resource Waters in the state of Oregon according to DEQ.

7. *Is the wetland protected in a federal, state, or local management plan (e.g. for a park, refuge, or scenic river?*

Wells Island is designated as open space in the Columbia River Gorge National Scenic Area Management Plan. The U.S. Forest Service owns the island and developed an open space management plan to meet the requirements of the National Scenic Area Management Plan. The plan establishes the following management goals:

- Protect the island its ecosystem of riverine forest and meadows
- Protect, enhance, and manage habitat diversity to promote viability of biodiversity for both flora and fauna
- Return the island to a less developed visual character
- Allow low levels of dispersed recreation in seasons and locations which do not impact the known wildlife values
- Retain the structures with potential value to the history of the island

8. *Is the wetland a protected mitigation site for a State Removal-Fill permit, federal 404 fill permit, or enforcement action? Protected means there is a legal instrument, such as a conservation easement, that will preclude a wetland impact permit from being issued for this site.*

Wetland PH-13 is a compensatory mitigation site under DSL permit no. RF 6520, however, the permit conditions do not include long-term protection.

9. *Is the wetland a restoration or protected area included in the wetland reserve program administered by the Natural Resources Conservation Service? The length of protection may vary depending on landowner agreements.*

There are no wetlands enrolled in the wetland reserve program in the study area (personal communication, Carly Heron, USDA 2002).

10. *Is the wetland considered rare or unique in Oregon? Examples include bogs, vernal pools and old growth forested wetlands.*

There are no rare or unique wetland types in Hood River.

Appendix E. OFWAM Wetland Characterization

This appendix contains the results of the Oregon Freshwater Wetland Assessment Methodology wetland characterization. The characterization is based on the responses to 58 questions about the assessment area watersheds and the individual wetlands. The results include two sections: (1) responses to questions 1-14 about the assessment area watersheds, and (2) a table with responses to questions 15-58 for the individual wetlands.

Watershed Setting

1. *What is the name of the drainage basin that contains your assessment area?*

The study area is in the Hood River and Columbia Gorge Tributaries East watersheds of the Middle Columbia Drainage Basin (Figure 4).

2. *What is the watershed's area in square miles?*

The Hood River watershed is approximately 339 square miles and the Columbia Gorge Tributaries East watershed is approximately 143 square miles.

3. *Calculate the average slope of the watershed*

This information is not used in completing the OFWAM assessment.

4. *Is the stream flow in the watershed modified by dams, channelization or levees?*

The Hood River Watershed Assessment identified approximately 35 miles of stream channel in the Hood River watershed that was modified by diking, riprap, channelization, realignment, roads, railroads or other causes. Large dams in the Hood River watershed include Powerdale Dam on the Hood River and Clear Branch Dam on the Middle Fork Hood River. A number of irrigation diversion dams are also operated by irrigation districts in the watershed (HRWG 1999). Most of the Columbia Gorge Tributaries East watershed is in the Mt. Hood National Forest and stream flows have not been as heavily modified as in the Hood River watershed. However, the lower reaches of streams in the watershed have been channelized in the agricultural and urbanizing areas in the Hood River area (HRWG 2000).

5. *Is water being taken out of the stream(s) through active diking, drainage or irrigation districts in the watershed upstream of the assessment area?*

East Fork Irrigation District, Mount Hood Irrigation District, Middle Fork Irrigation District, Dee Flat Irrigation District and Farmers Irrigation District operations affect stream flow in the Hood River watershed. The main irrigation season is April 15 to

October 1. No irrigation districts are taking water out of Indian Creek or streams in the Columbia Gorge Tributaries East watershed (HRWG 1999).

6. *What is the dominant land use in the watershed upstream from the assessment area?*

Approximately 75% of the Hood River watershed is in the Mount Hood National Forest, Hood River County owned forest or private forestland ownership. Approximately 60% of the Columbia Gorge Tributaries East watershed is in the Mark O. Hatfield Wilderness Area managed by the U.S. Forest Service. Local drainage basin land use varies. The Phelps Creek basin is a mix of forestry and agricultural use. The headwaters areas are all in forest use. Forest use is the dominant use for this basin. The Henderson Creek basin is dominated by agricultural uses. The Columbia River basin includes the tributaries to the river and the river itself. The tributary basins are predominately urban. The river basin overall is dominated by forestry uses. The Indian Creek basin is dominated by agricultural uses. The Hood River basin is dominated by forestry uses.

7. *Are any streams in the study area listed as water quality limited by the Oregon Department of Environmental Quality?*

Indian Creek was listed in 1998 as water quality limited for temperature from mouth to headwaters. In 2002 DEQ is proposing removing the temperature listing due to completion of the Western Hood Subbasin Total Maximum Daily Load but adding a new listing for chlorpyrifos. The Hood River was listed in 1998 for temperature and PH from the Powerdale powerhouse to the diversion dam. In 2002 DEQ proposed removing the temperature listing due to completion of the Western Hood Subbasin Total Maximum Daily Load. This reach begins at the edge of the study area and is located upstream of the section of the Hood River in the study area. The portion of the Columbia River in the study area was listed in 1998 for temperature and total dissolved gas. In 2002 DEQ proposed listing the Columbia River in the study area for temperature and PCB and removing the total dissolved gas listing due to completion of the Columbia/Snake River Total Maximum Daily Load (DEQ 2003).

8. *What are the nonpoint source pollution water quality conditions of stream reaches in the watershed upstream from the assessment area?*

The Hood River is rated “severe” overall and “severe” for water quality conditions affecting fish and aquatic habitat and “moderate” for water contact recreation. Indian Creek is rated “severe” overall and “severe” for water quality conditions affecting aquatic habitat and “moderate” for water quality conditions affecting fish and water contact recreation. Phelps Creek is rated “moderate” overall and “moderate” for water contact recreation. No other streams in the study area are rated (DEQ 1988).

9. *What fisheries are present in the watersheds?*

The following populations of cold water anadromous and resident fish have been documented by the Oregon Department of Fish and Wildlife:

Name	**Range**	**Use**
Coho salmon	Hood River	spawning and rearing
	Columbia River	rearing and migration
Winter steelhead	Hood River	spawning and rearing
	Columbia River	rearing and migration
Summer steelhead	Hood River	spawning and rearing
	Columbia River	rearing and migration
Spring chinook	Hood River	spawning and rearing
	Columbia River	rearing and migration
Fall chinook	Hood River	spawning and rearing
	Columbia River	rearing and migration
Sea-run cutthroat trout	Hood River Columbia River	rearing and migration
Pacific lamprey	Hood River	spawning and rearing?
	Columbia River	rearing and migration
Bull trout	Hood River Columbia River	juvenile/adult rearing
Resident cutthroat trout, rainbow trout, mountain whitefish, sucker, sculpin, longnose dace	Hood River Phelps Creek Indian Creek	spawning and rearing

A variety of introduced warm water fish are present in ponds including bass, bluegill, black crappie, green sunfish and yellow perch (personal communication, Steve Pribyl ODFW, 2003).

10. *Are known sensitive, threatened or endangered fish species present in the watershed?*

Steelhead, chinook and chum salmon in the Columbia River are listed as threatened under the federal ESA. Coho salmon are a candidate for federal listing. Steelhead and bull trout in the Hood River are listed as threatened under the federal ESA.

11. *What wildlife species are present in the watersheds?*

This information is not used in completing the OFWAM assessment.

12. *Are known sensitive, threatened or endangered plant species or wildlife species other than fish present in the watershed?*

The following wetland-related sensitive, threatened or endangered plant species or wildlife species are present in the watersheds:

Name	**Status**
Bald eagle	Federal and state threatened
Harlequin duck	Federal species of concern, state sensitive
Northwestern pond turtle	Federal species of concern
Purple martin	Federal species of concern, state sensitive

13. *Does the watershed provide a natural corridor for fish and wildlife movement?*

This information is not used in completing the OFWAM assessment.

14. *What are the landscape features at both ends of the movement corridor?*

This information is not used in completing the OFWAM assessment.

Individual Wetlands Assessment

OFWAM wetland characterization results for individual wetlands are in the following table.

