CITY OF ASHLAND

LOCAL WETLANDS INVENTORY AND ASSESSMENT

& RIPARIAN CORRIDOR INVENTORY

APPROVED WETLANDS INVENTORY
Oregon Department of State Lands

Meets Local Wetlands Inventory standards
Date 3/20/2007 Approved by P. Ryan

CITY OF ASHLAND

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City of Ashland Local Wetlands Inventory
& Riparian Corridor Inventory
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Summary

SWCA Environmental Consultants[1] (Fishman/SWCA), conducted a Local Wetlands Inventory and Assessment and Riparian Corridor Inventory for the City of Ashland. The study area included the Ashland city limits and urban growth boundary. Total study area boundary acreage is 4,959 acres or 7.75 square miles.

Fourteen wetland units (W1 – W14) were inventoried and assessed. Eight of these 13 units (W1, W4, W5, W6, W7, W11, W12 and W13) were not previously mapped in the National Wetlands Inventory or the City's GIS database. Eleven wetland units were associated with streams or were hydrologically connected to a stream via roadside or agricultural drainage ditches. Three (W2, W8 and W9) wetlands did not contain a surface water connection to a stream or other wetland and were therefore determined to be isolated. Total wetland acreage within the study area was calculated to be 28.31 acres.

Locally significant wetlands were identified using the Oregon Freshwater Wetland Assessment Method (OFWAM). Significance was determined based on a wetland's ability to provide high function in one or more of the following categories: wildlife habitat, fish habitat, water quality or hydrologic control, or the wetland's ability to provide medium water quality function if located within 0.25 mile of a DEQ water quality listed stream. Eleven wetland units were determined to be locally significant. The Ashland Demonstration Wetlands (W2) were not designated as locally significant due to their creation for the purpose of wastewater treatment per OAR 141-086-350(1). The Billings Ranch wetland (W3) and the Washington Street wetland (W11) were determined to be non-locally significant.

All riparian corridors were inventoried to evaluate general stream characteristics and hydrology, adjacent landform, and vegetation. Significant riparian corridors were determined using the Goal 5 Safe Harbor criteria. Riparian corridors along streams identified by the Oregon Department of Fish and Wildlife as being fish-bearing were determined to be significant according to the Safe Harbor criteria. Significant riparian corridors in the study area include Ashland Creek, Bear Creek, Emigrant Creek, Kitchen Creek, Neil Creek, and Tolman Creek.

Further information is included in the accompanying report, and the reader is referred to the appendices for wetland and riparian summary sheets, wetland sample plot data, OFWAM data sheets and other information.

[1] The Portland, Oregon office of SWCA Environmental Consultants was acquired from Fishman Environmental Services in 2004.

Project Purpose

The City of Ashland is required to update their Comprehensive Plan under periodic review for Goal 5 wetland resources. The Goal 5 rule requires the City to inventory its natural resources according to the general inventory process outlined in OAR 660-023-0030 as well as specific guidelines for wetlands (660-023-0100) and riparian corridors (OAR 660-023-0090). Fishman Environmental Services, a Division of SWCA Environmental Consultants (Fishman/SWCA), conducted a Local Wetlands Inventory (LWI) and Riparian Corridor Inventory (RCI) for the City of Ashland to meet statewide planning Goal 5 requirements. The LWI was prepared to meet the Department of State Lands (formerly the Division of State Lands) Local Wetlands Inventory Standards and Guidelines (OAR 141-086-0180 through 141-086-0240; effective July 1, 2001). Significant riparian corridors were mapped using the Safe Harbor criteria identified under OAR 660-023-0090(5). The LWI and RCI are required to be submitted to the Oregon Department of State Lands (DSL) and the Department of Land Conservation and Development (DLCD) for review and approval before they can be adopted by the City and used to develop a land use program to conserve and protect significant Goal 5 resources.

Background Information

Study Area

The study area for the Local Wetlands Inventory and Riparian Corridor Inventory includes the City of Ashland city limits and the urban growth boundary. Total study area boundary acreage is 4,959 acres or 7.75 square miles. The study area is located in Township 38 South, Range 1 East, Sections 31, 32, and 33 and Township 39 South, Range 1 East, Sections 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 22, and 23. An index map of the study area is included in Appendix 1. The study area is contained on 12 base maps.

Drainage Basin

The City of Ashland is located within the Rogue River basin. The study area is contained entirely within the Bear Creek watershed. The study area contains two major drainages: Bear Creek in the north and Ashland Creek in the west.

Topography

Topography of the study area consists of steeply sloped foothills in the south, a relatively flat central portion that is highly developed, and the Bear Creek floodplain in the north. Streams in the higher elevation areas are confined within steep V-shaped drainages, and streams in lower elevation areas are typically confined within a well-defined stream channel. Therefore, stream-associated wetlands are generally either not present or are limited to a narrow fringe along the stream channel. Fishman/SWCA obtained two-foot contours of the study area from the City of Ashland. Two-foot contours were not available for the northwest portion of the study area in Sections 31 and 32.

Vegetation
Wetland indicator status is according to the U.S. Fish and Wildlife Service National List of Plant Species that Occur in Wetlands: Northwest (Region 9).

Soils
Soils were mapped in the Soil Survey of Jackson County Area, Oregon (USDA SCS 1993). The vast majority of the study area is mapped as containing hydric soil inclusions. The only area of mapped hydric soils in the study area is located along Kitchen Creek.

National Wetlands Inventory & Previous Wetland Inventory
Approximately fifty wetlands were mapped in the National Wetlands Inventory (NWI) on the Ashland, Oregon NWI quadrangle. A few mapped wetlands are associated with streams, but the majority of wetlands appear to be isolated. A field survey of Ashland's wetlands was conducted by two Southern Oregon University students in 1990. The 1990 study area generally coincided with the study area of the present inventory, with the exception of that the previous inventory did not include the area located outside the City limits and inside the UGB in Sections 5, 31, and 32. The 1990 inventory focused almost exclusively on field verifying the presence of NWI-mapped wetlands, collecting sample plot data, and photodocumenting the wetlands.

Floodplain
The floodplain was mapped by the Federal Emergency Management Agency on the Flood Insurance Rate Map for the City of Ashland, Oregon. A 100-year floodplain is mapped along Ashland, Bear, Clay, Emigrant, Hamilton, and Neil creeks. The City of Ashland modified the FEMA floodplain boundaries following the 1997 flood, including mapping the 100-year floodplain adjacent to Cemetery Creek.

Department of State Lands Files
Fishman/SWCA obtained copies of wetland determinations, delineations, and permit applications within the study area from the Department of State Lands. A list of the DSL files obtained along with their approximate locations and current status of these wetlands is included in Appendix 2. Wetland delineation boundaries from maps included in DSL files were hand mapped onto aerial photograph base maps and were field verified where permission to access was granted.

Aerial Photographs & GIS Data
Fishman/SWCA obtained black and white aerial photographs dated April 16, 1998, which showed spring hydrology, and color aerial photographs dated July 2001 from the City of Ashland. The 1998 aerial photos were previously used by the City of Ashland Geographic Information Department to prepare a Geographic Information System (GIS) layer of streams, ditches and ponds in the study area.

Scope of Work

Local Wetlands Inventory

A Local Wetlands Inventory has been prepared in accordance with the Department of State Lands Local Wetlands Inventory Standards and Guidelines (OAR 141-086-0180 through 141-086-0240; effective July 1, 2001). Fishman/SWCA mapped all wetlands greater than 0.5 acre according to the LWI rules. The approximate locations of many wetlands less than 0.5 acre in size were also mapped. These small wetlands are identified as "possible wetlands" on the LWI maps. Many isolated man-made ponds are present in the study area, most of which are less than 0.5 acre. Man-made ponds were also included on the LWI maps. Mapping protocol follows the DSL LWI rules and wetland boundaries have been digitized in an ESRI-compatible format for use by the City and DSL.

Wetland Assessment and Determination of Locally Significant Wetlands

Wetlands greater than 0.5 acre in size have been assessed using the Oregon Freshwater Wetland Assessment Method (OFWAM) as required by the LWI rules. The OFWAM assessment consisted of evaluating Wildlife Habitat, Fish Habitat, Water Quality, and Hydrologic Control functions. Per the Department of State Lands Administrative Rules for Identifying Significant Wetlands (OAR 141-86-300 through 141-86-350), if the assessed wetland unit provided diverse wildlife habitat, intact fish habitat, intact water quality function, or intact hydrologic control function, then the wetland was determined to be significant.

Wetlands not meeting the significance criterion based upon the OFWAM assessment were also evaluated according to the other criteria for determining Locally Significant Wetlands established by DSL. These criteria include (but are not limited to): the wetland or a portion of the wetland is within a horizontal distance less than one-fourth mile from a water quality limited water body (DEQ's 303(d) list) and its water quality function is intact or impacted or degraded; the wetland contains one or more rare plant communities; the wetland is inhabited by any species listed by the federal government as threatened or endangered or listed by the state as sensitive, threatened or endangered; or 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.

Riparian Corridor Inventory

Although the Goal 5 Rule is very specific regarding Local Wetlands Inventory methodology, the Goal 5 Rule does not include a prescribed method for the preparation of a Riparian Corridor Inventory. Discretion provided to local communities through the Goal 5 rule allows for inventory methods which are created by the City, reviewed by its' citizens, and implemented in a manner that best fits with the local natural resources.

The process of determining an exact location of a riparian corridor requires an on-site resource delineation. Even among the experts, the definition of "riparian" and the position of the boundary is often debated.

Determination of Significant Riparian Corridors

Goal 5 provides a Safe Harbor optional course of action rather than following the standard Goal 5 process, including the ESEE decision process. The Safe Harbor criteria identified under OAR 660-023-0090(5) establish a standard setback distance from all fish-bearing lakes and streams as follows:

> (a) Along all streams with average annual stream flow greater than 1,000 cubic feet per second (cfs) the riparian corridor boundary shall be 75 feet upland from the top of each bank.
>
> (b) Along all lakes, and fish-bearing streams with average annual stream flow less than 1,000 cfs, the riparian corridor boundary shall be 50 feet from the top of bank.
>
> (c) Where the riparian corridor includes all or portions of a significant wetland as set out in OAR 660-023-0100, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland.
>
> (d) In areas where the top of each bank is not clearly defined, or where the predominant terrain consists of steep cliffs, local governments shall apply OAR 660-023-0030 rather than apply the safe harbor provisions of this section.

Public Involvement Process

A newspaper article was published in the Ashland Daily Tidings on May 23, 2003 notifying the public of the onset of the Local Wetlands Inventory and Riparian Corridor Inventory. A second newspaper article appeared in the Medford Mail Tribune on July 23, 2003 describing the status of the inventory process.

Fishman/SWCA conducted two public open house meetings for the project. The first meeting was held on June 4, 2003 to present the Goal 5 requirements and inventory process. The second meeting was held on November 20, 2003 to present the draft inventory results and maps and to receive public comments on the draft maps. Approximately two dozen citizens attended the second meeting. A third public meeting will occur to present the final inventory and maps to the City planning commission.

Local Wetlands Inventory and Assessment (OAR 660-023-0090)

Wetland Definition

Wetlands are federally defined as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory 1987). In other words, wetlands typically display three wetland criteria: a predominance of hydrophytic (wetland) vegetation, the presence of hydric (wet) soils, and wetland hydrology (ponding or near-surface saturated soils for at least 5 percent of the growing season; typically 11 days or so

during the growing season. According to the Jackson County soil survey, the growing season in Medford is April 7th through November 3rd (the growing season may vary annually).

Wetland Methodology

The Goal 5 rule is very specific in the method required for wetland inventories. The wetland inventory must be prepared using OAR 141-086-0210 through 0240. The product of the wetland inventory is a Local Wetlands Inventory (LWI). The Oregon Department of State Lands (DSL) must approve the LWI.

Prior to conducting field work, background information was reviewed in the office to identify possible wetland areas and to prioritize sites for field verification. Background information included USGS topographic map, national wetlands inventory map, Jackson County soil survey, and FEMA floodplain maps; DSL wetland determination/delineation and permit files; two-foot contour mapping from the City; and 1998 and 2001 aerial photos from the City. Field work included verification of the presence or absence of NWI mapped wetlands and wetlands previously identified in DSL files; identification of previously unmapped wetlands areas greater than 0.5 acre; and identification of possible wetlands less than 0.5 acre, even though these areas are not required to be mapped according to LWI standards. Identification of new (i.e. previously unmapped) wetland areas was facilitated by field visits of sites which contained either a topographic drainage on the 2-foot contour maps or a wetland hydrology signature visible on the aerial photographs.

Letters requesting permission to access were mailed to 1,513 property owners. The City sent out letters to the property owners requesting written permission to access these parcels. The list of parcels for which permission to access was requested was generated primarily based upon a GIS query identifying parcels containing either NWI or City mapped streams, wetlands or ponds, parcels mapped within the 100-year floodplain, and parcels located within 50 feet of any one of these mapped resource boundaries. In addition, several parcels which contained either a topographic drainage based upon 2-foot contours or a wetland hydrology signature on the aerial photographs were also included on the list. Of the approximately 1,500 letters, the City received 589 yes responses and 104 no responses. Field work was conducted on June 3, 4, 5, 24, 25, and 26, 2003.

Properties for which on-site data collection was allowed were identified on a tax lot base map which was color coded to identify publicly-owned parcels as well as properties for which permission to access was either granted or granted with conditions (i.e. call to notify property owner prior to site visit). On-site data collection consisted of either preparation of wetland determination sample plot data sheets documenting vegetation, soils, hydrology, and topography (included in Appendix 3) or field notes recording our visual observations of one or more of these parameters. No on-site data was collected on parcels for which permission to access was not granted or for which no response to the public notice requesting permission to access was received by the City. For areas where permission to access was not granted, off-site data was collected where possible by viewing the site with the use of binoculars from adjacent roads, parking lots or public

properties. Base maps used for field work and mapping consisted of 2001 color aerial photographs plotted at a scale of 1 inch to 300 feet. The City's stream, ditches and ponds GIS layer, which was created based on interpretation of 1998 aerial photographs, and the NWI mapping were overlayed onto the aerial photographs. Wetland and riparian boundaries, sample plots, and off-site observation points were hand mapped on the aerial photograph base maps in the field.

Wetlands were identified based on the methodology contained in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987), used by the Department of State Lands. Wetlands generally include swamps, marshes, bogs, and similar areas, but also include seasonally wet meadows, farmed wetlands and other areas that may not appear "wet" at all times throughout the year. Aerial photograph signatures of wetland habitat types were groundtruthed at the start of the inventory at publicly owned sites including the Ashland Demonstration Wetlands and adjacent BMX park and at the North Mountain Nature Park. Wetland habitat types were labeled according to Cowardin class. Wetland habitat types present in the study area include: palustrine scrub-shrub (PSS), palustrine emergent (PEM), and palustrine open water (POW).

Wetland boundaries, sample plot locations, and field observation points were mapped by hand on the color aerial photo base maps. Wetland boundaries and other data were then digitized onto digital aerial photographs in a Geographic Information System. The GIS attribute tables contain data for each wetland polygon including unique polygon ID number, wetland unit number, habitat type, wetland acreage, and DSL file number (if any).

The locations of several isolated wetlands that were too small to be inventoried according to DSL rules (<0.5 acre) were mapped approximately as "possible wetlands". In addition, several other areas that appeared to be wetland from off-site, but for which the presence of wetland could not be field verified since permission to access these properties was not granted, were also mapped as possible wetlands. Many isolated man-made ponds are present in the study area, most of which are less than 0.5 acre. Man-made ponds were mapped separately from possible wetlands and wetlands greater than 0.5 acre.

Wetland summary sheets have been prepared for each wetland unit. Wetland summary sheets include the site name, site code, general location, Township, Range, and Section location, DSL file number (if any), acreage, Cowardin (NWI) classification, hydrogeomorphic classification, hydrologic basin, mapped soils, sample plot numbers (if any), date(s) of field work, dominant vegetation, primary hydrology source, OFWAM summary, significance determination, and general wetland description including basis for wetland boundary determination. Wetland summary sheets are included in Appendix 4.

The approximate locations of potential wetland mitigation/restoration sites are also required to be identified according to DSL's local wetlands inventory standards and guidelines. According to OAR 141-086-210 (19), "Vacant, former wetlands, consisting mostly of relict (dewatered) hydric soils, which are five (5) acres or larger in size shall be identified and mapped as potential wetland mitigation or restoration sites...." No sites

within the study area meeting these criteria were identified; therefore, a map of potential wetland mitigation/restoration sites is not included in the LWI.

Wetland Assessment Criteria

Wetlands were assessed using the Oregon Freshwater Wetland Assessment Methodology (OFWAM; Roth et al. 1996), which evaluates wetland functions and values relative to other wetlands within the study area. The four functions listed below were assessed for each OFWAM unit, and each function was rated high, medium or low based on how many of the criteria listed below for each function were met. OFWAM evaluation sheets are included in Appendix 5. OFWAM wetlands of special interest for protection and wetland characterization evaluation sheets which evaluate general watershed characteristics are included in Appendix 6.

Wildlife Habitat - The following criteria contribute to wetlands having high wildlife habitat function: two or more Cowardin wetland classes (i.e. forested, scrub-shrub, emergent) are present; woody vegetation is the dominant wetland vegetation cover type; there is high interspersion among Cowardin classes; more than one acre of open water is present; the wetland is connected to other wetlands or bodies of water by surface water (stream, lake, pond, ditch, or culvert); no upstream or adjacent stream reaches are listed as water quality limited; the dominant existing land use within 500 feet of the wetland's edge is exclusive forest use or open space; and greater than 40 percent of the wetland's edge is bordered by a vegetated buffer at least 25 feet wide.

Fish Habitat - The following criteria contribute to wetlands having high fish habitat function: more than 75 percent of the stream is shaded by stream-side (riparian) vegetation; the stream is in a natural channel, or modified portions of the stream are returning to a natural channel; more than 25 percent of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks, or boulders; no upstream or adjacent stream reaches are listed as water quality limited; the dominant existing land use within 500 feet of the wetland's edge is exclusive forest use or open space; and salmon, trout or sensitive species are present in a stream, lake or pond associated with the wetland at some time during the year.

Water Quality Protection - The following criteria contribute to wetlands having high water quality protection function: the wetland's primary source of water is surface flow, including streams and ditches, or precipitation; there is evidence of flooding or ponding during a portion of the growing season; wetland vegetation cover is greater than 60 percent; the wetland is greater than 5 acres in size or is between 0.5 acre and 5 acres in size and is connected to other wetlands within a 3 miles radius by surface water (stream, ditch, canal or lake); the dominant existing land use within 500 feet of the wetland's edge is developed uses or agriculture; and one or more upstream or adjacent stream reaches are listed as water quality limited.

Hydrologic Control - The following criteria contribute to wetlands having high hydrologic control function: the wetland is located within the 100-year floodplain or within an enclosed basin; there is evidence of flooding or ponding during a portion of the

growing season; the wetland is greater than 5 acres in size; waterflow out of the wetland is restricted (beaver dam, concrete structure, undersized culvert) or the wetland has no outlet; woody vegetation is the dominant wetland vegetation cover type; the dominant existing land use within 500 feet of the wetland on the downstream or downslope edge of the wetland is developed uses; and the dominant land use in the watershed upstream from the assessment area is urban or urbanizing.

OFWAM Units

Fourteen wetland units (W1 – W14) were inventoried and assessed. Wetland units are listed below along with their Township, Range and Section, general location, Cowardin wetland habitat classification, and wetland acreage. Wetland units may contain one or more wetland areas. Wetlands along the same stream reach with the same hydrology source and adjacent land use are grouped into the same OFWAM unit for assessment purposes. Similarly, if a wetland is bisected by a road crossing and each wetland area contains similar characteristics, they are grouped into the same wetland unit. Eleven wetland units were associated with streams or were hydrologically connected to a stream via roadside or agricultural drainage ditches. Three (W2, W8 and W9) wetlands did not contain a surface water connection to a stream or other wetland and were therefore determined to be isolated. Narrow wetland fringes, ranging from 1 to 5 feet wide, were present along several streams within the study area. These wetland fringes were much smaller than 0.5 acre (the minimum wetland size required by DSL to be mapped) and are not included in the OFWAM units in the table below. It was not possible to map wetland fringes given the map scale of a wetland inventory. Wetland fringes were included within the riparian corridor mapping along streams in the study area, including forested wetland fringes along Ashland Creek and Bear Creek.

TABLE 1. OFWAM UNITS, WETLAND HABITAT TYPES & ACREAGES

Wetland Unit	TRS	Location	Habitat Type*	Wetland Acreage
W1	T39S, R1E, S4	Ashland Creek/BMX Park	PEM	2.23
W2	T39S, R1E, S4	Ashland Demonstration Wetlands	POW/PEM	0.64
W3	T39S, R1E, S5	Billings Ranch	PEM	1.83
W4	T39S, R1E, S10	Cemetery Creek	PEM	3.86
W5	T39S, R1E, S4 & 9	Clear Creek Village	PEM/POW	1.29
W6	T39S, R1E, S11	Knoll Creek	PEM	1.71
W7	T39S, R1E, S4	North Mountain Nature Park	PEM/POW	3.25
W8	T39S, R1E, S4	NWI Wetland 4G	PSS	0.90
W9	T39S, R1E, S10	NWI Wetland 10B	PEM	5.38
W10	T39S, R1E, S13	NWI Wetland 13B & 13C	PEM	2.12

TABLE 1. OFWAM UNITS, WETLAND HABITAT TYPES & ACREAGES				
Wetland Unit	**TRS**	**Location**	**Habitat Type***	**Wetland Acreage**
W11	T39S, R1E, S14	Washington Street	PEM	0.85
W12	T39S, R1E, S10	West of Cemetery Creek	PEM	1.68
W13	T39S, R1E, S11	West of Hamilton Creek	PEM	1.41
W14	T38S, R1E, S33	Ashland Creek, near sewage treatment plant	POW/PEM	1.16
			Total Wetland Acreage	28.31

* PEM = palustrine, emergent; POW = palustrine, open water; PSS = palustrine, scrub-shrub

Determination of Significance for Wetland Areas

The 14 wetland units listed above were evaluated using the Oregon Freshwater Wetland Assessment Methodology (OFWAM) as required by the LWI rules. The OFWAM assessment consisted of evaluating Wildlife Habitat, Fish Habitat, Water Quality, and Hydrologic Control functions. Per the Department of State Lands Administrative Rules for Identifying Significant Wetlands (OAR 141-86-300 through 141-86-350), if the assessed wetland unit provided diverse wildlife habitat, intact fish habitat, intact water quality function, or intact hydrologic control function, then the wetland was determined to be locally significant. Wetlands W1, W4-W9 and W12-W14 were determined to be locally significant wetlands according to this methodology. Although Wetland W2 displays intact water quality function, it is excluded from the locally significant wetland criteria according to OAR 141-086-0350(1) "Exclusions. Regardless of their standing in relation to the criteria in OAR 141-086-0350(2) or (3) of these rules, wetlands shall not be designated as locally significant if they fall within any one of the following categories:...(E) Of any size and created for the purpose of wastewater treatment...."

Three wetlands (W3, W10 and W11) did not meet the significance criterion based upon the OFWAM assessment and were therefore evaluated according to the other criteria for determining Locally Significant Wetlands established by DSL. These criteria include: the wetland or a portion of the wetland is within a horizontal distance less than one-fourth mile from a water quality limited water body (DEQ's 303(d) list) and its water quality function is intact or impacted or degraded; the wetland contains one or more rare plant communities; the wetland is inhabited by any species listed by the federal government as threatened or endangered or listed by the state as sensitive, threatened or endangered; or 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.

Wetland W10 was determined to be locally significant based on rating medium for water quality function and occurring within ¼ mile of a water-quality limited stream listed by DEQ on the 303(d) list. Wetlands W3 and W11 did not meet any of these criteria and were therefore determined to be non-locally significant.

The table below summarizes the wetland function ratings and wetland significance for each OFWAM unit. OFWAM evaluation sheets for each unit are included in Appendix 5, and OFWAM wetlands of special interest for protection and wetland characterization evaluation sheets are included in Appendix 6. A complete list of all vegetation observed in wetlands and uplands in the study area is included in Appendix 7.

TABLE 2. LOCAL WETLANDS INVENTORY
DETERMINATION OF LOCALLY SIGNIFICANT WETLANDS

Wetland Unit	OFWAM FUNCTIONS[1]				SIGNIFICANT[2]
	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	
1	M	L	H	M	Y
2	M	L	H	M	N[3]
3	M	L	M	M	N
4	M	M	H	M	Y
5	M	M	H	H	Y
6	M	H	H	M	Y
7	H	M	H	H	Y
8	M	L	M	H	Y
9	M	L	H	H	Y
10	M	L	M	M	Y[4]
11	M	L	M	M	N
12	M	L	H	M	Y
13	M	L	H	M	Y
14	H	M	M	H	Y

[1] Wildlife Habitat Function: H = Diverse wildlife habitat, M = Habitat for some species, L = Lost or not present. Fish Habitat, Water Quality and Hydrologic Control Functions: H = Intact, M = Impacted or degraded, L = lost or not present

[2] Wetlands which score high in at least one of the four functions evaluated are determined to be locally significant according to DSL rules, except as noted below.

[3] Wetlands of any size that were created for the purpose of wastewater treatment shall not be designated as locally significant per OAR 141-086-350(1).

[4] Wetland W10 was determined to be locally significant based on rating medium for water quality function and occurring within ¼ mile of a water-quality limited stream listed by DEQ on the 303(d) list.

Status of National Wetlands Inventory Mapped Wetlands

We attempted to field verify the presence or absence of all wetlands mapped on the NWI in the study area. Several of the larger NWI-mapped wetlands have been incorporated into the wetlands mapped in the local wetlands inventory, including units W3, W8, W9, W10 and W13. Many of the NWI-mapped wetlands were determined to be man-made ponds and are mapped as ponds on the local wetlands inventory maps. Several wetlands mapped as less than 0.5 acre in size on the NWI could not be field verified due to lack of permission to access the sites and are therefore identified as Possible Wetlands (PW) on the local wetlands inventory maps. The local wetlands inventory maps replace the national wetlands inventory maps and the City's stream, ditches and ponds GIS layer and

provide the most accurate inventory of wetlands inside the Ashland urban grown boundary.

Riparian Corridor Inventory (OAR 660-023-0090)

Riparian Corridor Definition

Goal 5 definitions:

"Riparian area" is the area adjacent to a river, lake, or stream, consisting of the area of transition from an aquatic ecosystem to a terrestrial ecosystem.

"Riparian corridor" is a Goal 5 resource that includes the water areas, fish habitat, adjacent riparian areas, and wetlands within the riparian area boundary.

"Riparian corridor boundary" is an imaginary line that is a certain distance upland from the top of bank...

Riparian Corridor Methodology

The method for conducting a riparian corridor inventory is not prescribed. The Goal 5 Rule permits the application of a "Safe Harbor" setback distance to all fish bearing lakes and streams. The standard setback is 50 feet for streams with more than 1000 cubic feet per second (cfs) stream flow and 50 feet for fish bearing lakes and streams with less than 1000 cfs. The rule also lists the following resources that must be consulted when completing the riparian corridor inventory:

- Oregon Department of Forestry stream classification maps
- USGS 7.5-minute quadrangle map
- National Wetland Inventory Maps
- Oregon Department of Wildlife (ODFW) maps indicating fish habitat
- Federal Emergency Management Agency (FEMA) flood maps
- Aerial photographs

Fishman/SWCA has prepared the riparian corridor inventory using a modified on-site method. Time and budget constraints typically make it unfeasible to conduct an on-site delineation of all riparian corridors in the City. Therefore, we conducted brief on-site field visits to document vegetation and topography adjacent to streams at several locations along each stream to determine the approximate location of the riparian corridor. The location of the riparian corridor was hand mapped on the aerial photo base map (photo date 2001, scale 1 inch to 300 feet). Two foot contour data and vegetation signatures on the aerial photos were used to approximate the location of the riparian corridor for areas that were not field verified. For areas where permission to access was not granted, off-site data was collected if possible by viewing the site with the use of binoculars from adjacent roads, parking lots or public properties. No field data was collected for Strawberry Creek or Twin Creek since permission to access the properties

containing these small sections of stream was not granted, and the streams were not visible from adjacent public roads. Field work was conducted on June 3, 4, 5, 24, 25, and 26, 2003.

Riparian summary sheets include the site name, Township, Range, and Section location, sample plot numbers (if any), dates(s) of field work, dominant vegetation, and general riparian corridor description. Riparian summary sheets are included in Appendix 8.

Riparian Corridor Units

Riparian corridors were mapped along all streams in the study area, which include:

- Ashland Creek
- Ashland Creek Tributary 1
- Beach Creek
- Bear Creek
- Bear Creek Tributary 1
- Cemetery Creek
- Clay Creek
- Clear Creek
- Emigrant Creek
- Fordyce Creek
- Golf Course Creek
- Hamilton Creek
- Hamilton Creek Tributaries 1 & 2
- Kitchen Creek
- Knoll Creek
- Mountain Creek
- Neil Creek
- Paradise Creek
- Paradise Creek East
- Pinecrest Creek
- Roca Creek
- Strawberry Creek
- Tolman Creek
- Twin Creek
- Wrights Creek
- Wrights Creek Tributaries 1 - 5

Determination of Significance for Riparian Corridor Areas

Significant riparian corridors mapped using the Safe Harbor criteria identified under OAR 660-023-0090(5). The Safe Harbor criteria establish a standard setback distance from all fish-bearing lakes and streams as follows:

> a) Along all streams with average annual stream flow greater than 1,000 cubic feet per second (cfs) the riparian corridor boundary shall be 75 feet upland from the top of each bank. (Top of bank is defined by the DSL as "bankfull stage," and in the absence of obvious tops of bank can be approximated by the two-year flood

elevation. Most streams in the City of Ashland have well-defined channels and the top of bank is in most cases easily observed in the field.)

b) Along all lakes, and fish-bearing streams with average annual stream flow less than 1,000 cfs, the riparian corridor boundary shall be 50 feet from the top of bank.

c) Where the riparian corridor includes all or portions of a significant wetland, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland.

d) In areas where the top of each bank is not clearly defined, or where the predominant terrain consists of steep cliffs, local governments shall apply OAR 660-23-030 (the inventory process defined in the subject document) rather than apply the safe harbor provisions.

