

**CITY OF MEDFORD URBAN RESERVE  
LOCAL WETLANDS INVENTORY REPORT  
JACKSON COUNTY, OREGON**



Prepared for



**The City of Medford Planning Department**  
200 South Ivy Street  
Medford, Oregon 97501

Prepared by



**SWCA Environmental Consultants**  
1220 SW Morrison Street, Suite 700  
Portland, Oregon 97205  
503.224.0333  
[www.swca.com](http://www.swca.com)

December 2016

SWCA Project No. 31802

*This page intentionally left blank*

## CONTENTS

<b>1. Introduction.....</b>	<b>1</b>
<b>2. General Description of the Study Area .....</b>	<b>1</b>
2.1. Landscape Setting, Topography, and Land Use .....	1
2.2. Watershed.....	2
2.3. Climate, Precipitation, and Growing Season.....	3
2.4. Sensitive Species .....	4
2.5. Water Quality .....	5
2.6. Soils.....	5
2.7. Vegetation .....	6
<b>3. Wetland Inventory Process and Methodology .....</b>	<b>7</b>
3.1. Public Involvement .....	7
3.2. Inventory Methodology .....	7
3.2.1. Off-Site Inventory Procedures .....	8
3.2.2. On-Site Inventory Procedures .....	8
3.3. Wetland Assessment .....	9
3.3.1. The Oregon Freshwater Wetland Assessment Methodology .....	9
3.3.2. Wetlands of Special Interest for Protection.....	10
3.4. Mapping and Map Transfer Procedures .....	10
<b>4. Local Wetland Inventory Results .....</b>	<b>12</b>
4.1. Study Area Summary .....	12
4.2. Oregon Freshwater Wetland Assessment Ranking .....	17
4.3. Locally Significant Wetland, and Wetlands of Special Interest for Protection Criteria.....	18
4.4. OFWAM, LSW, and Wetlands of Special Interest for Protection Results.....	19
<b>5. Literature Cited .....</b>	<b>22</b>
5.1. Literature Cited in this Report.....	22
5.2. Other Literature and Data of Interest .....	24
5.2.1. Websites .....	25

## APPENDICES

**Appendix A.** Oregon Local Wetlands Inventory Administrative Rules

**Appendix B.** Abbreviations and Definitions

**Appendix C.** Vegetation List and Sampling Plot Data Forms

**Appendix D.** Wetland Summary Sheets

**Appendix E.** OFWAM Wetland Characterization Questions, Function Answer Sheets, and Function and Condition Summary Sheets

**Appendix F.** Maps and Figures

Figure A. Project Location

Figure B. Index Map for Figure Series C (Soil maps), D (Topography maps), and E (NWI and County Hydrography Maps)

Figure Series C. NRCS Soil Maps

Figure Series D. USGS Topography Maps

Figure Series E. NWI and Hydrography Maps

Figure Series F. Index map and Drainage Basin Guide; and LWI Maps (under separate cover)

Figure Series G. Poster sized LWI Maps

**Appendix G.** Staff Qualifications

**Appendix H.** Example Landowner Letter

**Appendix I.** Addenda

## TABLES

<b>Table 1.</b>	Key to Drainage Basin Codes .....	2
<b>Table 2.</b>	Assessed Rainfall for the Preceding 3-month Period, Medford Airport Weather Station .....	3
<b>Table 3.</b>	Rare, Threatened, and Endangered Flora and Fauna Records within 2 Miles of the Study Area .....	4
<b>Table 4.</b>	Hydric Soils, Soils with Hydric Inclusions, and Non-hydric Soils in the Study Area (by map unit number and name) .....	5
<b>Table 5.</b>	Mapping Data Layers Used for Development of the Local Wetland Inventory .....	10
<b>Table 6.</b>	Local Wetlands Inventory Spatial Layers Included in the Georeferenced Database .....	11
<b>Table 7.</b>	Figure Number Index for Figure Series F .....	12
<b>Table 8.</b>	Summary of Wetlands Delineated within the Study Area .....	14
<b>Table 9.</b>	Types of Wetlands in the Study Area .....	17
<b>Table 10.</b>	Key to OFWAM Ranking .....	17
<b>Table 11.</b>	Criteria for Determining Goal 5 Locally Significant Wetlands .....	18
<b>Table 12.</b>	OFWAM Rankings <sup>†</sup> , LSW Determination, and Wetlands of Special Interest for Protection Results .....	19



## 1. INTRODUCTION

SWCA Environmental Consultants (SWCA) conducted a local wetlands inventory (LWI) for the Urban Reserve portions that are being considered for inclusion in the City of Medford's Urban Growth Boundary (UGB). An LWI is a systematic survey of a large geographic area to locate and map wetlands, classify them by type, and evaluate their function and value. This study builds upon an earlier LWI conducted for the city (Wetland Consulting 2002).

This report documents the LWI for the City of Medford urban reserve study area in Jackson County, Oregon. The inventory was conducted according to standards and guidelines outlined in the Department of State Lands (DSL) Oregon Administrative Rules (OAR) 141-086-0180 through 141-086-0390 (Appendix A). Inventory methods included a mixture of on-the-ground surveys and remote sensing. A list of abbreviations used in this study and selected definitions are included in Appendix B. The LWI wetland vegetation list as well as the data forms for each sample plot are provided in Appendix C. Appendix D provides the wetland summary sheets. The *Oregon Freshwater Wetland Assessment Methodology* (OFWAM) wetland characterization questions, function answer sheets, and function and condition summary sheets are provided in Appendix E. Maps of the LWI are provided in Appendix F, and staff qualification are in Appendix G. Appendix H provides an example landowner letter explaining the project and seeking permission for study area access. Appendix I includes wetland delineations that were concurred with by DSL during and after this report was prepared.

SWCA determined the location and size of wetlands (with a required minimum threshold of 0.5 acre) throughout the study area, and grouped these wetlands into assessment units according to OFWAM guidelines. The quality and condition of assessment units were determined by applying the OFWAM and then determining whether wetlands were locally significant by applying the criteria outlined in OAR 141-86-300 through 141-86-350. This report presents the results of the wetland inventory and assessment as well as the identification of streams in the study area. Fieldwork took place in April and July 2015.

## 2. GENERAL DESCRIPTION OF THE STUDY AREA

The urban reserve study area comprises 6,428 acres of urban reserve areas in Townships 36, 37 and 38 South, Ranges 1 and 2 West, Jackson County, Willamette Meridian, Oregon. The study area comprises 11 labeled "MD" units surrounding the City of Medford's existing UGB in all cardinal directions except to the northwest. Study units MD-1 through MD-9 total 4,628 acres, and parklands (MD-Ps) Chrissy and Prescott total an additional 1,800 acres along the foothills on the eastern edge of the study area. Background maps for this project are included in Appendix F. (Figure A shows the project location, Figure B is an index map for the Figure Series C–E, Figure Series C shows the soil mapping, Figure Series D shows the topographic mapping, Figure Series E shows the National Wetland Inventory [NWI] and Jackson County hydrography maps, Figure Series F includes the LWI maps, and Figure Series G is a poster-sized series of the LWI maps).

Watershed-level OFWAM questions relating to land use and water quality are addressed on the wetland characterization answer sheets contained in Appendix E.

### 2.1. Landscape Setting, Topography, and Land Use

The City of Medford is in Jackson County, Oregon, southeast of Grants Pass, northwest of Ashland, along Interstate 5 and approximately 30 miles north of the California/Oregon border. Medford lies within the Klamath Mountain physiographic province (Franklin and Dyness 1988), a complex of variously formed ranges with rugged, deeply dissected terrain. Medford is in the Bear Creek Valley and is bordered by the Siskiyou Mountains to the west and the Cascade Range to the east. Most of the study area is relatively flat

and is on the valley bottom floor (see Figure Series D in Appendix F). Study area units to the east are on the foothills of the Cascade Mountains.

The existing City of Medford UGB includes 18,069 acres in which there are extensive commercial and residential developments. Within the urban reserve study area, large undeveloped areas dominate, ranging in elevation from 1,280 feet to 3,580 feet above sea level. Lands within the northern and southern portions of the study area are mostly grass, pasture, or abandoned orchards converted to pasture, many of which receive routine flood-irrigation throughout the irrigation season (April–October). Also included in the study area are extensive paved roads, light industrial use, residential use, and recreational use including the Centennial Golf Club and Prescott Park. Coker Butte and Roxy Ann Peak are located in the eastern portion of the study area.

Twenty-seven types of hydric and hydric-inclusion soils are mapped in the study area (see section 2.5). A number are characterized by high clay content, low water infiltration rates, and poor internal drainage.

## 2.2. Watershed

According to Appendix H of the OFWAM, the study area is located in the Rogue drainage basin, which is one of 18 basins defined by the Oregon Water Resources Department. The City of Medford, and the majority of the study area is in the Middle Rogue unit of the Rogue River drainage basin (4<sup>th</sup>-field/Hydrological Unit Code [HUC] 8, 17100308). A small eastern portion of the study area extends into the Upper Rogue HUC8, 17100307. Within the Middle Rogue unit of the study area are two 6<sup>th</sup>-field/HUC12 watershed boundaries: Whetstone-Rogue River in the north (171003080202); and Larson Creek-Bear Creek in the south (171003080110). Within the Upper Rogue unit of the study area is the Lower Antelope Creek HUC12 (171003070811). Portions of eight local drainage basins are also present in the study area. Mapping of these basins was derived from the 2002 City of Medford LWI report (Wetland Consulting 2002) and provides a finer-scale watershed boundary for the dispersed study area units (See index Figure F, Appendix F). A key to the five relevant local drainage basin abbreviations used for the study is provided in Table 1.

**Table 1.** Key to Drainage Basin Codes

Drainage Basin Code	Local Drainage Basin Name
MWC	Midway Creek drainage basin (also known as Upton Slough)
BCS	Bear Creek South drainage basin
DRC	Dry Creek
LSC	Larson Creek drainage basin
LPC	Lone Pine Creek drainage basin

Swanson Creek, Larson Creek, and Bear Creek are the dominant hydrological features in the study area. Swanson Creek flows to Whetstone Creek north of Medford. Bear Creek flows northwest to the Rogue River and receives flow from Larson Creek, Lazy Creek, and a number of unnamed streams that cross the study area. Headwaters for Midway Creek (also known as Upton Slough) are located in the study area; however, most of the creek is located within the previously studied UGB. Gore Creek and Crooked Creek are Bear Creek tributaries located southwest of the Medford city limits; they run close to, but outside of, the study area.

Most ponds in the study area are artificial and are most likely maintained for farm and stock watering, and some residential use.

Many streams in the study area have been modified through channelization, underground piping, removal of riparian vegetation, and installation of water storage ponds. Medford Irrigation District, Rogue River Irrigation District, and Talent Irrigation District maintain an extensive network of irrigation and drainage ditches and canals throughout much of the study area, many of which connect with natural streams. Irrigation features of significance include the Phoenix Canal in the southwest and the East Lateral Canal in the east.

Medford Irrigation District–stored waters include Fourmile Reservoir, Fish Lake, Hyatt Lake, Howard Prairie Lake, and Emigrant Lake (Medford Irrigation District 2015). Water delivery to users is achieved through the use of stream channels, irrigation canals, and ditches. The Medford Irrigation District’s 2015 drought plan notes that irrigation water storage for 2015 is at 42% of full, with users facing a 30% usage reduction goal so that irrigation can continue through to late summer (Medford Irrigation District 2015). Flood-irrigation is a common practice in the study area and is evidenced by distinctive seasonal flood signatures on historical aerial imagery.

## 2.3. Climate, Precipitation, and Growing Season

Medford’s climate is characterized by cool winters and hot summers. Average winter temperature is 40 degrees Fahrenheit (°F) with an average daily minimum of 32°F. Snowfall averages 4.8 inches annually. Summer temperatures average 70°F, with an average daily maximum of 87°F. Rainfall averages 18 inches per year (National Weather Service 2015). Summer rainfall is light, with more frequent rains from late fall through spring. Based on the wetlands climate analysis (WETS) table for the Medford Rogue Valley Airport, it is estimated that there is a 50% probability that the growing season begins on March 25 and ends on November 10 (lasting 230 days), for a temperature threshold of 28°F (Natural Resources Conservation Service [NRCS] 2015a). The *Corps of Engineers Wetlands Delineation Manual*, hereafter the 1987 Manual (Environmental Laboratory 1987) defines "growing season" as the portion of the year when soil temperature (measured 20 inches below the surface) is above biological zero (5 degrees Celsius or 41°F). This period "can be approximated by the number of frost-free days" (Environmental Laboratory 1987). Estimated starting and ending dates for the growing season are based on 28°F air temperature thresholds at a frequency of 5 years in 10.