The following abbreviations are used in the table:

ag agriculture

dev developed or development

open open space

PEM palustrine emergent

PSS palustrine scrub-shrub

PFO palustrine forested

PUB palustrine unconsolidated bottom

NA not assessed/not applicable

ASSESSMENT QUESTIONS

WETLAND	*15*	*16*	*17*	*18*	*19*	*20*	*21*	*22*	*23*	*24*	*25*	*26*	*27*	*28*	*29*	*30*	*31*	*32*
CO-1	dev-c, open-b	dev	a	a	a	dev-c	PUB-b, PEM-c	b	b	b		a	b	a	b	NA	NA	NA
CO-2	dev-c, open-b	dev	b	a	a	dev-c	PUB-a	b	b	c		b	b	a	b	NA	NA	NA
CO-3	dev-c, open-a	open	b	b	b	dev-c, open-a	PEM-a, PSS-d	b	c	b		b	b	d	c	NA	NA	NA
CO-4*	open-c	open	b	a	a	open-c	PUB-a		b	c	a		a	c	a	a	d	c
CO-5*	open-c	open	b	a	a	open-c	PFO-b, PSS-c		a	c	a		a	d	a	a	d	c
CO-6	open-c, dev-a	open	a	a	a	open-c?, dev-b	PFO-a, PEM-d	a	a	c		a	a	d	a	c	d	a
HE-1	open-b, dev-b	open	b	a	a	dev-c, open-b	PUB-a	b	b	c		a	a	b	a	c	d	c
HE-6	ag-c, dev-a	ag	b	a	b	dev-c	PEM-a	a	c	c		a	a	d	c	NA	NA	NA
HE-11	ag-b, dev, b, open-a	ag	b	a	b	dev-c, ag-a	PEM-a	a	c	c		a	a	d	c	NA	NA	NA
HO-1	open-c, dev-a	open	b	a	a	open-c, dev-a	PSS-a, PFO-d	a	a	c		a	a	d	a	c	d	c
HO-2	dev-c, open-b	open	b	a	a	dev-c	PEM-b, PUB-d, PSS-d	a	b	b		a	a	d	a	a	d	c
HO-3	dev-c, open-b	open	b	a	a	dev-c	PSS-b, PFO-c	a	a	c		b	a	d	a	a	d	c
IN-1	dev-c, open-b	open	b	a	a	dev-c, open-a	PFO-a, PEM-d	a	a	b		a	a	d	a	a	a	a
IN-2	dev-c, ag-a, open-a	open	a	a	a	dev-c, open-a, ag-a	PFO-b, PEM-c	a	a	b		a	a	d	a	a	a	a
PH-1	dev-c, open-a, ag-a	dev	b	a	b	dev-c, open-a	PEM-a	b	c	c		b	a	d	c	NA	NA	NA
PH-9	open-c, dev-a, ag-a	dev	b	b	b	dev-c	PFO-a	a	a	c		a	b	d	c	NA	NA	NA
PH-13	dev--c, open-a, ag-a	dev	b	a	b	dev-c, ag-a	PUB-c, PSS-c, PEM-c	a	b	b		b	a	c	b	a	a	b

*assessed as rural

ASSESSMENT QUESTIONS (continued)

WETLAND	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58
CO-1	a	c	c	c	a	a	NA	NA	a	a	a	a	a	b	b	a	a	b		b	a	b	b	c	a	b
CO-2	a	c	c	c	a	a	NA	NA	c	b	a	a	b	c	b	c	a	a		b	a	b	b	c	a	c
CO-3	NA	NA	NA	a	a	a	a	a	c	b	b	NA	b	c	c	c	c	b		b	a	b	b	d	a	b
CO-4*	a	b	c	a	a	c	a	a	a	a	a	a	b	a	a	b	a	b	a		b	NA	a	c	b	c
CO-5*	NA	NA	NA	a	a	c	a	a	a	a	a	a	b	b	a	c	a	b	b		b	NA	a	b	b	b
CO-6	NA	NA	NA	a	a	c	a	a	a	a	a	a	b	b	c	c	a	a		a	a	b	a	b	a	b
HE-1	a	b	b	a	a	c	a	a	c	b	a	c	b	c	c	c	a	a		a	a	b	a	b	a	c
HE-6	c	b	a	c	a	c	NA	NA	b	b	a	a	a	b	c	b	a	a		a	a	a	a	b	b	c
HE-11	NA	NA	NA	a	a	c	a	a	a	a	a	a	a	b	c	b	c	a		b	b	NA	a	b	a	c
HO-1	NA	NA	NA	a	a	c	a	b	a	a	a	a	a	a	a	a	a	b		b	b	NA	a	c	a	b
HO-2	c	c	b	a	a	c	a	b	a	a	a	a	a	a	a	a	a	b		b	a	b	b	c	a	a
HO-3	c	c	c	a	a	c	a	b	a	b	a	a	a	b	a	b	a	b		b	a	b	b	c	a	c
IN-1	NA	NA	NA	c	c	c	NA	a	b	a	a	a	b	a	c	c	a	b		a	b	NA	a	c	c	c
IN-2	NA	NA	NA	a	a	c	a	b	b	a	a	b	b	a	c	c	a	b		a	b	NA	a	c	b	b
PH-1	NA	NA	NA	c	c	c	NA	a	b	a	b	a	a	a	c	b	c	a		b	b	NA	a	c	a	c
PH-9	NA	NA	NA	c	a	c	NA	b	b	a	a	a	b	b	c	b	c	a		a	b	NA	a	b	b	c
PH-13	a	b	b	a	a	a	c	a	a	a	a	a	a	a	c	a	b	b		b	b	NA	a	b	a	a

*assessed as rural

Appendix F. OFWAM Wetland Assessment Results

WILDLIFE HABITAT

WETLAND	*Questions* 1	2	3	4	5	6	7	8	9	*Assessment Descriptor*
CO-1	a	b	b	a	a	b	c	c	a	habitat for some species
CO-2	c	b	c	a	a	b	c	c	b	habitat for some species
CO-3	c	c	b	c	b	b	a	c	b	habitat for some species
CO-4	c	b	c	b	a	a	c	a	a	habitat for some species
CO-5	b	a	c	c	a	a	c	a	a	habitat for some species
CO-6	b	a	c	c	a	a	c	a	a	habitat for some species
HE-1	c	b	c	a	a	a	c	a	a	habitat for some species
HE-6	b	c	c	c	a	a	a	b	a	habitat for some species
HE-11	b	c	c	c	a	a	a	b	a	habitat for some species
HO-1	a	a	c	c	a	a	c	a	a	habitat for some species
HO-2	a	b	b	c	a	a	c	c	a	habitat for some species
HO-3	a	a	c	c	a	a	c	c	b	habitat for some species
IN-1	b	a	b	c	a	a	c	c	a	habitat for some species
IN-2	a	a	b	c	a	a	c	c	a	habitat for some species
PH-1	c	c	c	c	a	a	b	c	b	habitat for some species
PH-9	b	a	c	c	b	b	b	a	a	habitat for some species
PH-13	a	b	b	b	a	a	b	c	b	habitat for some species

FISH HABITAT

WETLAND	*Questions (S-streams P-ponds)*												*Assessment Descriptor*
	S1	***S2***	***S3***	***S4***	***S5***	***S6***	***P1***	***P2***	***P3***	***P4***	***P5***	***P6***	
CO-1	NA	NA	NA	NA	NA	NA	a	c	c	c	c	b	impacted or degraded
CO-2	NA	NA	NA	NA	NA	NA	a	c	c	c	c	b	impacted or degraded
CO-3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NOT ASSESSED
CO-4	c	a	c	c	a	a	a	c	b	c	a	a	impacted or degraded
CO-5	c	a	c	c	a	a	NA	NA	NA	NA	NA	NA	impacted or degraded
CO-6	c	c	a	c	a	a	NA	NA	NA	NA	NA	NA	impacted or degraded
HE-1	c	c	c	c	a	a	a	b	b	c	a	a	intact
HE-6	NA	NA	NA	NA	NA	NA	c	a	b	a	b	c	impacted or degraded
HE-11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NOT ASSESSED
HO-1	c	c	c	c	a	a	NA	NA	NA	NA	NA	NA	impacted or degraded
HO-2	c	a	c	c	c	a	c	b	c	c	c	a	impacted or degraded
HO-3	c	a	c	c	c	a	c	c	c	c	c	?	impacted or degraded
IN-1	a	a	a	c	c	a	NA	NA	NA	NA	NA	NA	impacted or degraded
IN-2	a	a	a	c	c	a	NA	NA	NA	NA	NA	NA	impacted or degraded
PH-1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NOT ASSESSED
PH-9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NOT ASSESSED
PH-13	a	a	b	b	c	b	a	b	b	b	c	b	impacted or degraded

WATER QUALITY

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	c	a	a	a	a	a	impacted or degraded
CO-2	c	a	c	b	a	a	impacted or degraded
CO-3	a	a	a	b	a	c	intact
CO-4	a	a	c	b	c	a	impacted or degraded
CO-5	a	a	a	b	c	a	intact
CO-6	a	a	a	a	c	a	intact
HE-1	a	a	c	b	a	a	impacted or degraded
HE-6	c	a	a	b	b	c	impacted or degraded
HE-11	a	a	a	b	a	c	intact
HO-1	a	a	a	b	c	a	intact
HO-2	a	a	a	b	a	a	intact
HO-3	a	a	a	b	a	a	intact
IN-1	c	c	a	b	c	a	impacted or degraded
IN-2	a	a	a	a	a	a	intact
PH-1	c	c	a	b	a	b	impacted or degraded
PH-9	c	a	a	b	c	b	impacted or degraded
PH-13	a	a	c	b	a	b	impacted or degraded