Fish-bearing streams were determined based upon ODFW StreamNet data and a map from the Oregon Department of Fish and Wildlife showing stream segments where fish presence was documented based upon ODFW observations during electroshocking and snorkel surveys conducted in 1997 through 2000. The ODFW map identifies Ashland Creek, Bear Creek, Emigrant Creek, Kitchen Creek, Neil Creek, and Tolman Creek as being fish-bearing within the study area. According to the Safe Harbor criteria, a 50 foot buffer is required adjacent to these streams.

Most of the streams in Ashland are not documented as fish-bearing, and therefore would not be protected under the safe harbor requirements. Short sections of Clay Creek, Hamilton Creek and Wrights Creek located downstream of the study area were mapped as fish-bearing; however, the streams are not documented as being fish-bearing within the study area, so a safe harbor has not been applied to these streams. The City currently requires 10 to 20 foot buffers adjacent to all streams within the Ashland urban growth boundary, including those that are not fish-bearing. The City of Ashland is currently discussing alternatives for additional inventory, assessment, and regulation of riparian corridors not addressed under the Safe Harbor.

Staff Qualifications

As required by LWI rules, technical staff qualifications are described below.

Project Manager: Daniel Stark, AICP, Natural Resource Planner / GIS Program Manager

Responsibilities: Dan provided project management and coordination with the City of Ashland Planning Staff, provided coordination of the GIS database development, and assisted in preparing the Goal 5 report.

Dan Stark is certified by the American Institute of Certified Planners and provides land use expertise and public service sector personal experience. Dan's specialties include natural resource planning, GIS, and land use planning. Dan had more than five years

experience as a Planner and GIS Analyst for Marion County, Oregon where he developed and maintained the County Planning Division GIS using ArcInfo, ArcView and Map Objects. Dan has developed tools using AML (Arc Macro Language) to analyze the county groundwater consumption rates and determine compliance with the county groundwater ordinance. His GIS database included tax lot-level analyses of soils, wetlands, floodplains, other natural resource features and urban infrastructure. Dan also participated in the long-range planning program at Marion County by providing support to the periodic review tasks including Goals 3, 4, 5, 7, 14 and others. Since joining Fishman/SWCA in November of 1999, Dan has managed several large inventory and assessment projects including the City of Hillsboro Local Wetlands, Riparian Corridor, and Wildlife Habitat Inventory and Assessment (Goal 5 project), Watersheds 2000 stream assessment for Clean Water Services (Washington County's stormwater management agency), and has also assisted with the City of Wilsonville's Goal 5 Inventory, Title 3 Compliance, and ESA Compliance project.

Field Inventory Staff: Stacy N. Benjamin, Wetland Ecologist
Responsibilities: Stacy managed the field inventory, prepared the wetland and riparian corridor maps, conducted OFWAM, prepared the resource site summary sheets and summary tables, and prepared the Goal 5 report. Stacy provided review and quality control of GIS map products.

Stacy Benjamin is experienced in wetland determination and delineation, wetland permitting, mitigation design, wetland monitoring, and natural resource assessment. Stacy's Goal 5 experience includes conducting local wetlands inventories for the Cities of Hillsboro and Lakeside; wetland, riparian and upland habitat function and value assessments; and updating the natural resource inventory (riparian and upland resources) for the Lane Council of Governments. Stacy is experienced in both on-site and off-site wetland inventory methodology, aerial photograph interpretation and mapping, and conducting function and value assessments for wetland, riparian, and upland areas. Stacy has completed training in the 1987 Wetlands Delineation Manual and has been conducting wetland determinations and delineations since she joined Fishman/SWCA in 1996.

Field Inventory Staff: C. Mirth Walker, PWS, CWD, Wetlands Program Manager
Responsibilities: Mirth assisted with the field inventory and provided review and quality assurance for all inventory and assessment products.

Mirth Walker is responsible for coordination of wetland work orders and provides wetland delineation QA/QC and project management. She is certified as a Professional Wetland Scientist (PWS) by the Society of Wetland Scientists and is a provisionally certified Wetland Delineator by the Seattle District U.S. Army Corps of Engineers. Mirth's specialties include wetland determinations and delineations, wetland mitigation and monitoring, permit coordination, aerial photograph interpretation, wetland training, and natural resource inventories. Mirth managed and conducted the City of Wilsonville LWI / RCI / Upland Wildlife Habitat Inventory and Assessment, the Lakeside LWI, the

La Grande LWI, and she assisted with the Cities of Hillsboro, Tualatin, Tigard, and Stayton wetland inventories and assessments.

Geographic Information System Management: Rafael Gutierrez, GIS Analyst
Responsibilities: Preparation of GIS maps and management of the GIS database

Rafael's specialties include ESRI's ArcView and ArcInfo software, Global Positioning Systems, database design and development, and cartographic design. He has a firm understanding of projection, datum, and coordinate system concepts. Rafael also has four years experience in web development and design including client/server administration, PHP and MySQL database construction and CGI programming. Many of Rafael's projects include digitizing, editing and topological operations, area calculations, transforming datasets to and from various projections and coordinate systems, and spatial analysis using raster datasets. Other project experience includes using dynamic segmentation for linear surveys, multiple criteria analyses, and integrating large relational database management systems with GIS.

Project / Contract Oversight: Paul A. Fishman, CEP, Principal Ecologist
Responsibilities: Paul provided contract management oversight and assistance as necessary in this project, and assisted with public involvement

Paul is a Certified Environmental Professional by the Academy of Board Certified Environmental Professionals. Paul has over 34 years management experience in natural resource assessment and planning. He has managed small and large, individual consultant and multi-discipline team efforts for dozens of clients in the western U.S. Paul has organized and/or participated in community-based processes to guide and implement these efforts. He has developed an extensive network in the environmental community, including resource and regulatory agencies, local jurisdictions, consultants, and public groups. He has developed his company as a key consultant to local jurisdictions for natural resource inventory and planning projects. Paul has a history of providing training and educational seminars to a variety of audiences: in 1996, he conducted a half-day wetland training to help attendees understand the basic requirements for wetland issues; in 1999, Paul provided an educational program for recognizing wetlands, Goal 5 criteria and conducting assessments for the Endangered Species Act.

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Enclosures:
City of Ashland Local Wetlands Inventory Maps

APPENDICES

Appendix 1: Local Wetlands Inventory Index Map & Detail Maps
Appendix 2: List of DSL Wetland Determination and Permit Files
Appendix 3: Wetland Determination Sample Plot Data Sheets
Appendix 4: Wetland Summary Sheets
Appendix 5: OFWAM Evaluation Sheets
Appendix 6: OFWAM Wetlands of Special Interest for Protection & Wetland Characterization Sheets
Appendix 7: Vegetation List
Appendix 8: Riparian Corridor Summary Sheets

City of Ashland
Local Wetlands Inventory
Index Map

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T39S R1E 13
T39S R1E 23
T39S R1E 24

CITY OF ASHLAND

Fishman Environmental Services, A DIVISION OF SWCA

Legend

Natural Resources

- Wetlands
- Possible Wetlands
- Pond
- Streams

- Sections
- City Limits
- UGB
- Streets

N
W E
S

0 1,000 2,000 4,000 6,000

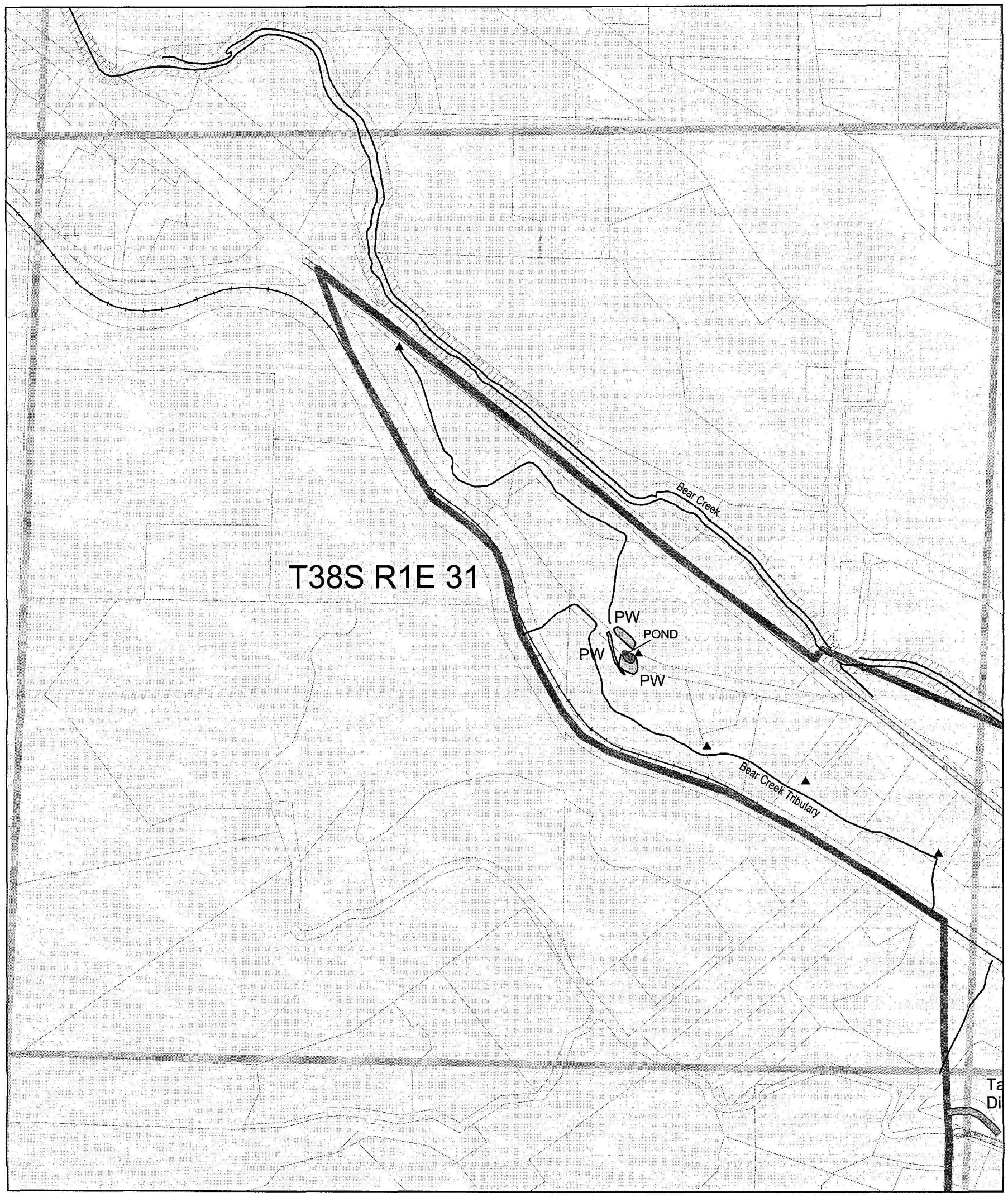
Feet

Data Source: Jackson County GIS 2003. GIS: R.Gutierrez, Fishman Environmental Services, a Division of SWCA www.fishmanenvironmental.com ; 2005-06-2

City of Ashland

Local Wetlands Inventory

T38S R1E 31



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- Wetlands, field verified
- Wetlands, not field verified
- Possible Wetlands
- Pond
- Riparian Corridor Safe Harbor (50 feet)
- Sample Plot
- Observation Point
- Taxlots
- Urban Growth Boundary
- City Limits
- Sections
- Streets
- Railroad
- Streams, intermittent drainages, and ditches
- Laterals
- Talent Irrigation District Canal
- Culverted Streams
- W1-W14 Wetland Unit

N W E S

Feet: 300 150 0 300 600

Study area is contained within the Bear Creek watershed

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Maps have been prepared using
City of Ashland digital orthophotos.
Photos are SID format
Pixel Resolution: 1' pixel
Date of Photography: July 2001

Projection Information:
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GCS North American 1983
Print date: 12/12/06; Prepared By: R. Gutierrez

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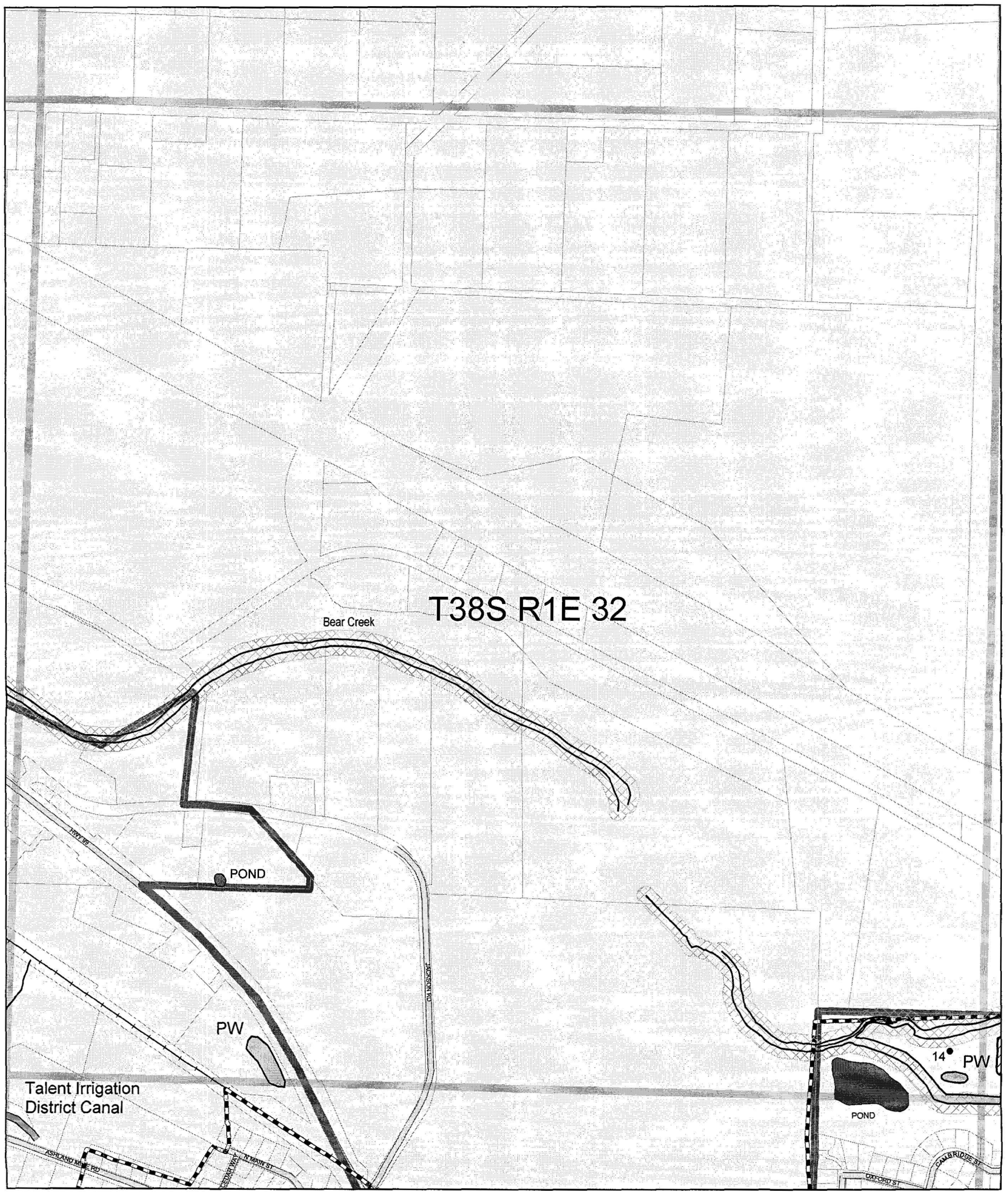
Local Wetlands Inventory

T38S R1E 32



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N W E S

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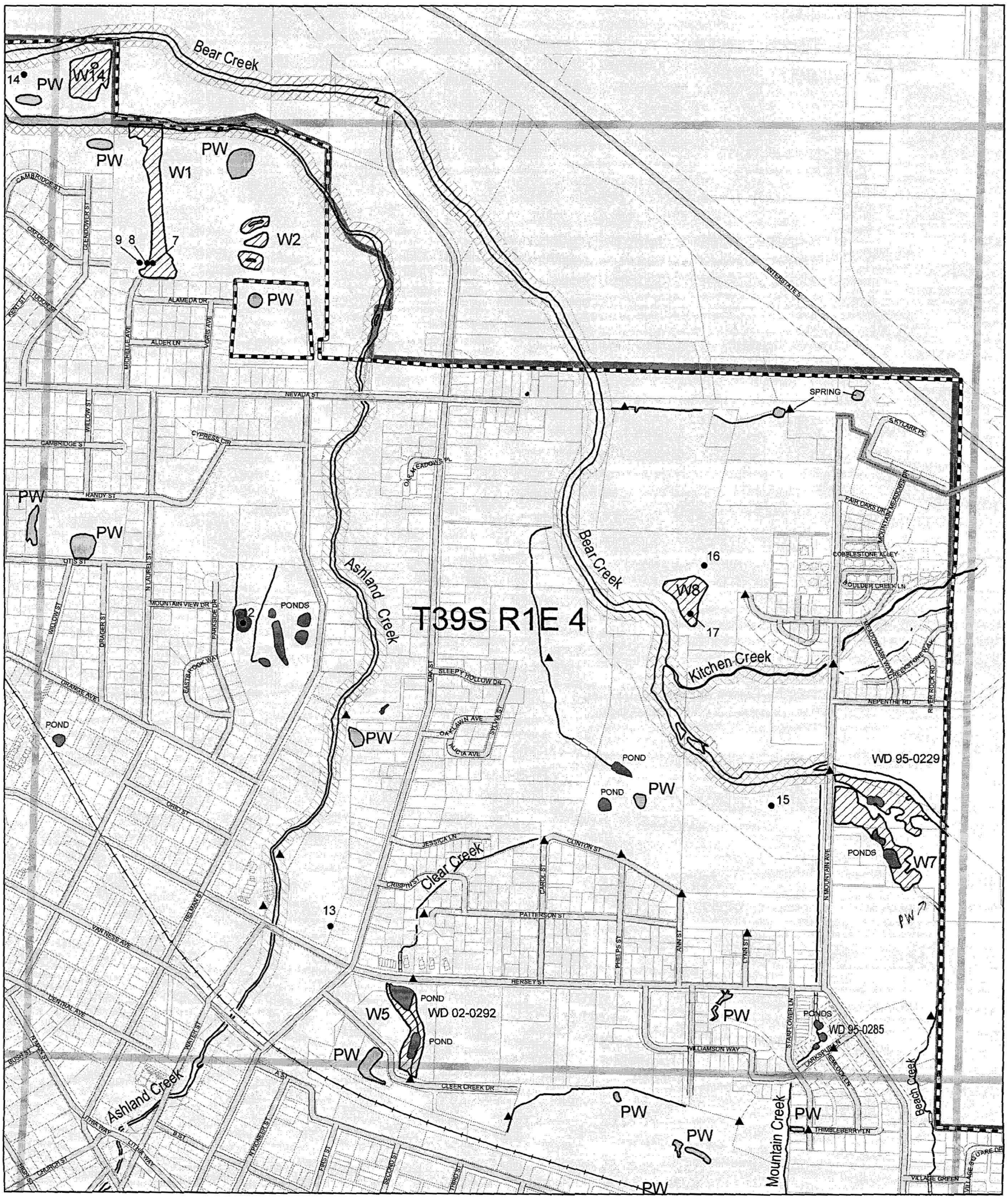
Local Wetlands Inventory

T39S R1E 4



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N W E S

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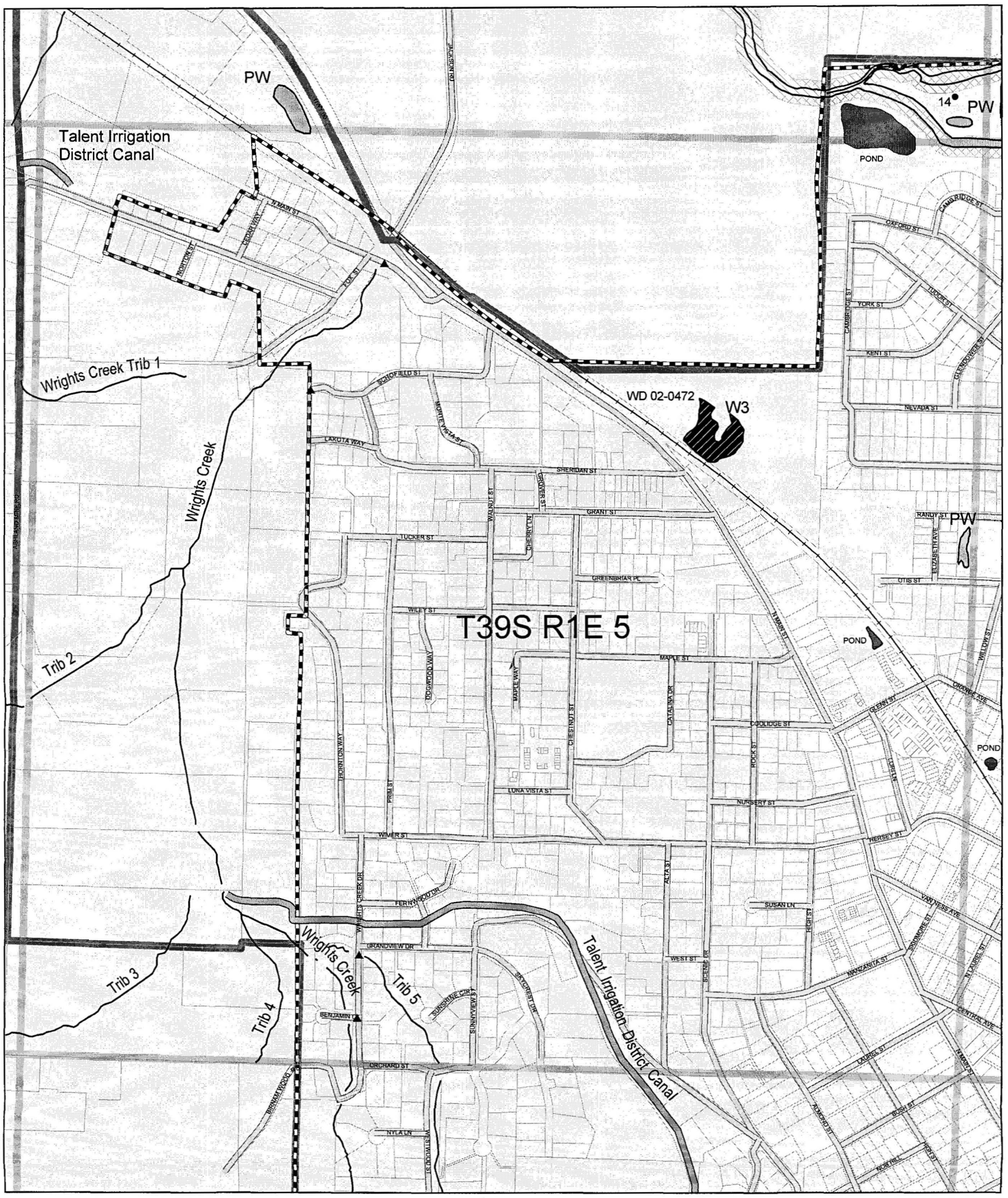
Local Wetlands Inventory

T39S R1E 5



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N W E S

Feet: 300 150 0 300 600

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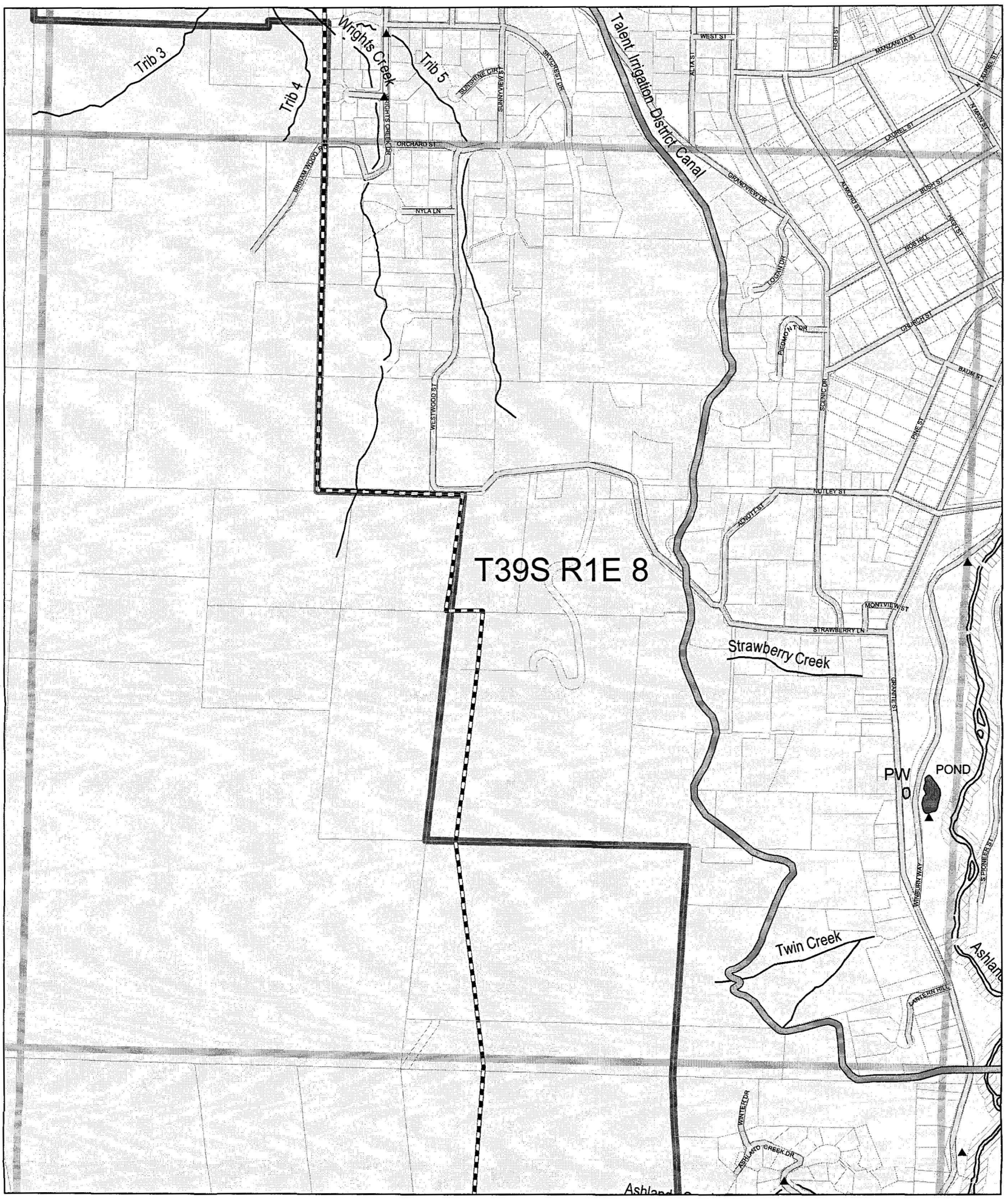
Local Wetlands Inventory