During the month of April, the National Weather Service noted that temperatures remained on the cooler side of normal. Cold, wet fronts moved through the area during fieldwork on the 7th, and again on the 13th, after which high temperatures returned (as much as 10-15 degrees above normal). A high pressure system moved in at the end of April, triggering warmer than normal temperatures once again.

Table 2 provides a summary of rainfall measured at the Medford airport during the 3 months preceding fieldwork. Using the NRCS method of assessment, rainfall for the prior period was at the low end of normal.

**Table 2.** Assessed Rainfall for the Preceding 3-month Period, Medford Airport Weather Station

Prior Month (most recent first)		WETS Rainfall Percentile (inches)		Measured Rainfall (inches)	Condition (dry, wet, normal)	Condition Value (1=dry, 2=normal, 3=wet)	Month Weight	Multiply Previous Two Columns
		30th	70th					
1st	April	0.82	1.59	0.6	Dry	1	3	3
2nd	March	1.21	2.23	1.45	Normal	2	2	4
3rd	February	1.16	2.56	3.20	Wet	3	1	3
							Sum*	10

\* Sum of 6–9 = Drier than Normal, Sum of 10–14 = Normal, Sum of 15–18 = Wetter than Normal.

## 2.4. Sensitive Species

The Oregon Biodiversity Information Center (ORBIC) conducted a data system search on behalf of SWCA for rare, threatened, and endangered plant and animal records occurring within 2 miles of the study area on April 2, 2015 (Table 3). The Agate Desert Preserve and the Whetstone Savanna Preserve are within 2 miles of the study area and therefore account for a significant number of the potential sensitive species listed by ORBIC.

**Table 3.** Rare, Threatened, and Endangered Flora and Fauna Records within 2 Miles of the Study Area

Common Name	Scientific Name	Federal/State Status
<b>Amphibians</b>		
Foothill yellow-legged frog	<i>Rana boylei</i>	SOC/SC and SV
<b>Arthropods</b>		
Franklin's bumblebee	<i>Bombus franklini</i>	SOC/--
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	LT/--
<b>Birds</b>		
Grasshopper sparrow	<i>Ammodramus savannarum</i>	--/SV
Lewis's woodpecker	<i>Melanerpes lewis</i>	SOC/SC
Tricolored blackbird	<i>Agelaius tricolor</i>	SOC/--
<b>Fish</b>		
Chinook salmon (southern Oregon//northern California coasts ESU, fall run)	<i>Oncorhynchus tshawytscha</i>	--/SV
Coho salmon (southern Oregon//northern California coasts ESU)	<i>Oncorhynchus kisutch</i>	LT/SV
Steelhead (Klamath Mountains Province ESU summer run, winter run)	<i>Oncorhynchus mykiss</i>	--/SC and SV
<b>Mammals</b>		
Long-legged myotis	<i>Myotis volans</i>	SOC/SV
<b>Reptiles</b>		
California mountain kingsnake	<i>Lampropeltis zonata</i>	SOC/SV
Western pond turtle	<i>Actinemys marmorata</i>	SOC/SC
<b>Vascular Plants</b>		
Agate Desert lomatium/desert parsley	<i>Lomatium cookii</i>	LE/LE
Bellinger's meadow-foam	<i>Limnanthes floccosa</i> ssp. <i>bellingeriana</i>	SOC/SC
Big-flowered woolly meadow-foam	<i>Limnanthes pumila</i> ssp. <i>grandiflora</i>	LE/LE
Coral seeded allocarya/popcorn flower	<i>Plagiobothrys figuratus</i> ssp. <i>corallicarpus</i>	SOC/SC
Gentner's fritillaria/fritillary	<i>Fritillaria gentneri</i>	LE/LE
Southern Oregon buttercup	<i>Ranunculus austrooreganus</i>	--/SC

Notes: ESU = Evolutionarily Significant Unit; SOC = species of concern; LT = listed threatened; LE = listed endangered; SC = state candidate; SV = state vulnerable.

Essential salmonid habitat (ESH) mapping for the study area was sourced from the DSL (2010) and includes Bear Creek, Larson Creek, and Lazy Creek.

## 2.5. Water Quality

Water quality data were sourced from the Oregon Department of Environmental Quality's (DEQ's) 1988 *Statewide Assessment of Nonpoint Sources of Water Pollution* (DEQ 1988), and subsequent updates. The Oregon DEQ's 2012 integrated report and 303(d) database were also searched. Bear Creek is water quality-limited for temperature, sediment, and bacteria, and Larson Creek is water quality-limited for temperature and dissolved oxygen. Additional information was gathered from the Oregon Explorer Website.

## 2.6. Soils

Clay-textured soils are common on the alluvial fans and valley floor in areas surrounding Medford. These soils undergo considerable expansion and contraction with wetting and drying (Franklin and Dyrness 1988). Hydric soils, soils with hydric inclusions, and non-hydric soils mapped within the study area (NRCS 2012) are listed in Table 4 and shown on Figure Series C in Appendix F.

**Table 4.** Hydric Soils, Soils with Hydric Inclusions, and Non-hydric Soils in the Study Area (by map unit number and name)

Hydric Soils	
139A	Padigan clay, 0%–3% slopes
141A	Phoenix clay, 0%–3% slopes
35A	Cove clay, 0%–3% slopes
76A	Gregory silty clay loam, 0%–3% slopes
Soils with Hydric Inclusions	
6B	Agate-Winlo complex, 0%–5% slopes
17C, 17E	Brader-Debenger loams, 1%–15%, 15%–40% slopes
23A	Camas-Newberg-Evans, 0%–3% slopes
27B, 27D	Carney clay, 0%–3%, 5%–20% slopes
28D, 28E	Carney cobbly clay, 5%–20%, 20%–35% slopes
30E	Carney-Tablerock association, 20%–35% slopes
33A, 33C	Coker clay, 0%–3%, 3%–12% slopes
34B	Coleman loam, 0%–7% slopes
43B, 43D	Darow silty clay loam, 1%–5%, 5%–20% slopes
44E	Debenger-Brader loams, 15%–40% slopes
61A	Foehlin gravelly loam, 0%–3% slopes
112F	McMullin-Medco complex, 12%–50% slopes
113E, 113G	McMullin-Rock outcrop complex, 3%–35%, 35%–60% slopes
114G	McNull loam, 35%–60% slopes
125F	Medco-McMullin complex, 12%–50% slopes
127A	Medford silty clay loam, 0%–3% slopes
158B	Ruch gravelly silt loam, 2%–7% slopes

**Table 4.** Hydric Soils, Soils with Hydric Inclusions, and Non-hydric Soils in the Study Area (by map unit number and name)

Non Hydric Soils	
81G	Heppsie clay, 35%–70% slopes
82G	Heppsie-McMullin complex, 35%–70% slopes
146	Pits, gravel
186H	Tablerock-Rock outcrop complex, 35%–110% slopes

\* This table serves as a key for Figure Series C, Appendix F.

Hydric soils mapped in the study area are described as follows (NRCS 2015b):

- **Cove clay** (map unit 35A) is a deep, poorly drained soil on floodplains that formed in mixed alluvium from sedimentary and basic igneous rocks. The soil matrix color between 0 and 16 inches below ground surface (bgs) is typically very dark gray (10YR 3/1), with many fine distinct yellowish brown and dark reddish brown masses of iron accumulation. A seasonal water table occurs within 1 foot of the surface from December through June.
- **Gregory silty clay loam** (map unit 76A) is a deep, poorly drained soil on stream terraces that formed in recent alluvium from sedimentary and basic igneous rocks. The soil matrix color between 0 and 29 inches bgs is typically very dark grayish brown (10YR 3/2), with common distinct mottles occurring below 18 inches. A seasonal water table occurs within 1 foot below ground surface from December through May.
- **Padigan clay** (map unit 139A) is a very deep, poorly drained soil on alluvial fans and in basins that formed in clayey alluvium weathered from tuffs, breccias, and andesite. The soil matrix color between 0 and 25 inches bgs is usually very dark gray (2.5Y N3/0). The seasonal water table varies from 1 foot above to 0.5 foot below ground surface from November through May.
- **Phoenix clay** (map unit 141A) is a moderately deep, poorly drained soil on alluvial fans that formed in alluvium and colluvium from clayey sediments. The soil matrix color between 0 and 12 inches bgs is usually dark gray (10YR 4/1). A seasonal water table occurs within 0.5 feet below ground surface from December through May.

## 2.7. Vegetation

Historically, natural vegetation typical to the area includes oak woodland with a grass understory in drier areas, and hardwood riparian forests made up of cottonwood (*Populus* sp.), willow (*Salix* sp.), and alder (*Alnus* sp.) (Franklin and Dyrness 1988). Native vegetation communities in the Medford urban reserve areas have been altered by farming, grazing, and urban and light industrial development activities. Remnant native plant communities include Oregon white oak savanna on Roxy Ann Peak and on the foothills east of the study area, and riparian areas along Swanson Creek, Bear Creek, and in some locations along Larson Creek. Observed plant species associated with Medford urban reserve wetlands are listed in Table C1, Appendix C.

### **3. WETLAND INVENTORY PROCESS AND METHODOLOGY**

#### **3.1. Public Involvement**

The City of Medford organized the public outreach efforts for this project. Letters explaining the project and seeking permission for study area access (Appendix H) were sent to all property owners whose tax lots 1) intercepted hydric soil layers and/or NWI mapped wetlands and streams, 2) showed a potential wetland signature in aerial photographs, or 3) provided key access to tax lots identified as having potential wetlands. Of the 265 private property parcels requested for access, 53 were accessed for survey; this number includes city-owned parcels and excludes parcels that were visually confirmed from adjacent access. The overall permission rate was 28%.

Public meetings were held in the Medford Carnegie Building, 413 West Main Street on March 18 and July 1, 2015, each from 5 to 7 p.m. A short overview of the LWI process was presented at the initial March 18 meeting. At the final public meeting on July 1, the draft results of the LWI were presented. Most of the time at each meeting was used to address questions from local landowners and the public. For each meeting, approximately 20 members of the public were in attendance.

#### **3.2. Inventory Methodology**

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

The OARs outline that both on-site and off-site inventory methods are employed to determine if a site contains wetland soils, hydrology, and vegetation. The methodology used for determining the presence of wetlands followed the 1987 Manual (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers' Wetland Delineation Manual for the Western Mountains, Valleys, and Coast Region, (Version 2.0)* (USACE 2010), as approved by both the USACE and DSL.

Following the technical approach outlined in the OARs, SWCA used existing data to build base maps to support the initial screening for potential wetlands in the study area, and to support the on- and off-site wetland determination work. Base maps included comprehensive hydrography data sourced from the NWI, Jackson County, the City of Medford, and DSL. Base maps also included aerial imagery, NRCS mapped hydric soils, Federal Emergency Management Agency (FEMA) 100-year floodplains, 2-foot contours and hill-shade derived from light detection and ranging (LiDAR) data, tax lots, and study area boundaries. Refer to Table 5 in section 3.4 for a complete list of base map resources used.

Following the approach described above, identified “potential” wetlands were defined as areas with mapped hydric soils, previously mapped wetland features (NWI, county, city, or DSL data), and aerial imagery that suggest the presence of wetland vegetation and/or saturation, ponding, or ditching. Additionally, aerial imagery layers were reviewed to interpret wetland types where visual confirmation was not possible.

County- and city-level hydrography data were reviewed and confirmed to incorporate NWI data and to provide more detailed local data (see Figure Series E, Appendix F). Where there were multiple previously mapped wetlands in one area, the most recent data layer was used. Where access was granted, available hydrography data were confirmed visually, or by collecting sample plot data. Over the course of the field surveys, efforts were made to ground-truth aerial interpretation wherever possible.

Dominant Cowardin (Cowardin et al. 1979) and hydrogeomorphic (HGM; Adamus 2001) classes and subclasses were identified for all mapped wetlands. Appendices B3 and B4 provide descriptions of Cowardin and HGM system classes. Observed water regime and special modifier codes are included in the Cowardin classification if they are known or could be approximated based on desktop review. For wetlands observed or estimated to contain multiple Cowardin classes greater than 0.25 acre in size, each classification was mapped and labelled as a separate wetland.

### **3.2.1. Off-Site Inventory Procedures**

Where site access was not granted, wetlands were identified based on 1) the presence of wetland (hydrophytic) vegetation as documented in aerial photographs, or by binoculars from off-site viewing locations; 2) an aerial signature showing saturation or ponding (a hydrologic signature); 3) the presence of mapped hydric soils; or 4) the presence of a mapped wetland or water feature (referencing NWI, Jackson County, City of Medford hydrologic data, and Wetland Delineations [WD's] previously submitted to DSL [existing data]). Off-site viewing locations included roads, public property, commercial parking lots, and private tax lots with access granted.

In accordance with DSL guidelines, off-site wetlands larger than 0.5 acre (approximately 148 × 148 feet) were mapped as polygons. Off-site wetlands less than 0.5 acre were labelled with a Probable Wetland (PW) point or in some cases mapped as a polygon if a previous delineation boundary was available in the existing data.