HYDROLOGIC CONTROL

WETLAND	*Questions* 1	2	3	4	5	6	7	*Assessment Descriptor*
CO-1	a	a	a	a	b	a	c	intact
CO-2	a	a	b	a	b	a	c	intact
CO-3	b	a	b	a	b	a	a	intact
CO-4	a	a	b	c	b	c	c	impacted or degraded
CO-5	a	a	b	c	a	c	c	impacted or degraded
CO-6	a	a	a	c	a	c	c	intact
HE-1	a	a	b	c	b	c	b	impacted or degraded
HE-6	b	a	b	c	c	b	b	impacted or degraded
HE-11	b	a	b	c	c	b	b	impacted or degraded
HO-1	a	a	b	c	a	c	c	impacted or degraded
HO-2	a	a	b	c	b	c	c	impacted or degraded
HO-3	a	a	b	c	a	c	c	impacted or degraded
IN-1	a	c	b	c	a	c	b	impacted or degraded
IN-2	a	a	a	c	a	c	b	intact
PH-1	b	c	b	c	c	a	c	lost or not present
PH-9	b	a	b	c	a	c	c	impacted or degraded
PH-13	b	a	b	a	b	a	c	impacted or degraded

SENSITIVITY TO FUTURE IMPACTS

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	a	a	a	a	a	c	sensitive to impacts
CO-2	a	a	a	a	a	c	sensitive to impacts
CO-3	a	a	c	a	a	c	sensitive to impacts
CO-4	a	a	a	c	c	c	sensitive to impacts
CO-5	a	a	a	c	c	a	sensitive to impacts
CO-6	a	a	a	c	c?	a	sensitive to impacts
HE-1	a	a	a	a	a	c	sensitive to impacts
HE-6	b	b	c	b	a	b	potentially sensitive
HE-11	a	b	c	a	a	b	potentially sensitive
HO-1	b	a	a	c	c	a	potentially sensitive
HO-2	b	a	a	a	a	c	potentially sensitive
HO-3	b	a	a	a	a	a	potentially sensitive
IN-1	a	b	a	a	a	a	potentially sensitive
IN-2	b	b	a	a	a	a	potentially sensitive
PH-1	a	b	b	a	a	b	potentially sensitive
PH-9	a?	b	b	c	a	a	potentially sensitive
PH-13	a	b	b	a	a	c	potentially sensitive

ENHANCEMENT POTENTIAL

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	a	b	NA	a	a	c	high
CO-2	a	b	NA	b	b	c	high
CO-3	a	a	a	b	b	c	high
CO-4	a	a	a	b	a	c	high
CO-5	a	a	a	b	a	c	high
CO-6	a	a	a	a	a	c	high
HE-1	a	a	a	b	a	c	high
HE-6	a	b	NA	b	a	b	high
HE-11	a	a	a	b	a	b	high
HO-1	a	a	a	b	a	b	high
HO-2	a	a	a	b	a	b	high
HO-3	a	a	a	b	b	b	high
IN-1	a	b	NA	b	a	b	high
IN-2	a	a	a	a	a	b	high
PH-1	b	b	NA	b	b	b	moderate
PH-9	a	b	NA	b	a	b	high
PH-13	a	a	c	b	b	b	high

EDUCATION

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	a	a	b	a	b	a	has educational uses
CO-2	c	b	b	a	c	b	not appropriate
CO-3	c	b	b	c	c	b	not appropriate
CO-4	a	a	b	a	a	b	has educational uses
CO-5	a	a	b	a	b	b	has educational uses
CO-6	a	a	b	a	b	b	has educational uses
HE-1	c	b	a	c	c	b	not appropriate
HE-6	b	b	b	a	b	a	potential educational use
HE-11	a	a	b	b	b	a	has educational uses
HO-1	a	a	b	a	a	a	has educational uses
HO-2	a	a	b	a	a	a	has educational uses
HO-3	a	b	b	a	b	a	potential educational use
IN-1	b	a	b	a	a	b	potential educational use
IN-2	b	a	b	b	a	b	potential educational use
PH-1	b	a	b	a	a	a	potential educational use
PH-9	b	a	b	a	b	b	potential educational use
PH-13	a	a	b	a	a	a	has educational uses

RECREATION

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	b	b	a	b	a	b	potential to provide recreation
CO-2	c	b	c	b	a	a	potential to provide recreation
CO-3	c	c	c	b	b	b	not appropriate for recreational use
CO-4	a	a	b	b	a	b	provides recreational opportunities
CO-5	b	a	c	b	a	b	provides recreational opportunities
CO-6	b	c	c	b	a	a	potential to provide recreation
HE-1	c	c	c	b	a	a	not appropriate for recreational use
HE-6	b	c	b	b	a	a	potential to provide recreation
HE-11	b	c	b	b	b	a	potential to provide recreation
HO-1	a	a	a	b	a	b	provides recreational opportunities
HO-2	a	a	a	b	a	b	provides recreational opportunities
HO-3	b	a	b	b	a	b	potential to provide recreation
IN-1	a	c	c	b	a	b	provides recreational opportunities
IN-2	a	c	c	b	a	b	provides recreational opportunities
PH-1	a	c	b	b	b	a	provides recreational opportunities
PH-9	b	c	b	b	b	a	potential to provide recreation
PH-13	a	c	a	b	b	b	provides recreational opportunities

AESTHETIC QUALITY

WETLAND	*Questions* 1	2	3	4	5	6	*Assessment Descriptor*
CO-1	b	a	c	b	b	b	moderately pleasing
CO-2	c	a	c	b	b	b	not pleasing
CO-3	b	a	c	b	b	c	not pleasing
CO-4	c	b	a	a	a	c	not pleasing
CO-5	b	b	a	c	a	b	moderately pleasing
CO-6	b	a	c	a	a	a	moderately pleasing
HE-1	c	a	c	a	a	a	moderately pleasing
HE-6	c	b	b	a	a	a	moderately pleasing
HE-11	c	a	a	b	a	a	moderately pleasing
HO-1	b	a	a	b	a	b	pleasing
HO-2	a	a	c	b	b	b	moderately pleasing
HO-3	c	a	c	b	b	b	not pleasing
IN-1	c	c	a	a	a	b	not pleasing
IN-2	b	b	a	a	a	b	moderately pleasing
PH-1	c	a	a	b	a	b	moderately pleasing
PH-9	c	b	a	a	a	a	moderately pleasing
PH-13	a	a	a	b	a	a	pleasing