T39S R1E 8



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N, W, E, S

Feet: 300 150 0 300 600

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City of Ashland

Local Wetlands Inventory

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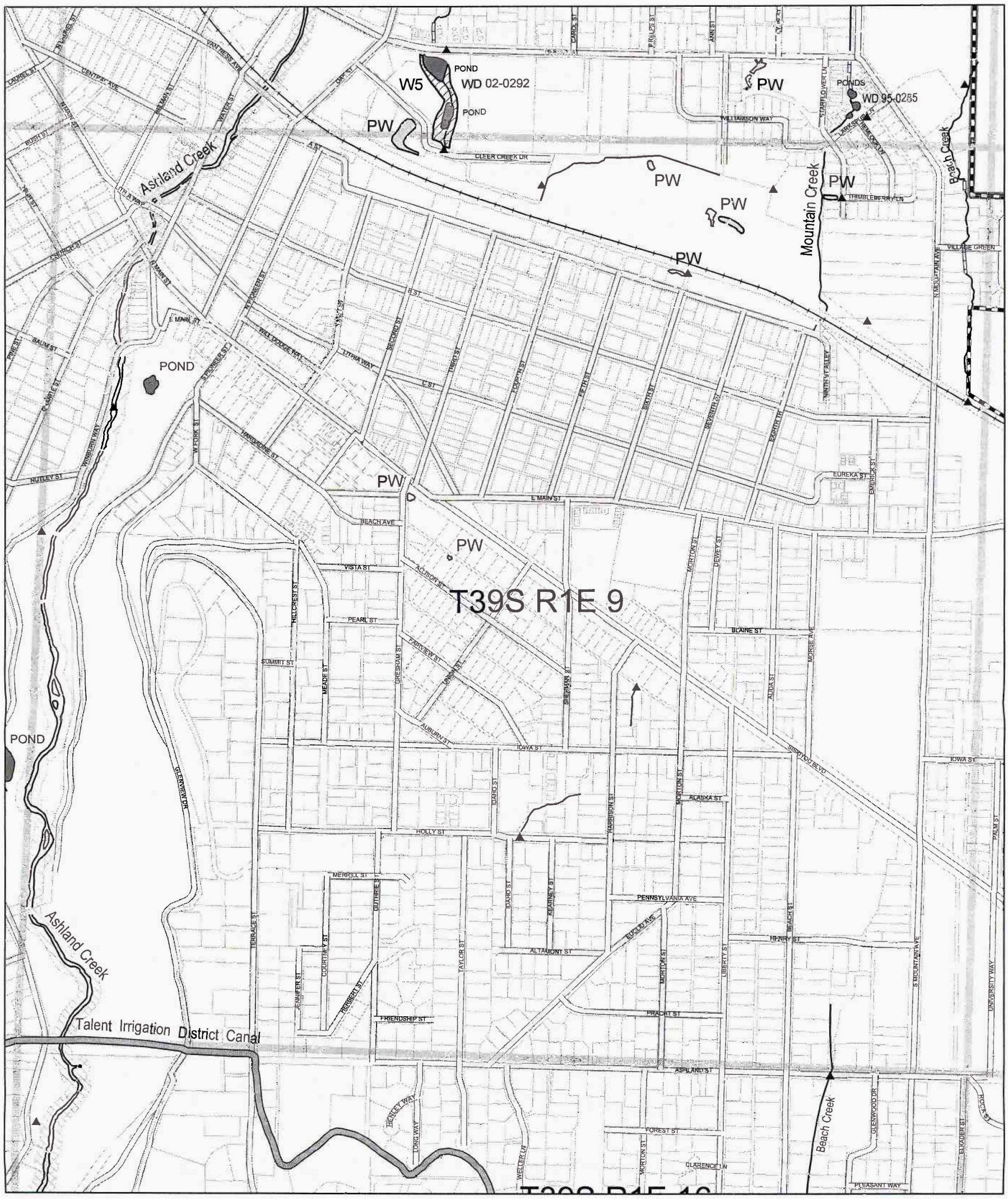

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- Culverted Streams
- W1-W14 Wetland Unit

N W E S

Feet

300 150 0 300 600

Study area is contained within the Bear Creek watershed

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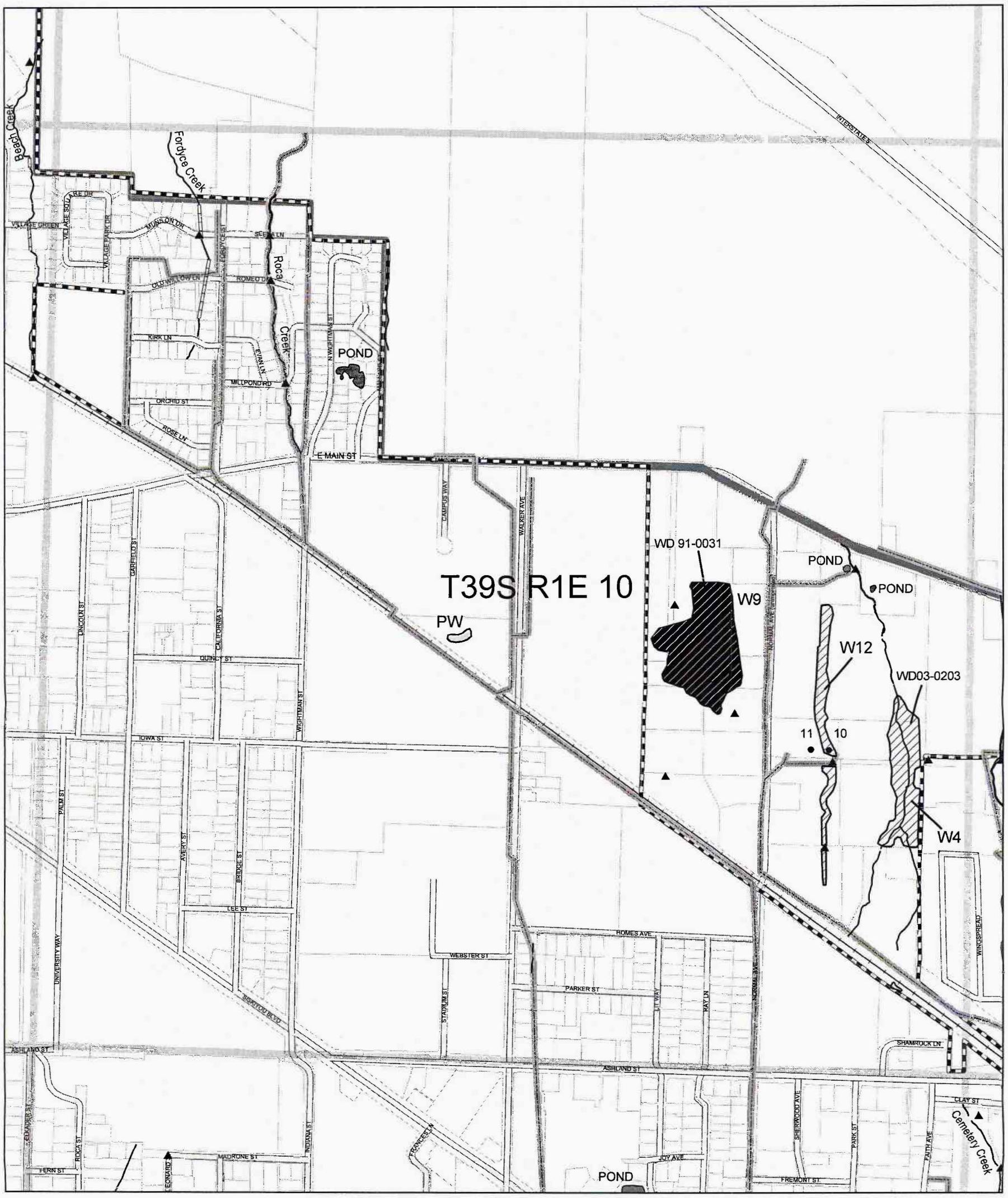
City of Ashland

Local Wetlands Inventory

T39S R1E 10



Legend

- Wetlands, field verified
- Wetlands, not field verified
- Possible Wetlands
- Pond
- Riparian Corridor Safe Harbor (50 feet)
- Sample Plot
- Observation Point
- Taxlots
- Urban Growth Boundary
- City Limits
- Sections
- Streets
- Railroad
- Streams, intermittent drainages, and ditches
- Laterals
- Talent Irrigation District Canal
- Culverted Streams
- W1-W14 Wetland Unit

N W E S

Feet: 300 150 0 300 600

Study area is contained within the Bear Creek watershed

Fishman Environmental Services
A DIVISION OF SWCA ENVIRONMENTAL CONSULTANTS

SWCA
Environmental Consultants, Inc.
www.swca.com

434 NW 6th Ave, Suite 304
Portland, OR 97209-3600
503-224-0333

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Photos are SID format
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Date of Photography: July 2001

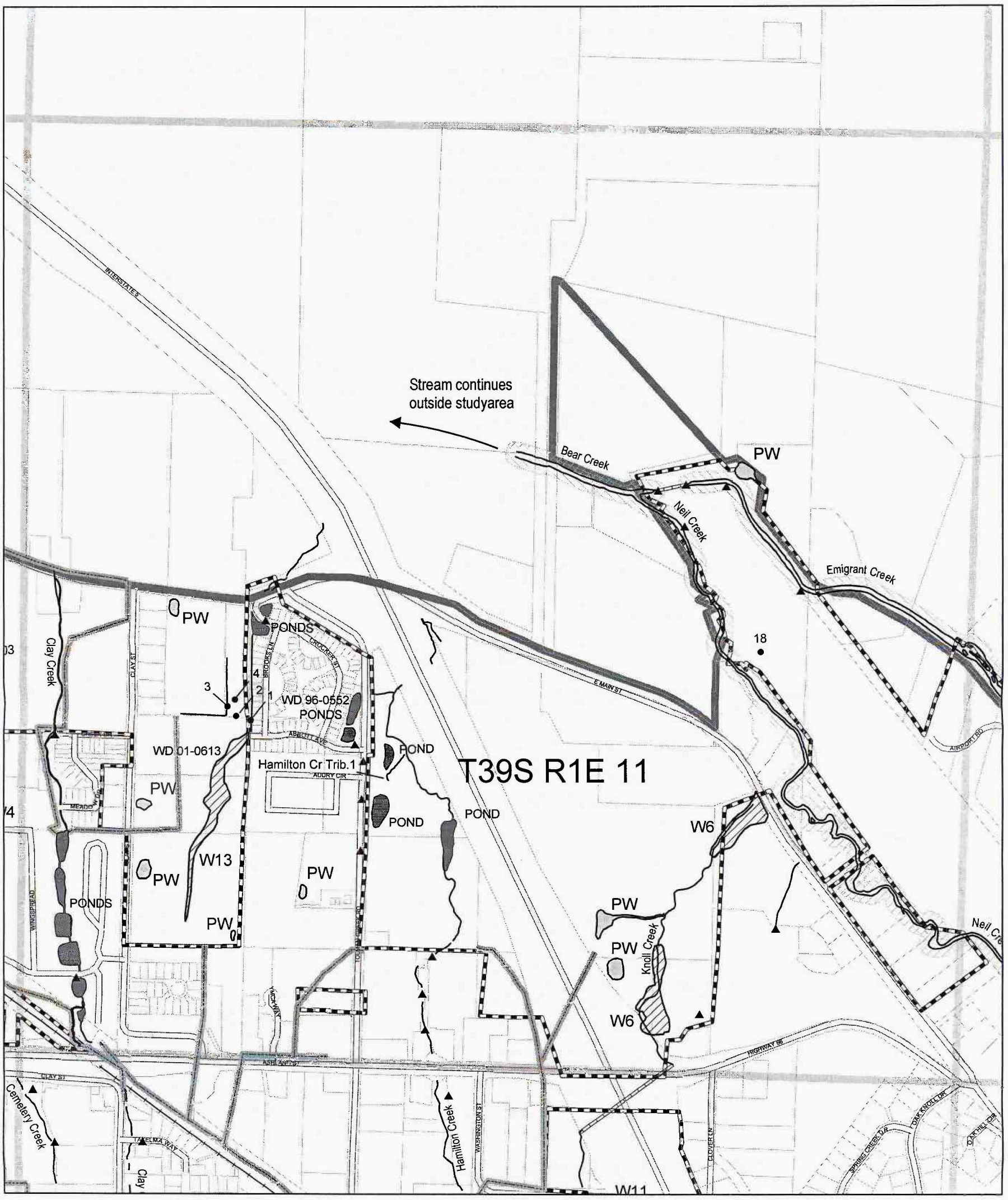
Projection Information:
NAD 1983 StatePlane Oregon South FIPS 3602 Feet
Lambert Conformal Conic
False Easting: 4921250.000000
False Northing: 0.000000
Central Meridian: -120.500000
Standard Parallel 1: 42.333333
Standard Parallel 2: 44.000000
Latitude Of Origin: 41.666667

GCS North American 1983
Print date: 12/12/06; Prepared By: R. Gutierrez

City of Ashland

Local Wetlands Inventory

T39S R1E 11



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N, W, E, S

Feet: 300 150 0 300 600

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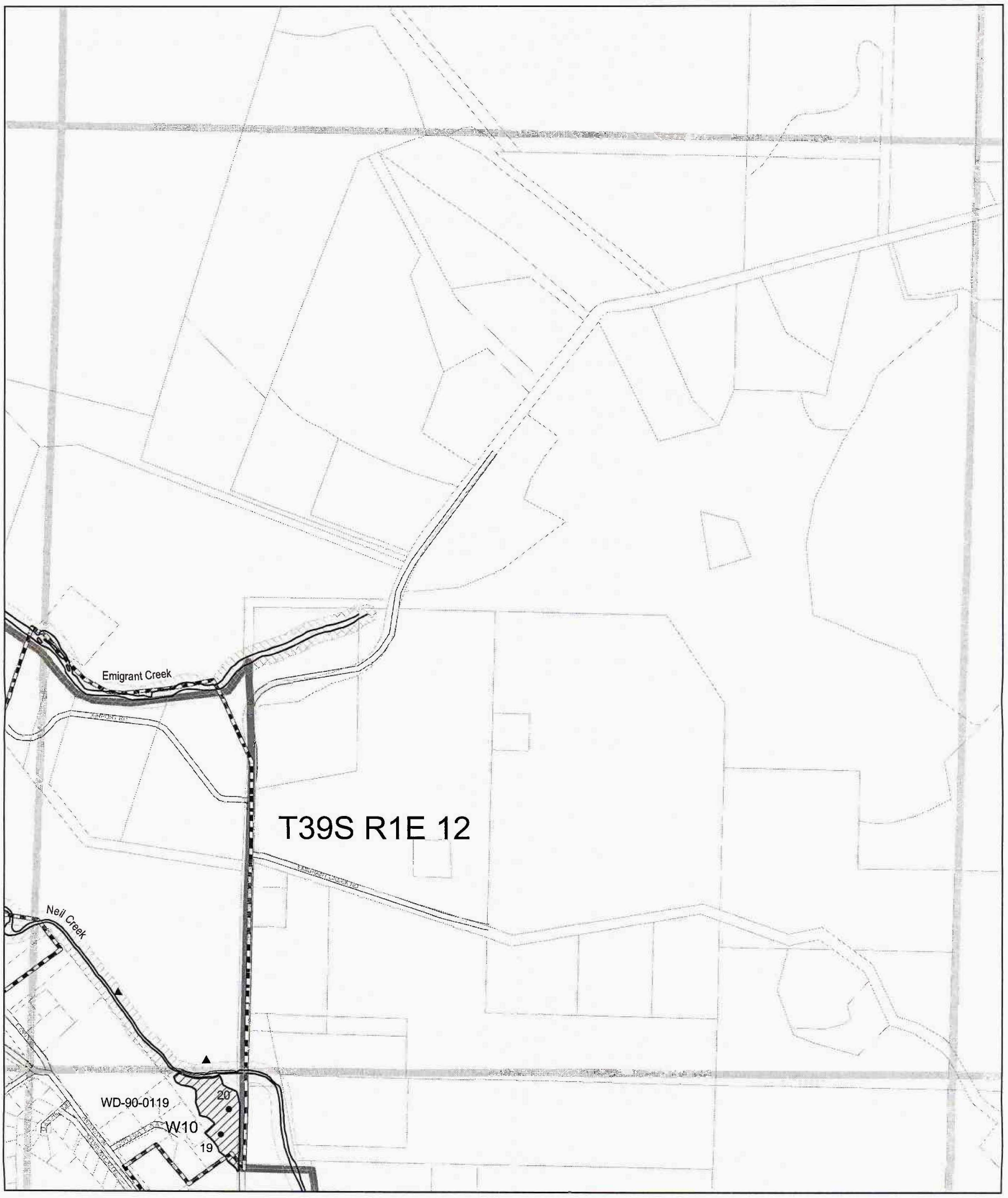
Local Wetlands Inventory

T39S R1E 12



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N W E S

Feet

300 150 0 300 600

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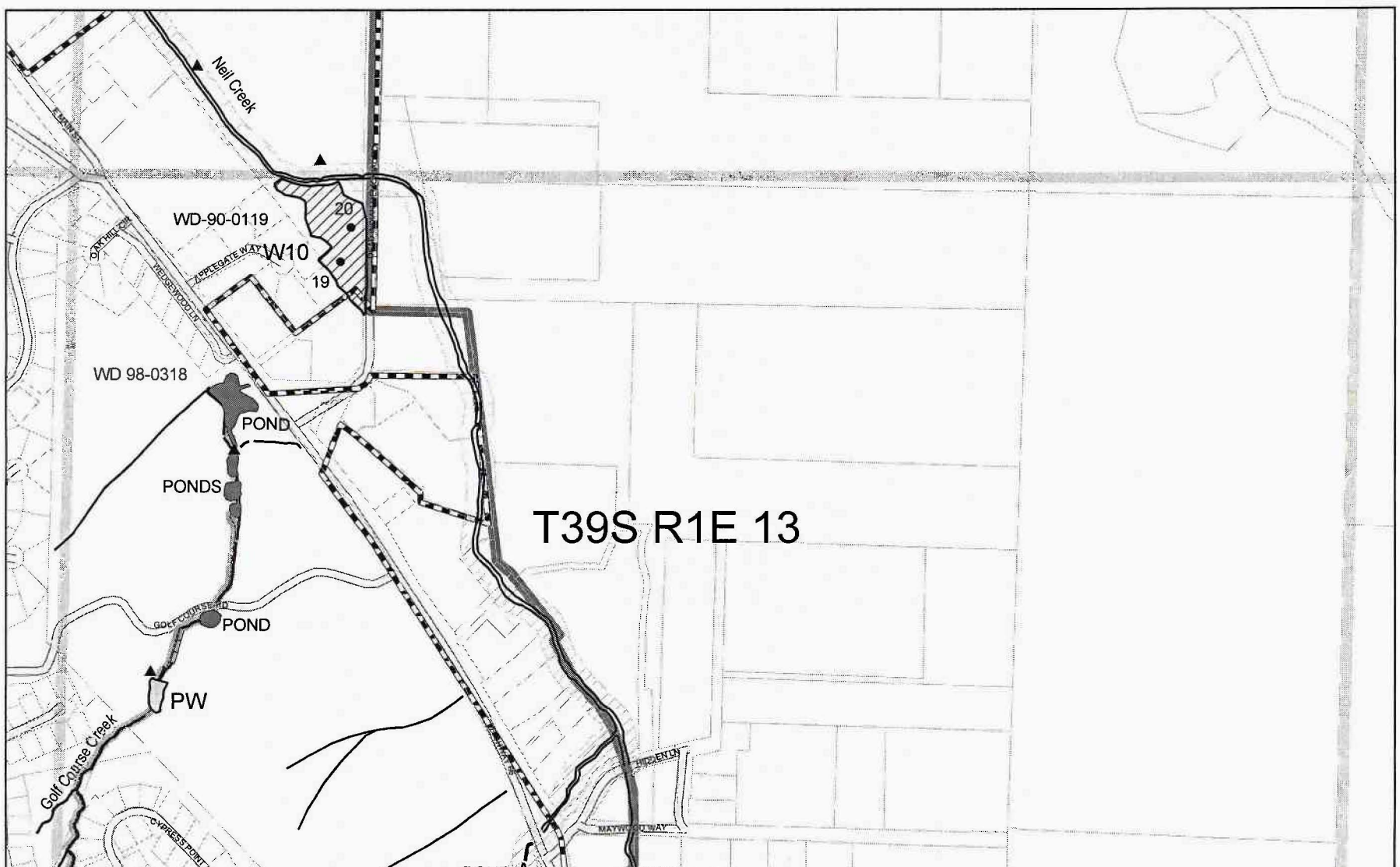
City of Ashland

Local Wetlands Inventory

T39S R1E 13



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N W E S

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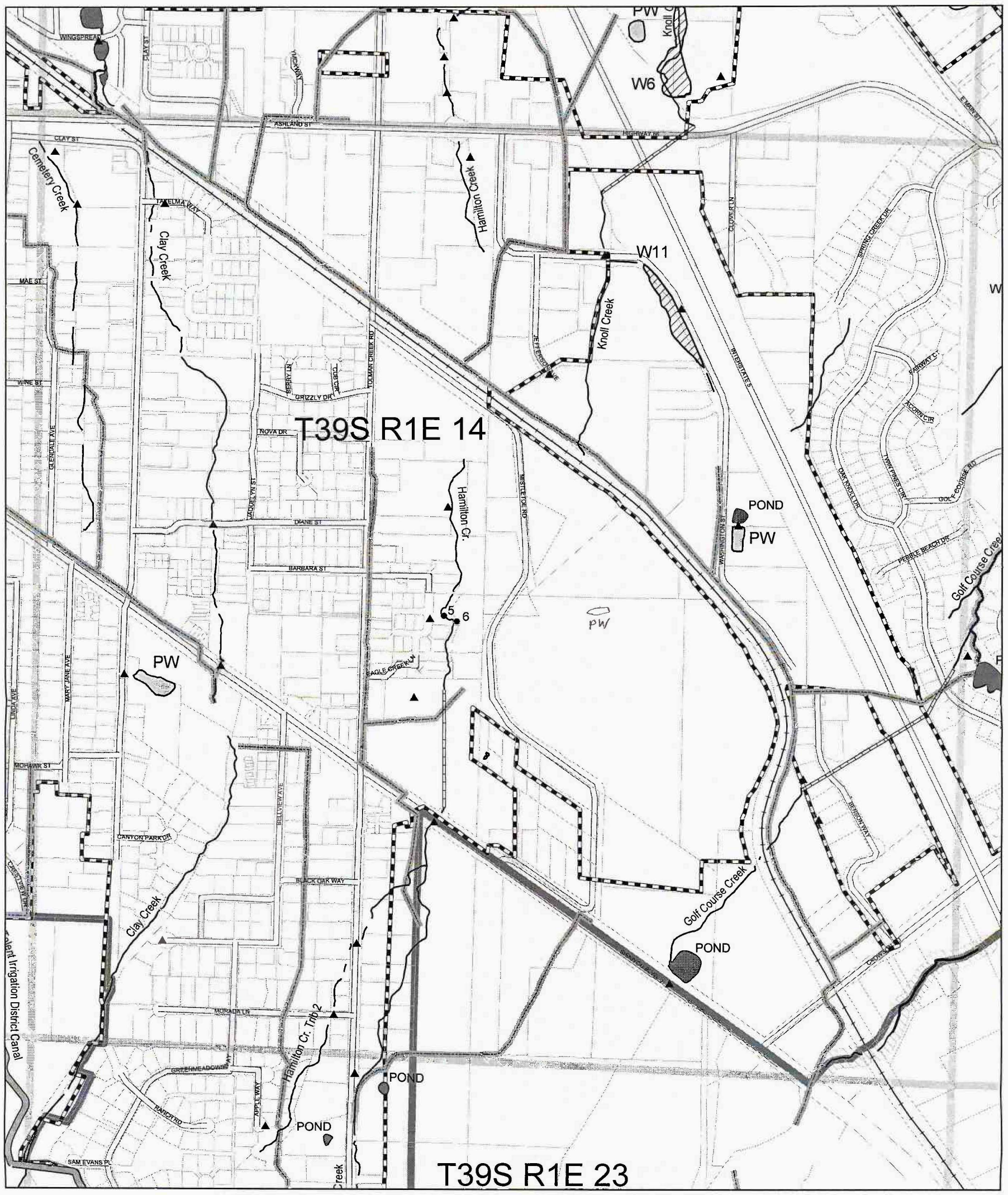
Local Wetlands Inventory

T39S R1E 14



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Feet: 300 150 0 300 600

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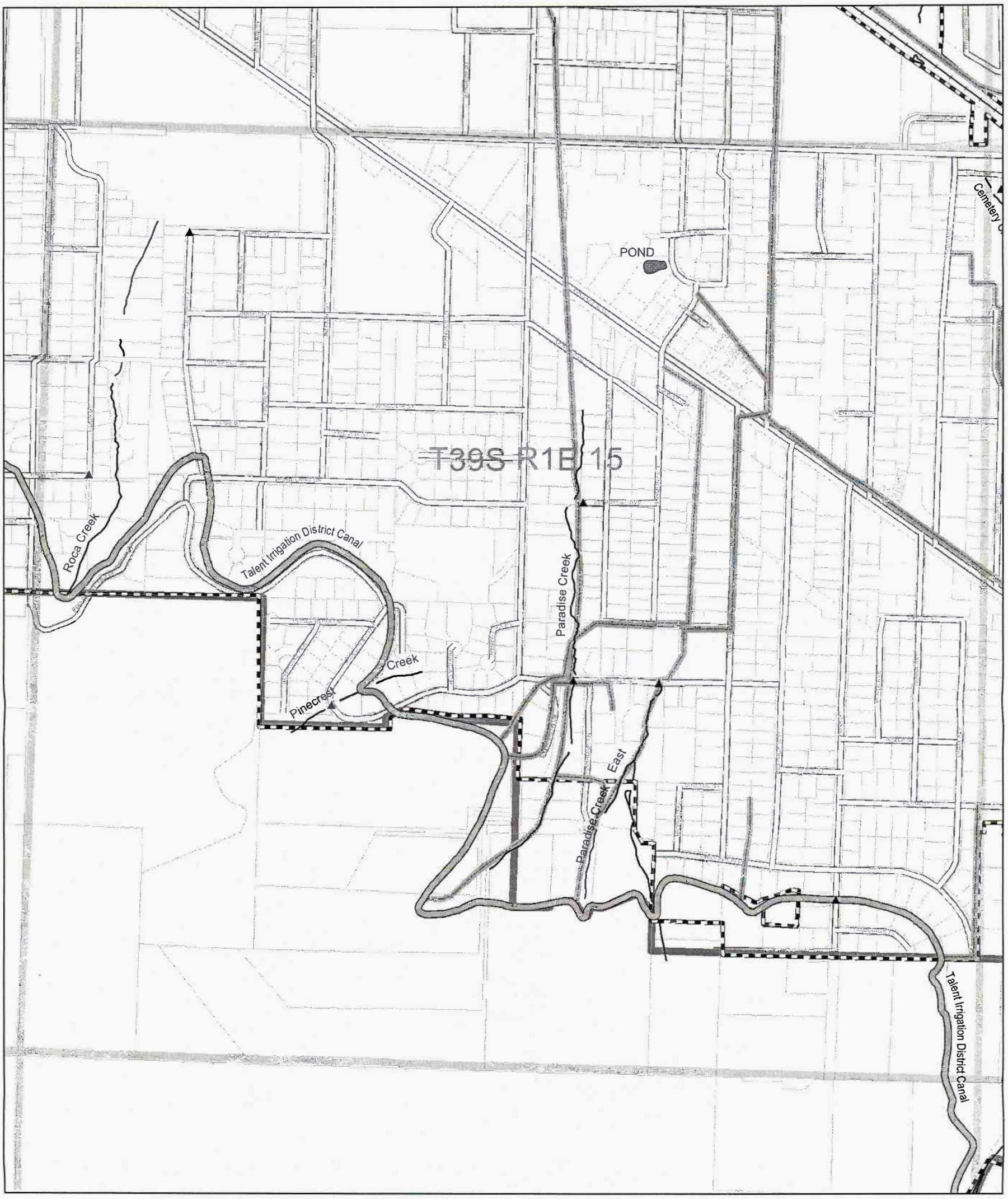
Local Wetlands Inventory

T39S R1E 15



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N W E S

Feet

300 150 0 300 600

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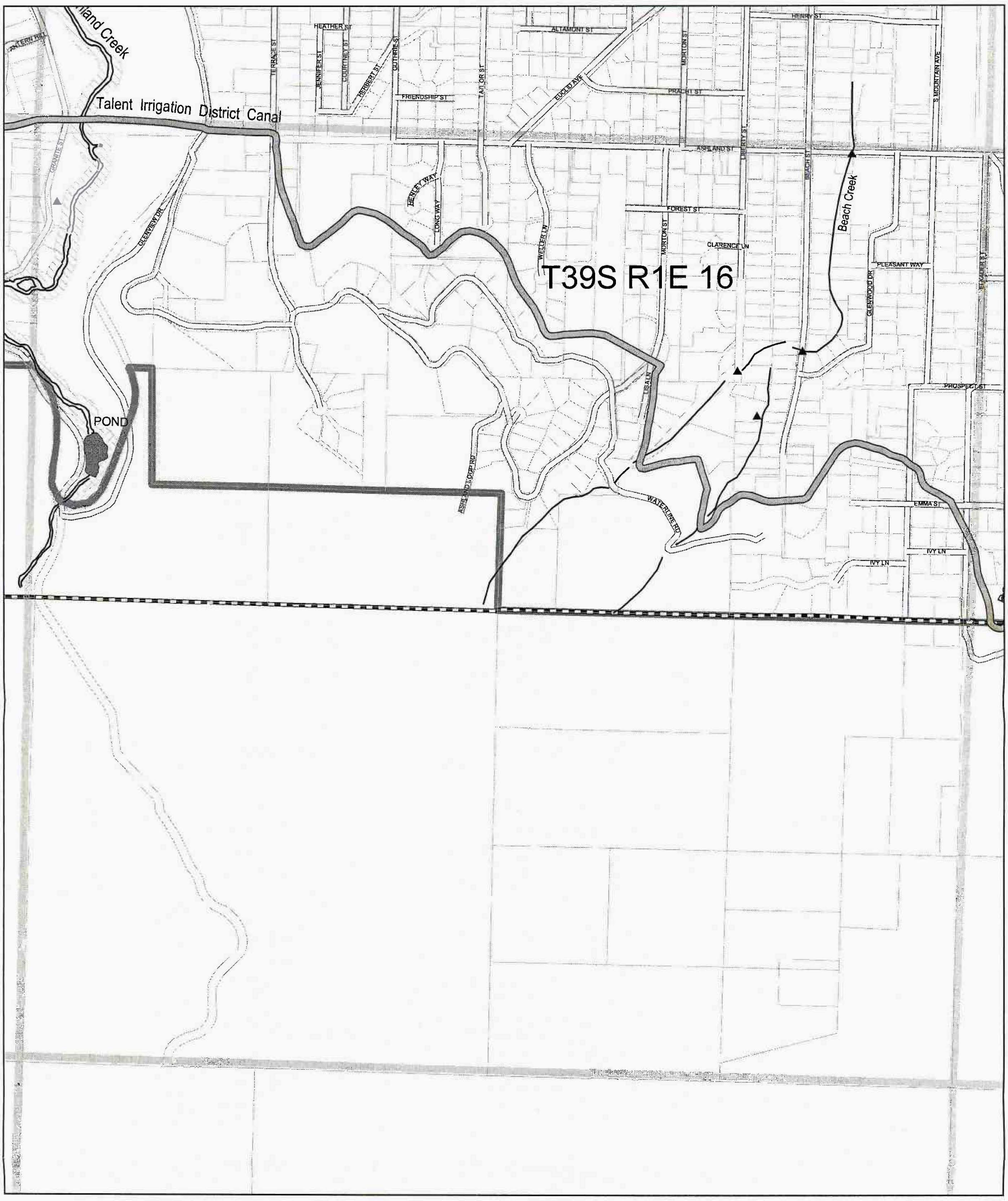
Local Wetlands Inventory