In many cases where existing data were utilized, visual confirmation of wetlands and waters was not possible and therefore the dataset was not altered or refined. As a result, there are locations where mapping data do not accurately align with aerial imagery or LiDAR data interpretations.

### **3.2.2. On-Site Inventory Procedures**

Field surveys were conducted April 6–9 and 20–23, 2015, and selected sites were revisited on July 1, 2015. Where property access permission was granted, each potential wetland was verified with at least one sampling plot that best characterized the feature. Vegetation, soils, and hydrology were documented on standard USACE regional wetland determination data forms, additional notes were recorded in field log books, and each wetland was photographed. SWCA used a Trimble GeoExplorer XT global positioning system (GPS) unit to record the location of each sampling plot in the field. Field-collected data were downloaded into the LWI geodatabase using the industry standard Esri ArcGIS software, version 10.1.

In accordance with DSL guidelines, wetlands assessed on-site that were less than 0.5 acre in size were recorded with a PW point in the field, using a Trimble GPS. Wetlands confirmed to be larger than 0.5 acre were mapped as polygons using a combination of GPS and hand-sketched boundary lines on field base maps.

Each potential wetland where land-use activities such as ditching, water diversion, or agricultural practices had significantly altered site conditions were verified with at least one sampling plot. Any potential wetlands with unreliable indicators (e.g., a dominant plant that grows in both wetlands and non-wetlands, such as reed canarygrass, *Phalaris arundinacea*) were verified with at least one sampling plot. Any previously mapped wetlands no longer apparent were verified with a sampling plot.

All sampling plot data recorded on the USACE data forms are included in Appendix C. All sampling plot and PW point locations are shown on the LWI maps provided in Appendix F (Figure Series F). Refer to section 3.4 for a detailed description of mapping methods used.



### 3.3. Wetland Assessment

#### 3.3.1. *The Oregon Freshwater Wetland Assessment Methodology*

The OFWAM (Roth et al. 1996) was used to evaluate fish and wildlife habitat, water quality, and hydrologic control functions for each wetland assessment unit in the study area. Following the OFWAM guidance, wetland assessment units were established by grouping mapped wetlands based on their hydrologic connectedness (see Table 8 in section 4.1). Wetlands were determined to be connected if culverts and / or ditches permit free flow of surface water, and the slope and drainage of the wetland is unidirectional. Wetlands on each side of a stream or river were also considered part of the same assessment unit, and their assessment included the river waterbody. LiDAR and multispectral National Agriculture Imagery Program (NAIP) infrared imagery were instrumental for desktop analysis of hydrological connectivity. Following the criteria outlined in OAR 141-086-0350, OFWAM results were used to identify Goal 5 Locally Significant Wetlands (LSWs). Where applicable, other measures to determine LSWs were implemented, as discussed later in this report. OFWAM and LSW results are used primarily for planning and educational purposes.

#### **Wetland Functions and Values**

Wetlands vary greatly by type and location; therefore, not all perform the same functions and not all are equally valued. Wetland assessment may involve one or all of the following aspects:

- **Functions:** The ecological processes in wetlands, such as nitrogen cycling
- **Values:** The societal importance attached to those functions, such as water quality improvement
- **Condition:** The degree to which a wetland is altered or degraded, generally by human impacts

The OFWAM uses indicators that allow an evaluation of the extent to which a specific wetland may perform a given function, and helps compare wetlands and evaluate their relative importance (value). Each wetland function evaluated by OFWAM is described below:

- **Wildlife habitat:** Wetlands provide essential water, food, cover, and reproductive areas for many wildlife species. OFWAM evaluates the habitat diversity for species usually associated with wetlands, without emphasizing one particular species.
- **Fish habitat:** OFWAM evaluates how a wetland provides fish habitat in streams, ponds, or lakes associated with a wetland. The assessment incorporates both warm water and cold water fish, and no particular species is emphasized.
- **Water Quality:** Wetlands are highly effective at removing nitrogen and phosphorous, some chemicals, heavy metals, and other pollutants from water. For this reason, artificial wetlands are often constructed for cleaning stormwater runoff and for tertiary treatment (polishing) of wastewater. Wetlands bordering streams and rivers and those that intercept runoff from fields and roads may provide this function.
- **Hydrologic control:** Wetlands can hold water during storm events and reduce flood impacts. OFWAM evaluates the effectiveness of a wetland to reduce downstream flood peaks and store floodwaters.

The OFWAM methodology for this study was streamlined to include only those wetland characterization questions that were relevant for determining whether the wetlands were LSWs. Therefore, questions 39–58 of the methodology were not included.

### 3.3.2. Wetlands of Special Interest for Protection

The first filter of OFWAM is to determine whether the wetland is covered by a management plan, protected by regulation, or is uncommon in Oregon. A “yes” answer to any of the ten assessment questions places the wetland into the “Special Interest for Protection” category. According to OFWAM, Wetlands of Special Interest indicate that management decisions should be made to protect the site. OARs do not require Wetlands of Special Interest to be labelled as such on LWI maps. Instead, this information is discussed in section 4.3, and included in Table 11 and the Wetland Summary Sheets in Appendix D.

## 3.4. Mapping and Map Transfer Procedures

SWCA used ArcGIS to prepare base mapping for the study area in accordance with the standards outlined under OAR 141-086-0210 (Inventory Development Process and Standards). All mapping layers used for development of the LWI are listed in Table 5. Data were reviewed to identify tax lot parcels that contained potential wetlands, and to generate a list of landowners for which access requests were made by the city. For field use, D-size (22 × 34 inches) map series were printed at a scale of 1 inch = 200 feet, and included a selection of suitable mapping layers (noted in Table 5).

**Table 5.** Mapping Data Layers Used for Development of the Local Wetland Inventory

Resource	Sources
Study area boundaries*	City of Medford (2015)
Tax lot boundaries and codes*	Jackson County (2015)
Tax lot access permission*	City of Medford (2015)
Most recent aerial imagery*	City of Medford (2015), flown by David C. Smith and Associates in 2013
Esri world imagery	Environmental Systems Research Institute (2015)
Historical aerial imagery	U.S. Geological Survey (1974), Google Earth (2015) <sup>†</sup>
Streets and street names*	Jackson County (2015)
Wetland mapping data*	Combination of data from the NWI (USFWS 1994), Jackson County (2015); and City of Medford (2013, 2015)
DSL wetland polygons*	Oregon DSL (2015)
Hydric/hydric inclusion soils*	NRCS Soil Survey Geographic database (SSURGO; NRCS [2015b])
Stream data*	Combination of National Hydrography Dataset (NHD), Jackson County, and City of Medford (2013, 2015)
HUC12 identifier and boundaries*	NHD (USGS 2014; accessed 2014)
Drainage basin boundaries	City of Medford LWI (Wetland Consulting 2002)
ORBIC data*	Oregon Biodiversity Information Center (Portland State University)
Oregon Hydrography – Whole Stream Routes	Oregon Department of Fish and Wildlife (ODFW 2014)
Contour data (100 foot and 2 foot)	Jackson County (2015) and City of Medford (2015), respectively
FEMA 100-year flood zone	Federal Emergency Management Agency (accessed 2015)

\* This data layer was included on field reference maps. This location data is confidential.

<sup>†</sup> Google Earth photograph dates include August 5, 1994 (black and white); July 23, 2000 (black and white); August 17 and November 30, 2003; August 14, 2005; August 17, 2006; July 20, 2010; November 16, 2011; August 13, 2012; and July 4, 2014.

Scanned DSL maps of wetland polygons that had previously been identified in the same township section and ranges as the study area were obtained directly from DSL by request (DSL, 2015). These maps were reviewed by the City, and wetlands that were found to be located within the study area were manually converted to digital format for incorporation into the project geodatabase. Where possible, these wetlands were visually confirmed, and where deemed necessary, additional sample plot data were collected.

Subsequent to creating the base maps for the inventory, SWCA created an ArcGIS georeferenced database to house spatial data, attribute tables, and metadata for the study. The LWI geodatabase contains attributes that record expanded comments and data source information relating to each wetland. The geodatabase is projected using the Oregon Lambert conformal conic. Table 6 summarizes the inventory's spatial data layers that are included in the database.

**Table 6.** Local Wetlands Inventory Spatial Layers Included in the Georeferenced Database

Layer	Type/Code
Wetlands	Polygon/W00 (wetlands < 0.5 acre in size that had been previously mapped are included in these data)
Probable wetland	Point/PW00 (wetlands < 0.5 acre in size)
Stream	Width < 6 feet = line, > 6 feet = polygon/name or unique number
Natural waters	Polygon/WA00
Artificial wetlands and waters	Ponds = Polygon/AW00 Ditches = line/Unique number (no artificial wetlands were recorded)
Sample plots	Point/P00

Notes: The LWI database provided to the DSL additionally includes watershed boundaries, drainage basin boundaries, study area boundaries, tax lot lines and numbers, major streets, and metadata per OAR 141-086-0225.

Attribute data for each layer include a "data source" field.

Using the off- and on-site methods described in section 3.2, wetland and water features were mapped and characterized. GPS-collected field data were post-processed to ensure sub-meter accuracy, and polygons that were sketched on printed field maps were digitized to an approximate accuracy of 5 meters (16.4 feet), where visibility was available.

Each mapped feature in the LWI database was assigned a unique identifier. In addition, each wetland polygon includes the following attributes:

- Visual confirmation (yes/no)
- Prior wetland determination or delineation (WD) DSL file number
- Data source(s), which references the origin(s) of the data
- Cowardin classification and modifiers
- HGM classification
- Size (acres)
- LSW determination (yes/no)

## 4. Local Wetland Inventory Results

### 4.1. Study Area Summary

The study area encompasses 6,428 acres within the urban reserve areas surrounding the city's UGB. In all, 85 wetland polygons were delineated in the study area, totaling 195 acres (not including rivers and streams, deepwater habitats, or artificially created waters). LWI wetlands are shown on maps contained in Figure Series F and G, Appendix F. Table 7, below provides a figure number index, sorted by wetland identifier code. This table is also included at the beginning of Figure series F as a reference.

**Table 7.** Figure Number Index for Figure Series F

WET_ID	OFWAM Group	Figure Number
W01	BCS-1	F-69
W02-A	BCS-1	F-68, F-69
W02-B	BCS-1	F-68
W03	BCS-9	F-68
W04-A	MWC-1	F-8
W04-B	MWC-1	F-8
W04-Mosaic	MWC-1	F-8
W06	MWC-2	F-7, F-8
W07	MWC-3	F-4, F-5
W08	MWC-13	F-9, F-10
W09	MWC-15	F-10
W10-A	MWC-5	F-11, F-12
W10-B	MWC-5	F-11
W10-C	MWC-5	F-11
W10-D	MWC-5	F-11
W10-E	MWC-5	F-11
W10-F	MWC-5	F-13, F-14
W10-G	MWC-5	F-11, F-12, F-13, F-14
W11	MWC-10	F-16, F-17
W13	BCS-2	F-65, F-66
W14	LSC-1	F-58
W15	LSC-2	F-57, F-58
W17	BCS-6	F-71, F-72
W18	BCS-5	F-74
W19-A	BCS-7	F-76
W19-B	BCS-7	F-76
W20	BCS-8	F-76
W21	MWC-6	F-22, F-23
W22	MWC-5	F-11

**Table 7.** Figure Number Index for Figure Series F

WET_ID	OFWAM Group	Figure Number
W23	MWC-12	F-2
W24	MWC-2	F-2
W25	MWC-8	F-1, F-2, F-6
W26	N/A	F8
W27	MWC-16	F8
W28	MWC-16	F8
W29	N/A	F-6
W30	N/A	F-6
W31	MWC-9	F-7
W32	N/A	F-7
W33	N/A	F-3
W34	MWC-2	F-3
W35	MWC-2	F-3
W36	MWC-1	F-8
W37	N/A	F-4
W38	MWC-3	F-4
W39-A	MWC-4	F-10
W39-B	MWC-4	F-10, F-12
W40	MWC-15	F-10
W41	MWC-4	F-9, F-10
W42	MWC-14	F-9, F-10
W43	MWC-11	F-9
W44	N/A	F-11
W45	N/A	F-11
W46	MWC-6	F-19
W47	MWC-6	F-16, F-17, F-20, F-21
W48	MWC-6	F-19
W49	MWC-6	F-16, F-19, F-20
W50	MWC-6	F-16, F-19
W51	MWC-6	F-16, F-19
W53	MWC-6	F-22
W54	MWC-6	F-21, F-22
W55	MWC-6	F-21
W56	MWC-6	F-21
W57	MWC-6	F-21
W61	LPC-1	F-50
W62	LSC-4	F-56
W63	LSC-3	F-57

**Table 7.** Figure Number Index for Figure Series F

WET_ID	OFWAM Group	Figure Number
W64	LSC-3	F-57, F-62
W66	BCS-2	F-66
W68	BCS-3	F-66
W69	N/A	F-68
W70	BCS-4	F-74
W71	BCS-4	F-74
W72	BCS-4	F-74
W74	BCS-4	F-72, F-74
W78	DRC-1	F-38, F-39
W79	BCS-5	F-74
W81	N/A	F-87
W82	MWC-7	F-1, F-2
W85	MWC-2	F-2, F-3
W86	MWC-2	F-2
W87	MWC-2	F-8
W88	MWC-2	F-8
W89	MWC-6	F-20
W90	MWC-6	F-86

Table 8 lists the unique identification codes assigned to each of the 85 wetlands identified in the study area, with each associated OFWAM/drainage basin group code, Cowardin and HGM class, visual confirmation status, wetland size, and DSL file number. While conducting site visits, 13 upland sampling plots and 12 wetland sampling plots were recorded. Sampling plot data forms are found in Appendix C.