Appendix G. OFWAM Wetland Function and Condition Summary Sheets

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two or more Cowardin classes	Unconnected wetlands within 3 miles
	Emergent vegetation & ponding	Adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	More than 1 acre open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Deep & shallow water in pond	Adjacent water quality listed streams
	<10% cover objects in wetland complex	Adjacent land use development
	<20% riparian shading of shoreline	Warm water fish present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is groundwater	Wetland area is > 5 acres
	Floods or ponds in growing season	Adjacent land use development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	In enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is development
	Wetland area is > 5 acres	Watershed land use upstream is forested
	No outlet	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Wetland is isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is > 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Potential boat launching areas/access	Fishing is allowed
	Trails or viewing areas exist	No hunting is allowed at the wetland
AESTHETIC QUALITY:	**Moderately pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-2**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with <5 species	Unconnected wetlands within 3 miles
	Emergent vegetation & ponding	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use development
	More than 1 acre open water	Buffer borders 10-40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Deep & shallow water in pond	Adjacent water quality listed streams
	<10% cover objects in wetland complex	Adjacent land use development
	<20% riparian shading of shoreline	Warm water fish present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is groundwater	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use development
	Vegetation cover is low	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	In enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is development
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	No outlet	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Wetland is isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders 10-40% of wetland
		Sensitive to future impacts
EDUCATION:	**Not appropriate for educational uses**	
Rationale	No access	Access to other habitats possible
	1-2 visible hazards to the public	No safe public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	No safe public access point exists	Habitat for some wildlife species
	Potential boat launching areas/access	Fishing is allowed
	No trails or viewing areas exist	Hunting is allowed at the wetland
AESTHETIC QUALITY:	**Not Pleasing**	
Rationale	One Cowardin class visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-3**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with <5 species	Unconnected wetlands within 3 miles
	Dominated by emergent vegetation	No adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders 10-40% of wetland
	Nearest surface waters within 1 mile	
FISH HABITAT:	**NOT ASSESSED**	
Rationale		
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use development
	Vegetation cover is high	No adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	Not in 100 year floodplain/enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is development
	Wetland area is 0.5 - 5 acres	Watershed land use is development
	No outlet	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Wetland is isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Not adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders 10-40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Not appropriate for educational use**	
Rationale	No access	No access to other habitats
	1-2 visible hazards to the public	No safe public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Not appropriate for recreation**	
Rationale	No safe public access point exists	Habitat for some wildlife species
	No boat launching areas/access	No fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Continuous noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-4**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with <5 species	Surface waters connect to other wetlands
	Open water only	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	0.5 - 3 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is open space
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is low	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Open water only
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Stream flow modified	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Open water only
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Undeveloped trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are open space
	25%-50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-5**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is open space
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Stream flow modified	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are open space
	25 - 50% of the wetland is visible	No unpleasant odors
	No visual detractors exist	Intrusive noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-6**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is extensively modified	Adjacent land use is open space
	>25% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is >5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is >5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Stream flow modified	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is >5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	Fishing is allowed
	No trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are open space
	>50% of the wetland is visible	Natural, pleasant odors only
	Permanent visual detractors exist	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HE-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with <5 species	Surface waters connect to other wetlands
	Emergent vegetation & ponding	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use open space
	More than 1 acre open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Intact**	
Rationale	Deep & shallow water in pond	Adjacent water quality listed streams
	10-25% cover objects in wetland complex	Adjacent land use open space
	20-60% riparian shading of shoreline	Salmon present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is low	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Streambank modified <1 mile upstream	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Not appropriate for educational use**	
Rationale	No access	No access to other habitats
	1-2 visible hazards to the public	No safe public access point exists
	Intact fish habitat	No access for limited-mobility people
RECREATION:	**Not appropriate for recreation**	
Rationale	No safe public access point exists	Habitat for some wildlife species
	No boat launching areas/access	Fishing is allowed
	No trails or viewing areas exist	Hunting is allowed at the wetland
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class visible	Surroundings are open space
	>50% of the wetland is visible	Natural, pleasant odors only
	Permanent visual detractors exist	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HE-6**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Dominated by emergent vegetation	No adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is agriculture
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Shallow water only in pond	No adjacent water quality listed streams
	>25% cover objects in wetland complex	Adjacent land use is agriculture
	20-60% riparian shading of shoreline	No fish present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Water source is groundwater	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is agriculture
	Vegetation cover is high	No adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100-year floodplain or closed basin	Dominated by emergent vegetation
	Floods or ponds in growing season	Downstream land use is agriculture
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet is unrestricted	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is agriculture
	Water not taken from stream by irrigators	Adjacent zoning primarily development
	No adjacent water quality listed streams	Dominated by emergent vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Access only by permission	Access/views of other habitats
	1-2 visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	Fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are open space
	25 - 50% of the wetland is visible	Natural, pleasant odors only
	Visual detractors exist but removable	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HE-11**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Dominated by emergent vegetation	No adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is agriculture
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**NOT ASSESSED**	
Rationale		
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use development
	Vegetation cover is high	No adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100-year floodplain or closed basin	Dominated by emergent vegetation
	Floods or ponds in growing season	Downstream land use is agriculture
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet is unrestricted	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Streambank modified <1 mile upstream	Adjacent land use development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	No adjacent water quality listed streams	Emergent vegetation only
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	No fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately pleasing**	
Rationale	One Cowardin class visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is extensively modified	Adjacent land use is open space
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Developed trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-2**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two or more Cowardin classes	Surface waters connect to other wetlands
	Emergent vegetation & ponding	Adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Developed trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	More than two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-3**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is development
	Less than 0.5 acres open water	Buffer borders 10 - 40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Woody vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders 10-40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Has public access	Access/views of other habitats
	1-2 visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Undeveloped trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not Pleasing**	
Rationale	One Cowardin class visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **IN-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Woody vegetation is dominant	Adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has>75% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	>25% in-stream structures	Salmon present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is groundwater	Wetland area is 0.5 - 5 acres
	Doesn't flood or pond in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Doesn't flood or pond in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Woody vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Access only by permission	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	No boat launching areas/access	Fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not pleasing**	
Rationale	One Cowardin class is visible	Surrounding landscape is open space
	<25% of the wetland is visible	Natural, pleasant odors only
	There are no visual detractors	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **IN-2**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two or more Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is development
	Less than 0.5 acres open water	Buffer borders 10 - 40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has>75% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	>25% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is > 5 acres
	Floods or ponds in growing season	Adjacent land use development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is >5 acres	Watershed land use upstream is farming
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Woody vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is >5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Potential educational uses**	
Rationale	Access only by permission	Views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	No boat launching areas/access	Fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	Two Cowardin classes are visible	Surrounding landscape is open space
	25 - 50% of the wetland is visible	Natural, pleasant odors only
	There are no visual detractors	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **PH-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with<5 species	Surface waters connect to other wetlands
	Dominated by emergent vegetation	Adjacent streams moderate NPS pollution
	Low Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders 10-40% of wetland
	Connected to surface waters	
FISH HABITAT:	**NOT ASSESSED**	
Rationale		
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is groundwater	Wetland area is 0.5 - 5 acres
	Doesn't flood or pond in growing season	Adjacent land use is development
	Vegetation cover is high	Adjacent streams moderate NPS pollution
HYDROLOGIC CONTROL:	**Lost or not present**	
Rationale	Not in 100-year floodplain or closed basin	Dominated by emergent vegetation
	Doesn't flood or pond in growing season	Downstream land use is development
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forestry
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent streams moderate NPS pollution	Emergent vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is lost or not present	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders 10-40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential educational uses**	
Rationale	Access only by permission	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	No fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are landscaped/manipulated
	> 50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **PH-9**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Unconnected wetlands within 3 miles
	Dominated by woody vegetation	Adjacent streams moderate NPS pollution
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Nearest surface waters within 1 mile	
FISH HABITAT:	**NOT ASSESSED**	
Rationale		
WATER QUALITY:	**Impacted or degraded**	
Rationale	Water source is groundwater	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent streams moderate NPS pollution
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100 year floodplain/enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use open space
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent streams moderate NPS pollution	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential educational uses**	
Rationale	Access only by permission	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	No fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are open space
	25%-50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **PH-13**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two or more Cowardin classes	Surface waters connect to other wetlands
	Emergent vegetation & ponding	Adjacent streams moderate NPS pollution
	Moderate Cowardin class interspersion	Adjacent land use development
	0.5 - 1 acres open water	Buffer borders 10-40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Deep & shallow water in pond	No adjacent water quality listed streams
	>25% cover objects in wetland complex	Adjacent land use development
	20 - 60% riparian shading of shoreline	Warm water fish present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is low	Adjacent streams moderate NPS pollution
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100 year floodplain/enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is development
	Wetland area is 0.5 - 5 acres	Watershed land use is forestry
	No outlet	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent streams moderate NPS pollution	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Water source is surface water	Buffer borders 10-40% of wetland
	In-flow blocked, not restorable	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	No boat launching areas/access	No fishing is allowed
	Trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Pleasing**	
Rationale	2 Cowardin classes are visible	Surroundings are landscaped/manipulated
	> 50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Some noise, natural sounds

Appendix H. Locally Significant Wetlands Checklists

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-1**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
X		*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
		Optional Criterion (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-2**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-3**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	
		Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	
		Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
X		*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-4**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-5**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
	X	*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **CO-6**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
X		*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **HE-1**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
X		*intact* fish habitat
	X	*intact* water quality
X		*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **NO** Wetland Code(s): **HE-6**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **HE-11**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **HO-1**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
	X	*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **HO-2**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **HO-3**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
X		Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **IN-1**
OFWAM Unit: **11**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **YES** Wetland Code(s): **IN-2**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
X		*intact* water quality
X		*intact* hydrologic control.
X		Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **NO** Wetland Code(s): **PH-1**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **NO** Wetland Code(s): **PH-9**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

Locally Significant Wetlands Checklist

SIGNIFICANT: **NO** Wetland Code(s): **PH-13**

A. "OUT" Test

Wetlands that score "Yes" in any of the following categories do NOT proceed to Section B:

Y	N	Wetland's ARTIFICIALLY CREATED ENTIRELY FROM UPLAND that are:
	X	(a) created for the purpose of controlling, storing, or maintaining stormwater
	X	(b) active surface mining or active log ponds
	X	(c) ditches without a free and open connection to waters of the state & no food or game fish
	X	(d) < 1 acre and unintentionally created from irrigation leakage or construction activity
	X	(e) created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard
	X	Documented by EPA or DEQ as contaminated by hazardous substances, materials or wastes

B. "IN" Test

Wetlands that meet ONE OR MORE of the following criteria are Locally Significant Wetlands:

Y	N	Wetlands that score the highest rank (stated in italics below) for any of the four ecological functions addressed by OFWAM or equivalent methodology:
	X	*diverse* wildlife habitat
	X	*intact* fish habitat
	X	*intact* water quality
	X	*intact* hydrologic control.
	X	Occurs within 1/4 mile of a water body listed by DEQ as quality-limited and the wetland's water quality function is *intact* or *impacted or degraded*
	X	Contains one or more rare/uncommon wetland plant communities in Oregon. (Most concise list is found as Appendix G in OFWAM).
	X	Inhabited by any species listed by the federal or state government as a sensitive, threatened or endangered species in Oregon (unless consultation with the appropriate agency deems the site not important for the maintenance of the species).
	X	Has a direct surface water connection to a stream segment mapped by ODFW as habitat for "indigenous anadromous salmonids" and the fish habitat function is *intact* or *impacted or degraded*
	X	*Optional Criterion* (local discretion): Wetland represents a *locally* unique plant community.
	X	*Optional Criterion* (local discretion): Publicly owned and determined to *have educational uses* and there is documented use for educational purposes by a school or organization.