T39S R1E 16



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N W E S

Feet

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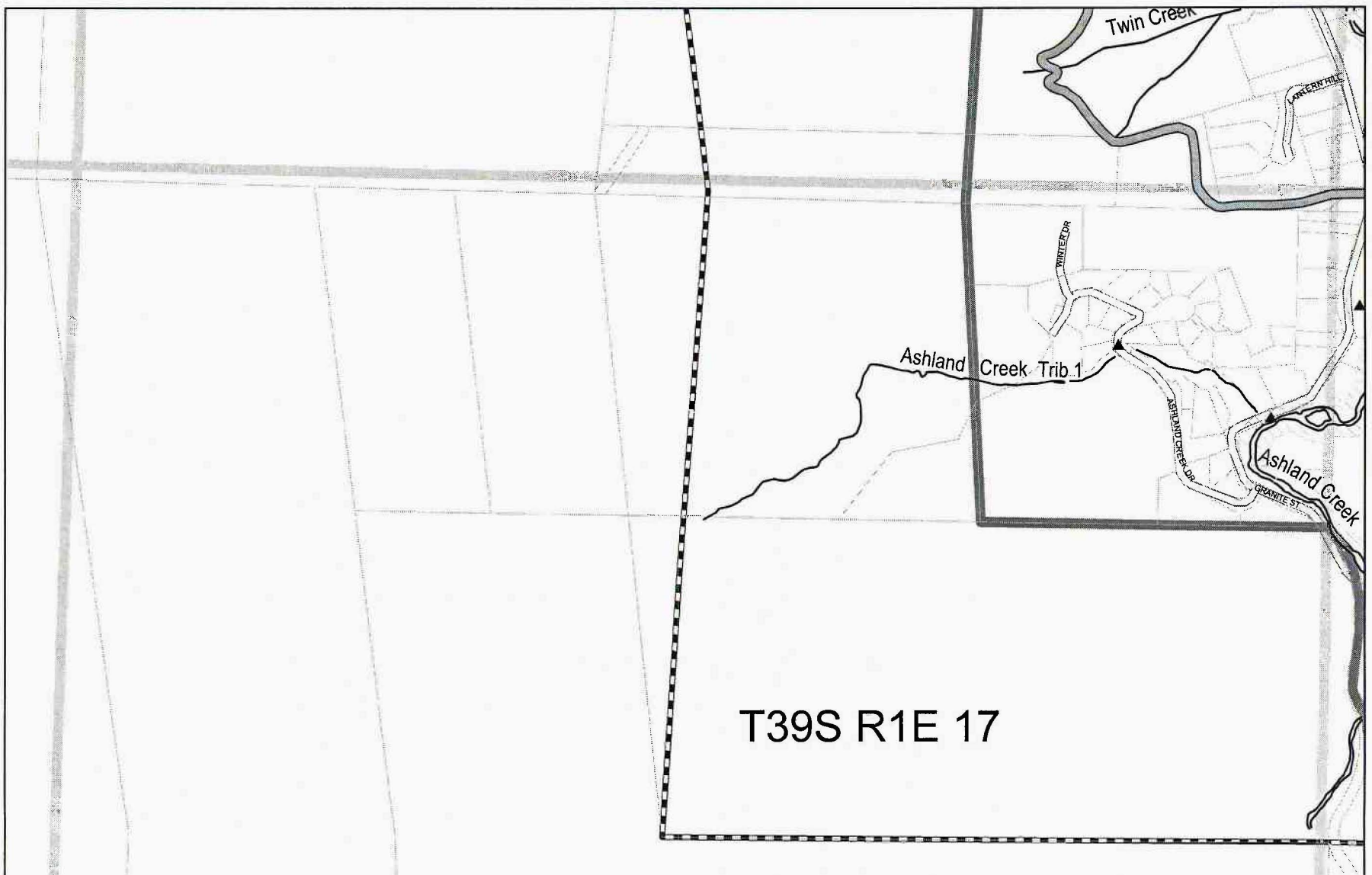
T39S R1E 17



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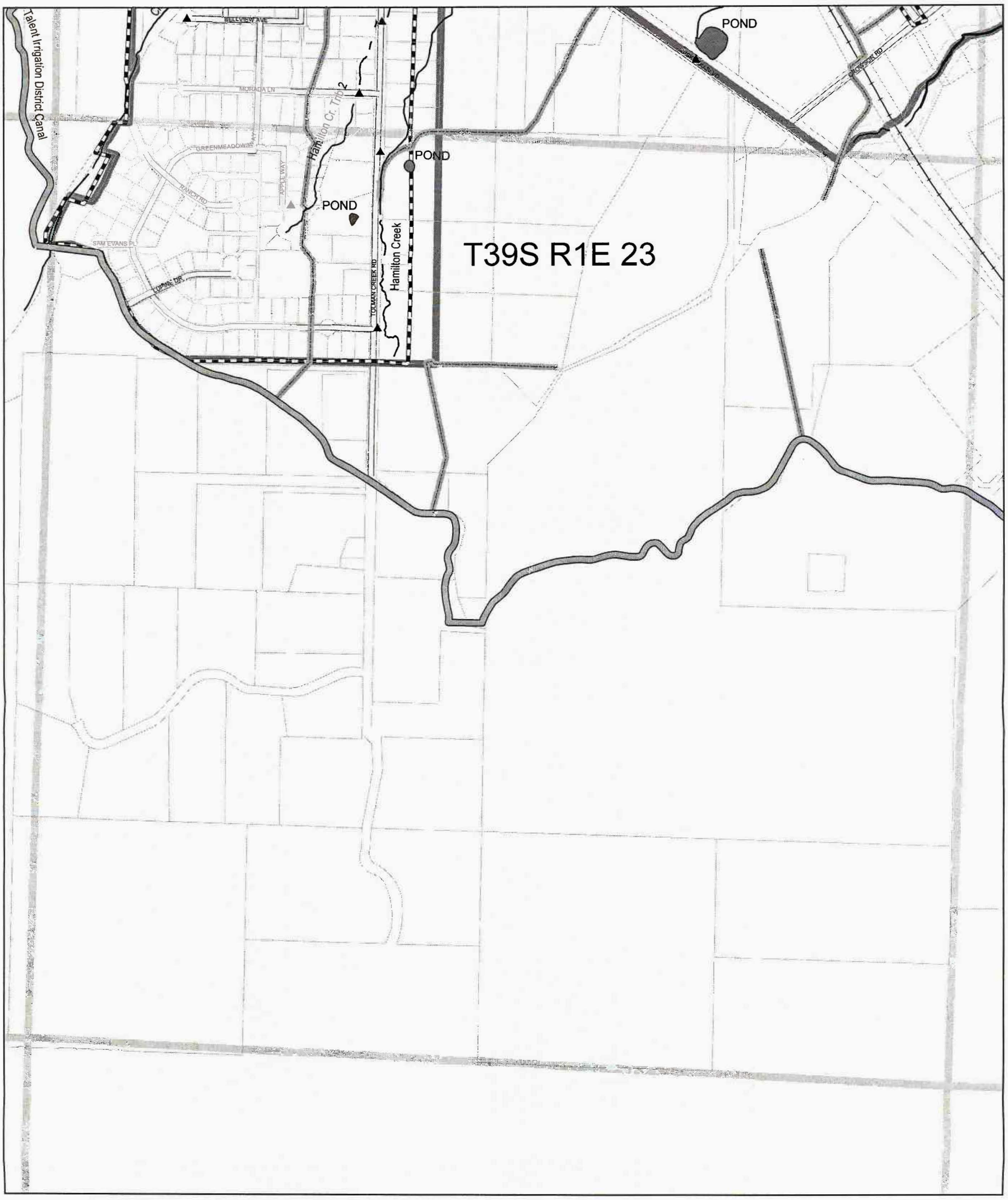
T39S R1E 23



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Appendix 2:

List of DSL Wetland Determination and Permit Files

DSL Wetland Determination and Permit Files within Ashland LWI study area boundary:

03-0203: T39S, R1E, Section 10DA, TL 3600 (Cemetery Creek; wetland W-4)
- DSL on-site wetland determination of fill violation on Creek Drive site
- Fill not removed as of 6/3/03 site visit (off-site)

RF-30032; T39S, R1E, Section 5, TL 200 (Billings Ranch; wetland W-3)
- Earth movement & construction fencing present on 6/25/03 (off-site)

01-0613: T39S, R1E, Section 11BD, TL 1000 (East Village; wetland W-13)
- Field checked 6/3/03 (off-site), north field plowed to edge of wetland

99-0064/02-0292/ permit 12783: T39S, R1E Section 4CD, TL1904 (Clear Creek Village; wetland W-5)
- Field checked 6/3/03 (off-site), site under construction

98-0318: T39S, R1W, Section 13 (Oak Knoll Golf Course)
- Field checked 6/5/03 (on-site), wetland mitigation complete

96-0094: T39S, R1E, Section 9 (Mountain Vista)
- Field checked 6/24/03 – cattail marsh filled for residential subdivision
- On-site wetland mitigation located in subdivision north of Larkspur Lane

95-0229: T39S, R1E, Section 4, SE1/4 (North Mountain Nature Park, wetland W-7)
- Field checked 6/24/03 – modified wetland boundary based on on-site vegetation and topography

92-0220: T39S, R1E, Section 5 (Ashland Community Hospital)
- Non-jurisdictional wetland has been filled (based on aerial)

91-0031: T39S, R1E, Section 10, SE ¼ , TL 910, 909, others (David Lane Parcels, wetland W-9)
- no permission to access, could not view wetland from off-site due to berms & blackberry
- modified wetland boundary based on vegetation signature on aerial (newer residential development at south

90-0119: T39S, R1E, Section 13, TL 2008, 2007, 2011 (Fabricant Property; wetland W-10)
- Field checked 6/26/03
- non-jurisdictional wetland has been partially filled for commercial development

Appendix 3:

Wetland Determination Sample Plot Data Sheets

CITY OF ASHLAND LOCAL WETLANDS INVENTORY WETLAND DETERMINATION SAMPLE PLOTS 1-20 LOCATIONS			
Sample Plot #	TRS	Wetland/Stream	Comments
7 – 9	T39S R1E S5	Wetland unit 1	
None	--	Wetland unit 2	Obvious wetland boundary due to on-site observation of topography and vegetation & aerial photo signature of ponds
None	--	Wetland unit 3	Mapped wetland boundary based on DSL RF-30032 & aerial photo hydrology signature
None	--	Wetland unit 4	No permission to access; viewed vegetation from off-site to map wetland boundary
None	--	Wetland unit 5	Mapped wetland boundary based on DSL App. 12783 & confirmed from off-site
None	--	Wetland unit 6	No permission to access; viewed vegetation from off-site to map wetland boundary
None	--	Wetland unit 7	Modified wetland boundaries mapped in DSL WD 95-0229 based on on-site observation of topography & vegetation
16 & 17	T39S R1E S4	Wetland unit 8	
None	--	Wetland unit 9	No access due to blackberry, modified partial wetland boundary mapped in DSL WD 91-0031 based on vegetation signature on aerial (newer residential development at south)
19 & 20	T39S R1E S13	Wetland unit 10	
None	--	Wetland unit 11	No permission to access; viewed vegetation from off-site to map wetland boundary
10 & 11	T39S R1E S10	Wetland unit 12	
1 – 4	T39S R1E S11	~~Wetland unit 13~~	
12	T39S R1E S4	NWI wetland 4D	Mapped as possible wetland due to <0.5 acre
15	T39S R1E S4	NWI wetland 4I	NWI wetland not present
5 & 6	T39S R1E S14	~~Hamilton Creek~~	Narrow wetland fringe, too small to map
13	T39S R1E S4	Ashland Creek	Upland sample plot
14	T38S R1E S32	Bear Creek	Upland sample plot
18	T39S R1E S11	Neil Creek	Upland sample plot

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Rolih Date: 6/3/03 Plot: 1
Site: Wetland Unit 13 Sect.(1/4) 11 SW Township 39S Range 1E (Wet) / Up
Plot Location: South of main St. (~600ft)
Topographic Location: ~2ft above drainage (trib. to Bear creek)
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 90) (5' radius)		
(1) Typha latifolia	80	OBL
2. Cardamine oligosperma	10	FAC
3. Juncus effusus	tr	FACW
4. Holcus lanatus	tr	FAC
5. Poa sp.	tr	prob. FAC
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: 10) (10' radius)		
1. Acer negundo	10	FAC+
2. Rubus discolor	tr	FACU
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/1 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-6		10YR 3/2		SaSiL, many fine gravels
6-8		10YR 3/1		coarse Sand w/silt

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: Soil probe, sandy layer closer to surface in lower portion of & Stream Channel
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: ___ Depth to free water: ___ Depth to saturation: ___ seepage: ___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other: Small drainage channelized along rear of residential subdivision	
___Sediment Deposits	Remarks: Very moist below 6" likely earlier in growing season	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Rolih Date: 6/3/03 Plot: 2
Site: Wetland unit 13 (2nd Plot) Sect.(1/4) 11 SW Township 39S Range 1E Wet / (Up)
Plot Location: ~50 ft NW of Plot 1
Topographic Location: ~2 ft higher than Plot 1
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)		
(1) Alopecurus pratensis	70	FACW
2. Poa sp.	10 prob	FAC
3. Lactuca sp.	10 prob	FACU
4. Festuca arundinacea	10	FAC-
5. Cirsium vulgare	tr	FACU
6. Tragopogon species	tr	UPL
7. Epilobium minutum?	tr	UPL
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks: meadow foxtail likely planted, subdominants mostly upland
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/1 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-2		10YR 3/2	—	SaSiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: Soil probe, refusal @ 2" due to dry hard soil + gravels
Hydric Soil Criterion / Indicators Met? YES (NO)

HYDROLOGY

Depth of inundation:— Depth to free water:— Depth to saturation:— seepage:—

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? YES (NO)	

DETERMINATION: Is this plot a Wetland? YES (NO)
Comments: Wetland boundary (Plot 1) determination based on topo change to Plot 2.
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Rolih Date: 6/3/03 Plot: 3
Site: wetland Unit 13 /2g ditch Sect.(1/4) 11SW Township 39S Range 1E (Wet) / Up
Plot Location: ~10ft east of fence, NW of Plot 2
Topographic Location: bottom of 2 ft wide + 1 ft deep Ag. ditch
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover: Ø) (10' radius)		
(1.) Juncus effusus	100	FACW	1.		
2. Carex stipata	tr	OBL	2.		
3. Carex pachystachya	tr	FAC	3.		
4.			4.		
5.			5.		
6.			**Tree** Stratum (% total cover: Ø) (30' radius)		
7.			1.		
8.			2.		
9.			3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/1 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-8		10YR 3/2 - 4/2	mixed matrix + few med 7.5YR 4/4	Salm w/Silt
8-12+		10YR 4/2	few fine 10YR 4/4	Salm w/Silt

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor X Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: Soil probe
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: ___ Depth to free water: ___ Depth to saturation: Surface seepage: ___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Property owners report water in ditch from TID, started few days ago	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Rolih Date 6/3/03 Plot: 4
Site: Wetland Unit 13/ag. ditch (B)* Sect.(1/4) 11SW Township 39S Range 1E Wet / (Up)
Plot Location: few feet east of ag ditch
Topographic Location: top of ag. ditch, ~1 ft higher than Plot 3
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: ____) (5' radius)		
1. Alopecurus pratensis	60	FACW
2. Epilobium minutum ?	20	UPL
3. Festuca arundinacea	10	FAC-
4. Bromus tectorum	5	UPL
5. Bromus secalinus	5	UPL
6. Cirsium vulgare	tr	FACU
7. Tragopogon species	tr	UPL
8. Geranium species	tr	FAC-/FACU/UPL
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/2 = 50%
Hydrophytic Vegetation Criterion Met? YES (NO) but close subdominants upland NWI Class

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-9		10YR 3/2		SaSiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks: Soil probe
Hydric Soil Criterion / Indicators Met? YES (NO)

HYDROLOGY

Depth of inundation: ____ Depth to free water: ____ Depth to saturation: ____ seepage: ____

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soil moist only	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? YES (NO)	

DETERMINATION: Is this plot a Wetland? YES (NO)
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/3/03 Plot: 5
Site: Hamilton Creek Sect.(1/4) 14 SW Township 39S Range 1E (Wet) / Up
Plot Location: 2 ft east of stream on narrow wetland bench
Topographic Location: above top of stream bank
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover:____) (10' radius)		
(1) Glyceria occidentalis	35	OBL	1.		
(2) Poa Species	25	prob FAC	2.		
3. Veronica americana	10	OBL	3.		
4. Lotus corniculatus	10	FAC	4.		
5. Ranunculus repens	10	FACW	5.		
6. Juncus acuminatus	5	OBL	**Tree** Stratum (% total cover:____) (30' radius)		
7. Holcus lanatus	5	FAC	1.		
8.			2.		
9.			3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 2/2 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 23A - Camas-Newberg-Evans Matches Profile? Y (N) close
Taxonomy: Fluventic + Cumulic Haploxerolls Drainage Class: excessively/well drained

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-1		10YR 3/2	—	SaSiL
1-3		2.5Y 4/2	—	SaSi
3-11		10YR 3/1	—	Coarse Sand w/Silt

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: Shovel
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: 8" Depth to saturation: Surface seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks:	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO

Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/3/03 Plot: 6
Site: Hamilton creek Sect.(1/4) 14 SW Township 39S Range 1E Wet / (Up)
Plot Location: 20 ft SE of Plot 5
Topographic Location: 2 ft higher than Plot 5
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover:____) (10' radius)		
(1) Festuca arundinacea	20	FAC-	1.		
(2) Lolium perenne	20	FACU	2.		
(3) Bromus secalinus	20	UPL	3.		
(4) Elymus caput-medusae	20	UPL	4.		
5. Lotus corniculatus	10	FAC	5.		
6. Trifolium repens	10	FAC	**Tree** Stratum (% total cover:____) (30' radius)		
7. Hypochaeris radicata	tr	FACU	1.		
8. Festuca myuros	tr	UPL	2.		
9.			3.		

Remarks: plot in wetted riparian fringe w/green veg, turns brown upslope
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/4 = 0
Hydrophytic Vegetation Criterion Met? **YES** (NO) NWI Class

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-2		10YR 3/2		SaSi
2-4+		10YR 4/2	—	Coarse Sand

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ____Major Portion of Root Zone
Remarks: Shovel refusal at 4" - very gravelly
Hydric Soil Criterion / Indicators Met? **YES** (NO)

HYDROLOGY

Depth of inundation:— Depth to free water:— Depth to saturation:— seepage:—

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils moist only	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO)
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date: 6/4/03 Plot: 7

Site: BMX Park/Ashland Wastewater Plant Sect.(1/4) SW Township 39S Range 1E (Wet) / Up

Plot Location: West edge of wetland at BMX Park, ~100 ft N of Michelle

Topographic Location: gradual slope down to Ashland Creek

Do normal environmental conditions exist? (Y) N Explain:

Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

Wetland Unit 1

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover: 10) (10' radius)		
(1) Typha angustrfolia	50	OBL	(1) Rubus discolor	10	FACW
(2) Eleocharis palustris	20	OBL	2.		
(3) Epilobium watsonii	20	FACW-	3.		
4. Geranium Carolinianum	10	UPL	4.		
5. Conium maculatum	tr	FACT	5.		
6. Rumex sp.	tr	—	**Tree** Stratum (% total cover:____) (30' radius)		
7. Galium aparine	tr	FACW	1.		
8.			2.		
9.			3.		

Remarks:

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 3/4 = 75%

Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: Brader-Deberger loams (17C) Matches Profile? Y (N) close

Taxonomy: Typic Xerochrepts Drainage Class: well drained

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-10		10YR 2/1	—	muck

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer

___Histic Epipedon ___Gleyed ___Organic Streaking

___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma

___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks: Shovel, Some Silt in Surface 4"

Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: 7" Depth to saturation: Surface seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks:	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO

Comments:

Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date: 6/4/03 Plot: 8
Site: BMX Park/Ashland WWTP Sect.(1/4) S/W Township 39S Range 1E Wet / (Up)
Plot Location: 25 ft West of Plot 7
Topographic Location: ~6" higher than Plot 7
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:
Wetland Unit 1 (2 plot)

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover: Ø) (10' radius)		
(1) Bromus tectorum	30	UPL	1.		
(2) Bromus secalinus	30	UPL	2.		
(3) Geranium carolinianum	20	UPL	3.		
4. Festuca arundinacea	10	FAC-	4.		
5. Vicia villosa	10	UPL	5.		
6. Galium aparine	tr	FACU	**Tree** Stratum (% total cover: Ø) (30' radius)		
7. Lactuca sp.	tr	prob. FACU	1.		
8.			2.		
9.			3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/3 = Ø
Hydrophytic Vegetation Criterion Met? **YES** (**NO**) NWI Class

SOILS

Mapped unit name: Brader-Deberger loams (17C) Matches Profile? Y (N) close
Taxonomy: Typic Xerochrepts Drainage Class: well drained

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-9		10YR 2/1	—	SiL
9-12		10YR 2/1	—	Sandy muck

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List 8 Major Portion of Root Zone
Remarks: Shovel, gravels @ 6-9"
Hydric Soil Criterion / Indicators Met? (**YES**) **NO**

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: 12" seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks:	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (**YES**) **NO**	

DETERMINATION: Is this plot a Wetland? **YES** (**NO**)
Comments: Strongly Upland veg.
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date 6/4/03 Plot: 9
Site: BMX Park/Ashland WWTP Sect.(1/4) SW Township 39S Range 1E Wet / (Up)
Plot Location: 25 ft West of Plot 8
Topographic Location: ~6" higher than Plot 8
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:
Wetland Unit 1 (2 plot)

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover:____) (10' radius)		
(1) Bromus tectorum	40	UPL	1.		
(2) Bromus secalinus	40	UPL	2.		
(3) Festuca arundinacea	20	FAC-	3.		
4. Tragopogon species	tr	UPL	4.		
5.			5.		
6.			**Tree** Stratum (% total cover:____) (30' radius)		
7.			1.		
8.			2.		
9.			3.		

Remarks: Veg. mowed, %'s approximate
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/3 = Ø
Hydrophytic Vegetation Criterion Met? **YES** (NO) NWI Class

SOILS

Mapped unit name: Brader-Deberger loams Matches Profile? Y (N) close
Taxonomy: Typic Xerochrepts Drainage Class: well drained

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-8		10YR 2/2	—	SiL
8-10+		10YR 2/1	—	SaSiL w/organics

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ____Major Portion of Root Zone
Remarks: Shovel
Hydric Soil Criterion / Indicators Met? (YES) **NO**

HYDROLOGY

Depth of inundation:— Depth to free water:— Depth to saturation:— seepage:—

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils dry throughout	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO)
Comments: Strongly upland veg.
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/5/03 Plot: 10
Site: wetland unit 12 Sect.(1/4) 10SE Township 39S Range 1E (Wet) / Up
Plot Location: ~400 ft west of Cemetery creek
Topographic Location: relatively flat ag. field w/slight depression area
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover:____) (10' radius)		
(1) Alopecurus geniculatus	25	OBL	1.		
(2) Alopecurus pratensis	25	FACW	2.		
3. Myosotis species	10	FACW/OBL	3.		
4. Ranunculus occidentalis	10	FAC	4.		
5. Juncus effusus	15	FACW	5.		
6. Holcus lanatus	10	FAC	**Tree** Stratum (% total cover:____) (30' radius)		
7. Juncus acuminatus	5	OBL	1.		
8. Trifolium repens	tr	FAC	2.		
9. Eleocharis palustris	tr	OBL	3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 2/2 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y N close - surface only
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-5		10YR 2/2		SiL w/organics
5-6		10YR 2/1	com fine-med 7.5YR 3/3	gravelly SiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List 5 Major Portion of Root Zone
Remarks: probe, refusal @ 6" due to gravel
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: ___ Depth to free water: 6" Depth to saturation: Surface seepage: ___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks:	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/5/03 Plot: 11
Site: wetland unit 12 (T plot) Sect.(1/4) 10SE Township 39S Range 1E Wet (Up)
Plot Location: ~60 ft west of plot 10
Topographic Location: ~6" higher than plot 10
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)		
(1) Hordeum geniculatum	30	FACU+
(2) Bromus secalinus	20	UPL
(3) Anthemis cotula	20	FACU
(4) Trifolium dubium	20	UPL
5. Festuca arundinacea	10	FAC-
6. Juncus bufonius	tr	FACW
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover:____) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover:____) (30' radius)		
1.		
2.		
3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/4 = 0
Hydrophytic Vegetation Criterion Met? **YES** (**NO**) NWI Class

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y (N) close
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-3		10YR 3/1	—	fine Salm

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: Soil probe - refusal due to dry, hard soils
Hydric Soil Criterion / Indicators Met? (**YES**) **NO**

HYDROLOGY

Depth of inundation:___ Depth to free water:___ Depth to saturation:___ seepage:___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (**NO**)	

DETERMINATION: Is this plot a Wetland? **YES** (**NO**)
Comments: Strongly upland veg.
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Dr. + Mrs. Reynolds Date: 6/5/03 Plot: 12
Site: NWI-mapped wetland 4D Sect.(1/4) 4SW Township 39S Range 1E (Wet) / Up
Plot Location: 10ft South of 'Frog Pond', 10ft West of Helman Ditch
Topographic Location: gradual slope down to north
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain: Sheep in this field but not heavily grazed

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)			**Shrub/Sapling** Stratum (% total cover:____) (10' radius)		
(1) Poa species	50	prob FAC	1.		
(2) Alopecurus pratensis	20	FACW	2.		
(3) Juncus species	20	prob FACW	3.		
4. Carex feta	10	FACW	4.		
5. Holcus lanatus	tr	FAC	5.		
6. Trifolium repens	tr	FAC	**Tree** Stratum (% total cover:____) (30' radius)		
7. Carex pachystachya	tr	FAC	1.		
8.			2.		
9.			3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 3/3 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 33A - Coker clay Matches Profile? Y (N) close
Taxonomy: Chromic Pelloxererts Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-4		10YR 2/2		SIL trace Sand
4-10		10YR 2/2	com fine 7.5YR 3/3	Coarse Sand w/Silt ↳ decomposed granite

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor X Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List 4 Major Portion of Root Zone
Remarks: Shovel probe below hole to 14-16"
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: 14-16" Depth to saturation: Surface seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Water in Helman Ditch from TID according to property owner	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments: Mapped as possible wetland due to < 0.5 acre
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date: 6/24/03 Plot: 13
Site: Ashland Community Garden Sect.(1/4) 4 SW Township 39S Range 1E Wet / (Up)
Plot Location: SE corner of garden, just north of Hersey Street
Topographic Location: Slight depression area behind adjacent backyards
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 110) (5' radius)		
(1) Festuca arundinacea	65	FAC-
(2) Equisetum hyemale	20	FACW
3. Agropyron repens	10	FAC-
4. Galium aparine	10	FACU
5. Holcus lanatus	5	FAC
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks: Equisetum dominant in small area only
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/2 = 50%
Hydrophytic Vegetation Criterion Met? **YES** (NO) NWI Class

SOILS

Mapped unit name: 33A - Coker clay Matches Profile? Y (N) close
Taxonomy: Chromic Pelloxererts Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-9		10YR 3/2-3/3		SaSiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks:
Hydric Soil Criterion / Indicators Met? **YES** (NO)

HYDROLOGY

Depth of inundation:___ Depth to free water:___ Depth to saturation:___ seepage:___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO)
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date: 6/24/03 Plot: 14
Site: Bear Creek Sect.(1/4) 32 SE Township 38S Range 1E Wet / (Up)
Plot Location: Between Bear + Ashland creeks in greenway
Topographic Location: Slightly lower than trail, ~10ft north of trail
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 80) (5' radius)		
(1) Poa species	60 prob.	FAC
2. Conium maculatum	10	FACt
3. Galium aparine	10	FACU
4. Agropyron repens	tr	FAC-
5. Festuca arundinacea	tr	FAC-
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: 110) (10' radius)		
(1) Salix exigua	90	OBL
2. Prunus virginiana	10	FACU
3. Rubus discolor	10	FACU
4.		
5.		
Tree Stratum (% total cover: 0) (30' radius)		
1.		
2.		
3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 2/2 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class

SOILS

Mapped unit name: 23A-Camas-Newberg-Evans Matches Profile? (Y) N close Newberg
Taxonomy: Fluventic + Cumulic Haploxerolls Drainage Class: Somewhat excessively

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-15		10YR 3/2		Sasil tr. organics

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks:
Hydric Soil Criterion / Indicators Met? YES (NO)

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: — seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils slightly moist	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? YES (NO)	

DETERMINATION: Is this plot a Wetland? YES (NO)
Comments: mapped in riparian corridor of Bear Creek
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: Russ Dale/Mogan Pacific LLC Date: 6/24/03 Plot: 15
Site: Riverwalk Subdivision Sect.(1/4) 4 SE Township 39S Range 1E Wet (Up)
Plot Location: in NWI mapped wetland 4I (not present)
Topographic Location: flat
Do normal environmental conditions exist? (Y) N Explain:
Are soils X vegetation ___ hydrology ___ significantly disturbed? N Explain: fill soils present

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 95) (5' radius)		
(1) Bromus rigidus	40	UPL
(2) Agropyron repens	20	FAC-
3. Bromus secalinus	10	UPL
4. Centaurea cyanus	10	UPL
5. Vicia villosa	10	UPL
6. Cardaria chalapensis?	tr	UPL
7. Rumex crispus	tr	FAC+
8. Anthemis cotula	tr	FACU
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/2 = Ø
Hydrophytic Vegetation Criterion Met? **YES** (NO) NWI Class

SOILS

Mapped unit name: 234 - Camas-Newberg Evans Matches Profile? Y N close
Taxonomy: Fluventic + Cumulic Haploxerolls Drainage Class:

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
		fill soils w/lots of debris		

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks:
Hydric Soil Criterion / Indicators Met? **YES** (NO)

HYDROLOGY

Depth of inundation: ___ Depth to free water: ___ Depth to saturation: ___ seepage: ___

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: soils very dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO) ground from old lumber mill site
Comments: Site currently under development, site reported to be dumping?
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/24/03 Plot: 16

Site: ~360 ft NW of Mt. Meadows Drive Sect.(1/4) 4 NE Township 39S Range 1E Wet / (Up)

Plot Location: ~250 ft north of Plot 17

Topographic Location: Slope above scrub-shrub wetland, ~10 ft higher

Do normal environmental conditions exist? (Y) N Explain:

Are soils X vegetation ___ hydrology ___ significantly disturbed? N Explain: Site contains piles of fill dirt + large rocks

Wetland Unit 8 (U plot)

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 105) (5' radius)		
(1) Bromus tectorum	60	UPL
(2) Hordeum geniculatum	20	FACU+
3. Alopecurus pratensis	10	FACW
4. Epilobium species	10	—
5. Dipsacus sylvestris	5	FAC
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: 10) (10' radius)		
(1) Rosa species (non-native)	10 prob.	UPL
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: 0) (30' radius)		
1.		
2.		
3.		