**Table 8.** Summary of Wetlands Delineated within the Study Area

OFWAM Grouping <sup>*</sup>	Unique Identifier	Cowardin Class <sup>†</sup>	HGM Class <sup>‡</sup>	Visually Confirmed	Size (acres)	LSW Determination	DSL File Number
BCS-1	W01	PEMCh	SV	Yes	3.50	No	None
BCS-12	W02-A	PEMCh	SV	Yes	0.77	No	None
BCS-12	W02-B	PEMCh	RI	Yes	0.36	No	None
BCS-9	W03	PEMBh	SV	Yes	2.33	No	None
MWC-1	W04-A	PEMCd	SV	Yes	1.67	Yes	None
MWC-1	W04-B	PEMCh	RI	Yes	0.15	Yes	None
MWC-1	W04-Mosaic	PEMC	SV	Yes	6.56	Yes	None
MWC-2	W06	PSS1C	RI	Yes	0.30	Yes	WD2012-0181
MWC-3	W07	PEMBh	SV	Yes	1.35	Yes	WD2005-0692
MWC-13	W08	PEMB	SV	No	1.76	Yes	None
MWC-15	W09	PEMBh	SV	Yes	11.52	Yes	WD2009-0470
MWC-5	W10-A	PEMCd	RFT	Yes	2.79	Yes	WD2007-0106

**Table 8.** Summary of Wetlands Delineated within the Study Area

OFWAM Grouping <sup>+</sup>	Unique Identifier	Cowardin Class <sup>†</sup>	HGM Class <sup>‡</sup>	Visually Confirmed	Size (acres)	LSW Determination	DSL File Number
N/A	W10-B	PEMB	SV	Yes	0.05	N/A	WD2007-0106
N/A	W10-C	PEMB	SV	Yes	0.03	N/A	WD2007-0106
MWC-5	W10-D	PEMC	SV	Yes	0.45	Yes	WD2007-0106
MWC-5	W10-E	PEMC	SV	Yes	0.61	Yes	WD2007-0106
MWC-5	W10-F	PEMFh	DCNP	No	3.80	Yes	WD2007-0106
MWC-5	W10-G	PABHh	DCP	Yes	1.84	Yes	WD2007-0106
MWC-10	W11	PEMCx	SV	Yes	0.98	No	None
BCS-2	W13	PEMCx	RFT	Yes	0.96	Yes	None
LSC-1	W14	PSS1A/PEMA	RI	Yes	0.59	Yes	None
LSC-2	W15	PSS1d	RFT	Yes	2.05	Yes	None
BCS-6	W17	PEMCx	RI	Yes	0.87	No	WD2004-0551
BCS-5	W18	PFO1h	SV	Yes	0.96	Yes	None
BCS-7	W19-A	PEMCd	SH	Yes	6.75	Yes	None
BCS-7	W19-B	PSS1	DCP	Yes	0.49	Yes	None
BCS-8	W20	PEMC	SV	Yes	3.77	No	None
MWC-6	W21	PFOd/PABFx	SV	Yes	2.06	Yes	None
MWC-5	W22	PEMC	SV	Yes	1.49	Yes	None
MWC-12	W23	PEMA	RI	No	6.41	No	None
MWC-2	W24	PEMA	RI	No	0.19	Yes	None
MWC-8	W25	PEMA	Flats	No	7.71	Yes	None
MWC-2	W26	PEMC	RI	No	0.46	Yes	WD2012-0181
MWC-16	W27	PEME	SV	Yes	0.81	No	WD2012-0181
MWC-16	W28	PEME	SV	Yes	0.51	No	WD2012-0181
N/A	W29	PSS1/PEM	SV	No	0.19	N/A	None
N/A	W30	PEMB	SV	No	0.14	N/A	None
MWC-9	W31	PEMA	RI	Yes	0.52	No	None
N/A	W32	PEMA	Flats	No	0.49	N/A	WD2012-0181
N/A	W33	PUBFx	Flats	No	0.14	N/A	None
MWC-2	W34	PSS1F	RFT	Yes	0.41	Yes	None
MWC-2	W35	PSS1F	RFT	Yes	0.66	Yes	None
MWC-1	W36	PEMCx	RI	No	0.28	Yes	None
N/A	W37	PSS1C	LFV	Yes	0.12	N/A	None
MWC-3	W38	PEMCd	RFT / SV	Yes	6.34	Yes	WD2012-0181
MWC-4	W39-A	PSS1/PEM	RFT / SV	No	3.37	Yes	WD2009-0470
MWC-4	W39-B	PSS1F	RFT	Yes	0.97	Yes	None
MWC-15	W40	PEMB	SV	No	0.29	Yes	WD2009-0470
MWC-4	W41	PSSF	SV	No	1.80	Yes	None
MWC-14	W42	PEMCh	SV	No	0.58	Yes	None
MWC-11	W43	PSS1B	SV	No	1.32	No	None

**Table 8.** Summary of Wetlands Delineated within the Study Area

OFWAM Grouping*	Unique Identifier	Cowardin Class†	HGM Class‡	Visually Confirmed	Size (acres)	LSW Determination	DSL File Number
N/A	W44	PEMC	SV	No	0.15	N/A	None
N/A	W45	PEMCx	RI	No	0.16	N/A	None
MWC-6	W46	PABHh	DO	No	1.34	Yes	None
MWC-6	W47	PEMBd	RFT	No	5.74	Yes	None
MWC-6	W48	PSSC1h	RFT	No	0.39	Yes	None
MWC-6	W49	PSS1Cd/PEMC	RFT	No	6.96	Yes	None
MWC-6	W50	PUBHx/PSS1Bh	SV	Yes	2.04	Yes	None
MWC-6	W51	PSS1Bh/PEMB	SV	No	0.52	Yes	None
MWC-6	W53	PEMBd	SV	Yes	1.18	Yes	None
MWC-6	W54	PEMB	SV	Yes	8.84	Yes	None
MWC-6	W55	PEMBd	SV	Yes	0.51	Yes	None
MWC-6	W56	PEMBd	SV	No	1.87	Yes	None
MWC-6	W57	PEMBd	SV	No	0.65	Yes	None
LPC-1	W61	PEMh/PSSh	RI	No	1.83	No	None
LSC-4	W62	PSS1d	RFT	No	0.72	No	None
LSC-3	W63	PEMBh	DCNP	No	2.31	No	None
LSC-3	W64	PEMBh	DCNP	Yes	5.19	No	None
BCS-11	W66	PEMCd	RFT	Yes	0.79	Yes	None
BCS-3	W68	PEMB	SV	No	0.73	No	None
N/A	W69	PUBFx	SV	No	0.16	N/A	None
BCS-4	W70	PSS1Cd	RI	Yes	2.32	Yes	WD2015-0492
BCS-4	W71	PEMC	SV	No	2.51	Yes	None
BCS-4	W72	PEMC	SV	No	2.28	Yes	None
BCS-10	W74	PEMC	SV	No	5.83	Yes	None
DRC-1	W78	PEMC	RFT	No	1.32	Yes	None
BCS-5	W79	PFO1B/R3UB	RFT	Yes	2.82	Yes	None
N/A	W81	PEMB	SV	No	0.09	N/A	None
MWC-7	W82	PEMA	Flats	Yes	37.33	Yes	None
MWC-2	W85	PSS1C/PEMC	RFT	Yes	0.71	Yes	None
MWC-2	W86	PSS1C/PEMC	RFT	No	1.87	Yes	None
MWC-2	W87	PEMC/PSS1C	RFT	No	0.42	Yes	WD2002-0010
MWC-2	W88	PSS1C/PEMC	RFT	No	0.35	Yes	None
N/A	W89	PEMC	SV	No	0.11	No	None
N/A	W90	PEMC	SV	No	0.10	No	None

\* OFWAM assessment codes: MDW = Midway Creek Drainage; BCS = Bear Creek South Drainage; DRC = Dry Creek Drainage; LSC = Larson Creek Drainage; LPC = Lone Pine Creek Drainage; N/A = Below the 0.5 acre minimum threshold for OFWAM assessment

† Class descriptions are provided in Table 9. Water regime and special modifiers are described in Appendix B3.

‡ HGM Classification codes: SV = slope valley; RI = riverine impounding; RFT = riverine flow-through; DCNP = depressional closed nonpermanent; DCP = depressional closed permanent; SH = slope headwater; DO = depressional outflow. Refer also to Appendix B4.



An analysis of Cowardin classification wetland types shows that the emergent type makes up approximately 80%, and the scrub-shrub type makes up approximately 14% of the delineated wetlands in the study area. Table 9 provides a summary of identified wetland types by class, acres, and percentage of total wetlands. Wetland summary sheets for each wetland are found in Appendix D.

Ninety five PWs were identified in the study area and are depicted in Figure Series F and G, Appendix F. PW66 has the potential to be a locally significant wetland if future on-the-ground investigation at this location were to delineate wetland/s larger than 0.5 acre in size.

**Table 9.** Types of Wetlands in the Study Area

Wetland Classification*	Classification Description	Approximate Acres	Percentage of Wetlands
Palustrine Emergent (PEM) <sup>†</sup>	Wetlands with rooted herbaceous vegetation that stands erect above the water or ground surface.	158	81%
Palustrine Scrub-shrub (PSS) <sup>‡</sup>	Wetlands dominated by shrubs and tree saplings less than 20 feet high.	26	13%
Palustrine Forested (PFO) <sup>‡</sup>	Wetlands dominated by trees that are greater than 20 feet high.	6	3%
Palustrine Aquatic Bed (PAB)/Unconsolidated Bottom (PUB) <sup>‡</sup>	PAB: Greater than 30% vegetation cover, growing on or below the water's surface for most of the growing season most years PUB: At least 25% cover of particles smaller than stones, and a vegetative cover less than 30%.	6	3%
<b>Total</b>		<b>195</b>	<b>100%</b>

\* Where two wetland types were present in one wetland polygon, the predominant class type has been assigned in this table.

<sup>†</sup> Where NWI wetland data were incorporated in to the inventory, water regime classification was retained.

<sup>‡</sup> Includes multiple subclasses and water regimes. Values were rounded up.

## 4.2. Oregon Freshwater Wetland Assessment Ranking

The OFWAM provides qualitative information on the relative value of wetlands. Details of OFWAM function questions and rationale are included in Appendix B. Categories of high (H), medium (M), and low (L) were assigned to the assessment criteria to easily compare the results. H was assigned to wetlands receiving the highest function or condition result (e.g., intact, diverse), L was assigned to the wetlands receiving the lowest result (lost or not present), and M was assigned to the results that do not fit the other criteria (impacted or degraded, potential). This system is summarized in Table 10.

**Table 10.** Key to OFWAM Ranking

<b>Wildlife Habitat</b>	H. Wetland provides diverse wildlife habitat. M. Wetland provides habitat for some wildlife species. L. Wetland does not provide wildlife habitat.
<b>Fish Habitat</b>	H. Wetland's fish habitat function is intact. M. Wetland's fish habitat function is impacted or degraded. L. Wetland's fish habitat function is lost or not present.
<b>Water Quality</b>	H. Wetland's water-quality function is intact. M. Wetland's water-quality function is impacted or degraded. L. Wetland's water-quality function is lost or not present.
<b>Hydrologic Control</b>	H. Wetland's hydrologic control function is intact. M. Wetland's hydrologic control function is impacted or degraded. L. Wetland's hydrologic control function is lost or not present.

### 4.3. Locally Significant Wetland, and Wetlands of Special Interest for Protection Criteria

LSW determinations were based on OAR 141-086-300 through 141-086-350 (Identifying Significant Wetlands). 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. Table 11 provides the criteria for determining whether a wetland is locally significant. All wetlands, even those not determined to be locally significant, may still be regulated by the DSL and the USACE. Refer to Table 8 and the wetland summary sheets (Appendix D) for details of each wetland.