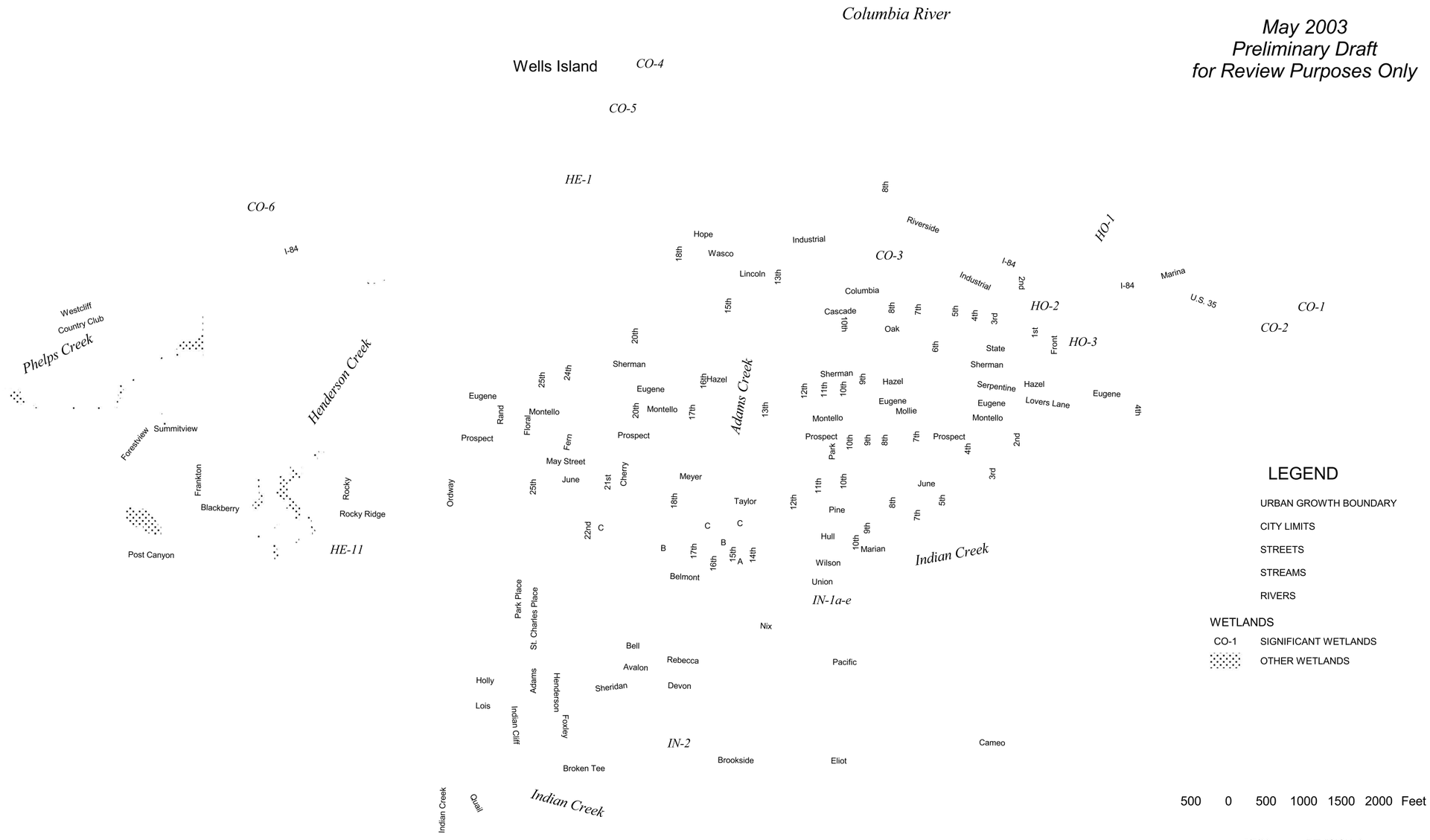
Appendix I. Technical Staff Qualifications

Joel Shaich, Wetland Scientist

Joel Shaich is a certified Professional Wetland Scientist with over 10 years wetland regulatory and management experience in Oregon for government agencies at the local, state and federal levels and in the private sector. He has conducted wetland delineations, local wetland inventories, OFWAM assessments and wetland significance determinations. In addition, he has conducted state and federal agency oversight reviews for technical and regulatory adequacy of wetland delineations, local wetland inventories, OFWAM assessments and wetland significance determinations. Mr. Shaich contributed to state administrative rules for wetland and waterway jurisdictional determinations and wetland significance determinations. He has participated on assessment teams helping develop OFWAM, the Oregon Wetland-Riparian Assessment Project, and the Washington State Wetlands Function Assessment Project. Related natural resource experience includes stream assessment team leader, water quality certification reviewer and National Environmental Policy Act document reviewer for water quality, aquatic habitat and wetlands issues. Mr. Shaich's educational background includes an M.S. in Environmental Science with a focus on wetlands management and professional training in wetland delineation, wetland plant identification and geographical information systems.

FIGURE 7. HOOD RIVER SIGNIFICANT WETLANDS

May 2003
Preliminary Draft
for Review Purposes Only



LEGEND

- URBAN GROWTH BOUNDARY
- CITY LIMITS
- STREETS
- STREAMS
- RIVERS

WETLANDS

- CO-1 SIGNIFICANT WETLANDS
- OTHER WETLANDS

500 0 500 1000 1500 2000 Feet

5/5/03 REVISION: 3

WETLAND CONSULTING

Hood River
Local Wetlands Inventory
and
Wetlands Significance Determinations

Prepared for

City of Hood River
301 Oak Street, PO Box 27
Hood River, Oregon 97031

Prepared by

Wetland Consulting
3710 SE Taylor Street
Portland, Oregon
(503) 238-5942

July 2003

2.0 Study Methods

The study area is the Hood River city limits and the Hood River urban growth boundary area (UGB) and is located in Hood River County, Oregon approximately 60 miles east of the Portland at the confluence of the Hood River and Columbia River (Figure 1).

Joel Shaich, a certified Professional Wetland Scientist, produced the LWI. A qualifications summary is in Appendix I.

Methods for local wetland inventories, wetland function and condition assessments and locally significant wetlands determinations are prescribed in the following Oregon Administrative Rules (OARs):

- *Local Wetlands Inventory Standards and Guidelines* (OAR 141-86-180 to 240)
- *Identifying Significant Wetlands* (OAR 141-86-300 to 350)
- *Procedures and Requirements for Complying With Goal 5* (OAR 660-23-100)

Specific procedures used to complete the Hood River LWI and identify locally significant wetlands are described in the following sections.

2.1 Local Wetlands Inventory

A Local Wetland Inventory (LWI) is a systematic survey of an area to identify, characterize, and map the approximate boundaries of wetland resources. Inventory methodology is defined in OAR 141-86-180 through 141-86-240.

2.1.1 Identification of Potential Wetlands and Other Waters

Potential wetlands are areas identified from off-site sources that have one or more wetland characteristics. Potential wetlands are candidates for field-verification to determine if they meet wetland criteria. Only potential wetland sites 0.5 acres and larger were field verified in accordance with LWI mapping standards. Other waters included in the inventory were rivers, streams, lakes and ponds. Artificially-created channels in the study area (small irrigation laterals and roadside drainage ditches) were not included.

The following information sources were reviewed to identify potential wetlands and other waters:

- DSL regulatory files including permit files, DSL wetland determinations and private consultant wetland delineations submitted for DSL review.
- Available wetland delineations by private consultants that have not been reviewed by DSL.
- True color aerial photography taken May 29, 1999, provided by Hood River County.
- *Soil Survey of Hood River County Area, Oregon*, 1981, US Department of Agriculture (USDA). Soils maps are at a 1:20,000 scale. A USDA digital version of the soils mapping was also used.
- Hydric Soils List for Hood River County

4.0 Local Wetlands Inventory Results

4.1 Wetlands

Seventeen wetlands 0.5 acres or larger were mapped, totaling 52 acres. An additional 20 wetlands smaller than 0.5 acres were mapped from DSL-approved wetland delineations. These small wetlands totaled less than 2 acres. Each wetland is described on a wetland summary sheet (Appendix A). Wetland sample plot field data forms are in Appendix B. The wetlands are mapped on one LWI map sheet at a scale of 1:6,000 (1 inch = 500 feet) (Appendix C).

4.2 Possible Wetlands

Forty-five possible wetlands (areas smaller than 0.5 acres with wetland characteristics) were mapped as points and labeled "PW" on the LWI map. The approximate boundaries of the larger possible wetland areas were also mapped. Wetland indicators observed included ponded water, dominance by wetland vegetation and low topographic positions. No attempt was made to field verify possible wetlands.

- Retain the structures with potential value to the history of the island

The City of Hood River has zoned the portion of Wells Island in the city limits as open space under Goal 5 which includes wetlands CO-4 and CO-5. City code (Ord 1657, 1992) prohibits the city from issuing permits which would be inconsistent with the Columbia River Gorge National Scenic Area Management Plan (City of Hood River Comprehensive Plan, City of Hood River 1983?).

No wetlands met any of the other criteria for wetlands of special interest for protection. The full results are in Appendix D.

5.2 Wetland Functions and Conditions Assessment Results

Wetlands assessment results are in Table 4. Wetland function and condition summary sheets for each assessment unit are in Appendix G. Answers to wetland function and condition questions are in Appendix F. Watershed and wetland characterization results are in Appendix E.