Remarks:

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 0/3 = 0

Hydrophytic Vegetation Criterion Met? **YES** (NO) NWI Class

SOILS

Mapped unit name: 43D-Darrow Silty clay loam Matches Profile? Y (N) close

Taxonomy: Vertic Argixerolls Drainage Class: moderately well

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-4		10YR 2/2	—	consolidated soil

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer

___Histic Epipedon ___Gleyed ___Organic Streaking

___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma

___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks: refusal @ 4" due to 3-4" cobbles

Hydric Soil Criterion / Indicators Met? **YES** (NO)

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: — seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils very dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO)

Comments:

Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/24/03 Plot: 17

Site: ~250 ft SW of mt. meadows Dr. Sect.(1/4) 4DE Township 39S Range 1E (Wet) / Up

Plot Location: in DSL mapped wetland 46

Topographic Location: upslope edge of wetland depression area

Do normal environmental conditions exist? (Y) N Explain:

Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

wetland unit 8

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 10) (5' radius)		
1. Juncus patens	5	
2. Juncus effusus	5	
3. Dipsacus sylvestris	tr	
4.		
5.		
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: 125) (10' radius)		
① Rubus discolor	100	FACU
② Salix lasiandra	25	FACW+
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks:

Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/2 = 50%

Hydrophytic Vegetation Criterion Met? (YES) NO push to meet based on bps, soils, tqo NWI Class PSS

SOILS

Mapped unit name: 128B - Medford clay loam Matches Profile? Y (N) close

Taxonomy: Pachic Argixerolls Drainage Class: moderately well

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-4+		10YR 3/2	few coarse 10YR 5/4	SIL w/some fill gravels

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer

___Histic Epipedon ___Gleyed ___Organic Streaking

___Sulfidic Odor X Mottled (w/i 10") ___Organic Pan ___Low Chroma

___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks: refusal @ 4" due to gravels

Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: — seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: soils moist	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO probably earlier in growing season	

DETERMINATION: Is this plot a Wetland? (YES) NO

Comments:

Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: City of Ashland Date: 6/25/03 Plot: 18
Site: Airport / Neil Creek Sect.(1/4) II SE Township 39S Range 1E Wet / (Up)
Plot Location: South of runway, north of Neil Creek
Topographic Location: flat area at top of berm several ft above Neil Creek
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.	*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 140) (5' radius)			**Shrub/Sapling** Stratum (% total cover: Ø) (10' radius)		
1. Artemisia douglasiana	90	FACW	1.		
2. Anthriscus scandicina	30	UPL	2.		
3. Dipsacus sylvestris	10	FAC	3.		
4. Festuca myuros	5	UPL	4.		
5. Sisymbrium species	5	FACU/UPL	5.		
6. Conium maculatum	5	FAC+	**Tree** Stratum (% total cover: Ø) (30' radius)		
7. Galium aparine	5	FACU	1.		
8. Lathyrus species	tr.	–	2.		
9.			3.		

Remarks:
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/2 = 50%
Hydrophytic Vegetation Criterion Met? **YES** (NO) close subdominants mostly upland NWI Class

SOILS

Mapped unit name: 31A-Central Point Sandy loam Matches Profile? Y (N) close
Taxonomy: Pachic Haploxerolls Drainage Class: well drained

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-10		10YR 2/2		SaSiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone

Remarks:
Hydric Soil Criterion / Indicators Met? **YES** (NO)

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: — seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils dry	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? **YES** (NO)	

DETERMINATION: Is this plot a Wetland? **YES** (NO)
Comments:
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/26/03 Plot: 19
Site: Wetland Unit 10 Sect.(1/4) 13DD Township 39S Range 1E (Wet) / Up
Plot Location: in DWI mapped wetland 13B + 13C
Topographic Location: hummocky area lower than fill slope up to adj. road + commercial devel.
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)		
(1) Phalaris arundinacea	100	FACW
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks: 1 oregon ash to north, willow to west of plot
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/1 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 100A - Kubli loam Matches Profile? Y N close
Taxonomy: Aquic Haploxeralfs Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-2		root thatch		
2-17		10YR 2/2	com, fine 7.5YR 3/4	SiL tr sand + organics
17-25		10YR 2/1	ORC @ 17"	

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor X Mottled (w/i 10") ___Organic Pan ___Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks: dug to 12", probed below hole to 25"
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: 17" seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
X Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils moist 0-17", saturated below	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO	

earlier in growing season

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments: Upland boundary to South + West defined by fill slope up to commercial development
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

WETLAND DETERMINATION DATA SHEET - 1987 MANUAL

Project #: 03043 Ashland LWI, Jackson Co., OR Owner: ? Date: 6/26/03 Plot: 20
Site: LWI Wetland 13B + 13C Sect.(1/4) 13 NW Township 39S Range 1E (Wet) / Up
Plot Location: ~200 ft north of Plot 19
Topographic Location: Slightly lower than Plot 19, very gradual slope to north
Do normal environmental conditions exist? (Y) N Explain:
Are soils___ vegetation___ hydrology___ significantly disturbed? (N) Explain:
Wetland Unit 10

VEGETATION

*Dominant Plant Species	% Cover	Ind.
Herb Stratum (% total cover: 100) (5' radius)		
1. (Phalaris arundinacea	70	FACW
2. Dipsacus sylvestris	10	FAC
3. Conium maculatum	10	FAC+
4. Lactuca species	10	
5.		
6.		
7.		
8.		
9.		

*Dominant Plant Species	% Cover	Ind.
Shrub/Sapling Stratum (% total cover: Ø) (10' radius)		
1.		
2.		
3.		
4.		
5.		
Tree Stratum (% total cover: Ø) (30' radius)		
1.		
2.		
3.		

Remarks: ~20% reed canarygrass dead, teasel + hemlock increase to west
Percent of Dominant Species that are OBL, FACW, or FAC (excluding FAC-): 1/1 = 100%
Hydrophytic Vegetation Criterion Met? (YES) NO NWI Class PEM

SOILS

Mapped unit name: 104A - Kubli loam Matches Profile? Y N close
Taxonomy: Aquic Haploxerolls Drainage Class: Somewhat poorly

Depth	Horizon	Matrix Color	Mottle Abund., Size, Color, on Pores/Peds?	Texture, Struct., Other
0-10		10YR 2/1		SaSiL

___Histosol ___Reducing Conditions (test) ___Hi. Organic Cont. Surf. Layer
___Histic Epipedon ___Gleyed ___Organic Streaking
___Sulfidic Odor ___Mottled (w/i 10") ___Organic Pan X Low Chroma
___Prob. Aquic Moisture Regime ___Concretions (w/i 3", >2mm) ___On Hydric Soils List ___Major Portion of Root Zone
Remarks:
Hydric Soil Criterion / Indicators Met? (YES) NO

HYDROLOGY

Depth of inundation: — Depth to free water: — Depth to saturation: — seepage: —

1° Indicators	2° Indicators	2° Indicators
___Inundated	___Oxidized Root Channels in upper 12"	___Local Soil Survey Data
___Saturated in upper 12"	___Water-stained leaves	___FAC-Neutral Test
___Water Marks	Recorded Data Available (aerials, gauge)? Explain:	
___Drift Lines	Other:	
___Sediment Deposits	Remarks: Soils slightly moist	
___Drainage Patterns	Wetland Hydrology Criterion / Indicators Met? (YES) NO probably earlier in growing season	

DETERMINATION: Is this plot a Wetland? (YES) NO
Comments: Upland boundary to north defined by blackberry + increase in elevation
Determined by: Stacy Benjamin & C. Mirth Walker *Fishman Environmental Services* rev.5/03

Appendix 4:

Wetland Summary Sheets

WETLAND SUMMARY SHEETS
TABLE OF CONTENTS

Site: Wetland 1

Site Code: **W1**
Location: South of Ashland Creek, west of sewage treatment plant, east of BMX park
Township **39S** Range **1E** Section **4** Quarter **NW**
Tax Map Tax lot(s) 391E04BB 102 & 200
DSL #: none

Approximate size (acres): 2.23
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Ashland Creek
Soil type(s): Brader-Debenger, Barron

Sample Plot Number(s): 7, 8 & 9 Field verification date(s): 6/4/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: cattail, poison hemlock, and creeping spikerush

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation & groundwater seeps

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody vegetation, <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	High	evidence of ponding, high veg. cover, Ashland Creek is WQ limited
Hydrologic Control:	Medium	unrestricted outlet, no woody veg., upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This emergent wetland is dominated by cattail, poison hemlock (a noxious species) and creeping spikerush. Other species noted in the wetland include meadow foxtail, teasel, Himalayan blackberry, willow-herb, soft rush, sedge and bedstraw. The wetland is connected to Ashland Creek at its downslope edge. Adjacent uplands are dominated by ryebrome, downy cheat grass, tall fescue, geranium and hairy vetch.

Site: Wetland 2

Site Code: **W2**
Location: Ashland Demonstration Wetlands, south of Ashland Creek, east of sewage treatment plant
Township **39S** Range **1E** Section **4** Quarter **NW**
Tax Map Tax lot(s) 391E04BB 200
DSL #: none

Approximate size (acres): 0.16 + 0.22 + 0.26 = 0.64
Cowardin classification: POW/PEM HGM classification: Depressional Closed Nonpermanent
Hydrologic basin: Isolated
Soil type(s): Brader-Debenger

Sample Plot Number(s): none Field verification date(s): 6/4/03 & 6/24/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: narrow-leaf cattail, hardstem bulrush

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	sparse woody veg., low interspersion, <0.5 acre open water, isolated
Fish Habitat:	Low	small seasonal ponds with no connection to stream, no cover or shade
Water Quality:	High	evidence of ponding, high veg. cover, Ashland Creek is WQ limited
Hydrologic Control:	Medium	outside floodplain, no woody veg., upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Not locally significant, not subject to state jurisdiction. Note: although Wetland W2 displays intact water quality function, it is excluded from the locally significant wetland criteria according to OAR 141-086-0350(1) since it was created for the purpose of wastewater treatment. The wetland is also non-jurisdictional since it was created in upland soils and is smaller than 1 acre.

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
The Ashland Demonstration Wetlands consist of 3 excavated ponds, 0.16, 0.22 and 0.26 acre in size, dominated by narrow-leaf cattail and hardstem bulrush. The upper pond also contained poison hemlock (noxious) and floating pennywort with red-osier dogwood, rose and willow shrubs planted on the side slopes. The middle pond also contained globepodded hoarycress, a noxious species. The ponds were constructed in 1996 and were lined and planted. The ponds were built as an experimental system to determine their effectiveness for removing

Wetland 2, continued

phosphorous from the City's wastewater. The ponds received 10,000 gallons per day from the sewage treatment plant until 1998 or 1999 when the experiment was discontinued since preliminary results revealed that this type of natural treatment system would not be adequate to meet DEQ's phosphorous standard given the volume of the City's wastewater and small size of the treatment ponds. The wetland/upland boundaries are well-defined by topography and a change to non-hydrophytic vegetation surrounding the ponds consisting of ripgut brome, ryebrome, tall fescue, hairy vetch, and two-color lupine.

Three rectangular areas were excavated immediately north of the Ashland Demonstration Wetlands to provide stormwater infiltration. These areas are currently dominated by non-hydrophytic vegetation and do not meet the wetland criteria. The upper two excavated areas are dominated by dead giant reed (invasive in California), and the lower excavated area is dominated by a brome species. These three excavated areas are not included in the mapping for wetland unit 2.

Site: Wetland 3

Site Code: W3
Location: Billings Ranch, north of railroad, just south of City limits
Township **39S** Range **1E** Section **5** Quarter **NE**
Tax Map Tax lot(s) 391E05 200
DSL #: WD 02-0472; RF-30032

Approximate size (acres): 1.83
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Bear Creek
Soil type(s): Shefflein, Coker

Sample Plot Number(s): none (recent delineation) Field verification date(s): 6/25/03 (off-site)

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: common velvetgrass, grass species, bulrush and cattail

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation & groundwater seeps (seeps noted in wetland delineation report)

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody veg., <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	Medium	primary water source = groundwater, evidence of ponding, high veg. cover
Hydrologic Control:	Medium	outside floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Not locally significant but still jurisdictional

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
The Billings Ranch residential subdivision site was under construction at the time of the site visit. This wetland was viewed from off-site from Nevada Street using binoculars. Grading activity was occurring, and orange construction fencing was present adjacent to the wetland area. Vegetation was dominated by grasses, including common velvetgrass (all species could not be identified with binoculars). Trace amounts of teasel, hardstem bulrush, rush and dock were also noted. The wetland delineation report describes the portion of the wetland to be impacted as being dominated by upland and wetland grasses (often facultative wetland grasses) with lesser amounts of rushes and sedges. The portion of the wetland to be protected is described as having bulrush and cattails.

Wetland 3, continued

This site was delineated in 2002 (DSL WD 2002-0472). A portion of this wetland is slated to be filled under permit (DSL RF-30032), with mitigation to occur adjacent to Billings Pond just north of this wetland. The size of the wetland to remain after permitted impacts is 1.14 acres.

Site: Wetland 4

Site Code: **W4**
Location: Cemetery Creek, north of railroad, south of Main Street
Township **39S** Range **1E** Section **10** Quarter **SE**
Tax Map Tax lot(s) 391E10D 201; 391E10DA 3200, 3500 & 3600
DSL #: WD 03-0203 (east side of tax lot 3600 only)

Approximate size (acres): 3.86
Cowardin classification: PEM HGM classification: Riverine Flow-Through
Hydrologic basin: Cemetery Creek
Soil type(s): Kubli

Sample Plot Number(s): none (no permission to access) Field verification date(s): 6/3/03

Dominant Plant Species (Common Names):
Trees:

Shrubs: Pacific willow, weeping willow

Herbs: reed canarygrass, cattail

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Cemetery Creek, also stormwater input from adjacent residential development to east noted

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody veg., <0.5 acre open water
Fish Habitat:	Medium	low shading and cover, adjacent land use is agriculture
Water Quality:	High	evidence of ponding, high veg. cover, adjacent land use is agriculture
Hydrologic Control:	Medium	outside floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland unit is associated with Cemetery Creek. Vegetation is dominated by reed canarygrass (invasive) and cattail, with areas of Pacific willow and weeping willow shrubs. Himalayan blackberry and white poplar shrubs were also noted in areas. A few black cottonwood trees are also present along the stream. The wetland is closely bordered by residential development along its east edge. The western wetland boundary is defined by a change to upland grasses. A wetland fill violation occurred at the west end of Creek Drive, and an on-site wetland determination was conducted by the Division of State Lands in April 2003 (DSL WD 03-0203).

Site: Wetland 5

Site Code: **W5**
Location: Clear Creek Village mitigation site, north of Chegar Street, south of Hersey Street
Township **39S** Range **1E** Section **4** Quarter **SW**
Tax Map Tax lot(s) 391E04CD 1904
DSL #: WD 02-0292

Approximate size (acres): 1.29
Cowardin classification: PEM/POW HGM classification: Riverine Impounding
Hydrologic basin: Clear Creek
Soil type(s): Coker

Sample Plot Number(s): none Field verification date(s): 6/3/03

Dominant Plant Species (Common Names):
Trees:

Shrubs: Oregon ash, red-osier dogwood, Douglas spirea, willow, red elderberry

Herbs: cattail, hardstem bulrush, rush, blue wildrye, tufted hairgrass, buttercup

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Stormwater runoff, wetland is the headwaters of Clear Creek

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	mod. interspersion, <0.5 acre open water, adjacent land use = developed
Fish Habitat:	Medium	low shading and cover, adjacent land use is developed
Water Quality:	High	evidence of ponding, high veg. cover, adjacent land use is developed
Hydrologic Control:	High	enclosed basin, evidence of ponding, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
A wetland delineation of the Clear Creek Village mitigation site was recently conducted by Integrated Environmental Design (DSL WD 02-0292). Two on-line ponds are present on Clear Creek. The site contains a diverse vegetation community in the emergent wetland area and native shrub plantings should develop into a scrub-shrub wetland community over time. Wetland boundaries are well-defined by topography and a change to non-hydrophytic vegetation.

Site: Wetland 6

Site Code: **W6**
Location: Knoll Creek, north of Interstate-5, south of East Main Street
Township **39S** Range **1E** Section **11** Quarter **SE**
Tax Map Tax lot(s) 391E11D 100, 300, 900 & 1000
DSL #: none

Approximate size (acres): 1.71
Cowardin classification: PEM HGM classification: Riverine Flow-Through
Hydrologic basin: Knoll Creek
Soil type(s): Kubli, Brader-Debenger, Central Point

Sample Plot Number(s): none (no permission to access) Field verification date(s): 6/4/03 (off-site)

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: cattail, rush

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Knoll Creek

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	sparse woody vegetation, moderate interspersion, <0.5 acre open water
Fish Habitat:	High	natural stream channel, adjacent land use is undeveloped
Water Quality:	High	surface water-driven, evidence of ponding, high veg. cover
Hydrologic Control:	Medium	outside floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This unit was viewed from off-site from the Windmill Inn parking lot using binoculars. Two stream-associated wetlands are present along Knoll Creek. The wetlands are predominantly emergent with a minor scrub-shrub component. Vegetation is dominated by cattail and rush, with a few willow, black cottonwood, Oregon ash and rose shrubs also present. Adjacent uplands are dominated by Himalayan blackberry and upland grasses.

Site: Wetland 7

Site Code: **W7**
Location: North Mountain Nature Park, south of Bear Creek, east of Mountain Avenue
Township **39S** Range **1E** Section **4** Quarter **SE**
Tax Map Tax lot(s) 391E04DA 300; 391E04DD 100 & 400
DSL #: WD 95-0229

Approximate size (acres): 3.25
Cowardin classification: PEM/POW HGM classification: Riverine Impounding
Hydrologic basin: Bear Creek
Soil type(s): Camas-Newberg-Evans

Sample Plot Number(s): none Field verification date(s): 6/24/03

Dominant Plant Species (Common Names):
Trees:

Shrubs: Douglas spirea, Oregon ash, sandbar willow, black hawthorn and black cottonwood

Herbs: cattail, hardstem bulrush, soft rush, sedge, meadow foxtail, bentgrass and creeping buttercup

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Beach Creek (ponds) & precipitation (emergent wetlands)

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	High	connected to Beach & Bear Creeks, moderate interspersion, wide buffer
Fish Habitat:	Medium	low shading and cover, stream channel modified (on-line ponds)
Water Quality:	High	surface water-driven, evidence of ponding, high veg. cover
Hydrologic Control:	High	within floodplain, evidence of ponding, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
Three on-line ponds (upper, middle and lower ponds) are present on Beach Creek. We refer to the pond at the downstream end of Beach Creek as the lower pond and to the pond further upstream on Beach Creek the upper pond, although the North Mountain Park informational brochure refers to the lower pond as the upper pond and vice versa. The ponds are fringed by emergent wetlands containing cattail, hardstem bulrush, soft rush, sedge, and meadow foxtail with Douglas spirea, Oregon ash, sandbar willow, black hawthorn, and black cottonwood shrubs. The lower wetlands are located in the floodway of Bear Creek. Floating aquatic vegetation in the ponds includes lesser duckweed and Mexican water fern. Western pond turtle were observed in the upper pond. Additional emergent wetland vegetation observed in the non-ponded areas included meadow foxtail, bentgrass, creeping buttercup, teasel, Watson's willow-herb, and rush.

Site: Wetland 8

Site Code: **W8**
Location: North of Bear Creek, west of Mountain Avenue
Township **39S** Range **1E** Section **4** Quarter **NE**
Tax Map Tax lot(s) 391E04AC 900
DSL #: none

Approximate size (acres): 0.90
Cowardin classification: PSS HGM classification: Slope Valley
Hydrologic basin: Isolated, no apparent connection to Bear Creek
Soil type(s): Camas-Newberg-Evans, Darow, Medford

Sample Plot Number(s): 16 & 17 Field verification date(s): 6/24/03

Dominant Plant Species (Common Names):
Trees:

Shrubs: sandbar willow, Pacific willow and Himalayan blackberry

Herbs:

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation, may be spring-fed

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, <0.5 acre open water, isolated
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	Medium	no evidence of ponding, high veg. cover, Bear Creek is WQ limited
Hydrologic Control:	High	restricted outlet, woody veg., upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This scrub-shrub wetland is dominated by sandbar willow and Pacific willow shrubs surrounded by a dense Himalayan blackberry thicket. One Oregon ash tree was also present in the wetland, along with trace amounts of soft rush, spreading rush and teasel (invasive). This wetland is bordered on the south and west by a gravel road, and no culvert was observed under the road that would connect the wetland with Bear Creek to the south. Upland vegetation adjacent to the wetland is dominated by yellow starthistle (noxious), ripgut brome, tumblemustard, poison hemlock (noxious), teasel and Himalayan blackberry and hairy.

Site: Wetland 9

Site Code: **W9**
Location: North of railroad, south of East Main Street, west of Cemetery Creek
Township **39S** Range **1E** Section **10** Quarter **NE & SE**
Tax Map Tax lot(s) 391E10D 903, 909, 910, 913 & 1000
DSL #: WD 91-0031

Approximate size (acres): 5.38
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Isolated
Soil type(s): Kubli

Sample Plot Number(s): none (difficult access) Field verification date(s): 6/25/03 (off-site)

Dominant Plant Species (Common Names):
Trees:

Shrubs: Himalayan blackberry is around the perimeter

Herbs: (from 1991 delineation) fine grass, cattail, soft rush, creeping buttercup, common velvetgrass

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation, apparently spring-fed

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, <0.5 acre open water, isolated
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	High	evidence of ponding, high veg. cover, adjacent land use is developed
Hydrologic Control:	High	evidence of ponding, outlet restricted, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland was difficult to view from off-site due to the presence of berms bordering much of the site and the lack of viewing points from adjacent roads. The south portion of the wetland was partially viewed from a permission to access parcel on Normal Street and was observed to be surrounded by dense blackberry with a few a few willow and black cottonwood. A portion of this wetland was delineated in 1991 (DSL WD 91-0031). Wetland vegetation on the wetland data sheets included a fine grass, cattail, soft rush, creeping buttercup, common velvetgrass and Himalayan blackberry.

Site: Wetland 10

Site Code: **W10**
Location: North of Highway 66, south of Neil Creek
Township **39S** Range **1E** Section **13** Quarter **NW**
Tax Map Tax lot(s) 391E13B 2001
DSL #: WD 90-0119

Approximate size (acres): 2.12
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Neil Creek
Soil type(s): Barron, Kubli, Camas-Newberg-Evans

Sample Plot Number(s): 19 & 20 Field verification date(s): 6/25/03 & 6/26/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: reed canarygrass, poison hemlock, teasel

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody vegetation, <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	Medium	no evidence of ponding, high veg. cover, Neil Creek is WQ limited
Hydrologic Control:	Medium	within floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland is dominated by reed canarygrass (invasive), poison hemlock (noxious) and teasel (invasive). A few willow, white alder and Oregon ash shrubs are also present. Soils are hummocky, indicating possible prior agricultural use. The wetland appears to be connected to Neil Creek at its downslope end. Adjacent uplands consist of quack grass, ripgut brome, downy cheat grass, yellow starthistle (noxious), globepodded hoarycress (noxious) and Himalayan blackberry.

Historically this site appears to have been upland, per the 1990 wetland determination; however, recent normal hydrologic conditions present for several years support a revised finding that it is now jurisdictional wetland.

Site: Wetland 11

Site Code: **W11**
Location: Southwest of Washington Street & Interstate-5, north of railroad
Township **39S** Range **1E** Section **14** Quarter **NE**
Tax Map Tax lot(s) 391E14A 1102 & 1104
DSL #: none

Approximate size (acres): 0.85
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Knoll Creek
Soil type(s): Kubli

Sample Plot Number(s): none (no permission to access) Field verification date(s): 6/5/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: meadow foxtail

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody vegetation, <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	Medium	no evidence of ponding, high veg. cover, adjacent land use is developed
Hydrologic Control:	Medium	outside floodplain, no evidence of ponding, upstream land use developed

Determination of Goal 5 Locally Significant Wetland: Not locally significant but still jurisdictional

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland was viewed from off-site from Washington Street with binoculars. This wetland consists of a roadside emergent wetland along the southwest side of Washington Street, dominated by meadow foxtail, with lesser amounts of blue wildrye, birdsfoot-trefoil and catchweed bedstraw. This wetland is connected to Knoll Creek via a roadside ditch at its downstream end. The wetland boundary is defined by a change to upland grasses.

Site: Wetland 12

Site Code: **W12**
Location: West of Cemetery Creek, north of railroad, south of East Main Street
Township **39S** Range **1E** Section **10** Quarter **NE & SE**
Tax Map Tax lot(s) 391E10D 201, 203, 204, 300 & 700
DSL #: none

Approximate size (acres): 1.68
Cowardin classification: PEM HGM classification: Slope Valley
Hydrologic basin: Cemetery Creek
Soil type(s): Kubli

Sample Plot Number(s): 10 & 11 Field verification date(s): 6/5/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: cattail, meadow foxtail, water foxtail and soft rush

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation & TID

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody vegetation, <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	High	evidence of ponding, high veg. cover, adjacent land use is agriculture
Hydrologic Control:	Medium	outside floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland swale originates in a horse pasture north of the railroad tracks and is located approximately 400 feet west of Cemetery Creek. The wetland is dominated by cattail, meadow foxtail, water foxtail and soft rush. Lesser amounts of western buttercup, forget-me-not, common velvetgrass, spreading rush and creeping spikerush were also present, with a few black cottonwood trees also present in the northern portion. Adjacent uplands contain Mediterranean barley, ryebrome, tall fescue, yellow clover and mayweed chamomile.

Site: Wetland 13

Site Code: **W13**
Location: West of Hamilton Creek, north of Ashland Street, south of East Main Street
Township **39S** Range **1E** Section **11** Quarter **SW**
Tax Map Tax lot(s) 391E11C 2500; 391E11CA 2762 & 12761; 391E11CB 1000 & 1100
DSL #: WD 01-0613

Approximate size (acres): 1.41
Cowardin classification: PEM
HGM classification: Slope Valley
Hydrologic basin: Bear Creek
Soil type(s): Kubli

Sample Plot Number(s): 1 - 4
Field verification date(s): 6/3/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs: common velvetgrass, meadow foxtail, Kentucky bluegrass, soft rush, cattail and spearmint

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Precipitation & TID

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	Medium	1 Cowardin class, no woody vegetation, <0.5 acre open water
Fish Habitat:	Low	wetland does not include a stream, lake or pond
Water Quality:	High	evidence of ponding, high veg. cover, adjacent land use is agriculture
Hydrologic Control:	Medium	outside floodplain, unrestricted outlet, upstream land use is developed

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland is the headwaters of a small unnamed tributary to Bear Creek that flows behind a residential subdivision. The wetland consists of a gentle topographic swale trending north through several agricultural properties. A portion of this wetland was previously delineated (DSL WD 01-0613) and the adjacent area was partially plowed up to the edge of wetland. The wetland is described as containing common velvetgrass, meadow foxtail, Kentucky bluegrass, soft rush, cattail and spearmint in the wetland delineation report. Several Canada geese were observed on the headwater area in this area from off-site. Uplands are meadow foxtail, brome, tall fescue and orchard grass.