**Table 11.** Criteria for Determining Goal 5 Locally Significant Wetlands

<b>Exclusions: A wetland cannot be designated as significant if the answer to any of the criteria below is "Yes".</b>	
1.	Is this wetland artificially created entirely from upland and:
a.	created for the purpose of controlling, storing, or maintaining storm water
b.	is used for active surface mining or as a log pond
c.	is a ditch without a free and open connection to natural waters of the state and does not contain food or game fish
d.	is less than 1 acre and created unintentionally from irrigation or construction
e.	created for the purpose of wastewater treatment, cranberry production, farm watering, sediment settling, cooling industrial water, or a golf hazard
2	Is the wetland or portion of the wetland contaminated by hazardous substances, materials or wastes as per the conditions of ORS 141-86-350 1(b)?
<b>Mandatory Locally Significant Wetland Criteria: A wetland is locally significant if "Yes" is the answer to <u>any</u> of the criteria below.</b>	
1	Does the wetland provide <i>diverse wildlife habitat</i> ?
2	Is the wetland's <i>fish habitat function intact</i> ?
3	Is the wetland's <i>water quality function intact</i> ?
4	Is the wetland's <i>hydrologic control function intact</i> ?
5	Is the wetland less than 1/4 mile from a water body listed by DEQ as a water quality limited water body (303(d) list) <u>and</u> is the wetland's <i>water quality function intact, or impacted or degraded</i> ?
6	Does the wetland contain a rare plant community?
7	Is the wetland inhabited by any species listed federally as threatened or endangered, or state listed as sensitive, threatened or endangered?
8	Does the wetland have a direct surface water connection to a stream segment mapped by ODFW as habitat for indigenous anadromous salmonids and is the wetland's <i>fish habitat function intact, or impacted or degraded</i> ?
<b>Optional Locally Significant Wetland Criteria: Local governments may identify a wetland as significant if "Yes" is the answer to the criteria below</b>	
1	Does the wetland represent a locally unique native plant community <u>and</u> provides <i>diverse wildlife habitat or habitat for some species</i> <u>or</u> has an <i>intact, or impacted or degraded fish habitat function</i> <u>or</u> has an <i>intact, or impacted or degraded water quality function</i> <u>or</u> has an <i>intact, or impacted or degraded hydrologic control function</i> .
2	Is the wetland publicly owned and used by a school or organization <u>and</u> does the wetland provide <i>educational uses</i> ?

Adapted from OAR 141-086-0350.

Wetlands of Special Interest for Protection were identified by addressing the 10 “first filter” questions outlined in Chapter 5 of the OFWAM. Responses to these questions identify whether the wetland is in a management plan, is protected by regulatory rules or statutes, or is uncommon in Oregon.

#### 4.4. OFWAM, LSW, and Wetlands of Special Interest for Protection Results

OFWAM ranking and LSW determination results for each wetland are shown in Table 12. Of the 23 OFWAM assessment units identified in the study area, 14 units meet the criteria for local significance. These 14 units cover a total of 160 acres (58 mapped wetland polygons), which is approximately 85% of the total mapped wetland acreage within the study area. Detailed results are contained in Appendix E, which includes OFWAM wetland characterization questions and answers, and function and condition summary tables.

Three OFWAM assessment units in the Midway Drainage basin (MWC-1, MWC-7, and MWC-8) and one unit in the Bear Creek South drainage basin (BCS-5) met the criteria for wetlands of special interest for protection. Table 8 provides a listing of the wetland codes contained in each OFWAM assessment unit.

**Table 12.** OFWAM Rankings<sup>‡</sup>, LSW Determination, and Wetlands of Special Interest for Protection Results

Wetland Assessment Code and unit size <sup>*, †</sup>	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	General Description and LSW Criteria (where applicable)	LSW (yes or no)?
MWC-1 8.7 acres	M	N/A	M	H	This is a wetland of special interest for protection; it includes an Agate Desert vernal pool mosaic (W04-Mosaic), and the unit is located within the Swanson Creek 100-year flood zone. May contain plant species listed as endangered by the State of Oregon.	Yes
MWC-2 5.4 acres	H	M	H	H	Comprises mostly riparian vegetation along Swanson Creek and located in the floodplain of Swanson Creek, adjacent to industrial and residential land uses.	Yes
MWC-3 7.7 acres	M	M	H	M	This complex provides effective pollutant removal for downstream waters by means of a large surface area and connection to other wetlands	Yes
MWC-4 6.1 acres	H	M	H	H	Comprises mostly riparian vegetation along Swanson Creek, and located in the floodplain of Swanson Creek, adjacent to industrial and residential land uses.	Yes
MWC-5 11 acres	M	M	M	H	Coker Butte complex. Unit is more than 5 acres in size. Extensive ponding in growing season. Streams and ponds present.	Yes
MWC-6 33.2 acres	M	M	M	H	PSS/PEM complex at the headwaters of Midway and Swanson Creeks. Unit is more than 5 acres in size, with extensive ponding in growing season. Streams and ponds present.	Yes

**Table 12.** OFWAM Rankings<sup>‡</sup>, LSW Determination, and Wetlands of Special Interest for Protection Results

Wetland Assessment Code and unit size <sup>*,†</sup>	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	General Description and LSW Criteria (where applicable)	LSW (yes or no)?
MWC-7 37.3 acres	M	M	M	H	Wetland of special interest for protection; this is a mapped Agate Desert vernal pool mosaic. May contain plant species listed as endangered by the State of Oregon.	Yes
MWC-8 7.7 acres	M	M	M	H	Wetland of special interest for protection; this is a mapped Agate Desert vernal pool mosaic. May contain plant species listed as endangered by the State of Oregon.	Yes
MWC-9 0.52 acre	M	M	M	M	This is a minor wetland just over the 0.5-acre threshold; runs along a ditch line.	No
MWC-10 1 acre	M	M	M	M	Long narrow wetland along a drainage line in an old orchard, now a pasture.	No
MWC-11 1.3 acre	M	N/A	M	M	Potentially a relict oxbow of Swanson Creek. Adjoins to industrial use area.	No
MWC-12 6.4 acres	M	M	M	M	Large PEM wetland in pasture.	No
MWC-13 1.8 acre	M	M	H	M	PEM wetland in old oxbow of Swanson Creek with ponding evident	Yes
MWC-14 0.6 acre	M	N/A	M	M	Isolated PEM wetland	No
MWC-15 11.8 acres	M	N/A	H	M	Large PEM wetland on decommissioned race track north of Swanson Creek.	Yes
MWC-16 1.3 acre	M	N/A	H	M	PEM wetland south of Justice Road	No
BCS-1 3.5 acres	M	M	M	M	Comprises flood-irrigated fields adjacent but not connected to the irrigation canal. Unit is more than 0.25 mile away from Bear Creek (horizontal distance).	No
BCS-2 1 acre	M	M	M	M	This Larson Reservoir complex is not connected to the "water quality-limited" Larson Creek; however, it is within 0.25 of a mile and therefore passes LSW criteria.	Yes
BCS-3 0.7 acre	M	M	M	M	This unit comprises a small wetland behind a house that is more than 0.25 mile south of Larson Creek.	No
BCS-4 7.1 acres	H	M	H	H	Unit is located on east side of I-5, opposite the Bear Creek Greenway (connected via culvert). Intact water quality and hydrological control functions. Unit is within 0.25 mile of water quality-limited Bear Creek.	Yes
BCS-5 3.8 acres	H	H	M	M	Bear Creek Greenway unit (within 0.25 mile of Bear Creek), a wetland of special interest for protection. Intact fish habitat function present. Bear Creek contains areas of critical habitat for Coho salmon (as designated by the National Marine Fisheries Service on May 5, 1999). The BCS-5 wetlands within Bear Creek's riparian area may provide off-channel habitat during high flows.	Yes

**Table 12.** OFWAM Rankings<sup>‡</sup>, LSW Determination, and Wetlands of Special Interest for Protection Results

Wetland Assessment Code and unit size <sup>*,†</sup>	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	General Description and LSW Criteria (where applicable)	LSW (yes or no)?
BCS-6 0.9 acre	M	M	M	M	This is a golf course wetland unit located along parcel boundary.	No
BCS-7 7.2 acres	M	N/A	M	H	This is a groundwater-fed complex north of South Stage Road. Intact hydrological control function in place.	Yes
BCS-8 3.8 acres	M	N/A	M	M	This is a groundwater-fed wetland with a small pond, north of South Stage Road.	No
BCS-9 2.3 acres	M	M	M	M	Flood-irrigated field with a downslope surface-water connection to an irrigation district canal.	No
BCS-10 5.8 acre	H	M	H	H	Unit is located on east side of I-5, opposite the Bear Creek Greenway (connected via culvert). Intact water quality and hydrological control functions. Unit is within 0.25 mile of water quality-limited Bear Creek.	Yes
BCS-11 0.8 acre	M	M	M	M	This Larson Reservoir complex is not connected to the "water quality-limited" Larson Creek; however, it is within a quarter mile of the creek and therefore passes LSW criteria.	Yes
BCS-12 1.1 acre	M	N/A	M	M	PEM wetland in flood-irrigated field next to irrigation channel	No
DRC-1 1.3 acre	H	M	M	M	Wetland located in a tributary to Dry Creek, on the eastern slope of Prescott Park	Yes
LSC-1 0.6 acre	M	N/A	H	M	Unit is a scrub-shrub wetland located on an ephemeral drainage, east of Cherry Lane. Intact water quality function.	Yes
LSC-2 2.1 acres	M	M	H	M	This Mud Creek complex has intact water quality function due to ponding and dominance of scrub-shrub vegetation.	Yes
LSC-3 7.5 acres	M	M	M	M	Unit is a scrub-shrub wetland on ephemeral drainage, east of Cherry Lane. Intact water quality function. Separated from LSC-1 by a raised road.	No
LSC-4 0.7 acre	M	M	M	M	This is a scrub-shrub wetland north of Mud Creek, fed by an ephemeral drainage. No visual confirmation.	No
LPC-1 1.8 acres	M	M	M	M	This unit is surrounded by orchards off of Foothill Road. It connects to the Phoenix irrigation canal.	No

<sup>\*</sup> OFWAM ranking key: H = High (Intact / Provides diverse wildlife habitat); M = Medium (Impacted or degraded / Provides habitat for some species); N/A = Criteria not applicable

<sup>\*</sup> Wetland assessment codes: MDW = Midway Creek Drainage; BCS = Bear Creek South Drainage; DRC = Dry Creek Drainage; LSC = Larson Creek Drainage; LPC = Lone Pine Creek Drainage.

<sup>†</sup> Refer to Table 8 for the itemization of individual wetland codes (and sizes) that are included in each OFWAM assessment unit.

## 5. LITERATURE CITED

### 5.1. Literature Cited in this Report

- Adamus, P.R. 2001. *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles*. Salem, Oregon: Oregon Division of State Lands.
- City of Medford. 2015. GIS Data provided to SWCA by City of Medford Planning Department before field surveys, 2015. Attribute data in the Project geodatabase cite further detail on data sources.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. FWS/OBS-79/31. U.S. Fish and Wildlife Service. Available at: [http://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States.pdf#search=%22Classification of Wetlands and Deepwater Habitats of the United States%22](http://www.fws.gov/wetlands/Documents/Classification-of-Wetlands-and-Deepwater-Habitats-of-the-United-States.pdf#search=%22Classification%20of%20Wetlands%20and%20Deepwater%20Habitats%20of%20the%20United%20States%22). Accessed February 5, 2015.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1. Online edition. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station. Available at: <http://el.erdc.usace.army.mil/elpubs/pdf/wlman87.pdf>. Accessed February 5, 2015.
- Environmental Systems Research Institute (Esri). 2015. World Imagery downloaded March 2015.
- Federal Emergency Management Agency (FEMA). 2015. GIS dataset downloaded from FEMA Map Service Center, March 2015. Available at: <https://msc.fema.gov/portal>
- Franklin, J.F., and Dyrness, C.T. 1988 *Natural Vegetation of Oregon and Washington*. Portland, Oregon: Pacific Northwest Forest and Range Experiment Station, Forest Service, U.S. Department of Agriculture.
- Google Earth. 2015. Aerial photographs east of the Medford area, Oregon. Available at: <http://earth.google.com>. Accessed 2015.
- Jackson County. 2015. Jackson County GIS data clearinghouse. Available at: <http://gis.jacksoncounty.org/>. Accessed March 2015.
- Medford Irrigation District. 2015. *Medford Irrigation District's 2015 Drought Plan*. Available at: <http://www.medfordid.org/mn.asp?pg=ThisMonthatMID>. Accessed August 2015:
- National Marine Fisheries Service. 1999. Designated Critical Habitat; Central California Coast and Southern Oregon/Northern California Coasts Coho Salmon. *Federal Register* 64(86):24049–24062.
- National Weather Service. 2015. Portland, OR. Available at: <http://www.weather.gov/climate/index.php?wfo=pqr>. Accessed May 2015.