The assessment results for Enhancement Potential should be considered with some skepticism. Wetlands CO-5, CO-6, HE-6, HO-1, HO-2, HO-3, IN-1 and PH-9 all ranked "high" for enhancement potential, yet all have a predominance of native vegetation and relatively intact hydrology. Enhancement opportunities are extremely limited for these wetlands. Other than perhaps attempting to remove Reed canarygrass, the wetlands would generally be better off left undisturbed. These inaccurate results appear to be due to limitations in the methodology.

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Wetland Summary Sheet

Sample Plot Numbers:	**1**	Wetland Code(s):	**CO-1**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB PEM**	Size (acres):	**6.11**
HGM Classification(s):	**DCP**	Locally Significant:	**YES**

Legal: **T3N R11E 30D**	Hydrologic Basin: **Columbia River**
Tax Lots: Oregon Department of Transportation right-of-way	Location: **South of Interstate 84, southeast of exit 64, north of the Union Pacific railroad tracks**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **groundwater (Columbia River water through freeway fill)**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Reed canarygrass
		Hardstem bulrush
		Common cattail

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a permanent pond with patches of emergent vegetation. Wetland boundaries are defined by water marks on the surrounding steep fill slopes for the railroad line along the south side and Interstate 84 and the Highway 35 interchange on the north side and by an abrupt change from wetland to upland vegetation. A review of historical aerial photographs indicates that the site was an agricultural field that was flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The filling for construction of Interstate 84 in the late 1950s separated the area from the river resulting in an isolated pond. According to several local informants pond levels rise and fall with changes in Columbia River levels indicating the water moves between the river and the pond through the fill for Interstate 84. No culverts or other surface connection between the pond and the river were observed.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**CO-2**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB**	Size (acres):	**3.71**
HGM Classification(s):	**DCP**	Locally Significant:	**YES**

Legal: **T3N R11E 30D T3N R10E 25C** Tax Lots: 3N11E30 TL 500, 700	Hydrologic Basin: **Columbia River** Location: **South of the Union Pacific railroad tracks and east of Highway 35**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **groundwater (Columbia River water through RR and freeway fill)**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
None	**Willow**	**Reed canarygrass**
		Hardstem bulrush

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a permanent pond with patches of emergent vegetation. Wetland boundaries are defined by water marks on the steep fill slopes for the railroad line along the north side and steep slopes along the south, southwest and southeast sides. A review of historical aerial photographs suggests that the site was an undeveloped area that was flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The filling for construction of Interstate 84 in the late 1950s separated the area from the river resulting in an isolated pond. According to several local informants pond levels rise and fall with changes in Columbia River levels indicating the water moves between the river and the pond through the fill for Interstate 84. No culverts or other surface connection between the pond and the river were observed.

Wetland Summary Sheet

Sample Plot Numbers:	**8, 9**	Wetland Code(s):	**CO-3**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM PSS**	Size (acres):	**1.42**
HGM Classification(s):	**DCNP**	Locally Significant:	**YES**

Legal: **T3N R10E 25C**

Tax Lots: Oregon Department of Transportation and Union Pacific Railroad rights-of-way

Hydrologic Basin: **Columbia River**

Location: **North of Union Pacific RR tracks, south of Interstate 84, access off 7th Street**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **stormwater discharge from culverts and from ditch to east**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**not appropriate**
Water Quality:	**intact**	Aesthetics:	**not pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is in a linear depression between Interstate 84 and the Union Pacific railroad tracks. Wetland boundaries along the north and south sides are defined by the steep fill slopes along I-84 and the railroad tracks, ponded and saturated soils, and the change from a wetland plant community to Himalayan blackberries. Ponded water and saturated soils were observed in the wetland during the site visit. The wetland receives and stores a large volume of stormwater and piped stream flow and is an integral part of the municipal stormwater management system.

Wetland Summary Sheet

Sample Plot Numbers:	**10, 11**	Wetland Code(s):	**CO-4**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUBx**	Size (acres):	**0.90**
HGM Classification(s):	**RI**	Locally Significant:	**YES**

Legal: **T3N R10E 26A**
Tax Lots: 3N10E26 TL 200

Hydrologic Basin: **Columbia River**
Location: **Southeast portion of Wells Island**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **Channel connects to Columbia River, groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
	Red osier dogwood	**none**
	Willow	

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: Wetland is an excavated depression with a sand bottom. There is an excavated channel (south side of pond) that connects the pond to the river when the Bonneville reservoir is at or near full pool elevation. A second constructed channel at the east end of the pond has silted in and is completely blocked. Wetland boundaries are defined by the topographic change at the edges of the excavated area. A portion of the excavated area had ponded water during the site visit. There is woody vegetation and blackberries along the banks of the wetland. The wetland is a compensatory mitigation site for wetland fills in the Columbia River by the Port of Hood River in the early 1990s (DSL Permit File No. RF 5573).

Wetland Summary Sheet

Sample Plot Numbers:	**12**	Wetland Code(s):	**CO-5**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PSS**	Size (acres):	**0.94 (0.28 in study area)**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 26A**	Hydrologic Basin: **Columbia River**
Tax Lots: 3N10E26 TL 200	Location: **South side of Wells Island**

Soil – Mapped Series: **30A Xerofluvents, nearly level**

Hydrology Source(s): **Columbia River saturates and inundates wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Willow	**Willow**	**Slough sedge**
Red Alder	**Red osier dogwood**	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: Wetland borders the Columbia River . The wetland boundary is defined by a topographic change along the east and north sides, ponding and soil saturation, and the change from a wetland plant community to a Himalayan blackberry-Black cottonwood plant community. The wetland was saturated during the site visit.

Wetland Summary Sheet

Sample Plot Numbers:	**13**	Wetland Code(s):	**CO-6**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PEM**	Size (acres):	**7.94**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 27C T3N R10E 27D**
Tax Lots: 3N10E27 TL 201
3N10E27D TL 200
Union Pacific Railroad right-of-way

Hydrologic Basin: **Columbia River**
Location: **Peninsula in Columbia River, north of Interstate 84 exit 62**

Soil – Mapped Series: None, mapped as part of Columbia River

Hydrology Source(s): **Columbia River saturates and inundates wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
Willow	**Red osier dogwood**	**Scouring rush**
		Stinging nettle

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a low peninsula extending from the Columbia River shoreline into the river. The wetland boundary at the southeast end of the peninsula is the steep fill slope for the Union Pacific Railroad grade. The wetland was not saturated or ponded during the site visit but water marks on trees at the highest portion of the peninsula and drift deposits indicate that the area is regularly flooded by the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-1**
Field Verification Date(s):	**1/14/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PUB**	Size (acres):	**1.50**
HGM Classification(s):	**RI**	Locally Significant:	**YES**

Legal:	**T3N R10E 26C**	Hydrologic Basin:	**Henderson Creek**
Tax Lots:	3N10E26CA TL 500, 600, 800, 900, 1000, 1001 & Union Pacific Railroad right-of-way	Location:	**South of Union Pacific Railroad tracks at the mouth of Henderson Creek**

Soil – Mapped Series:	None, mapped as part of Columbia River
Hydrology Source(s):	**Henderson Creek, unnamed stream, Columbia River via culvert**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
	Red osier dogwood	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**not appropriate**
Fish Habitat:	**intact**	Recreation:	**not appropriate**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**sensitive to impacts**
Enhancement Potential:	**high**		

Comments: The wetland is a pond separated from the Columbia River by fill material for the Union Pacific Railroad grade. The only vegetated portion of the wetland is a narrow fringe where Henderson Creek enters the pond. A culvert connects the pond to the river and functions as an outlet. The Bonneville full pool reservoir level is above the culvert outlet, allowing water to flow both ways when the reservoir is full. Wetland boundaries are defined by water marks on the steep fill slopes of the railroad fill and on the cliffs on the south side and by the presence of Himalayan blackberry.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-6 (6a & 6b)**
Field Verification Date(s):	**1/14/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**1.79**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 34A**	Hydrologic Basin: **Henderson Creek**
Tax Lots: 3N10E34A TL 2100	Location: **3875 May Street, south side of May Street**

Soil – Mapped Series:	**27B Wind River variant gravelly sandy loam, 0-8% slopes**
Hydrology Source(s):	**Groundwater, irrigation supply**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Soft rush
		Common cattail
		Small-fruited bulrush
		Reed canarygrass

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is fed by groundwater discharge and by irrigation runoff in ditches that drain into the wetland. HE-6a is the main part of the wetland. HE-6b is a small area that was isolated by construction of the access road through the property. There is a small excavated pond in the wetland. Wetland boundaries are the transition from the wetland plant community to a tall fescue-timothy-wheatgrass-diffuse knapweed plant community. The wetland was delineated by Real Ecology LLC (DSL File No. WD 02-0265). A permit has been issued by DSL to develop a residential subdivision on the site. The proposed project includes three road crossings in the wetland and creation of additional wetland area as compensatory mitigation (DSL File No. APP 26403).