Site: Wetland 14

Site Code: **W14**
Location: East pond between Ashland Creek & Bear Creek, downstream of sewage treatment plant
Township **38S** Range **1E** Section **33** Quarter **SW**
Tax Map Tax lot(s) 391E05 100
DSL #:

Approximate size (acres): 1.16
Cowardin classification: POW/PEM HGM classification: Depressional Closed Nonpermanent
Hydrologic basin: Ashland Creek
Soil type(s): Camas-Newberg-Evans

Sample Plot Number(s): Field verification date(s): 6/24/03

Dominant Plant Species (Common Names):
Trees:

Shrubs: Himalayan blackberry, Oregon ash, willow and black cottonwood

Herbs: cattail, knotweed (*Polygonum* species), yellow iris, poison hemlock and willow-herb

Other:

Primary hydrology source:
(including hydrology source and use of artificially created wetlands; any potential non-jurisdictional status)
Inlet from Ashland Creek

OFWAM Summary:

Function	Rating	Rationale
Wildlife Habitat:	High	>1 acre open water (seasonal) & emergent veg., connected to Ashland Cr.
Fish Habitat:	Medium	low shading and cover, Ashland Creek is water quality limited
Water Quality:	Medium	moderate veg. cover, adj. land use undeveloped, Ashland Cr. WQ limited
Hydrologic Control:	High	within floodplain, evidence of ponding, restricted outlet

Determination of Goal 5 Locally Significant Wetland: Significant

Description of the wetland, including topographic position, land uses, alterations, and the basis for the wetland boundary determination:
This wetland is a seasonal open water pond located near the confluence of Ashland Creek with Bear Creek just downstream of the Ashland sewage treatment plant. The pond is signed as the "Ashland Sediment Passive Treatment Pond" and was reportedly constructed in 1987 as a settlement pond to divert water from Ashland Creek during sluicing of the upstream Reader Reservoir. Sluicing last occurred in 1985. The pond is connected to Ashland Creek and contains both an inlet and outlet structure. The pond bottom and side slopes are comprised of granite sediment. Pond depth appeared to range from 1 to 6 feet. Vegetation fringing the pond includes cattail, yellow iris, poison hemlock, willow-herb, a few Oregon ash, willow and black cottonwood shrubs. Dense Himalayan blackberry is present along the north side adjacent to Bear Creek. Small diameter

Wetland 14, continued

branches and woody debris were present in the pond. The pond dries up in the summer and becomes an emergent wetland dominated by knotweed in the middle and other emergents around the perimeter. Wildlife use included the following birds: wood duck, mallard, barn swallow, tree swallow, red-winged blackbird, and great blue heron.

APPROVED WETLANDS INVENTORY
Oregon Department of State Lands

Meets LWI standards
Date 3/20/2007 Approved by PER/DF

Appendix 5:

OFWAM Evaluation Sheets

Wetland Ashland Cr. /BMX Park wetland - WL #1

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species PEM-TYAN, ELPA EPISPP, COMA RUDI, ALPR DISY
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water Ashland Cr.
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Ashland Cr on 303d list fecal coliform
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes: much > 50 ft to west ~50 ft to east

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

Fish Habitat (FH)

#1

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

6. Are fish in a stream, lake or pond associated with the wetland? #1

a. Salmon, trout or sensitive species are present at some time during the year
b. Species not covered in "a" are present at some time during the year
c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b.) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No cattail
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   (a.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#1

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a.) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c.) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Intact (H)
HC: Impacted or degraded (M)

Wetland Ashland Demonstration Wetlands - WL #2

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   (a.) 2 or more b. 1 with >5 plant species c. 1 w/ ≤5 plant species PUS, PEM
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation (b.) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   a. The wetland is connected by surface water to another body of water
   (b.) No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   Ashland Cr. on 303d list fecal coliform
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

Part A - Streams #2

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. (c.) No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% (c.) Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% (c.) Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

#2

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   (c) No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   (a) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#2

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   (a) Yes, the outlet is restricted or the wetland has not outlet no outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation (b) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Intact (H)
HC: Impacted or degraded (M)

Wetland Billings Ranch Wetland - WL #3

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species PEM
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   a. The wetland is connected by surface water to another body of water
   (b.) No surface water connection exists, but other bodies of water lie within 1 mile irrig. ditch filled for access?
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses
9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   a. Greater than 40% b. Between 10 and 40% (c.) Less than 10%
   Is it 50 feet wide or wider? yes___ no___ notes: based on wetland permit application figures

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA **Fish Habitat (FH)** #3

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#3

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches b. Precipitation or sheet flow
   (c.) Groundwater, including seeps and springs Scales report
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No Cattail
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres
   (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

Hydrologic Control (Flood Control & Water Supply; HC) #3

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b.) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No cattail
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c.) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   under constr. (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
* A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for Some Species (M)
FH: Lost or not present (L)
WQ: Impacted or degraded (M)
HC: Impacted or degraded (M)

Wetland Cemetery Creek Wetland - WL #4

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species PEM TYLA, PHAR, SCMI, POAL, SALA, SALA
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants Cemetery Cr not listed on 303d list
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space (b.) Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

#4

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% (c.) Less than 50%
2. What is the physical character of the stream channel?
   (a.) The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% (b.) Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space (b.) Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   (b.) Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

potentially not shown in ODFW map

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

6. Are fish in a stream, lake or pond associated with the wetland?

#4

a. Salmon, trout or sensitive species are present at some time during the year
b. Species not covered in "a" are present at some time during the year
c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   (a.) Surface flow, including streams and ditches b. Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No cattail
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres
   (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge (~~opposite WH8~~)?
   a. Developed uses (b.) Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#4

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Impacted or degraded (M)
WQ: Intact (H)
HC: Impacted or degraded (M)

OREGON FRESHWATER WETLAND ASSESSMENT METHODOLOGY (OFWAM)
ASSESSMENT QUESTIONS G:\2003\03043_Ashland\reports\ofwam_data_sheet.wpd
11/2003

Wetland Clear Creek Village Wetland - WL #5

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   (a.) 2 or more b. 1 with >5 plant species c. 1 w/ ≤5 plant species PGW, PEM, PSS
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation (b.) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High (b.) Moderate c. Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants

Clear C. not on 303(d) list

8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses
9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   a. Greater than 40% (b.) Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes__ no__ notes: Final buffer width once site developed is unknown

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH) #5

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% (c.) Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   (b.) Only portions of the stream channel are modified in-line ponds
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% (c.) Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   (c.) No species are present at any time during the year ODFW map

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#5

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   (a.) Surface flow, including streams and ditches b. Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#5

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a.) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   (b.) Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation (b.) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Impacted or degraded (M)
WQ: Intact (H)
HC: Intact (H)

Wetland Knoll Creek Wetlands - WL #6

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High (b.) Moderate c. Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   (a.) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

#6

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% (c.) Less than 50%
2. What is the physical character of the stream channel?
   (a.) The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% (b.) Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   (a.) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   (b.) Species not covered in "a" are present at some time during the year potentially (no stream on map)
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

6. Are fish in a stream, lake or pond associated with the wetland? #6
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   (a) Surface flow, including streams and ditches b. Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season? Cattail
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge (~~opposite WH8~~)?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

Hydrologic Control (Flood Control & Water Supply; HC) #6

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b.) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c.) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for Some Species (M)
FH: Intact (H)
WQ: Intact (H)
HC: Impacted or degraded (M)

Wetland North Mountain Nature Park wetlands - wl #7

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   (a) 2 or more b. 1 with >5 plant species c. 1 w/ ≤5 plant species PAB, PEM
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation (b) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High (b) Moderate c. Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants Beach Cr. not on 303d list
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   (a) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% (c.) Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   (b.) Only portions of the stream channel are modified in-line ponds
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% (c.) Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   (a.) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   (b.) Species not covered in "a" are present at some time during the year potentially (not shown on ODFW map)
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#7

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   (a.) Surface flow, including streams and ditches b. Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#7

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   (b) Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation (b) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   (a) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a) Urban or urbanizing b. Agriculture c. Forested or natural area

Riverwalk subdiv. under construction →

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

*

OFWAM FUNCTION SUMMARY

WH: Diverse (H)
FH: Impacted or degraded (M)
WQ: Intact (H)
HC: Intact (H)

OREGON FRESHWATER WETLAND ASSESSMENT METHODOLOGY (OFWAM)
ASSESSMENT QUESTIONS G:\2003\03043_Ashland\reports\ofwam_data_sheet.wpd
11/2003

Wetland NWI wetland 46 - WL # 8

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more b. 1 with >5 plant species (c.) 1 w/ ≤5 plant species PSS-SALA SAFL, RUCI
2. What is the dominant wetland vegetation cover type?
   (a.) Woody vegetation b. Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   a. The wetland is connected by surface water to another body of water
   (b.) No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Bear CC 303d list for fecal coliform + temp
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   (a.) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

Fish Habitat (FH)

#8

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#8

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b) Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   a. Developed uses b. Agriculture (c) Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   (a) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#8

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a.) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b.) Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   (a.) Yes, the outlet is restricted or the wetland has not outlet no culvert observed under road @ south end
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   (a.) Woody vegetation b. Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Impacted or degraded (M)
HC: Intact (H)

Wetland NWI Wetland 10B - WL #9

Wildlife Habitat (WH) PEM

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species TYLA, JUEF, HOLA RAPE, fine grass carex
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   a. The wetland is connected by surface water to another body of water
   (b.) No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants Cemetery Cr. not on 303d list
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes: >50ft where no development adjacent

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
* The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

#9

Fish Habitat (FH)

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No cattail
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   (a) >5 acres b. Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#9

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a.) Yes b. No partially berms
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   (a.) >5 acres b. Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   (a.) Yes, the outlet is restricted or the wetland has not outlet berms, no obvious outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?
   (a) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

*

OFWAM FUNCTION SUMMARY

WH: Habitat for Some Species (M)
FH: Lost or not present (L)
WQ: Intact (H)
HC: Intact (H)

Wetland NWI wetland 13b + 13c - wl #10

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more b. 1 with >5 plant species (c.) 1 w/ ≤5 plant species PEM
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Neil Cr. on 303d list Temp + DO
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   a. Greater than 40% b. Between 10 and 40% (c.) Less than 10%
   Is it 50 feet wide or wider? yes___ no X notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

#10

Fish Habitat (FH)

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#10

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b) Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   (a) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

Hydrologic Control (Flood Control & Water Supply; HC) #10

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a.) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b.) Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c.) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Impacted or degraded (M)
HC: Impacted or degraded (M)

Wetland Washington Street Wetland - Wt #11

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more b. 1 with >5 plant species (c.) 1 w/ ≤5 plant species
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water roadside ditch
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants Knoll Cr. not on 303d list
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space b. Agriculture (c.) Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

Fish Habitat (FH)

#11

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#11

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b.) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b.) Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

Hydrologic Control (Flood Control & Water Supply; HC) #11

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   a. Yes (b) Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   (b.) Minor restrictions slow down the water (i.e., undersized culvert) culvert under driveway?
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Impacted or degraded (M)
HC: Impacted or degraded (M)

Wetland West of Cemetery Creek wetland - wl # 12

Wildlife Habitat (WH)

PEM

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species

ALPR, myoscutS
ALGE, HOA, JUEF
ELPA, RAOC

2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   a. The wetland is connected by surface water to another body of water
   (b.) No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Cemetery cr. 303(d) list

   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space (b.) Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

NA

#12

Fish Habitat (FH)

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

6. Are fish in a stream, lake or pond associated with the wetland? #12
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b.) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season? Cattail
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover?
   (a.) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge (~~opposite WH8~~)?
   a. Developed uses (b.) Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#12

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Habitat for Some Species (M)
FH: Lost or not present (L)
WQ: Intact (H)
HC: Impacted or degraded (M)

Wetland West of Hamilton Creek wetland - WL # 13

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)?
   a. 2 or more (b.) 1 with >5 plant species c. 1 w/ ≤5 plant species PEM-HCD, JUEF ALPR TRAN, Mentha SALSPP
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High b. Moderate (c.) Low
4. How many acres of unvegetated open water are present?
   a. More than 1 acre b. Between 0.5 and 1 acre (c.) Less than 0.5 acre
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   (a.) Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   b. Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   (a.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants Clay + Hamilton cr. not on 303d list
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   a. Exclusive Forest Use or Open Space (b.) Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no__ notes: ag field; partially plowed

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

NA

#13

Part A - Streams

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   a. Yes b. Cannot be determined. c. No
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% c. Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% c. Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#13

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   a. Surface flow, including streams and ditches (b) Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No Cattail, mint
3. What is the degree of wetland vegetation cover?
   (a) High (>60%; OW<40%) b. Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge ~~(opposite WH8)~~?
   a. Developed uses (b) Agriculture c. Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   a. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

#13

Hydrologic Control (Flood Control & Water Supply; HC)

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   a. Yes (b.) No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   a. Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   (c.) No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation b. Emergent vegetation and ponding, or open water only
   (c.) Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   (a.) Developed uses b. Agriculture c. Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a.) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

*

OFWAM FUNCTION SUMMARY

WH: Habitat for some species (M)
FH: Lost or not present (L)
WQ: Intact (H)
HC: Impacted or degraded (M)

Wetland East Pond between Bear Creek + Ashland Creek
WL #14

Wildlife Habitat (WH)

1. How many Cowardin wetland classes are present (include vertical strata ≥20% cover)? PUb PEM
   (a.) 2 or more b. 1 with >5 plant species c. 1 w/ ≤5 plant species
2. What is the dominant wetland vegetation cover type?
   a. Woody vegetation (b.) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
3. What is the degree of Cowardin class interspersion for the wetland being observed (Fig. 3)?
   a. High (b.) Moderate c. Low
4. How many acres of unvegetated open water are present?
   (a.) More than 1 acre b. Between 0.5 and 1 acre c. Less than 0.5 acre Seasonal
5. How is the wetland connected to another body of water, such as a stream, lake or pond (F. 2)?
   (a.) The wetland is connected by surface water to another body of water connected to Ashland Creek via inlet + outlet
   b. No surface water connection exists, but other bodies of water lie within 1 mile
   c. No surface water connection exits, and no other bodies of water lie within 1 mile
6. How is the wetland connected to other wetlands?
   a. Connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, culvert, canal or lake
   (b.) Not connected by surface water, but other unconnected wetlands lie within a 3-mile radius
   c. Not connected to other wetlands by surface waters, and no other unconnected wetlands lie within a 3-mile radius
7. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Ashland Creek on 303d list fecal coliform
8. What is the dominant existing land use within 500 feet of the wetland's edge?
   (a.) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

9b. What percent of the wetland's edge is bordered by a vegetative buffer at least 25 feet wide?
   (a.) Greater than 40% b. Between 10 and 40% c. Less than 10%
   Is it 50 feet wide or wider? yes X no___ notes:_____

Wildlife Habitat Assessment Criteria	
The wetland provides *diverse* wildlife habitat if:	At least four questions are answered "a," and no more than one is answered "c."
The wetland provides *habitat for some species* if:	Answers do not satisfy the above- or below-listed criteria.
The wetland's wildlife habitat function is *lost or not present* if:	All questions are answered "c."

Fish Habitat (FH)

NA **Part A - Streams** #14

1. What percentage of the stream is shaded by stream-side (riparian) vegetation?
   a. More than 75% b. Between 50 and 75% c. Less than 50%
2. What is the physical character of the stream channel?
   a. The stream is in a natural channel, or modified portions of the stream are returning to a natural channel
   b. Only portions of the stream channel are modified
   c. The stream is extensively modified or confined in a non-vegetated channel or pipe
3. What percentage of the entire stream contains instream structures such as large woody debris, floating submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 25% c. Less than 10%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   a. Exclusive Forest Use or Open Space b. Agriculture c. Developed uses
6. Are fish present in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   b. Species not covered in "a" are present at some time during the year
   c. No species are present at any time during the year

Part B - Lakes and Ponds

1. Does the lake or pond contain areas of both deep and shallow water?
   (a) Yes b. Cannot be determined. c. No Pond ranges from NI-6 ft deep
2. What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?
   a. More than 25% b. Between 10 and 75% (c.) Less than 10%
3. What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?
   a. 60% or more b. Between 20 and 59% (c.) Less than 20%
4. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (= WH7)?
   a. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   (c.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Ashland creek
5. What is the dominant existing land use within 500 feet of the wetland's edge (= WH8)?
   (a) Exclusive Forest Use or Open Space b. Agriculture c. Developed uses

#14

6. Are fish in a stream, lake or pond associated with the wetland?
   a. Salmon, trout or sensitive species are present at some time during the year
   (b.) Species not covered in "a" are present at some time during the year not observed but likely present
   c. No species are present at any time during the year

Fish Habitat Assessment Criteria	
The wetland's fish habitat function is *intact* if:	Three or more questions are answered "a," and no more than one is answered "c."
The wetlands's fish habitat function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
The wetlands's fish habitat function is *lost or not present* if:	All questions are answered "c."

Water Quality (Pollutant Removal; WQ)

1. What is the wetland's primary source of water?
   (a.) Surface flow, including streams and ditches b. Precipitation or sheet flow
   c. Groundwater, including seeps and springs
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a.) Yes b. Unable to determine or not applicable c. No
3. What is the degree of wetland vegetation cover? PAB in winter PEM in summer
   a. High (>60%; OW<40%) (b.) Moderate (~60%; OW=40%) c. Low (<60%; OW>40%)
4. What is the wetland's area in acres?
   a. >5 acres (b.) Between 0.5 acre and 5 acres; or <0.5 acres and the wetland is connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
   c. <0.5 acre, and the wetland is not connected to other wetlands within a 3-mile radius by a perennial or intermittent stream, irrigation or drainage ditch, canal or lake
5. What is the dominant, existing land use within 500 feet of the wetland's edge (~~opposite WH8~~)?
   a. Developed uses b. Agriculture (c.) Exclusive Forest Use or Open Space
6. What is the water quality condition of stream reaches in the watershed upstream of the wetland or adjacent to the wetland (opposite WH7)?
   (a.) One or more upstream or adjacent reaches are listed as *water quality limited* or in *severe* water quality condition for nonpoint source pollutants Ashland Creek
   b. One or more upstream or adjacent reaches are listed in *moderate* water quality condition for nonpoint source pollutants
   c. No upstream or adjacent reached are listed as *water quality limited*, and all upstream or adjacent reaches are listed as *no problem* (or no data available) for nonpoint source pollutants

Water Quality Assessment Criteria	
A wetland's water-quality function is *intact* if:	Question 1 is answered "a," or "b," questions 2 and 3 are answered "a," and any other question is answered "a" or "b."
A wetland's water-quality function is *impacted or degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetlands's water-quality function is *lost or not present* if:	Four or more questions are answered "c."

Hydrologic Control (Flood Control & Water Supply; HC) #14

1. Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?
   (a) Yes b. No
2. Is there evidence of flooding or ponding during a portion of the growing season?
   (a) Yes b. Unable to determine or not applicable c. No
3. What is the wetland's area in acres?
   a. >5 acres (b) Between 0.5 and 5 acres c. <0.5 acre
4. Is waterflow out of the wetland restricted (eg., beaver dam, concrete structure, undersized culvert)?
   (a) Yes, the outlet is restricted or the wetland has not outlet
   b. Minor restrictions slow down the water (i.e., undersized culvert)
   c. No the outlet has unrestricted flow
5. What is the dominant wetland vegetation cover type (=WH2)?
   a. Woody vegetation (b) Emergent vegetation and ponding, or open water only
   c. Emergent vegetation or wet meadow
6. What is the dominant existing land use within 500 feet of the wetland <u>on the downstream or down-slope edge of the wetland</u>?
   a. Developed uses b. Agriculture (c) Exclusive Forest Use or Open Space
7. What is the dominant land use in the watershed upstream from the assessment area?
   (a) Urban or urbanizing b. Agriculture c. Forested or natural area

Hydrologic Control Assessment Criteria	
A wetland's hydrologic control function is *intact* if:	Four or more questions are answered "a."
A wetland's hydrologic control function is *impacted of degraded* if:	Answers do not satisfy the above- or below-listed criteria.
A wetland's hydrologic control function is *lost or not present* if:	Four or more questions are answered "c."

OFWAM FUNCTION SUMMARY

WH: Diverse (H)
FH: Impacted or Degraded (M)
WQ: Impacted or Degraded (M)
HC: Intact (H)

Appendix 6:

OFWAM Wetlands of Special Interest for Protection & Wetland Characterization Sheets

	Wetland 1	Wetland 2	Wetland 3

Wetlands of Special Interest for Protection

The first filter in the Oregon Method is to see whether the wetland is in a management plan, is protected by regulatory rules or statutes, or is uncommon in Oregon. A "yes" answer to any of the following questions will place the wetland into this category and management decisions should be made to protect the site. You still may want to evaluate the functions and conditions of each wetland to give you an overall evaluation of the wetlands in your assessment area. You should note on the Function and Condition Summary Sheet (Chapter VI and Appendix C) the information from this section. You do not need to contact every agency listed, but all those listed have all or some of the information you need.

Question 1

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

a. Yes
b. No
c. Unknown
List: Coho Salmon
Steelhead
Chinook

Information source

Oregon Natural Heritage Program, The Nature Conservancy, U.S. Fish and Wildlife Service, National Marine Fisheries Service, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture.

Question 2

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

a. Yes
b. No
c. Unknown
List: Bear Creek + Ashland Creek mapped as Essential Salmon Habitat by DSL

Information source

U.S. Fish and Wildlife Service, National Marine Fisheries Service, The Nature Conservancy.

	Wetland 1	*Wetland 2*	*Wetland 3*

Question 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 a Nature Conservancy Preserve?

a. Yes
(b.) No
c. Unknown
List which it is:

Information source

The Nature Conservancy, the Oregon Natural Heritage Program, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service, National Park Service and Corps of Engineers.

Question 4

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

a. Yes
(b.) No
c. Unknown
List which species:

Information source

U.S. Fish and Wildlife Service, Oregon Department of Fish and Wildlife.

Question 5

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

a. Yes
(b.) No
c. Unknown

Information source

Local planning office.

Question 6

Is the wetland a designated State Outstanding Resource Water?

a. Yes
(b.) No
c. Unknown

Information source

Oregon Department of Environmental Quality. (As of 1996, DEQ has not made any such designations.)

	Wetland 1	Wetland 2	Wetland 3

Question 7

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

a. Yes
(b.) No
c. Unknown
List name:

Information source

Oregon Department of Fish and Wildlife, State Parks, U.S. Fish and Wildlife Service, Bonneville Power Administration, Bureau of Land Management, National Park Service, METRO, local parks department.

Question 8

Is the wetland a *protected* mitigation site for a 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.

(a.) Yes wetland W-5
b. No
c. Unknown

Information source

Oregon Division of State Lands, Corps of Engineers, Environmental Protection Agency.

Question 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.

a. Yes
(b.) No
c. Unknown

Information source

Natural Resources Conservation Service, Consolidated Farm Services Agency.

Question 10

Is the wetland considered rare or unique in Oregon? Examples include bogs, vernal pools and old growth forested wetlands (See Appendix G).

a. Yes
(b.) No
c. Unknown

Information source

The Nature Conservancy, Oregon Division of State Lands, the Oregon Natural Heritage Program.

Wetland 1	*Wetland 2*	*Wetland 3*

Wetland Characterization

The Wetland Characterization is designed for information collection in a systematic manner. The Characterization is divided into a landscape section, for which all the information can be gathered in the office with appropriate maps and references (and maybe a few phone calls), and a site-specific section, which requires field observation and measurement. (*Questions that must be answered in the field are marked with a check.*) You may want to record the observation, not just the letter answer, when given the choice, because you might find the descriptive information useful later. Also, take some blank sheets of paper into the field for making sketches of the wetland area that you can refer to later. Another alternative is to put an overlay on an aerial photo and sketch and note information on the overlay. If done thoroughly, this should prevent you from having to return to the field or having to seek additional information when completing the assessment.

The information gathered is used to answer function and condition assessment questions (copies of these questions appear directly following the Characterization). The Characterization should not lead you to any conclusions; this will be done as the assessment sheets are completed.

What you need to take with you into the field:

- Clipboard
- Pencils (various colors for sketching)
- Blank paper to sketch on
- Long tape measure (200 feet if you have one), or measure your pace before going into the field
- Aerial photos (you may want to attach a mylar overlay to draw on)
- Ruler
- Base maps (optional or make copies)
- Binoculars (optional)

Watershed Notes

Watershed setting

All questions pertaining to the watershed can be answered in the office from aerial photographs, U.S. Geological Service topographical maps, and other reference materials. (See Appendix A.) The answers to these questions are used to give decision makers a broader understanding of ecological functions and land uses in the watershed. The answers are summarized on the Watershed Summary Sheet at the end of the Assessment Questions section.

Drainage basin

The Oregon Water Resources Department has divided the state into 18 drainage basins. Check the map in Appendix H to see which drainage basin contains the study site.

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

Physical characteristics of the watershed being assessed (within the drainage basin)

Topography

2. What is the watershed's area in square miles? The watershed area is often much smaller than the drainage basin (see Appendix E).
3. Calculate the average slope of the watershed (see Appendix F).

Hydrologic profile

4. Is the stream flow in the watershed modified by dams, channelization or levees? (Choose all that are appropriate.)
   (a) Tributary streams to the main stem stream are modified.
   b. Main stem stream is modified.
   c. Stream flow is not modified (free-flowing.)
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?
   (a) Yes.
   b. No.

Watershed Notes

Rogue River

63 sq.mi

22% (from Ashland Digital Terrain model)

Tributaries to Bear Creek have all been modified due to upstream development + culverting

Talent Irrigation District

Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area?
   a. Urban.
   b. Urbanizing (mix of urban, agriculture and forest uses).
   c. Agriculture (farming, ranching or grazing).
   (d.) Forested or natural area.

Water quality *(Use more specific water quality information, if available. Contact local DEQ office, or call the DEQ lab at (503) 229-5983 for sampling information.)*

7. Consult the most recent State of Oregon Department of Environmental Quality 305(b) Report to determine whether any streams in the study area are listed as a *water quality limited.* (You may want to ask DEQ whether there are any proposed changes.) This information is included in Clean Water Act section 303(d) reporting.
   (a.) Streams or portions of streams within the study area are listed as *water quality limited.*
   b. No streams or portions of streams within the study area are listed as *water quality limited.*

8. Consult the most recent *Oregon Statewide Assessment of Nonpoint Sources of Water Pollution* to determine the water quality condition of stream reaches in the watershed upstream from the assessment area. (If both "b" and "c" apply, choose "c.")
   a. All upstream reaches are listed as *no problem* (or no data available).
   (b.) One or more upstream reaches are listed in *moderate* water quality condition.
   c. One or more upstream reaches are listed in *severe* water quality condition.

Watershed Notes

Ashland Creek
Bear Creek
Neil Creek
on the DEQ
303(d) list

Emigrant Creek

Biological characteristics of the watershed

Watershed Notes

9. Fisheries: Select all that are appropriate and list type if known. (Contact local Oregon Department of Fish and Wildlife office for this information.)

		Type
(a)	Cold water.	coho, Chinook, Steelhead
(b)	Warm water.	
(c)	Anadromous.	coho, Chinook Steelhead
(d)	Wild population.	resident coastal cutthroat trout, coho, Chinook, Steelhead
(e)	Introduced or hatchery populations.	Steelhead, Chinook, resident rainbow trout
f.	None.	
g.	Other (list).	

10. Are known sensitive, threatened or endangered fish species present in the watershed? If so, list which species.

	Species
a. Yes.	Coho Salmon - Ashland, Bear & Neil creeks
b. No.	Chinook Salmon - Bear creek
c. Unknown.	Steelhead - Ashland, Bear, Emigrant, Kitchen Neil & Tolman creeks

11. Wildlife species: Select all that are appropriate and list species if known. (Contact local Oregon Department of Fish and Wildlife office for this information.)

	Species
(a)	Migratory birds.
(b)	Big game.
(c)	Nesting birds.

12. Are known sensitive, threatened or endangered plant species or wildlife species other than fish present in the watershed? If so, list which species. (Contact local ODFW office or Natural Heritage Council for this information.)

	Species
(a) Yes.	Spotted owl
b. No.	Lewis' woodpecker
c. Unknown.	Tricolored blackbird
	western toad
	black salamander
	Pacific pallid bat
	American marten
	Northwestern pond turtle
	Shasptail snake
	California mountain Kingsnake

no TES species documented within study area boundary

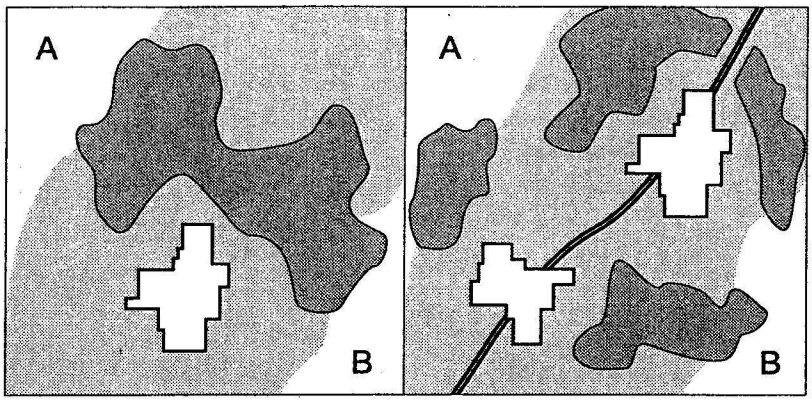

Figure 1. Watersheds as corridors for wildlife movement.
Areas A and B are the end points of a movement corridor through the watershed. Natural areas are shaded darkly, the irregular polygons represent highly developed areas, and the thick black line represents an impassable barrier such as an interstate highway. In the first part of the illustration, the contiguous natural area connects both ends of the corridor. The developed area is a barrier, but it does not obstruct species movement. The second half of the illustration shows fragmented natural areas with an impassable barrier. If the barrier stopped at the smaller developed area and did not continue off the lower left, species movement would still be possible.