- Natural Resources Conservation Service (NRCS). 2012. Soil Survey Geographic (SSURGO) database for Jackson County Area, Oregon, Parts of Jackson and Klamath Counties. Accessed February 2015.
- . 2015a. WETS data search using FOTG County Locator for MEDFORD ROGUE VLY AP, OR225. Available at: [http://efotg.sc.egov.usda.gov/efotg\\_locator.aspx?map=US](http://efotg.sc.egov.usda.gov/efotg_locator.aspx?map=US). Accessed March 26, 2015.
- . 2015b. Official Soils Series Descriptions. Available at: <https://soilseries.sc.egov.usda.gov/osdname.asp>. Accessed February 5, 2015.
- Oregon Department of Environmental Quality (DEQ). 1988. *1988 Oregon Statewide Assessment of Nonpoint Sources of Water Pollution*. Available in house at SWCA, Portland, Oregon.
- . 2012. Oregon's 2010 Integrated Report – Assessment Database and 303(d) List. Available at: <http://www.deq.state.or.us/wq/assessment/2010Report.htm>. Accessed August 27, 2015.
- Oregon Department of State Lands (DSL). 2010. Essential Salmonid Habitat, Jackson County. Available at: <http://www.oregon.gov/dsl/PERMITS/docs/maps/jackson.pdf>. Accessed August 27, 2015.
- . 2015. Wetland Delineation (WD) Scanned Paper Maps emailed to SWCA in March 2015.
- Oregon Department of Fish and Wildlife (ODFW). 2014. Oregon Hydrography – Whole Stream Routes. Available at: <https://nrimp.dfw.state.or.us/nrimp/default.aspx?p=259>. Accessed June 2015.
- Roth, E.M., R.D. Olsen, P.L. Snow, and R.R. Sumner. 1996. *Oregon Freshwater Wetland Assessment Methodology*. Revised Edition (including July 1997 Addendum). Edited by S.G. McCannell. Salem, Oregon: Oregon Division of State Lands.
- U.S. Army Corps of Engineers (USACE). 2010. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*, ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-10-3. Vicksburg, MS: U.S. Army Engineer Research and Development Center.
- U.S. Fish and Wildlife Service (USFWS). 1994. National Wetlands Inventory (NWI). Available at: <http://www.fws.gov/wetlands/NWI/Index.html>. Accessed March 2015.
- U.S. Geological Survey (USGS). 1974. Medford NW, NE, SE, SW Quadrangles; 7.5 Minute Series Orthophotoquads.
- . 2014. National Hydrography Dataset (NHD). Available at <http://nhd.usgs.gov/>. Accessed November 2014.
- Wetland Consulting. 2002. *Medford Local Wetlands Inventory and Locally Significant Wetland Determinations*. Prepared for Oregon Division of State Lands. Available at: <http://www.ci.medford.or.us/Files/LWI%20Report.pdf>. Accessed December 11, 2014.

## 5.2. Other Literature and Data of Interest

- Anchor QEA. 2011. Rogue Valley International-Medford Airport Critical Habitat and Species Inventory / Master Plan Update. Available at: [http://jacksoncountyor.org/airport/General/About-Us/Master-Plan?EntryId=26387&Command=Core\\_Download&method=attachment](http://jacksoncountyor.org/airport/General/About-Us/Master-Plan?EntryId=26387&Command=Core_Download&method=attachment). Accessed April 2015.
- ADVP (Agate Desert Vernal Pool) Planning Technical Advisory Committee. 2000. Spatial GIS data provided to SWCA by the City of Medford, March 2015.
- Environmental Science Associates (ESA). 2006. *Agate Desert Wetland Conservation – Agate Desert HCP Baseline Report*. Prepared for Agate Desert Wetland Conservation Plan Advisory Partners
- ESA/Adamus. 2007. *Agate Desert Vernal Pool – Final Draft Functional Assessment Methodology*. Prepared for Agate Desert Technical Advisory Committee.
- Hitchcock, C.L. and A. Cronquist. 1973. *Flora of the Pacific Northwest*. University of Washington Press, Seattle.
- Lichvar, R.W., M. Butterwick, N.C. Melvin, and W.N. Kirchner. 2014. *The National Wetland Plant List: 2014 Update of Wetland Ratings*. Phytoneuron 2014-41:1–42. Available at: <http://www.phytoneuron.net/> and [http://wetland\\_plants.usace.army.mil/](http://wetland_plants.usace.army.mil/). Accessed April 25, 2014.
- Medford Hydrography CAD. 2013. Spatial GIS data provided to SWCA by the City of Medford, March 2015. David Smith & Associates 2013 Aerial Mapping Project.
- Munsell Color (x-rite). Year 2009 revised; 2012 production. Munsell Soil-Color Charts. Grand Rapids, MI: Munsell Color.
- Natural Resources Conservation Service (NRCS). 2010. The PLANTS Database. National Plant Data Center, Baton Rouge, LA 70874-4490 USA. Available at: <http://www.plants.usda.gov/>.
- Oregon Department of Fish and Wildlife (ODFW). 2006. *Oregon Conservation Strategy*. ODFW, Salem, Oregon. Available at: <http://www.dfw.state.or.us/conservationstrategy/contents.asp>. Accessed June 2015.
- Oregon Department of Transportation (ODOT). 2001. Salmon Resource and Sensitive Area Mapping Project (SRSAM). GIS data from 2004 supplied to SWCA by the City of Medford, March 2015.
- ORMAP. 2015. Tax lot maps. Available at: <http://www.ormap.net/index.cfm?opt=maplist>. Accessed August 27, 2015.
- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson (eds). 2002. *Field Book for Describing and Sampling Soils, Version 2.0*. Lincoln, Nebraska: U.S. Department of Agriculture Natural Resources Conservation Service, National Soil Survey Center.
- U.S. Fish and Wildlife Service (USFWS). 1994. Eagle Point, Medford East, Medford West, and Sams Valley, Oregon. 7.5-minute National Wetlands Inventory maps. Color infrared aerial photography flown 8/82 at 1:58,000. Washington, D.C.: U.S. Fish and Wildlife Service.



U.S. Geological Survey (USGS). Provisional edition 1983. Eagle Point, Medford East, Medford West, and Sams Valley, Oregon. 7.5-minute topographic quadrangles. 1:24,000. Reston, Virginia: U.S. Geological Survey.

Wilson, B.L., R. Brainerd, D. Lytjen, B. Newhouse, and N. Otting of the Carex Working Group. 2008. *Field Guide to the Sedges of the Pacific Northwest*. Corvallis: Oregon State University Press.

### **5.2.1. Websites**

- Oregon Explorer: <http://oregonexplorer.info/wetlands/orwap/>
- DEQ: <http://deq12.deq.state.or.us/lasar2/data.aspx?dt=0&mw=889&mh=432>
- DEQ: <http://www.deq.state.or.us/WQ/assessment/docs/rpt98.pdf>
- ESH Maps: <http://www.oregon.gov/DSL/PERMITS/esshabitat.shtml> and [http://www.oregon.gov/DSL/PERMITS/counties\\_ess.shtml](http://www.oregon.gov/DSL/PERMITS/counties_ess.shtml)

*This page intentionally left blank*

## **Appendix A**

### **Oregon Local Wetlands Inventory Administrative Rules**

*This page intentionally left blank.*

# LOCAL WETLANDS INVENTORY (LWI) STANDARDS AND GUIDELINES

## 141-086-0180

### ***Purpose***

Pursuant to ORS 196.674 pertaining to the Statewide Wetlands Inventory (SWI), these rules establish a system for uniform wetland identification and comprehensive mapping. These rules also establish wetlands inventory standards for cities or counties developing a wetland conservation plan (WCP) pursuant to ORS 196.678. A Local Wetlands Inventory (LWI) is developed for all or a portion of a city or county according to the standards and guidelines contained in these rules (OAR 141-086-0180 through 141-086-0240).

Stat. Auth.: ORS 196.674 – 196.681 & 196.692

Stats. Implemented: ORS 196.668 – 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01

## 141-086-0185

### ***Applicability***

(1) Once approved by the Department of State Lands (Department), the LWI must be used in place of the National Wetlands Inventory (NWI) and is incorporated into the SWI.

(2) The approved LWI must be used by cities and counties in lieu of the NWI for notifying the Department of land use applications affecting mapped wetlands and other waters (ORS 215.418 and 227.350).

(3) An LWI fulfills the wetlands inventory requirements for Goal 5 and Goal 17 (OAR 660-015 and 660-023). An LWI that meets the additional WCP requirements specified in these rules must be used as the wetlands inventory basis for a WCP.

(4) A wetland function and condition assessment of mapped wetlands must be conducted as part of the LWI using the *Oregon Freshwater Wetland Assessment Methodology (OFWAM)* published by the Department in 1996. An equivalent functional assessment methodology may be used or adjustments may be made to OFWAM upon written approval by the Director. The assessment results are used to determine the relative quality (functions, values, and condition) of the mapped wetlands and to designate significant wetlands (OAR 141-086-0300 through 141-086-0350) as required for Goal 5, or to assess wetland functions and values for a WCP.

(5) An LWI is used by the Department, other agencies and the public to help determine if wetlands or other waters are present on particular land parcels.

(6) An LWI provides information for planning purposes on the location of potentially regulated wetlands and other waters such as lakes and streams, but is not of sufficient detail for permitting purposes under the state Removal-Fill Law (ORS 196.800 through 196.990). Smaller wetlands may not be mapped, and wetlands may be missed due to lack of onsite access, tree canopy cover and other constraints. A wetland delineation or determination report may be needed for parcels without LWI-mapped wetlands. A Department-approved wetland delineation report for wetlands identified in an LWI is usually needed prior to site development.

(7) All wetlands inventory procedures and products are subject to review and approval by the Department before the products:

- (a) Are incorporated into the SWI;
- (b) Can be used in lieu of the NWI for Wetland Land Use Notification purposes; or
- (c) Can be used by a city or county for Goal 5, Goal 17 or WCP purposes.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 196.674 - 196.681 & 196.692

Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94, Renumbered from 141-086-0190(1) & (4); DSL 2-2001, f. & cert. ef. 2-26-01; DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0200**

### ***Definitions***

(1) "Cowardin class or subclass" means the wetland classification according to the U.S. Fish and Wildlife Service's *Classification of Wetlands and Deepwater Habitats of the United States*, Cowardin et al., 1979.

(2) "Director" means the Director of the Oregon Department of State Lands or designee.

(3) "Department" means the Oregon Department of State Lands.

(4) "Georeferenced" means linking geographic data to known coordinates on the surface of the earth.

(5) "GIS" or "Geographic Information System" means a system of hardware, software and data storage that allows for the analysis and display of information that has been geographically referenced.

(6) "HGM class and subclass" means the hydrogeomorphic classification of the wetland based upon its landscape position and hydrology characteristics, according to the HGM classification developed by the Department.

(7) "Indicator" means the soil, vegetation, and hydrology characteristics or other field evidence that indicate that wetlands are present.

(8) "Inventory" means a systematic survey of an area to identify, classify and map the approximate boundaries of wetlands, and includes the supporting documentation required by these rules.

(9) "Mapping" means representing the identified wetlands and their approximate boundaries on a map.

(10) "Offsite Determination" means a wetland determination conducted without field verification using NWI maps, soils maps, and aerial photographs.

(11) "Other Waters" means waters of the state other than wetlands, such as streams and non-vegetated ponds.

(12) "Probable Wetland" or "PW" means an area noted during the course of LWI development that appears to meet wetland criteria but is less than one half of an acre in size or is small and of undetermined size, and is mapped as a point rather than a polygon on the LWI maps.

(13) "Sample Plot" means a specific area on the ground where soils, vegetation and hydrology data are recorded on a field data form per OAR 141-90-0035(14) in order to make a wetland determination.

(14) "Statewide Wetlands Inventory" or "SWI" means an inventory that contains at minimum the location, type (e.g. classification) and approximate extent of wetlands in the State of Oregon. This inventory is continually revised as additional information is received or obtained by the Department.

(15) "Stream" means a watercourse created by natural processes, or one that would be in a natural state if it were not for human-caused alterations. Stream includes a channelized or relocated stream.

(16) "Visually confirm" or "visual confirmation" means to walk over and/or visually check an area to make a wetland determination and map wetlands and other waters.

(17) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (ORS 196.800(16)).

(18) "Wetland Delineation Report" means a written document that contains the methods, data, conclusions and maps used to determine if wetlands and/or other waters of the state are present on a land parcel and, if so, describes and maps their location and geographic extent. A wetland determination report documenting wetland presence or absence is included within this definition (OAR 141-090 et seq.).