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**HE-11**
Field Verification Date(s):	**1/9/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**0.84**
HGM Classification(s):	**Flat**	Locally Significant:	**YES**

Legal: **T3N R10E 34A**	Hydrologic Basin: **Henderson Creek**
Tax Lots: 3N10E34A TL 2501	Location: **West of Rocky Road, south of Rocky Ridge Road**

Soil – Mapped Series:	**27B Wind River variant gravelly sandy loam, 0-8% slopes**
Hydrology Source(s):	**precipitation, irrigation runoff, groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
		Soft rush
		Wooly sedge
		American speedwell
		Short awn foxtail

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is in a shallow depression. Wetland boundaries are the transition from a wetland plant community to a bulbous bluegrass-chervil-tall oatgrass-Kentucky bluegrass plant community. The wetland was delineated by Fishman Environmental Services, LLC (DSL File No. WD 00-0063).

Wetland Summary Sheet

Sample Plot Numbers:	**2, 3**	Wetland Code(s):	**HO-1**
Field Verification Date(s):	**1/6/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PSS PFO**	Size (acres):	**1.46**
HGM Classification(s):	**RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**	Hydrologic Basin: **Hood River**
Tax Lots: 3N10E25 TL 100	Location: **East side of the Hood River, north of Interstate 84**

Soil – Mapped Series: None, mapped as part of Hood River

Hydrology Source(s): **Hood River saturates and inundates the wetland**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
	Red osier dogwood	**Scouring rush**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is a vegetated sand bar area within the banks of the Hood River. Wetland boundaries are the steep, riprapped river bank. The wetland was not saturated or inundated during the site visit but had drift lines, drainage patterns and sediment deposits, indicators of wetland hydrology. Most of the site is at or below 77' elevation, the Bonneville full pool elevation.

Wetland Summary Sheet

Sample Plot Numbers:	**4, 5**	Wetland Code(s):	**HO-2**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM PUB**	Size (acres):	**1.83**
HGM Classification(s):	**RI RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**
Tax Lots: 3N10E25DC TL 7600

Hydrologic Basin: **Hood River**
Location: **West of Hood River, south of Interstate 84, north of Union Pacific railroad tracks**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **Channel in southeast portion of wetland connects to Hood River**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Willow**	**Hardstem bulrush**
	Black cottonwood	**Scouring rush**
	Red alder	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is a pond/emergent marsh behind a low natural levee that separates the wetland from the Hood River except where a small channel connects to the river in the southeast portion of the wetland. The wetland also has shrub-dominated sand bars along the Hood River. Wetland boundaries on the north and south sides are steep fill slopes of Interstate 84 and the Union Pacific railroad tracks and a gentler natural slope on the west end. The wetland boundary has a distinct change from wetland vegetation to Himalayan blackberry and other upland species. A review of historical aerial photographs indicates that the site was part of the delta at the mouth of the Hood River that was then flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The construction of Interstate 84 in the 1950s isolated the site from the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**6, 7**	Wetland Code(s):	**HO-3**
Field Verification Date(s):	**1/7/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PSS**	Size (acres):	**2.24**
HGM Classification(s):	**RI RFT**	Locally Significant:	**YES**

Legal: **T3N R10E 25D**	Hydrologic Basin: **Hood River**
Tax Lots: Union Pacific and Mount Hood Railroad right-of-way	Location: **West of Hood River, south of the Union Pacific railroad tracks**

Soil – Mapped Series: **21C Rockford stony loam, 8-12% slopes**

Hydrology Source(s): **Natural and excavated channels connects to the Hood River**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Willow**	**Reed canarygrass**
	Red osier dogwood	**Scouring rush**
	Red alder	**Common cattail**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland has shrub-dominated sand bars along the Hood River. A low natural levee separates the shrub portion from forested wetland and a small pond at the west end of the wetland complex. Water from the Hood River flows throughout the wetland from several natural channels and an excavated channel along the north edge of the wetland. Wetland boundaries are mostly steep fill slopes of the Union Pacific and Mount Hood Railroad tracks. The wetland boundary has a distinct change from wetland vegetation to Himalayan blackberry and other upland species. A review of historical aerial photographs indicates that the site was part of the delta at the mouth of the Hood River that was then flooded following the construction of Bonneville Dam and the subsequent rise in elevation of the Columbia River. The construction of Interstate 84 in the 1950s isolated the site from the Columbia River.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**IN-1 (1a-1e)**
Field Verification Date(s):	**1/10/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO**	Size (acres):	**1.91**
HGM Classification(s):	**SV**	Locally Significant:	**YES**

Legal: **T3N R10E 36C**
Tax Lots: 3N10E36CB TL 3100, 3200, 3300

Hydrologic Basin: **Indian Creek**
Location: **On south slope above Indian Creek, between 12th Street and 9th Court**

Soil – Mapped Series: **26C Wind River fine sandy loam, 8-12% slopes**
31F Xerumbrepts, very steep
Hydrology Source(s): **groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Red osier dogwood**	**Skunk cabbage**
Red alder		**Reed canarygrass**
Rocky mountain maple		**Alpine lady fern**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**not pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetlands are a complex of five areas fed by seeps that discharge along the south slope above Indian Creek. Wetland boundaries are determined by the transition from the wetland plant community to a big-leaf maple-ponderosa pine-sword fern-snowberry plant community. The wetland was delineated by Joe and Jennifer Kelly (DSL File No. WD 98-0003). A portion of IN-1e was filled under DSL permit (DSL File No. FP 15278). Compensatory mitigation for the fill was enhancement of IN-1d and the remaining part of IN-1e.

Wetland Summary Sheet

Sample Plot Numbers:	**14, 15, 16**	Wetland Code(s):	**IN-2**
Field Verification Date(s):	**1/11/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO PEM**	Size (acres):	**15.57**
HGM Classification(s):	**RFT SV**	Locally Significant:	**YES**

Legal: **T3N R10E 35D T2N R10E 02A**

Tax Lots: 3N10E35DA TL 4999, 5000, 5200
3N10E35DC TL 800, 2300
3N10E35DD TL 101, 300, 400, 1000
2N10E02AB TL 100, 200

Hydrologic Basin: **Indian Creek**

Location: **Along Indian Creek between 12th Street and the west end of Broken Tee Drive**

Soil – Mapped Series: **26C Wind River fine sandy loam, 8-12% slopes**

Hydrology Source(s): **Indian Creek, surface runoff**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Red alder	**Red osier dogwood**	**Reed canarygrass**
Oregon ash	**Douglas spirea**	**Scouring rush**
	Pacific ninebark	
	Nootka rose	

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**potential opportunities**
Water Quality:	**intact**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**intact**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is in the floodplain of Indian Creek. Wetland boundaries are distinct topographic changes; steep slopes on the north side of Indian Creek and moderate slopes at the edge of the floodplain on the north side of the creek. Vegetation changes from a wetland plant community to a Himalayan blackberry- Scot's broom-Oregon white oak plant community. There is an excavated ditch that was used historically to divert water from Indian Creek. The ditch begins on the north side of the creek in approximately the center of the wetland and runs east to the northeast corner of the wetland.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-1 (1a & 1b)**
Field Verification Date(s):	**1/11/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEM**	Size (acres):	**1.09**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 27C**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E27C TL 2100	Location: **In southeast corner of tax lot**

Soil – Mapped Series:	**26B Wind River fine sandy loam, 0-8% slopes**
Hydrology Source(s):	**groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Black cottonwood	**Douglas spirea**	**Reed canarygrass**

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**lost or not present**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**moderate**		

Comments: The wetland is in a field. Wetland boundaries are determined by the transition from reed canarygrass to a brome grass-tall fescue-knapweed plant community. The wetland was delineated by Terrascience, Inc. (DSL File No. WD 02-0164). A permit application (DSL File No. 25851 has been submitted to construct a Wal-Mart store on the site.

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-9**
Field Verification Date(s):	**1/17/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PFO**	Size (acres):	**0.50**
HGM Classification(s):	**SV**	Locally Significant:	**NO**

Legal: **T3N R10E 34B**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E34B TL 1505	Location: **North of Summitview Way at its west end (road under construction at this time)**

Soil – Mapped Series:	**22E Rockford very stony loam, 0-30% slopes**
Hydrology Source(s):	**groundwater**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Red osier dogwood**	**Skunk cabbage**
Red alder		

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**potential uses**
Fish Habitat:	**NOT ASSESSED**	Recreation:	**potential opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**moderately pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: Wetland is fed by seeps. Wetland boundary is transition from wetland vegetation to an Oregon ash-Douglas fir-snowberry-sword fern plant community. The wetland was delineated by Real Ecology, LLC (DSL File No. WD 02-368).