13. Does the watershed provide a natural corridor for fish or wildlife movement? (Observe from aerial photographs.) **List whether for fish, wildlife or both.** Consider fences, dams and other barriers to travel. Aerial photographs of the watershed area are the best source of information. Fragmented systems have barriers to movement or a section where the natural area is broken by developed area.

    A corridor is a landscape feature that enables fish or wildlife species to travel between broad geographical areas. (See Figure 1.)

    a. There are contiguous natural areas that allow species movement, and if barriers exist, they do not stop animal or fish movement.
    b. The natural areas are fragmented, but species movement is still possible.
    c. The habitat system is fragmented, and there are barriers to species movement.

14. What are the landscape features at both ends of the movement corridor? (These may lie outside the assessment area.) From an aerial photo, observation or local knowledge, determine whether there are large natural areas at either end of the movement corridor. The natural area does not have to be a wetland.

    a. Large natural habitat areas are at both ends.
    b. One end has a natural habitat area and the other end is developed.
    c. Both ends are developed.

Watershed Notes

Interstate-5 bisects Bear creek but good riparian corridors allow wildlife movement along Bear + Ashland Creeks

Emigrant Lake at upstream end City of Talent downstream Rogue River National Forest to South of Study area

Appendix 7:

Vegetation List

City of Ashland Local Wetlands & Riparian Corridor Inventory and Assessment Vegetation List (Field Dates: June 3-6, 2003 and June 24-26, 2003)

Common Name, Scientific Name, Wetland Indicator Status, native or introduced (I) status, invasive or noxious designation. List sorted by scientific name.

vine maple (*Acer circinatum*, FAC-), native
box-elder (*Acer negundo*, FAC+), I
big-leaf maple (*Acer macrophyllum*, FACU), native
horsechestnut (*Aesculus species*, UPL), I
quack grass (*Agropyron* [[*Elytrigia*]] *repens*, FAC-), **noxious**
bentgrass (*Agrostis* species)
tree of heaven (*Ailanthus altissima*, NI), I
silver hairgrass (*Aira caryophyllea*, UPL), I
white alder (*Alnus rhombifolia*, FACW), native
water foxtail (*Alopecurus geniculatus*, OBL), native
meadow foxtail (*Alopecurus pratensis*, FACW), I
Saskatoon serviceberry (*Amelanchier alnifolia*, FACU), native
fiddleneck (*Amsinckia* species)
mayweed chamomile (*Anthemis cotula*, FACU), I
bur chervil (*Anthriscus scandicina*, UPL), I
hemp dogbane (*Apocynum cannabinum*, FAC+), native
madrone (*Arbutus menziesii*, UPL), native
Douglas' sagebrush (*Artemisia douglasiana*, FACW), native
tall oatgrass (*Arrhenatherum elatius*, UPL), I
giant reed (*Arundo donax*, UPL, FACW in California), I, **invasive in California**
showy milkweed (*Asclepias speciosa*, FAC+), native
common oat (*Avena sativa*, UPL), I
birch (*Betula* species)
water birch? (*Betula occidentalis*, FACW)
California groundcone (*Boschniakia strobilacea*, UPL), native
mustard (*Brassica* species, UPL), I
ripgut brome (*Bromus rigidus*, UPL), I
ryebrome (*Bromus secalinus*, UPL), I
downy cheat grass (*Bromus tectorum*, UPL), I
Henderson's or white brodiaea (*Brodiaea* (*Triteleia*) *hendersonii*, UPL), native
brodiaea (*Brodiaea* species, FACU/UPL), native
brome (*Bromus* species)
incense cedar (*Calocedrus decurrens*, UPL), native
Tolmie's mariposa? (*Calochortus tolmiei*, UPL), native
common shepherd's purse (*Capsella bursa-pastoris*, FACU), I
few-seeded bittercress (*Cardamine oligosperma*, FAC), native
Chalapa hoarycress? (*Cardaria chalapensis*, UPL), **noxious**

globepodded hoarycress (*Cardaria pubescens*, UPL), **noxious**
Columbia sedge (*Carex aperta*, FACW), native
dense sedge (*Carex densa*, OBL), native
greensheathed sedge (*Carex feta*, FACW), native
thick-headed sedge (*Carex pachystachya*, FAC), native
sawbeak sedge (*Carex stipata*, OBL), native
foothill sedge (*Carex tumulicola*, FACU), native
sedge (*Carex* species), native
paintbrush (*Castilleja* species), native
buckbrush, white ceanothus (*Ceanothus* species, UPL), native
bachelor's button or cornflower (*Centaurea cyanus*, UPL), I
yellow starthistle (*Centaurea solstitialis*, UPL), **noxious**
chicory (*Cichorium intybus*, UPL), I
western water hemlock (*Cicuta douglasii*, OBL), **noxious**
Canada thistle (*Cirsium arvense*, FACU+), I, **noxious**
bull thistle (*Cirsium vulgare*, FACU), **noxious**
poison hemlock (*Conium maculatum*, FAC+), **noxious**
beaked hazelnut (*Corylus cornuta* var. *californica*, FACU), native
red-osier dogwood (*Cornus stolonifera* [[*sericea*]], FACW), native
black hawthorn (*Crataegus douglasii*, FAC), native
hedgehog dogtail (*Cynosurus echinatus*, UPL), I
yellow nut-sedge (*Cyperus esculentus*, FACW), **noxious**
California oatgrass (*Danthonia californica*, FACU), native
Queen Anne's lace (*Daucus carota*, UPL), I
teasel (*Dipsacus sylvestris* [[*fullosum* ssp. *sylvestris*]], FAC), I, **invasive**
medusahead rye (*Elymus* [[*Taeniatherum*]] *caput-medusae*, UPL), I, **noxious**
basin wildrye (*Elymus cinereus*, FAC), native
blue wildrye (*Elymus glaucus*, FACU), native
creeping spikerush (*Eleocharis palustris*, OBL), native
waterweed (*Elodea* species, OBL)
willow-herb *Epilobium* species)
small-flowered willow-herb (*Epilobium minutum*, UPL), native
Watson's [hairy] willow-herb (*Epilobium watsonii* [*ciliatum*], FACW-), native
common horsetail (*Equisetum arvense*, FAC), native
common scouring-rush (*Equisetum hyemale*, FACW), native
horsetail (*Equisetum* species, FAC or wetter), native
filaree (*Erodium cicutarium*, UPL), I
California poppy (*Eschscholzia californica*, UPL), native
tall fescue (*Festuca arundinacea*, FAC-), I
rattail fescue (*Festuca myuros*, UPL), I
Oregon ash (*Fraxinus latifolia*, FACW), native
catchweed bedstraw (*Galium aparine*, FACU), native
bedstraw (*Galium* species)

Carolina geranium (*Geranium carolinianum* UPL), native
crane's-bill (*Geranium* species, FAC-/FACU+/UPL)
western mannagrass (*Glyceria occidentalis*, OBL), native
mannagrass (*Glyceria* species, FACW+/OBL), native
English ivy (*Hedera helix*, UPL), I, **noxious**
common velvetgrass (*Holcus lanatus*, FAC), I
Mediterranean barley (*Hordeum geniculatum* [*hystrix*], FACU+), I
charming barley (*Hordeum leporinum*, NI), I
spotted cats-ear (*Hypochaeris radicata*, FACU), I
floating penny-wort (*Hydrocotyle ranunculoides*, OBL), native
yellow iris (*Iris pseudacorus*, OBL), I
walnut (*Juglans* species, UPL), I
tapered rush (*Juncus acuminatus*, OBL), native
Baltic rush (*Juncus balticus*, FACW+), native
toad rush (*Juncus bufonius*, FACW), native
soft rush (*Juncus effusus*, FACW), native
dagger-leaf rush (*Juncus ensifolius*, FACW), native
salt rush? (*Juncus lesueurii*, FACW), native
rush (*Juncus* species)
lettuce (*Lactuca* species)
sweet pea (*Lathyrus* species)
lesser duckweed (*Lemna minor*, OBL), native
blue flax (*Linum* species, UPL),
birdsfoot-trefoil (*Lotus corniculatus*, FAC), I
Italian ryegrass (*Lolium multiflorum*, UPL), I
perennial ryegrass (*Lolium perenne*, FACU), I
two-color lupine (*Lupinus bicolor*, UPL), native
pineapple weed (*Matricaria matricarioides* [[*discoidea*]], FACU), native
horehound (*Marrubium vulgare*, FACU), I
white sweet-clover (*Melilotus alba*, FACU), I
pennyroyal (*Mentha pulegium*, OBL), I
mint (*Mentha* species)
monkey-flower (*Mimulus* species)
miner's lettuce (*Montia* [*Claytonia*] *perfoliata*, FAC), native
forget-me-not (*Myosotis* species)
American water-lily (*Nymphaea odorata*, OBL), I
red poppy (*Papaver* species, UPL), probably I
reed canarygrass (*Phalaris arundinacea*, FACW), **invasive**
mockorange (*Philadelphus lewisii*, UPL), native
ponderosa pine (*Pinus ponderosa*, FACU-), native
bulbous bluegrass (*Poa bulbosa*, UPL), I
fowl bluegrass (*Poa palustris*, FAC), native
Kentucky bluegrass (*Poa pratensis*, FAC), I

bluegrass (*Poa* species)
Japanese knotweed (*Polygonum cuspidatum*, FACU), **noxious**
knotweed or smartweed (*Polygonum* species)
rabbitfoot grass (*Polypogon monspeliensis*, FACW+), I
white poplar (*Populus alba*, UPL), I
Lombardy poplar (*Populus nigra* var. *italica*, UPL), I
black cottonwood (*Populus trichocarpa* [*balsamifera*], FAC), native
choke cherry (*Prunus virginiana*, FACU), native
cherry or plum (*Prunus* species, FAC-/FACU/UPL)
Douglas fir (*Pseudotsuga menziesii*, FACU), native
western crabapple (*Pyrus* [*Malus*] *fusca*, FACW), native
Oregon white oak (*Quercus garryana*, UPL), native
California black oak (*Quercus kelloggii*, UPL), native
valley oak (*Quercus lobata*, FAC - California region), native
pinoak (*Quercus palustris*, UPL), I
western buttercup (*Ranunculus occidentalis*, FAC), native
creeping buttercup (*Ranunculus repens*, FACW), I
buttercup (*Ranunculus* species)
poison oak (*Rhus diversiloba* [*Toxicodendron quercifolia*], FACU), native
western sumac (*Rhus glabra*, UPL), native
lemonade sumac (*Rhus trilobata*, NI), native
black locust? (*Robinia pseudoacacia*, FACU), I
rose (*Rosa* species)
curve-pod yellow-cress (*Rorippa curvisiliqua*, OBL), native
Himalayan blackberry (*Rubus discolor*, FACU), I, **noxious**
dock (*Rumex* species)
weeping willow (*Salix babylonica*, FAC+), I
sandbar willow (*Salix exigua*, OBL), native
Pacific willow (*Salix lasiandra* [[*lucida* var. *lasiandra*]], FACW+), native
Piper's [[Hooker]] willow (*Salix piperi* [[*hookeriana*]], FACW [[FACW-]]), native
willow (*Salix* species, FAC or wetter), native
bouncing bett (*Saponaria officinalis*, UPL), I
hardstem bulrush (*Scirpus acutus*, OBL), native
small-fruited bulrush (*Scirpus microcarpus*, OBL), native
cultivated rye (*Secale cereale*, UPL), I
hedge mustard (*Sisymbrium officinale*, UPL), I
tumblemustard (*Sisymbrium* species, FACU-/UPL), I
false Solomon's seal (*Smilacina* species, FAC-), native
bittersweet nightshade (*Solanum dulcamara*, FAC+), I, **invasive**
snowberry (*Symphoricarpos albus*, FACU), native
Pacific yew (*Taxus brevifolia*, NI), native
common dandelion (*Taraxacum officinale*, FACU), I
saltcedar or tamarisk (*Tamarix* species, NI or FACW), **noxious** (T. ramosissima is on the noxious list)

salsify (*Tragopogon* species, UPL), I
hare's-foot clover (*Trifolium arvense*, UPL), I
yellow clover (*Trifolium dubium*, UPL), I
red clover (*Trifolium pratense*, FACU), I
white clover (*Trifolium repens*, FAC), I
cultivated wheat (*Triticum aestivum*, UPL), I
narrow-leaf cattail (*Typha angustifolia*, OBL), native
broad-leaf cattail (*Typha latifolia*, OBL), native
elm (*Ulmus* species, UPL), I
Oregon myrtle, California laurel (*Umbellularia californica*, UPL), native
American speedwell (*Veronica americana*, OBL), native
speedwell (*Veronica* species)
hairy vetch (*Vicia villosa*, UPL), I
vetch (*Vicia* species)
periwinkle (*Vinca major*, UPL), I

Appendix 8:

Riparian Corridor Summary Sheets

RIPARIAN SUMMARY SHEETS
TABLE OF CONTENTS

Site: Ashland Creek

Township **38S** Range **1E** Section **32**; Township **39S** Range **1E** Sections **4, 9, 16 & 17**

Sample Plot Number(s): 13 (upland) Field verification date(s): 6/4/03, 6/5/03, 6/24/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:
White alder, black cottonwood, big-leaf maple, Oregon ash, and Pacific willow; with lesser amounts of weeping willow, choke cherry, incense cedar, and Douglas fir

Shrubs:
Oregon ash, Pacific willow, sandbar willow, red-osier dogwood, and Himalayan blackberry, with lesser amounts of snowberry, mock orange, Pacific ninebark, bittersweet nightshade, Pacific yew, thimbleberry, oceanspray, beaked hazelnut, madrone, and California myrtle

Herbs:
English ivy, periwinkle, sword fern

Other:

Description:
Ashland Creek originates outside the study area in the steep hillside south of Ashland. The Granite Street Reservoir is present on Ashland Creek at the upstream end of the study area. The reservoir is surrounded by a fringe of Himalayan blackberry with black cottonwood, white alder, Pacific willow, Oregon ash, Oregon white oak and big-leaf maple trees.

The upstream portion of Ashland Creek meanders through Lithia Park for approximately 1 mile. Ashland Creek receives flow from Lithia Springs. The stream channel ranges from 15 to 30 feet wide and generally widens as it trends downstream. Cobbles, boulders, and woody debris provide good in-stream structure, and the stream is well shaded by a riparian and upland forest consisting of white alder, big-leaf maple, and Oregon ash. Invasive species including Himalayan blackberry and English ivy are present in a few areas along Ashland Creek. The stream channel is confined by well-defined stream banks in Lithia Park. No wetland benches were noted; however, a few off-channel shallow water areas were created during the 1996 flood. These shallow water areas contain mannagrass, common velvetgrass, American speedwell, sawbeak sedge, and willow-herb. Two off-line ponds are present adjacent to Ashland Creek. Both ponds have concrete lined sides with embedded boulders and contain floating “Lake Restorer” islands designed to improve water quality. The upper pond is the larger pond and is used by wood ducks, mallards, and turtles. A few topographic draws were noted in the steep hillside above Ashland Creek, indicating that intermittent drainages may flow downslope to Ashland Creek. At the downstream end of Lithia Park beginning at the bridge at Calle Guanajuato Way, Ashland Creek is confined within a series of concrete sidewalls, some with adjacent planter boxes containing red-osier dogwood and willow shrubs.

The downstream portion of Ashland Creek ranges from 10 to 20 feet wide and is bordered predominantly by residential development, a few agricultural parcels and the Ashland Community Garden. Ashland Creek contains good in-stream structure with many cobbles and boulders as well as

Ashland Creek, continued

in-stream woody debris in some areas. Portions of the stream channel bottom are comprised of bedrock. Ashland Creek is confined within its stream banks due to topography of the adjacent side slopes and armoring of banks with riprap and boulders in some areas; therefore, wetland benches are generally not present along Ashland Creek. A riparian and upland forest corridor generally ranging from 50 to 150 feet wide is present along Ashland Creek. Development along Ashland Creek has resulted in some fragmentation and open canopy areas, but the stream is well-shaded in many areas. Dominant riparian vegetation consists of white alder, black cottonwood, Oregon ash, Pacific willow, sandbar willow, weeping willow and red-osier dogwood. Some areas of Himalayan blackberry and English ivy were noted, although invasive species are not generally dominant along the stream corridor.

Two large man-made open water ponds are present near the confluence of Ashland Creek with Bear Creek just downstream of the Ashland sewage treatment plant. The east pond is seasonal and becomes an emergent wetland in the summer and was therefore mapped as wetland unit W14.

The west pond (1.9 acres) is accessible from a trail off the end of Glendower and appears to be a diversion pond from Ashland Creek. The pond was reported to have been constructed approximately 30 years ago. An overflow structure to Ashland Creek was noted at the west end. The pond contains a fringe of reed canarygrass, teasel, and poison hemlock with scattered black cottonwood, sandbar willow, Oregon ash and rose shrubs. This pond appears to contain water year-round and was therefore mapped as a pond rather than a wetland. Wildlife use noted includes wood duck, mallards and western pond turtle.

Site: Ashland Creek Tributary 1

Township **39S** Range **1E** Section **17**

Sample Plot Number(s): none Field verification date(s): 6/26/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:
Willow, Himalayan blackberry, Oregon ash

Herbs:
Common horsetail, soft rush, periwinkle, sword fern, hosta, columbine

Other:

Description:
The headwaters of this tributary to Ashland Creek are located in the steep hillside to the west of Ashland Creek. The stream channel is confined within steep side slopes and is 2 to 5 feet wide with large cobbles. The stream was not flowing during the June site visits. Riparian side slopes contained a mixture of native and ornamental species in the herb layer. Adjacent uplands contain paintbrush, oceanspray, poison oak, madrone, and Oregon white oak.

Site: Beach Creek

Township **39S** Range **1E** Sections **4, 9 & 16**

Sample Plot Number(s): none Field verification date(s): 6/4/03, 6/24/03

Dominant Plant Species (Common Names):
Trees:
Big-leaf maple, Oregon white oak

Shrubs:
Oregon ash, Pacific willow, willow

Herbs:
cattail, curve-pod yellow-cress, poison hemlock, spearmint, teasel, bittersweet nightshade, yellow starthistle

Other:

Description:
The downstream section of Beach Creek daylights north of the railroad tracks where the stream is confined within steep Himalayan blackberry covered slopes. A weir structure is present on Beach Creek at the BPA substation site. Sedimentation has occurred upstream of the weir and a narrow wetland fringe is present containing cattail, curve-pod yellow-cress, poison hemlock and Pacific willow. A few Oregon ash and willow shrubs are also present, along with planted big-leaf maple and Oregon white oak saplings. Downstream vegetation along the stream channel consists of spearmint, teasel, bittersweet nightshade and yellow starthistle. Uplands consist of downy cheat grass, blue wildrye, Italian ryegrass, and planted big-leaf maple saplings. Downstream of the BPA substation, Beach Creek and an emergent wetland swale flow northwest through the North Mountain Nature Park to Bear Creek. Three on-line ponds (upper, middle and lower ponds) are present on Beach Creek. These ponds and associated wetlands were mapped as wetland unit 7.

The headwaters of Beach Creek originate in the steep hillside south of Ashland Street. Much of the stream is culverted through residential development. Beach Creek is intermittent where it is daylighted above Ashland Street. Downstream of Beach Street, the stream is bordered by steep side slopes with dense Himalayan blackberry and Pacific willow, black cottonwood and weeping willow trees in the riparian area. Adjacent uplands contain catchweed bedstraw, periwinkle, Himalayan blackberry, Oregon white oak and ponderosa pine. Upstream of Beach Street, Beach Creek is forked. The east fork is approximately 1 foot wide and flows through a rock and flagstone water feature through a backyard area and then continues upslope where it is confined at the bottom of steep Himalayan blackberry covered side slopes with tall fescue, bulbous bluegrass, and Oregon white oak further upslope. The west fork is an undefined channel at the bottom of a steep topographic ravine with very sparse herb layer that had been recently cleared of blackberry. Oregon white oak, madrone, big-leaf maple, Douglas fir and ponderosa pine were present in the tree canopy.

Site: Bear Creek

Township **38S** Range **1E** Sections **31 & 32**; Township **39S** Range **1E** Sections **4 & 11**

Sample Plot Number(s): 14 (upland) Field verification date(s): 6/5/03, 6/24/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:
black cottonwood, white alder, Oregon ash, weeping willow

Shrubs:
Himalayan blackberry, Pacific willow, sandbar willow, Piper's willow, black hawthorn

Herbs:
cattail, soft rush, common horsetail, curve-pod yellow-cress, buttercup, poison hemlock, teasel, hardstem bulrush

Other:

Description:
Bear Creek originates at the confluence of Emigrant Creek and Neil Creek just downstream of the airport. The downstream portion of Bear Creek varies from 30 to 75 feet wide. Bear Creek was observed at the Mountain Avenue bridge and the Bear Creek Greenway Trail bridge (Talent-Ashland Trail segment). The portion of Bear Creek located within the study area is bordered mostly by undeveloped land. Bear Creek has good in-stream structure with many cobbles and nice channel meanders. Bear Creek is topographically confined within its stream banks; therefore, wetland benches are generally not present. The stream is well-shaded by its riparian corridor which contains a mixture of native trees and shrubs and is generally dominated by black cottonwood, white alder, and Oregon ash in the tree canopy and by Pacific willow, sandbar willow and Piper's willow in the shrub layer. The stream channel is inaccessible in many areas due to dense thickets of Himalayan blackberry in the riparian corridor. An approximately 20 foot wide wetland bench containing cattail, yellow iris, American speedwell and soft rush is present on the north bank, downstream of Mountain Avenue. The stream channel is confined in this location by a steep Himalayan blackberry covered slope on the south bank. Two great blue heron nests with herons were observed in black cottonwood trees in the riparian corridor near Mt. Meadows Drive. Adjacent uplands contain a variety of upland pasture grasses, yellow starthistle, poison hemlock, Himalayan blackberry, oak and ponderosa pine.

The North Mountain Nature Park borders Bear Creek to the south at the northeast edge of the study area. The 14 acre park is being managed and enhanced by planting a variety of native species with the goal of improving the quality of fish and wildlife habitat in the Bear Creek riparian corridor. Bear Creek adjacent to the North Mountain Nature Park was approximately 30 to 35 feet wide and was flowing 1 to 2 feet deep and contained many in-stream cobbles and boulders.

Site: Bear Creek Tributary 1

Township **38S** Range **1E** Section **31**

Sample Plot Number(s): none Field verification date(s): 6/5/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:
Oregon ash, white alder

Shrubs:
Himalayan blackberry, Pacific willow, Piper's willow, cherry

Herbs:
Cattail, curve-pod yellow-cress, reed canarygrass, soft rush, common horsetail, hardstem bulrush, poison hemlock, mannagrass, buttercup, forget-me-not

Other:

Description:
This Bear Creek tributary is located in the northwest corner of the study area, outside the city limits and inside the UGB. The headwaters of the tributary originate in the steep hillslope south of the study area. The tributary flows northwesterly along the bottom of the hillslope behind several car dealerships and the Lithia Springs Inn. The stream is culverted under West Jackson Road, heads northerly through the Jackson Hot Springs RV Park, then continues northwesterly prior to being culverted under Highway 99 and joining Bear Creek. The stream varies from 3 to 10 feet wide and is bordered by a narrow emergent wetland fringe behind the Lithia Springs Inn. Wetland vegetation consists of cattail, curve-pod yellow-cress, reed canarygrass, soft rush, common horsetail, hardstem bulrush, poison hemlock, mannagrass, buttercup, forget-me-not with areas of Himalayan blackberry, willow and cherry shrubs. Oregon ash and white alder trees are present along the downstream portion. Adjacent uplands consist of brome, Himalayan blackberry, Oregon white oak, big-leaf maple, ponderosa pine, and Douglas fir.

Hydrology of the triburary is partially fed by sulfur springs, one of which was observed at the rear of the Lithia Springs Inn property. Sulfur springs also appear to be feeding a small concrete-lined pond south of West Jackson Road. Two-foot contours and black and white aerial photo coverage was not available for this area, and mapping the stream location was difficult in areas due to tree canopy cover and lack of permission to access the area.

Site: Cemetery Creek

Township **39S** Range **1E** Sections **10 & 14**

Sample Plot Number(s): none Field verification date(s):6/3/03, 6/5/03, 6/25/03

Dominant Plant Species (Common Names):
Trees:
Weeping willow, Pacific willow, black cottonwood

Shrubs:
Himalayan blackberry, sandbar willow, Pacific willow, choke cherry

Herbs:
Cattail, meadow foxtail, water foxtail, reed canarygrass, creeping buttercup, small-fruited bulrush, western buttercup, creeping spikerush, forget-me-not, velvetgrass

Other:

Description:
The headwaters of Cemetery Creek originate north of Siskiyou Boulevard. The stream channel is approximately 10 feet wide at the Clay Street Park with a narrow fringe of cattail, creeping buttercup and bittersweet nightshade. The riparian area contained Himalayan blackberry, sandbar willow, Pacific willow, choke cherry and black cottonwood. Adjacent uplands consisted of Himalayan blackberry, and mowed lawn (park) with a few pine and ornamental maple trees.

The stream channel is forked to the north of the railroad tracks. Emergent wetlands are associated with Cemetery Creek along this downstream section and were mapped as wetland unit 4. A wetland fill violation has been reported at the west end of Creek Drive (DSL WD 03-0203). Cemetery Creek generally ranges from 1 to 5 feet wide and is bordered by agricultural fields. The downstream portion is channelized through a landscaped yard where it is bordered by mowed lawn, the escaped ornamental periwinkle (*Vinca* species) and a few Piper's willow and weeping willow. Three small landscaped ponds are present adjacent to the stream.

Site: Clay Creek

Township **39S** Range **1E** Sections **11 & 14**

Sample Plot Number(s): none Field verification date(s): 6/3/03, 6/25/03

Dominant Plant Species (Common Names):
Trees:
white alder, Pacific willow, weeping willow, black cottonwood, black locust

Shrubs:
white alder, Pacific willow, Himalayan blackberry, Japanese knotweed, tree of heaven

Herbs:
Mannagrass, American speedwell, reed canarygrass, cattail, soft rush, sawbeak sedge, waterweed, monkey-flower, forget-me-not, English ivy

Other:

Description:
Clay Creek is labeled on the USGS and NWI maps as Hamilton Creek (Hamilton Creek the next stream east of Clay Creek). The headwaters of Clay Creek are located outside the study area in the steep hillside south of Ashland. The upstream section of Clay Creek, south of Ashland Street, is channelized through residential development and is generally 5 feet wide. A narrow wetland fringe of reed canarygrass, cattail, and soft rush is present along the stream channel, and riparian vegetation consists of Himalayan blackberry, white alder, Pacific willow, weeping willow, and black cottonwood. Invasive species including English ivy and Japanese knotweed were noted adjacent to Siskiyou Boulevard. Adjacent uplands contain tall fescue, orchard grass, Mediterranean barley, tall oatgrass, hairy vetch, Himalayan blackberry, snowberry, Oregon white oak, California black oak, ponderosa pine, and madrone.

Downstream of Ashland Street, six on-line ponds are present on Clay Creek in the Wingspread Mobile Home Park. These ponds are characterized as open water ponds, some of which have a narrow fringe of cattail or contain a small island with a few willlow. The ponds are connected by concrete spillways and are bordered by mowed lawn.

Much of the riparian vegetation along Clay Creek was removed in the Meadowbrook Park Estates and the side slopes adjacent to the stream are covered with bark dust. Downstream of this subdivision, the riparian corridor is more natural, although some clearing has occurred at the top of slope within the riparian buffer, and contains Pacific willow and black cottonwood on the side slopes and mannagrass, American speedwell, sawbeak sedge and waterweed (*Elodea* species) in and along the stream channel.

Site: Clear Creek

Township **39S** Range **1E** Section **4**

Sample Plot Number(s): none Field verification date(s): 6/4/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:
Oregon ash, weeping willow, black cottonwood

Shrubs:
Himalayan blackberry

Herbs:
Cattail, soft rush

Other:

Description:
Clear Creek originates just north of Clear Creek Drive at the Clear Creek Village wetland mitigation site (DSL App. #12783; wetland unit 5) that was under construction during the June site visits. Just downstream and north of Hersey Street, Clear Creek is channelized through residential development and is approximately 3 feet wide with a narrow fringe of cattail and soft rush and is bordered by mowed lawns with a few weeping willow and black cottonwood at the top of bank. A section of Clear Creek is culverted north of Clinton Street and then daylights as an approximately 5 foot wide channel surrounded by dense Himalayan blackberry and an Oregon ash overstory. This section of Clear Creek, as well as two off-line ponds, are reported to receive flow from an irrigation ditch fed by Ashland Creek. Adjacent uplands consist of Himalayan blackberry with poison hemlock, Canada thistle and hairy vetch.