(19) "Wetland Determination" means a decision that a site may, does, is unlikely to, or does not contain wetlands. A determination does not include the precise location or boundaries of any wetlands determined to be present (OAR 141-090 et seq.).

(20) "Wetland Mosaic" means a complex of several wetlands that are interspersed between areas of non-wetland each less than one half of an acre in size, or less than one tenth of an acre in size for a WCP, making them difficult to map.

Stat. Auth.: ORS 196.674 - 196.681 & 196.692

Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01; DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0210**

### ***Inventory Development Process and Standards***

(1) Wetland determinations conducted for the purpose of developing the LWI must be conducted according to the criteria, methodologies and guidance currently accepted by the Department (OAR 141-090 et seq.).

(2) Sources of inventory information must include:

(a) U.S.D.A. Natural Resources Conservation Service county soil survey and county list of hydric soils and soils with hydric inclusions, or other available soil surveys;

(b) NWI maps;

(c) USGS topographic maps;

- (d) Federal Emergency Management Act floodplain maps, where available;
  - (e) Other available local wetlands inventories or wildlife habitat inventories that include wetlands;
  - (f) Department wetland determination/delineation files; and
  - (g) High resolution (1 meter or finer) color and color infrared (where available) aerial photos taken within five years of inventory initiation. The minimum photo scale must be 1 inch = 200 feet unless another scale is approved by the Department.
- (3) Sources of inventory information may include but are not limited to:
- (a) LIDAR (Light Detection and Ranging) topographic data;
  - (b) Irrigation drainage district maps;
  - (c) Local knowledge of area (e.g., residents);
  - (d) Oregon State University Institute for Natural Resources Oregon Explorer data;
  - (e) Department permit files; and
  - (f) Resource agencies, including the Oregon Department of Fish and Wildlife and U.S. Fish and Wildlife Service.
- (4) Before beginning fieldwork, prepare a field map using an aerial photograph and include the approximate location of:
- (a) Any wetlands, deepwater habitats, and streams from the NWI;
  - (b) Any wetlands from the Department's wetland determination/delineation files or from other inventories;
  - (c) Hydric soils and soils with hydric inclusions (each coded separately);
  - (d) Wetlands or potential wetlands identified on aerial photos;
  - (e) Sites to visually confirm based on other leads; and
  - (f) Properties where access was granted.
- (5) Aerial photo interpretation must be tested early in the inventory process by interpreting several wetland types, ground truthing the interpretations, and then completing the aerial photo interpretations.
- (6) The local government must be responsible for requesting property access permission from landowners in the study area for parcels identified by inventory staff and/or the Department as possibly containing wetlands.
- (7) All potential wetlands that are not assessed with a sample plot and other waters identified through the process described in OAR 141-086-0210(1) through (4) must be visually confirmed to the extent practicable.
- (8) Where property access is granted, sample plot data must be provided according to the following minimum standards:



- (a) Verify each wetland with at least one sample plot that best characterizes the wetland;
  - (b) Verify with at least one sample plot each potential wetland where land use activities such as ditching, water diversion, or agricultural practices are likely to have significantly altered site conditions, making observations from a distance or a site walk-over unreliable; and
  - (c) Verify with at least one-sample plot potential wetlands with unreliable indicators (e.g., one dominant plant that grows in both wetlands and non-wetlands, such as *Phalaris arundinacea*).
- (9) If the LWI will be used for a WCP, in addition to the requirements in OAR 141-086-0210(7) and (8), a minimum of one sample plot must be provided that best characterizes each dominant wetland plant community.
- (10) If the landowner denies access permission and if visual confirmation from an adjacent property or road is not possible, employ off-site wetland determination methods.
- (11) All wetlands greater than or equal to one half of an acre and all wetlands identified in a Department-approved wetland delineation report must be identified and mapped as polygons. Wetlands that are less than [sic] one half of an acre may be mapped as polygons or as probable wetlands. Probable wetlands must be represented as points on the appropriate parcel(s) and should be labeled as "PW" on the maps. No further characterization or assessment is required for probable wetlands in the LWI. Probable wetlands will trigger cities and counties to notify the Department of proposed land use activities affecting mapped wetlands and other waters (ORS 215.418 and 227.350). For a WCP, all wetlands one-tenth acre and larger shall be identified and mapped as polygons.
- (12) The aim of the LWI is to map the location of wetlands at an accuracy of approximately 5 meters (16.4 feet). However, the actual accuracy may be less for some wetlands such as seasonal or forested wetlands that could not be visually confirmed.
- (13) Each wetland must be assigned a unique identification code.
- (14) All previously delineated wetlands from the Department's files must be field-verified, if possible, to determine if wetlands are still present and are approximately the same size and configuration as when delineated.
- (15) All identified wetlands must be classified:
- (a) To the class level of Cowardin (and to subclass for scrub-shrub and forested classes) and must include water regime and special modifiers (e.g., "farmed" or "diked/impounded"); and
  - (b) By dominant HGM class and subclass.
- (16) When a wetland contains more than one adjoining Cowardin classification, different classes or subclasses greater than 0.25 acres in size must be mapped and labeled as separate polygons.
- (17) Artificially created wetlands or other waters (such as irrigation canals and drains, industrial ponds, log ponds, golf course features, and storm water detention ponds that are greater than one half of an acre in size) must be included in the inventory regardless of their jurisdictional status, and their original purpose must be labeled on the inventory maps.
- (18) Where a wetland mosaic occurs, the site must be labeled as a wetland/upland mosaic on all inventory maps and so described on the wetland summary sheet.
- (19) Streams and other waters must be mapped, but no further documentation such as wetland summary sheets or OFWAM assessment is required. If an existing stream geospatial dataset is used, it may be necessary to adjust the layer to align with riparian or other linear wetlands.

(20) Using OFWAM, each wetland in its entirety must be assessed for all four ecological functions: water quality, hydrologic control, wildlife habitat and fish habitat. Any wetlands that may qualify as a Locally Significant Wetland due to education or recreation use must also be evaluated for those social functions (values) in OFWAM. The remaining functions and conditions in OFWAM do not need to be applied to any of the wetland assessment units. Contiguous wetlands or those in close proximity and assigned different codes may be grouped into a single OFWAM assessment unit based upon the guidance in OFWAM and/or in consultation with the Department.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 196.674 - 196.681 & 196.692

Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01;

DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0220**

### ***LWI Reports***

(1) A report that meets the requirements in OAR 141-086-0220 (2) and (3) must be developed and submitted to the Department for approval. A minimum of two sets of the final Department-approved LWI report in both paper and electronic format (.pdf file format) must be prepared; one set must be provided to the Department for inclusion in the SWI and the other must be provided to the local government.

(2) The report must document the inventory and mapping processes and results, and include the following information:

(a) A general description of the study area including a description of the landscape setting;

(b) A description of the wetland inventory process including the public involvement process; the inventory methods including the date(s) and scale(s) of source maps and aerial photos used; the offsite and onsite wetland determination procedures including procedures used for visual confirmation and probable wetland identification; and all mapping and map transfer procedures used;

(c) A summary of the inventory results including the total acreage of the study area and the total number and acreage of wetlands identified within the study area, excluding the acreage of deepwater habitat and artificially created wetlands such as detention ponds or aggregate extraction ponds;

(d) A discussion of the OFWAM assessment process (e.g. how assessment units were defined) and the results;

(e) A summary of Locally Significant Wetlands, if identified (may be in table format); and

(f) All figures, with the study area clearly outlined.

(3) Appendices must include:

(a) Sample plot data on standard field data forms per OAR 141-090 et seq.

(b) A summary sheet for each wetland that must at a minimum include:

(A) The unique wetland code;

- (B) Street address or equivalent location description;
  - (C) Township, Range, Section, Quarter Quarter Section and tax lot(s) that contain the mapped wetland;
  - (D) Approximate wetland size (in acres);
  - (E) Cowardin classification(s);
  - (F) HGM classification(s);
  - (G) Mapped soil unit(s);
  - (H) Watershed boundaries at the 6th field Hydrologic Unit Code scale as defined by the US Geological Survey or finer;
  - (I) Sample plot numbers, if any;
  - (J) Department wetland determination or delineation file numbers, where applicable;
  - (K) Scientific and common names of dominant plant species;
  - (L) Primary hydrology sources;
  - (M) Sampling or visual confirmation date(s) and method;
  - (N) Locally Significant Wetland determination, if made; and
  - (O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).
- (c) OFWAM assessment results for each wetland assessment unit that must include:
- (A) Wetlands of Special Interest for Protection (OFWAM, Chapter Five);
  - (B) Wetland Characterization results (OFWAM, Appendix B);
  - (C) Assessment results represented in table format;
  - (D) Answer sheets for all wetland assessment questions (OFWAM, Appendix C);
  - (E) Function and condition summary sheets for fish habitat, wildlife habitat, water quality, hydrologic control and, if applicable, education and recreation (OFWAM, Appendix C); and
  - (F) Watershed summary sheet (OFWAM, Appendix C).
- (d) Technical staff members and qualifications.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 196.674 - 196.681 & 196.692  
Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01; DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0222**

### ***Paper Map Standards***

(1) Maps that meet the requirements in OAR 141-086-0222(2) through (5) must be developed and submitted to the Department for approval. A minimum of two sets of the final Department-approved LWI maps in both paper and electronic format (.pdf file) must be prepared; one set must be provided to the Department for inclusion in the SWI and the other must be provided to the local government.

(2) If the study area is covered by more than one wetland map, a single, smaller scale reference map of the complete study area is required. The reference map shall be indexed to the individual, large-scale maps and show, at a minimum, the Public Land Survey System grid, the location and code of all identified wetlands, streams, the study area boundary, and major, named streets.

(3) Wetland maps must include:

(a) Map name;

(b) Scale bar;

(c) Geographic reference to the Public Land Survey System;

(d) Roads, with major roads named, and railroads;

(e) Streams and stream names;

(f) Artificially created wetlands and other waters labeled with their purpose (e.g. storm water pond);

(g) Tax lot lines;

(h) Watershed boundaries at the 6th field Hydrologic Unit Code scale as defined by the US Geological Survey or finer;

(i) Legend that explains all map symbols, line work, and patterns;

(j) Map date (month and year final map prepared);

(k) All wetlands, clearly and accurately drawn and clearly identified by a unique wetland code that relates each wetland to field data forms, tables, databases, wetland summary sheets, and OFWAM summary forms;

(l) Cowardin classification(s) of each wetland per 141-086-0210(15a & 16);

(m) Disclaimer that reads: "Information shown on this map is for planning purposes, represents the conditions that exist at the map date, and is subject to change. The location and extent of wetlands and other waters is approximate. There may be unmapped wetlands and other waters present that are subject to regulation. A current Oregon Department of State Lands-approved wetland delineation is required for state removal-fill permits. You are advised to contact the Department of State Lands and the U.S. Army Corps of Engineers with any regulatory questions."

- (n) Numbered sample plots; and
- (o) Study area boundary as defined by the local government.
- (4) Minimum map scale must be 1 inch = 200 feet (1:2,400).

Stat. Auth.: ORS 196.674 - 196.681 & 196.692  
Stats. Implemented: ORS 196.668 - 196.692  
Hist.: DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0225**

### ***Digital Data Standards***

- (1) A minimum of two sets of the final Department-approved LWI geospatial datasets must be prepared; one set must be provided to the Department for inclusion in the SWI and the other must be provided to the local government.
- (2) A georeferenced ArcGIS compatible dataset with attribute tables and metadata must be developed for each of the following:
  - (a) Wetland polygons with a unique wetland identification label, Cowardin classification code(s) and modifiers, HGM classification, approximate wetland size, Locally Significant Wetland significance determination (if made), whether it was visually confirmed, and the Department's wetland delineation report file number, if any.
  - (b) Probable wetland points with PW label;
  - (c) Streams with unique identification labels and, where available, names;
  - (d) Other natural bodies of water with names;
  - (e) Artificially created wetlands and water features (such as irrigation canals and ditches, industrial ponds, log ponds, golf course features, and storm water detention ponds) uniquely identified and purpose of artificially-created feature, if known;
  - (f) Watershed boundaries (6th order Hydrologic Unit Code scale or finer);
  - (g) Study area boundary;
  - (h) Tax lot lines and numbers;
  - (i) Sample plot dataset with unique identification labels that correspond to the field data form; and
  - (j) Major streets with name labels.
- (3) All georeferenced data sets must be projected using the Oregon Geographic Information Council-endorsed state standard: Oregon Lambert conformal conic (Datum: NAD 83; Units: International feet: 3.28084; Spheroid: GRS1980).
- (4) Metadata must be completed for each layer, conform to the current Oregon Geographic Information Council Metadata Standard, and must include a disclaimer as described in OAR 141-086-0222(3m).