Wetland Summary Sheet

Sample Plot Numbers:	**none**	Wetland Code(s):	**PH-13**
Field Verification Date(s):	**1/9/03**	Field Investigator:	**Joel Shaich**
Cowardin Classification(s):	**PEMx**	Size (acres):	**2.22**
HGM Classification(s):	**DO**	Locally Significant:	**NO**

Legal: **T3N R10E 34B**	Hydrologic Basin: **Phelps Creek**
Tax Lots: 3N10E34BD TL 400, 405, 424	Location: **at the end of Haven Drive in the Stonegate Subdivision**

Soil – Mapped Series: **21B Rockford stony loam, 0-8% slopes**

Hydrology Source(s): **Irrigation supply, surface runoff**

Dominant Wetland Vegetation		
TREES	SHRUBS	HERBS
Oregon ash	**Willow**	**Reed canarygrass**
Black cottonwood	**Red osier dogwood**	**Soft rush**
		Bittersweet nightshade
		Horsetail
		Velvet grass

OFWAM ASSESSMENT RESULTS			
Wildlife Habitat:	**habitat for some species**	Education:	**has educational uses**
Fish Habitat:	**impacted or degraded**	Recreation:	**provides opportunities**
Water Quality:	**impacted or degraded**	Aesthetics:	**pleasing**
Hydrologic Control:	**impacted or degraded**	Sensitivity to Future Impacts:	**potentially sensitive**
Enhancement Potential:	**high**		

Comments: The wetland is fenced off and maintained as a natural area by the Stonegate Subdivision Homeowners Association. The wetland contains an excavated pond, formerly used for irrigation that has been enhanced and enlarged for habitat improvement (DSL File No. RP 6047). A portion of the enhancement was compensatory mitigation for the culverting of a section of Henderson Creek during construction of the Wal-Mart store (DSL File No. RF 6520). The wetland boundaries are based on the transition from wetland vegetation to tall oatgrass-Oregon white oak-snowberry-tall Oregon grape.

9. *What fisheries are present in the watersheds?*

The following populations of cold water anadromous and resident fish have been documented by the Oregon Department of Fish and Wildlife:

Name	**Range**	**Use**
Coho salmon	Hood River	spawning and rearing
	Columbia River	rearing and migration
Winter steelhead	Hood River	spawning and rearing
	Columbia River	rearing and migration
Summer steelhead	Hood River	spawning and rearing
	Columbia River	rearing and migration
Spring chinook	Hood River	spawning and rearing
	Columbia River	rearing and migration
Fall chinook	Hood River	spawning and rearing
	Columbia River	rearing and migration
Sea-run cutthroat trout	Hood River Columbia River	rearing and migration
Pacific lamprey	Hood River	spawning and rearing?
	Columbia River	rearing and migration
Bull trout	Hood River Columbia River	juvenile/adult rearing
Resident cutthroat trout, rainbow trout, mountain whitefish, sucker, sculpin, longnose dace	Hood River Phelps Creek Indian Creek	spawning and rearing

A variety of introduced warm water fish are present in ponds including bass, bluegill, black crappie, green sunfish and yellow perch (personal communication, Steve Pribyl ODFW, 2003).

10. *Are known sensitive, threatened or endangered fish species present in the watershed?*

Steelhead, chinook and chum salmon in the Columbia River are listed as threatened under the federal ESA. Coho salmon are a candidate for federal listing. Steelhead and bull trout in the Hood River are listed as threatened under the federal ESA.

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-5**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is open space
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Stream flow modified	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are open space
	25 - 50% of the wetland is visible	No unpleasant odors
	No visual detractors exist	Intrusive noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **CO-6**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is extensively modified	Adjacent land use is open space
	>25% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is >5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Intact**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is >5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Sensitive to future impacts**	
Rationale	Stream flow modified	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is >5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	Fishing is allowed
	No trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are open space
	>50% of the wetland is visible	Natural, pleasant odors only
	Permanent visual detractors exist	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HE-6**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Dominated by emergent vegetation	No adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is agriculture
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Shallow water only in pond	No adjacent water quality listed streams
	>25% cover objects in wetland complex	Adjacent land use is agriculture
	20-60% riparian shading of shoreline	No fish present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Water source is groundwater	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is agriculture
	Vegetation cover is high	No adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100-year floodplain or closed basin	Dominated by emergent vegetation
	Floods or ponds in growing season	Downstream land use is agriculture
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet is unrestricted	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is agriculture
	Water not taken from stream by irrigators	Adjacent zoning primarily development
	No adjacent water quality listed streams	Dominated by emergent vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Access only by permission	Access/views of other habitats
	1-2 visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	Fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are open space
	25 - 50% of the wetland is visible	Natural, pleasant odors only
	Visual detractors exist but removable	Some noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two Cowardin classes	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is extensively modified	Adjacent land use is open space
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use open space
	Water taken from stream by irrigators	Adjacent zoning primarily open space
	Adjacent water quality listed streams	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Developed trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Pleasing**	
Rationale	Two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-2**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	Two or more Cowardin classes	Surface waters connect to other wetlands
	Emergent vegetation & ponding	Adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Emergent vegetation & ponding
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Emergent vegetation & ponding
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders >40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Has educational uses**	
Rationale	Has public access	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Provides recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Developed trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	More than two Cowardin classes visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **HO-3**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Dominated by woody vegetation	Adjacent water quality listed streams
	Low Cowardin class interspersion	Adjacent land use is development
	Less than 0.5 acres open water	Buffer borders 10 - 40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has<50% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	<10% in-stream structures	Salmon present
WATER QUALITY:	**Intact**	
Rationale	Primary water source is surface flow	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is development
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream not modified, wetland not isolated	Adjacent land use is development
	Water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Woody vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is surface flow	Buffer borders 10-40% of wetland
	In-flow unrestricted or easily unblocked	Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Has public access	Access/views of other habitats
	1-2 visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	Access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas/access exists	Fishing is allowed
	Undeveloped trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not Pleasing**	
Rationale	One Cowardin class visible	Surroundings are landscaped/manipulated
	>50% of the wetland is visible	Unpleasant odors at times
	Permanent visual detractors exist	Intrusive noise & natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **IN-1**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Surface waters connect to other wetlands
	Woody vegetation is dominant	Adjacent water quality listed streams
	Moderate Cowardin class interspersion	Adjacent land use development
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Connected to surface waters	
FISH HABITAT:	**Impacted or degraded**	
Rationale	Stream has>75% riparian shading	Adjacent water quality listed streams
	Stream is in a natural channel	Adjacent land use is development
	>25% in-stream structures	Salmon present
WATER QUALITY:	**Impacted or degraded**	
Rationale	Primary water source is groundwater	Wetland area is 0.5 - 5 acres
	Doesn't flood or pond in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent water quality listed streams
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	In 100 year floodplain or enclosed basin	Dominated by woody vegetation
	Doesn't flood or pond in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is farming
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use is development
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent water quality listed streams	Woody vegetation is dominant
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential for educational use**	
Rationale	Access only by permission	Access/views of other habitats
	No visible safety hazards exist	Maintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Maintained public access point exists	Habitat for some wildlife species
	No boat launching areas/access	Fishing is allowed
	No trails or viewing areas exist	No hunting is allowed
AESTHETIC QUALITY:	**Not pleasing**	
Rationale	One Cowardin class is visible	Surrounding landscape is open space
	<25% of the wetland is visible	Natural, pleasant odors only
	There are no visual detractors	Continuous noise, natural sounds

OFWAM Functions and Conditions Summary Sheet

		Wetland: **PH-9**
WILDLIFE HABITAT:	**Habitat for some species**	
Rationale	One Cowardin class with >5 species	Unconnected wetlands within 3 miles
	Dominated by woody vegetation	Adjacent streams moderate NPS pollution
	Low Cowardin class interspersion	Adjacent land use is open space
	Less than 0.5 acres open water	Buffer borders >40% of wetland
	Nearest surface waters within 1 mile	
FISH HABITAT:	**NOT ASSESSED**	
Rationale		
WATER QUALITY:	**Impacted or degraded**	
Rationale	Water source is groundwater	Wetland area is 0.5 - 5 acres
	Floods or ponds in growing season	Adjacent land use is open space
	Vegetation cover is high	Adjacent streams moderate NPS pollution
HYDROLOGIC CONTROL:	**Impacted or degraded**	
Rationale	Not in 100 year floodplain/enclosed basin	Dominated by woody vegetation
	Floods or ponds in growing season	Downstream land use is open space
	Wetland area is 0.5 - 5 acres	Watershed land use upstream is forested
	Outlet has unrestricted flow	
SENSITIVITY TO FUTURE IMPACTS:	**Potentially sensitive to future impacts**	
Rationale	Stream bank modified <1 mile upstream	Adjacent land use open space
	No water taken from stream by irrigators	Adjacent zoning primarily development
	Adjacent streams moderate NPS pollution	Dominated by woody vegetation
ENHANCEMENT POTENTIAL:	**High**	
Rationale	Key function is impacted or degraded	Wetland area is 0.5 - 5 acres
	Primary water source is groundwater	Buffer borders >40% of wetland
		Potentially sensitive to future impacts
EDUCATION:	**Potential educational uses**	
Rationale	Access only by permission	Access/views of other habitats
	No visible safety hazards exist	Unmaintained public access point exists
	No intact/diverse fish or wildlife habitat	No access for limited-mobility people
RECREATION:	**Potential recreational opportunities**	
Rationale	Unmaintained public access point exists	Habitat for some wildlife species
	Boat launching areas >1 mile	No fishing is allowed
	Undeveloped trails or viewing areas exist	Hunting is allowed
AESTHETIC QUALITY:	**Moderately Pleasing**	
Rationale	One Cowardin class is visible	Surroundings are open space
	25%-50% of the wetland is visible	Natural, pleasant odors only
	No visual detractors exist	Some noise, natural sounds