Site: Emigrant Creek

Township **39S** Range **1E** Sections **11 & 12**

Sample Plot Number(s): none Field verification date(s): 6/25/03

Dominant Plant Species (Common Names):
Trees:
white alder, black cottonwood, Pacific willow

Shrubs:
Himalayan blackberry, Oregon ash, Pacific willow, bittersweet nightshade

Herbs:
cattail, common horsetail, hardstem bulrush, mannagrass, water foxtail, meadow foxtail

Other:

Description:
Emigrant Creek originates east of the Ashland city limits and enters the study area at the northeast corner of the airport property, northwest of Dead Indian Memorial Road. Emigrant Creek is culverted through the mowed field at the northwest end of the runway in a very large (15 to 20 feet diameter) culvert. The stream is approximately 25 to 30 feet wide with abundant cobbles and boulders and occasional woody debris in the stream channel. The stream was flowing several feet deep during the June site visit, and channel meanders were noted in some areas. A narrow fringe of cattail, common horsetail, hardstem bulrush, mannagrass, water foxtail, meadow foxtail, bittersweet nightshade is present along the stream in a few areas. The stream is confined within steep side slopes with Himalayan blackberry, white alder, black cottonwood, Oregon ash and Pacific willow in the riparian area. Stream banks are armored with riprap in areas. Adjacent uplands consist of downy cheatgrass, ripgut brome, tall oatgrass, bulbous bluegrass, tumblemustard.

Site: Fordyce Creek

Township **39S** Range **1E** Section **10**

Sample Plot Number(s): None Field verification date(s): 6/4/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs:
Yellow nut-sedge, common velvetgrass, curve-pod yellow-cress

Other:

Description:
The majority of the Fordyce Creek has been culverted through residential development. Two small, unculverted stream sections remain south of Munson Drive and north and south of Kirk Lane. These remnant stream segments are 1 to 2 feet wide and consist of either a mowed grass channel or have rock lined sides with a fringe of emergent vegetation. The stream channel is bordered by mowed lawns and bark dust.

Site: Golf Course Creek

Township **39S** Range **1E** Sections **13 & 14**

Sample Plot Number(s): none Field verification date(s): 6/5/03, 6/25/03

Dominant Plant Species (Common Names):
Trees:
Weeping willow

Shrubs:
Pacific willow, sandbar willow, white alder

Herbs:
cattail, soft rush, hardstem bulrush, yellow iris, buttercup, American speedwell, curve-pod yellow-cress, sawbeak sedge

Other:

Description:
The headwaters of Golf Course Creek are located south of Highway 99, outside the UGB. An on-line pond (LWI –mapped wetland 14A) is present on Golf Course Creek at the upstream end of the study area. The pond contains a fringe of soft rush and is bordered by mowed grass up to the edge. Some woody debris and branches were present in the edge of the pond, and Canada goose were noted using the site.

Golf Course Creek receives flow from an off-line pond reportedly fed by TID water located in the residential subdivision north of Crowson Road and east of I-5. The pond has riprap sides with crushed gravel at the top of slope with a few Oregon white oak, ponderosa pine and black cottonwood surrounding the pond. Canada goose, wood ducks, great blue heron, and bullfrogs were noted at the pond. Golf Course Creek downslope from the pond was approximately 3 feet wide with a wetland fringe of curve-pod yellow-cress, birdsfoot trefoil, Watson's willow-herb and reed canarygrass and a few weeping willow. The stream was bordered by a mowed lawn with oak located further upslope.

On the Oak Knoll Golf Course, the stream is 2 to 3 feet wide with a narrow wetland fringes containing cattail, soft rush, hardstem bulrush, yellow iris, buttercup, American speedwell, curve-pod yellow-cress, sawbeak sedge, and a few willow shrubs. An on-line pond mapped on the NWI has been mostly filled (DSL Det. #98-0318) and several smaller on-line ponds were created on the downstream portion as wetland mitigation. Several very small seasonal drainages are visible on the golf course in the black and white aerial photographs. These drainages were visible during the site visit as very slight drainage patterns that followed site topography which decreases to the northeast. Uplands consist of mowed lawn with a few large weeping willow trees along the stream.

Upstream of Interstate-5, Golf Course Creek has a narrow riparian fringe consisting of a few willow and white alder shrubs. Adjacent uplands consist of orchard grass, hairy vetch, tumblemustard, Himalayan blackberry, and Oregon white oak.

Site: Hamilton Creek

Township **39S** Range **1E** Sections **11, 14 & 23**

Sample Plot Number(s): 5, 6 (upland) Field verification date(s): 6/3/03, 6/25/03

Dominant Plant Species (Common Names):
Trees:
Black cottonwood

Shrubs:
Pacific willow, sandbar willow, Himalayan blackberry

Herbs:
Broad-leaved cattail, soft rush, yellow iris, white waterlily, giant reed

Other:

Description:
Hamilton Creek is generally confined within a moderately steeply sloped riparian corridor. Narrow wetland benches (up to 5 feet wide) are present along the stream channel in downstream areas where topography adjacent to the stream channel is less steep (see sample plot 5). Wetland benches contain several species including mannagrass, reed canarygrass, buttercup, soft rush, American speedwell, curve-pod yellow-cress, cattail and willow. Periwinkle (*Vinca major*), an escaped ornamental species, was noted along the stream channel in the upstream portion that is bordered by residential development. A large on-line pond is present in the downstream portion. A small tributary (Hamilton Creek tributary 1) and several ponds are present downstream of the on-line pond. These ponds include two emergent wetland stormwater ponds north of Abbott Avenue in a residential subdivision as well as two ponds east of Tolman Road which contain a fringe of cattail and yellow iris and 2 clumps of giant reed (invasive in California). Uplands contain tall fescue, ryebrome, ripgut brome, medusahead rye, bulbous bluegrass, perennial ryegrass, oak, ponderosa pine, walnut and incense cedar, with dense thickets of Himalayan blackberry present in disturbed areas.

The upstream portion of Hamilton Creek, above Siskiyou Boulevard, is generally 2 to 3 feet wide and is bordered by a fringe of reed canarygrass, soft rush and mannagrass with Himalayan blackberry on the side slopes. Adjacent upland areas are dominated by tall fescue, sweatpea, ripgut brome, Himalayan blackberry, Oregon white oak, and ponderosa pine. A small tributary (Hamilton Creek tributary 2) joins Hamilton Creek a few hundred feet upstream of Siskyou Boulevard. A section of Hamilton Creek flows along Tolman Creek Road where it is confined between the road fill slope and an adjacent mowed lawn. Further upstream, the channel is confined within steep side slopes with a narrow riparian fringe of reed canarygrass, common horsetail and willow. Adjacent uplands contain Himalayan blackberry, beaked hazelnut, western crabapple and Oregon white oak.

The headwaters of Hamilton Creek originate outside the study area boundary.

Site: Kitchen Creek

Township **39S** Range **1E** Section **4**

Sample Plot Number(s): None Field verification date(s): 6/4/03

Dominant Plant Species (Common Names):
Trees:
black cottonwood, Pacific willow, white alder

Shrubs:
Himalayan blackberry

Herbs:
hardstem bulrush, cattail, creeping buttercup, meadow foxtail

Other:

Description:
The headwaters of Kitchen Creek originate outside the study area. Kitchen Creek is forked in the upstream portion through residential development. The north fork is 3 to 5 feet wide and contains a narrow wetland fringe of hardstem bulrush, creeping buttercup, and meadow foxtail with black cottonwood, Pacific willow and white alder along the streambanks. The south fork is 5 to 10 feet wide and contains a small on-line pond with a fringe of hardstem bulrush and cattail. A small putting green and a mowed lawn is present between the two forks. Non-landscaped upland areas adjacent to Kitchen Creek contain ripgut brome, ryebrome, tall fescue, orchard grass, California poppy and a few oak. The two forks of Kitchen Creek join below Mountain Avenue, and the stream flows to Bear Creek through a steeply sloped riparian corridor dominated by Himalayan blackberry with a few Pacific willow.

Site: Knoll Creek

Township **39S** Range **1E** Sections **11 & 14**

Sample Plot Number(s): none Field verification date(s):6/4/03, 6/25/03

Dominant Plant Species (Common Names):
Trees:
Black cottonwood, Pacific willow

Shrubs:
Himalayan blackberry

Herbs:
Common horsetail, meadow foxtail

Other:

Description:
Knoll Creek is generally confined within steep Himalayan blackberry covered slopes with a few black cottonwood and Pacific willow present in the riparian corridor. Adjacent uplands are dominated by Himalayan blackberry and Oregon white oak. Two stream associated emergent wetlands are present north of I-5 and west of the Windmill Inn and were mapped as wetland unit 6.

Site: Mountain Creek

Township **39S** Range **1E** Sections **4 & 9**

Sample Plot Number(s): none Field verification date(s): 6/3/03, 6/24/03

Dominant Plant Species (Common Names):
Trees:
Oregon ash, weeping willow

Shrubs:
Sandbar willow, Himalayan blackberry

Herbs:
knotweed, willow-herb, cattail, hardstem bulrush

Other:

Description:
The majority of the historic upstream portion of the stream has been culverted through residential development, although two small unculverted sections remain north of Holly Street and north of Iowa Street. The section of Mountain Creek north of Holly Street is a 2 to 3 foot wide stream channel confined at the bottom of steep Himalayan blackberry covered slopes. The upper portion of the slopes contain periwinkle, English ivy, cherry, black cottonwood, and big-leaf maple. The section of Mountain Creek located north of Iowa Street flows through a rock lined channel bordered by English ivy, sword fern and English laurel shrubs.

Mountain Creek is daylighted north of the railroad tracks along the east edge of the Southern Pacific Railroad property. The riparian corridor along Mountain Creek contains Oregon ash, sandbar willow, weeping willow and Himalayan blackberry. Two small on-line ponds are present in the residential subdivision south of Hersey Street and contain cattail, and a scrub-shrub wetland fringe of sandbar willow, Pacific willow, weeping willow, white alder and black cottonwood. North of Hersey Street, Mountain Creek is confined to a roadside ditch until it joins Bear Creek. A 6 to 10 foot wide intermittent drainage containing knotweed, willow-herb and small amounts of cattail and hardstem bulrush originates west of Mountain Creek on the Southern Pacific site and may be culverted to Mountain Creek. Uplands contain ripgut brome, bulbous bluegrass, tall oatgrass, and vetch.

Site: Neil Creek

Township **39S** Range **1E** Sections **11, 12 & 13**

Sample Plot Number(s): 18 (upland) Field verification date(s): 6/25/03

Dominant Plant Species (Common Names):
Trees:
Oregon ash, Pacific willow, black cottonwood

Shrubs:
Himalayan blackberry, Oregon ash, sandbar willow, black hawthorn

Herbs:
creeping buttercup, yellow iris, mint, soft rush, reed canarygrass, teasel

Other:

Description:
Neil Creek originates southeast of the Ashland city limits and enters the study area at the southeast corner of the airport property, on the west side of Dead Indian Memorial Road. The downstream section of Neil Creek is approximately 10 to 12 feet wide and was flowing approximately 6 to 12 inches deep during the June site visit, with a narrow wetland fringe of creeping buttercup, yellow iris, mint, soft rush, reed canarygrass, and teasel. Cobbles were observed in one section of stream where the stream channel was not obscured by Himalayan blackberry. The stream channel is confined at the bottom of steep side slopes dominated by Himalayan blackberry in most areas. Oregon ash, Pacific willow, sandbar willow, black hawthorn, and black cottonwood trees and shrubs are also present in the riparian corridor. A berm is present at the top of the slope along the west edge of the airport runway and is dominated by ripgut brome, hairy vetch, tumblemustard, yellow starthisle, poison hemlock, and redstem filaree.

The upstream portion of Neil Creek, just prior to its confluence with Emigrant Creek, is approximately 20 to 25 feet wide. Adjacent uplands are dominated by Himalayan blackberry, rattail fescue and tumblemustard.

Site: Paradise Creek

Township **39S** Range **1E** Section **15**

Sample Plot Number(s): none Field verification date(s): 6/25/03

Dominant Plant Species (Common Names):
Trees:
white alder

Shrubs:
Himalayan blackberry

Herbs:
creeping buttercup, curve-pod yellow-cress, soft rush, common velvetgrass, American speedwell, sedge, cattail

Other:

Description:
The headwaters of Paradise Creek are located outside the study area in the steep hillside south of Ashland. Paradise Creek is daylighted in the south portion of the study area; however, the majority of the downstream portion, below Clarke Avenue, has been culverted due to development. The upstream portion of Paradise Creek, above Peachey Road, is 2 to 3 feet wide with a fringe of creeping buttercup, curve-pod yellow-cress, soft rush, common velvetgrass, American speedwell, sedge, and cattail. Side slopes above the stream are dominated by Himalayan blackberry and white alder. Adjacent uplands consist of tall fescue, ripgut brome, hare's-foot clover, tumblemustard, hairy vetch, Oregon white oak and ponderosa pine.

The downstream portion of Paradise Creek and its riparian area, adjacent to Sunset Avenue, have been encroached upon by residential development. Portions of the stream channel are confined within a rock lined channel and the stream is bordered by mowed grass, ornamental species, and other landscaping.

Site: Paradise Creek East

Township **39S** Range **1E** Section **15**

Sample Plot Number(s): none

Field verification date(s): 6/25/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:
Himalayan blackberry, Piper's willow, Pacific willow

Herbs:
common velvetgrass

Other:

Description:
The headwaters of Paradise Creek East are located outside the study area in the steep hillside south of Ashland. A small section of Paradise Creek East is daylighted in the south portion of the study area. Paradise Creek East, above Peachey Road, is topographically confined within a 2 to 3 foot wide stream channel with a fringe of common velvetgrass. A small off-line pond is present just west of Peachey Road. The riparian area contains Himalayan blackberry, Piper's willow and Pacific willow shrubs. Adjacent uplands consist of tall fescue, Himalayan blackberry, Oregon white oak, ponderosa pine and backyard areas. Further upslope, Paradise Creek East becomes a forked drainage.

Site: Pinecrest Creek

Township **39S** Range **1E** Section **15**

Sample Plot Number(s): none Field verification date(s): 6/25/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:
snowberry, Himalayan blackberry

Herbs:
tall oatgrass, false Solomon's seal

Other:

Description:
The headwaters of Pinecrest Creek are located just outside the study area in the steep hillside south of Ashland. A small section of Pinecrest Creek is daylighted in the south portion of the study area upslope of Oneida circle. The majority of Pinecrest Creek has been culverted due to development. The upstream portion of Pinecrest Creek at Pinecrest Terrace is a narrow 6 to 12 inch wide channel that is not very well defined by topography. The stream channel was dry during the June site visit, with leaves in the bottom of the channel and only a trace amount of riparian vegetation consisting of tall oatgrass, false Solomon's seal, snowberry, and Himalayan blackberry. Adjacent uplands were steeply sloped with hare's-foot clover, Oregon grape, Himalayan blackberry, California black oak, ponderosa pine, and madrone.

Site: Roca Creek

Township **39S** Range **1E** Sections **10 & 15**

Sample Plot Number(s): None Field verification date(s): 6/4/03, 6/25/03, 6/26/03

Dominant Plant Species (Common Names):
Trees:
white alder, black cottonwood, Pacific willow, weeping willow

Shrubs:
white alder, black cottonwood, Pacific willow, Oregon ash, bittersweet nightshade, red-osier dogwood, big-leaf maple

Herbs:
Reed canarygrass, soft rush, hardstem bulrush

Other:

Description:
The headwaters of Roca Creek are located outside the study area in the steep hillside south of Ashland. The upstream daylighted portion of Roca Creek, above Madrone Street, is 2 to 3 feet wide and is confined at the bottom of very steep side slopes. Riparian vegetation consists of white alder, black cottonwood and Pacific willow shrubs and trees. Adjacent uplands are dominated by orchard grass, ripgut brome, charming barley, hare's-foot clover, common oat, hairy vetch, Himalayan blackberry, and Oregon white oak.

The majority of the downstream portion of Roca Creek has been culverted due to development. The stream daylights north of East Main Street in a residential subdivision. A small on-line pond is present on Roca Creek with a water control structure. A patch of hardstem bulrush is present at the upper end of the pond, and red-osier dogwood, white alder and big-leaf maple plantings are present on the side slopes. Downstream from the pond, the stream channel ranges from 3 to 6 feet wide and contains a narrow fringe of reed canarygrass, bittersweet nightshade, and soft rush with a few willow shrubs. The stream channel is bordered by mowed lawn with a few planted Oregon ash and big-leaf maple saplings. A portion of the stream channel consists of a mowed grass channel with a few weeping willow and Pacific willow, bordered by mowed lawn.

Roca Creek downstream of Seena Lane is approximately 10 feet wide and contains dense reed canarygrass in and adjacent to the stream channel, along with bittersweet nightshade, willow and Oregon ash shrubs.

Strawberry Creek

Township **39S** Range **1E** Section **8**

Sample Plot Number(s): none Field verification date(s): 6/26/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs:

Other:

Description:
Strawberry Creek is located in the steep hillside to the west of Ashland Creek. No field data was collected since permission to access was not granted, and Strawberry Creek is not visible from adjacent public roads.

Site: Tolman Creek

Township **39S** Range **1E** Sections **13 & 14**

Sample Plot Number(s): none Field verification date(s): 6/5/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:
Pacific willow

Herbs:
yellow iris, American speedwell, buttercup, curve-pod yellow-cress

Other:

Description:
Tolman Creek on the Oak Knoll Golf Course is 3 to 5 feet wide and is bordered by a narrow wetland fringe of yellow iris, American speedwell, buttercup, curve-pod yellow-cress and a few Pacific willow shrubs. A small on-line pond is present. Adjacent uplands contain tall fescue, catchweed bedstraw, Himalayan blackberry, and a few white alder.

Site: Twin Creek

Township **39S** Range **1E** Section **8**

Sample Plot Number(s): none Field verification date(s): 6/26/03

Dominant Plant Species (Common Names):
Trees:

Shrubs:

Herbs:

Other:

Description:
Twin Creek is located in the steep hillside to the west of Ashland Creek. No field data was collected since permission to access was not granted, and Twin Creek is not visible from adjacent public roads.

Site: Wrights Creek

Township **39S** Range **1E** Sections **5, 6 & 8**

Sample Plot Number(s): none Field verification date(s): 6/5/03

Dominant Plant Species (Common Names):
Trees:
Big-leaf maple, Pacific willow, ponderosa pine, quaking aspen

Shrubs:
Snowberry, serviceberry, Oregon ash, western wahoo, Himalayan blackberry

Herbs:
English ivy

Other:

Description:
Wrights Creek is confined within tall steep slopes and no wetland benches were observed at several road crossings. The stream channel is approximately 10 feet wide and contains many cobbles and boulders in the downstream portion. The riparian corridor contains good tree and shrub cover. Himalayan blackberry is present in open canopy areas. Uplands upslope of the riparian corridor contain downy cheat grass, tall fescue, tall oatgrass and hairy vetch.

Five tributaries to Wrights Creek are also included in this unit. Tributaries are similarly confined within steep side slopes, but the stream channels are narrower and contain more Himalayan blackberry than the mainstem of Wrights Creek. Adjacent uplands contain downy cheat grass, bulbous bluegrass, blue wildrye, common oat, hairy vetch, and catchweed bedstraw.

Oregon
Theodore R. Kulongoski, Governor

Department of State Lands
775 Summer Street NE, Suite 100
Salem, OR 97301-1279
(503) 378-3805
FAX (503) 378-4844
www.oregonstatelands.us.

March 21, 2007

John Morrison, Mayor
City of Ashland
20 East Main Street
Ashland, OR 97520

Re: Approval of the City of Ashland Local Wetlands Inventory and Assessment

Dear Mayor Morrison:

I am pleased to notify you that the Department of State Lands (DSL) has approved your Local Wetlands Inventory (LWI) and assessment. We appreciate your planning staff and the wetland consultant working with our staff to ensure that the inventory meets state LWI requirements (OAR 141-86-180 to 240) and the city's needs. The final inventory requirement is for the city to notify property owners with wetlands mapped on their property within 120 days of this approval. Please provide us with a copy of the landowner notification, once completed, indicating the date of notification.

Approval by DSL means that the LWI becomes part of the Statewide Wetlands Inventory. The LWI must now be used by the city instead of the National Wetlands Inventory for the Wetland Land Use Notification Process (ORS 227.350). The LWI and functional assessment also form the foundation for your wetland planning under Statewide Planning Goal 5, and the LWI must be adopted by the city per the Goal 5 requirements. Please note when significant wetlands are designated by the city, "non-significant" wetlands may be coded to distinguish them from "significant wetlands," but must not be removed from the approved LWI maps. These wetlands are still subject to state and federal permit requirements.

While considerable effort has been made to accurately identify most wetlands within the study area, DSL's approval does not guarantee that all regulated wetlands have been mapped. The mapped wetland boundaries are estimated boundaries, they have not been surveyed, and there are inherent limitations in mapping accuracy. DSL advises persons proposing land alteration on parcels containing mapped wetlands to contact DSL or obtain a wetland boundary delineation by a qualified consultant and submit it to DSL for approval prior to the land alteration.

It will be important to annotate your map (and associated database, if any) as new wetland delineations are completed and approved by DSL in order to keep your LWI updated. Future wetland delineation report approvals will be provided to the planning department.

We are pleased that the City of Ashland has conducted a thorough wetlands inventory and has made wetland planning a high priority. We look forward to working with you and your staff as you continue on the Goal 5 wetland planning effort. Please feel free to contact Peter Ryan at extension 232, with any questions you may have about the LWI or its use.

Sincerely,

Louise Solliday

Louise Solliday
Director

cc: Bill Molnar, Planning Manager, City of Ashland
John Renz, DLCD
Stacy Benjamin, SWCA
Yvonne Vallette, EPA
Jim Goudzwaard & Benny Dean, Corps of Engineers (enclosure)
John Marshall, FWS, Portland Field Office
Patty Snow, ODFW
Bill Kirchner, FWS Regional Office
Bob Lobdell, DSL
Kevin Moynahan, DSL

LWI CHECKLIST FOR DSL APPROVAL

LWI AREA: Ashland
NWI Quad(s): Ashland
Inventory Conducted By: Fishman / SWCA WCP Standard? ☐ Y ☒ N
Date Draft Rcvd: 2.5.04 Date Draft Returned: 11.30.04
Date Final Rcvd: 2/2007 Date Final Approved: 3-20-07 Reviewed by: Dana Field & Peter Ryan

Required Information Sources 141-86-210 (1)
- ☑ NWI
- ☑ SCS wetland determinations (if available)
- ☑ Other wetlands inventories or habitat maps, as available
- ☑ Airphoto(s) taken within last 5 years (min; scale 1" = 600' or 1" = 200' for WCP)
  B+W 4/98, color 7/01. 1 inch = 300'
- ☑ Soils survey
- ☑ FEMA maps (if applicable)
- ☑ DSL WD files

Optional Information Sources 141-86-210 (2)
- ☐ ASCS slides
- ☐ Natural Heritage Program data
- ☐ Resource agencies
- ☐ Other: 2-Ft contour mapping (Not Surv)
- ☑ Local knowledge 2 public meetings
- ☑ DSL permit files 6/4/03, 11/20/03

Field Work 141-86-190; 210
- ☑ Approved manual/procedure followed for onsite wetland determinations
- ☐ Field verification requirements for parcels with access met (7):
  - One sample plot that best characterizes each wetland or portion of wetland with distinct character
  - Paired plots for any uncertain wetland boundaries
  - At least one plot for land use (farming etc.) may have altered site conditions or obscured criteria
  - At least one plot for wetland or portion of wetland with unreliable indicator (like Phalaris)
  - If WCP, also one sample plot in each dominant wetland plant community (8)
- ☑ Previously delineated wetlands field-verified (drive-by) p. 3
- ☐ Artificial wetlands & waters identified
- ☑ Minimum wetland size of 0.5 acres likely met (0.10 acres for WCP)
- ☑ Wetlands classified to Cowardin class level with special modifiers
- ☑ Adjacent Cowardin classifications resolved to 0.5 acre none
- ☑ All wetlands classified by dominant HGM class & subclass
- ☑ Vacant, former wetlands 5 acres or larger identified

Comments/Needs:

Process Documentation 141-086-0220 (5)
- ☑ Fieldwork procedures described in sufficient detail p. 7
- ☑ Dates and scales of source maps and airphotos used
- ☑ Technical staff members & qualifications
- ☑ Standard data forms for all field-verified wetlands & non-wetlands
- ☑ Description of mapping procedures used p 6-7
- ☑ Field maps/photos provided to DSL for agency review of draft products

Info needed:

recommend clear, concise writing

Final Maps 141-086-0220 (1-4) & 141-086-0225 (digital maps)

- [x] Map name
- [x] Roads (major roads named) & railroads
- [x] Legend
- [x] Minimum scale of 1" = 600' (WCP 1" = 200')
- [x] Parcel boundaries (if parcel base exists)
- [x] Sample plots (numbered)
- [x] WD # for previously delineated wetlands Yes
- [x] Symbology for wetlands field verified vs. not field verified
- [x] Wetlands clearly drawn and individually coded
- [x] Geographical reference to PLS system
- [x] Scale bar
- [x] Streams and stream names
- [x] Map date
- [x] Disclaimer
- [x] Watershed boundaries (if any)
- [x] Study Area boundary
- [x] Reference/index map w/required items Yes
- [x] Map of potential mitigation sites none in Study area
- [x] Digital map products provided* Kathy Reviewed completed 3/2007

Comments/Needs: _____

* see digital map standards section below

Wetland Summary Sheets 141-086-0220 (6)

- [x] Wetland code
- [x] PLS location and Tax Lots
- [x] Cowardin Classification(s)
- [x] HGM class & subclass
- [x] Hydrologic basin
- [x] Primary hydrology source, incl. purpose of artificial wetlands
- [x] Common names of dominant plant species
- [x] Significance determination, if made
- [x] Comments that describe wetland, land uses, and alterations & basis of wetland boundary determination
- [x] Address or location
- [x] Size in acres
- [x] Soil type(s)
- [x] Sample plot codes
- [x] Field verification dates
- [x] Summary of OFWAM results

Comments/Needs: _____

OFWAM Results 141-086-0020 (7)

- [x] Wetlands of Special Interest
- [x] Wetland Characterization results
- [x] Answer sheets for all wetland assessment questions
- [x] Function and condition summary sheet Appendix 5
- [x] Assessment results in table format ~~pH~~ Table 2

Study Area Summary 141-86-220 (8)

- [x] Total Acreage in Study Area (SA): 4,959 ac 7.75 sq miles
- [x] Total Acreage of Wetlands in SA: ~~25.59~~ ac 28.31 (exclude artificial waters like gravel ponds)
- [x] Total Number of Wetlands in SA: ~~12~~ 14
- [ ] Comments/Needs: _____

Digital Map Standards 141-086-0225 ESRI-compatible

- [x] GIS staff reviewed; meets requirements Kathy Verble 3/2007

Approval Process 141-086-0228

- [x] Local government reviewed drafts and provided for public review and comment 11.20.03
- [x] DSL compiled comments and provided to consultant for final products 11.30.04 ✓

Landowner Notification (Onsite Option Only) 141-086-0240

Date Notified: _____

RYAN Peter

From: Bill Molnar [bill@ashland.or.us]
Sent: Friday, August 03, 2007 11:39 AM
To: RYAN Peter
Subject: Property Owner Notification Letter

Attachments: Inventory Approval Notification_ltr.doc

Inventory Approval Notificatio...

Hi Peter

I have attached a copy of the notice letter that was mailed to property owners with a significant or possible wetland on or within approximately 75-feet of their property. Let me know if there is anything else you need.

Thanks

Bill Molnar, Planning Manager
Ashland Planning Division
541.552.2042
molnarb@ashland.or.us

www.ashland.or.us
TTY: 800-735-2900

CITY OF
ASHLAND

Ashland Local Wetland Inventory & Assessment
Notice to Affected Landowners

August 3, 2007

Name of Recipient
Title or Business Name
Street Address
City, State Zip

Re: Property You Own
Map & Tax Lot #

Dear Ashland Property Owner,

Why are we contacting you? The Oregon Department of State Lands (DSL) recently approved the Ashland Local Wetlands Inventory & Assessment. Property that you own (see above) was included in the wetland inventory study area or is adjacent to a property included in the study. Based upon the inventory's findings, a wetland or possible wetland was mapped on your parcel(s) or an adjoining property. State regulations (OAR 141-86-0240) require us to notify you of this determination.

Purpose of the Inventory: The inventory was prepared in order to comply with State Law and to achieve better coordination between land use planning and state wetland regulations. The inventory identified, described and mapped the approximate boundaries of wetlands within the Ashland's City Limits and Urban Growth Boundary. Where access permission was granted to field consultants conducting the inventory, the wetland map should be accurate to within approximately 25-feet of the actual wetland boundary. Where access was not granted, the map would be less accurate.

State Law (ORS 227.350) requires that the City of Ashland notify the Oregon Department of State Lands if the City receives a site development application on a property that includes wetlands. Now that it has been approved, the inventory will be used by the City of Ashland as the basis for such notification. The inventory and notification process will help both the community and individual landowners by providing advance notice about wetland regulations. This allows the property owner to plan ahead and discuss possible future development plans with State and City staff in order to determine the need for permits and avoid potential fill violation liability.

Does the inventory create new regulations? No new regulations have yet been adopted in conjunction with the Local Wetlands Inventory and Assessment. For information about the value of wetlands and existing State wetland regulations, contact DSL staff at 503-378-3805 or via their web page at www.Oregonstatelands.us.

The City of Ashland Community Development Department is currently working on new ordinance language and revisions to existing ordinance provisions related to wetland and waterway areas. For more information about City of Ashland's existing and draft regulations, please contact Bill Molnar, Planning Manager, at 552-2042 or molnarb@ashland.or.us. You may view the Inventory Map and supporting documentation at the Ashland Community Development Department, 51 Winburn Way, Ashland, OR, 97520, or on the City's website at: www.ashland.or.us/wetlandinventory.

Community Development
51 Winburn Way
Ashland, Oregon 97520
www.ashland.or.us

Tel: 541-488-5305
Fax: 541-552-2050
TTY: 800-735-2900