Stat. Auth.: ORS 273.045

Stats. Implemented: ORS 196.668 - 196.686 & 196.692

Hist.: DSL 2-2001, f. & cert. ef. 2-26-01; DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0228**

### ***Review and Approval Process***

(1) A draft of all the LWI products required in OAR 141-086-0210 through -0225 of these rules must be provided to the Department (if the inventory was not developed by the Department) and the local government(s) for review.

(2) The local government must provide opportunity for public review of and comment on the draft LWI products.

(3) Public and local government comments on draft LWI products must be provided to the Department. The Department will request in writing from the party responsible for preparing the LWI any revisions or additions required in order for the LWI to be approved.

(4) The Department will review final products to ensure that all changes requested by the Department have been adequately addressed.

(5) If the final LWI products meet the requirements in these rules, the Department will send a letter of approval to the local government.

Stat. Auth.: ORS 273.045

Stats. Implemented: ORS 196.668 - 196.686 & 196.692

Hist.: DSL 2-2001, f. & cert. ef. 2-26-01; DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0230**

### ***Revisions***

(1) A city or county may elect to or may be required by the Department of Land Conservation and Development (DLCD) to revise their LWI. An LWI revision consists of either expanding the study area of an existing LWI or incorporating new wetland location and information into an existing LWI study area. The provisions in subsections (a) through (d) must be followed when an LWI is being revised.

(a) All Urban Growth Boundary expansion areas or other areas not included in the original LWI study area must be inventoried according to the requirements in these rules. If the original LWI area is not updated at the same time, it may still be necessary to update the LWI area adjacent to the new LWI area in order to align wetlands that are continuous between the two areas.

(b) When an LWI is being updated, newly identified wetlands or wetland boundary changes equal to or greater than one half of an acre must be identified, mapped and assessed using OFWAM.

(c) Sources of information for review of the previous study area to update the LWI must at a minimum include:

(A) Wetland delineation reports approved by the Department or map errors verified by the Department after the date of the approved LWI;

(B) Aerial photos approved by the Department, taken within five years of inventory revision initiation; and

(C) A field reconnaissance of the study area.

(d) Wetlands not previously mapped on the LWI must be verified by establishing a sample plot or by visual confirmation as required in OAR 141-086-0210(7) and (8) of this rule; previously mapped wetlands no longer apparent on aerial photos must also be verified with a sample plot or visually confirmed as necessary to confirm their absence.

(2) A draft of the revised LWI products as required in OAR 141-086-0228(1) through (5) must be provided to the Department and is subject to Department review and approval.

(3) If the LWI was used as the basis for an approved WCP, the local jurisdiction must instead:

(a) Provide to the Department, as part of the annual report (OAR 141-086-0035), a revised map and report indicating wetlands filled and wetlands restored, enhanced or created for mitigation; and

(b) Every five years, in conjunction with the Department's five year WCP review (ORS 196.684(6)), conduct an LWI review and incorporate new information, as required in OAR 141-086-0230(1)(b) through (1)(d).

(4) Newly-identified wetlands as identified by a Department-approved wetland delineation report or a removal-fill permit must not be added to the Department-approved Local Wetlands Inventory map without following the procedures outlined by OAR 141-086-0230(1)(a) through (d).

(5) Refinements to the location, extent, and/or absence of wetlands mapped on the LWI, as identified by a Department-approved wetland delineation or a Department wetland determination report, may be made at any time through an administrative process, by annotating the approved LWI or by creating a separate geospatial dataset containing the boundary adjustments, preserving the approved LWI mapping.

Stat. Auth.: ORS 196.674 - 196.681 & 196.692

Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01;

DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## **141-086-0240**

### ***Landowner Notification***

(1) When the LWI is approved by the Department, the local jurisdiction must notify by mail within one hundred twenty (120) calendar days all landowners of record whose parcel contains or abuts a mapped wetland or probable wetland.

(2) The local jurisdiction must provide one copy of the landowner notification letter to the Department.

Stat. Auth.: ORS 196.674 - 196.681 & 196.692

Stats. Implemented: ORS 196.668 - 196.692

Hist.: LB 11-1991, f. & cert. ef. 11-15-91; LB 9-1994, f. & cert. ef. 12-15-94; DSL 2-2001, f. & cert. ef. 2-26-01;

DSL 11-2008, f. 12-12-08, cert. ef. 1-1-09

## IDENTIFYING SIGNIFICANT WETLANDS

### 141-086-0300

#### ***Purpose***

ORS 197.279 (3) directs the Division of State Lands to establish these criteria and procedures for the identification of significant wetlands under Statewide Planning Goal 5. Local governments will use these technical standards to complete their planning responsibilities for wetlands, which are established by the Land Conservation and Development Commission (OAR 660-023-0100).

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97

### 141-086-0310

#### ***Policy***

To protect the state's wetland resources, the functions and services they provide, and all interests, it is important that clear and consistent criteria be used to identify significant wetlands for planning purposes.

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97

### 141-086-0320

#### ***Uses and Applicability***

(1) These rules provide standard criteria for local governments to use to meet their obligations for freshwater wetland planning as set forth by the Land Conservation and Development Commission (LCDC) in Goal 5. These rules do not address planning requirements for estuarine wetlands, which are covered under Statewide Planning Goal 16.

(2) Local governments shall apply the criteria for identifying locally significant wetlands (LSW). As specified in LCDC's Goal 5 rules (OAR 660-023-0100), the use of these criteria is required within urban growth boundaries (UGBs) and urban unincorporated communities (UUCs). The Goal 5 rules also authorize an option for counties to conduct detailed wetland planning in areas outside of UGBs and UUCs. Should a county choose to do so, the same rules and procedures as for UGBs and UUCs shall apply, including these criteria for significant wetlands.

(3) As provided by LCDC's Goal 5 rules (OAR Chapter 660, Division 23), local government planning and zoning responsibilities include the determination, designation, and protection of significant wetlands. A community that has identified significant wetlands prior to this rule should proceed under the provisions of OAR 660-023-0250.

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97



## 141-086-0330

### ***Definitions***

- (1) "Director" means the Director of the Division of State Lands or the Director's designee.
- (2) "Division" means the Division of State Lands.
- (3) "Indigenous Anadromous Salmonids" are chum, sockeye, Chinook and Coho salmon, and steelhead and cutthroat trout, that are members of the family Salmonidae and are listed as sensitive, threatened or endangered by a state or federal authority.
- (4) "Inhabited by" means that a plant or animal species uses the site for rearing, feeding, or breeding or as a migration or dispersal corridor. This does not include incidental use of the site by an animal species.
- (5) "Locally Significant Wetlands" or "LSW" are those wetland sites that provide functions or exhibit characteristics that are pertinent to community planning decisions made at a local scale, for example within a UGB. These wetland sites shall be identified by local governments according to the criteria and procedures in sections 141-086-0340 and 141-086-0350.
- (6) "Native Plant Community" is used here to indicate a recognized assemblage of plant species indigenous to Oregon. All such wetland plant communities are listed in the most recent version of Classification and Catalog of Native Wetland Plant Communities in Oregon (Oregon Natural Heritage Program).
- (7) "Rare Plant Community" is defined as relictual, uncommon or unique in Oregon, determined by number of occurrences and threats following national heritage program criteria (i.e., rarity ranking of G1-G3 or S1-S3). The most concise listing of wetland plant communities in Oregon that meet this standard for rarity is found in Appendix G of the Oregon Freshwater Wetland Assessment Methodology (Oregon Division of State Lands, 1996). The rarity rank of all wetland plant communities is also listed in the most recent version of Classification and Catalog of Native Wetland Plant Communities in Oregon (Oregon Natural Heritage Program).
- (8) "Wetlands" means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97

## 141-086-0340

### ***Procedures for Identifying Locally Significant Wetlands***

- (1) LSW criteria are applied by the local government.
- (2) The following base information is required prior to applying the LSW criteria:
  - (a) An approved Local Wetlands Inventory (OAR 141-086-0110 through 141-086-0240) covering the plan area; and
  - (b) A function and quality assessment of all inventoried wetlands using the Oregon Freshwater Wetland Assessment Methodology (OFWAM; Oregon Division of State Lands, 1996). Functional assessment descriptors from OFWAM

appear in quotation marks in section 146-086-0350 of these rules. An equivalent functional assessment methodology may be used, or adjustments may be made, upon written approval by the Director. If a different assessment methodology is approved, then equivalent terminology will be set out in the Division's letter of approval.

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97

## **141-086-0350**

### ***Locally Significant Wetland Criteria***

(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:

(a) Wetlands artificially created entirely from upland that are:

(A) Created for the purpose of controlling, storing, or maintaining stormwater; or

(B) Active surface mining or active log ponds; or

(C) Ditches without a free and open connection to natural waters of the state (as defined in OAR 141-085-0010(9)) and which do not contain food or game fish (as defined in ORS 496.009); or:

(D) Less than one acre in size and created unintentionally as the result of:

(i) Irrigation water overflow or leakage; or

(ii) Construction activity not related to compensatory mitigation for permitted wetland impacts; or

(E) Of any size and created for the purpose of wastewater treatment, cranberry production, farm or stock watering, settling of sediment, cooling industrial water, or as a golf course hazard.

(b) Wetlands or portions of wetlands that are contaminated by hazardous substances, materials or wastes as per the following conditions:

(A) The wetland is documented as contaminated on either the U.S. Environmental Protection Agency's (EPA) National Priority List (NPL, also known as the "superfund list"), or the Department of Environmental Quality's (DEQ) Inventory of Hazardous Substance Sites (ORS 465.225).

(B) Only the portion of the wetland affected by such hazardous substances or wastes shall be excluded from the LSW analysis. Affected portions shall be delineated in consultation with EPA and DEQ, and shall include areas potentially disturbed by clean-up activities.

(C) Contaminated wetlands that have subsequently been removed from the NPL or DEQ Inventory following clean-up shall be re-evaluated under the LSW criteria at the next periodic review.

(2) Mandatory LSW Criteria. A local government shall identify a wetland as locally significant if it meets one or more of the following criteria:

(a) The wetland performs any of the following functions at the levels indicated below using the Oregon Freshwater Wetland Assessment Methodology:

(A) "Diverse" wildlife habitat; or

(B) "Intact" fish habitat; or

(C) "Intact" water quality function; or

(D) "Intact" hydrologic control function.

(b) The wetland or a portion of the wetland occurs within a horizontal distance less than one-fourth mile from a water body listed by the Department of Environmental Quality as a water quality limited water body (303 (d) list), and the wetland's water quality function is described as "intact" or "impacted or degraded" using OFWAM. The 303(d) list specifies which parameters (e.g., temperature, pH) do not meet state water quality standards for each water body. A local government may determine that a wetland is not significant under this subsection upon documentation that the wetland does not provide water quality improvements for the specified parameter(s).

(c) The wetland contains one or more rare plant communities, as defined in this rule.

(d) 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, unless the appropriate state or federal agency indicates that the wetland is not important for the maintenance of the species.

(A) The use of the site by listed species must be documented, not anecdotal. Acceptable sources of documentation may include but are not limited to: field observations at the wetland sites during the local wetlands inventory and functional assessments, and existing information on rare species occurrences at agencies such as the Oregon Natural Heritage Program, Oregon Department of Fish and Wildlife, Oregon Department of Agriculture and the U.S. Fish and Wildlife Service.

(B) Input originating from other locally knowledgeable sources constitutes "documentation" if verified by one of the above agencies or a university or college reference collection.

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

(3) Optional LSW Criteria. At the discretion of the local government, wetlands that meet one or more of the following criteria may be identified as locally significant wetlands:

(a) The wetland represents a locally unique native plant community: wetland is or contains the only representative of a particular native wetland plant community in the UGB/UUC, which is only applicable if the entire UGB/UUC is inventoried. To be identified as a LSW, such a wetland must also have been assessed to perform at least one of the following functions at the levels indicated below using OFWAM:

(A) Its wildlife habitat descriptor is either "provides diverse habitat", or "provides habitat for some wildlife species"; or

(B) Its fish habitat descriptor is either "intact", or "impacted or degraded"; or

(C) Its water quality function descriptor is either "intact", or "impacted or degraded"; or

(D) Its hydrologic control function descriptor is either "intact", or "impacted or degraded".

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

Stat. Auth.: ORS 273 .360

Stats. Implemented: ORS 197.299

Hist.: LB 7-1996, f. 12-13-96, cert. ef. 1-1-97

## 141-086-0370

### **Definitions**

(1) **"Classification"** means the designation of wetlands into hydrogeomorphic classes and subclasses. For example, "riverine" would be one class of wetlands.

(2) **"Director"** means the Director of the Division of State Lands or the Director's designee.

(3) **"Division"** means the Division of State Lands.

(4) **"Functional Assessment"** means the process by which the capacity of a wetland to perform a certain function or group of functions is measured. Such functions would include but are not limited to: surface water storage, sediment removal, and maintenance of characteristic plant communities.

(5) The **"Hydrogeomorphic Method"** or **"HGM"** is a scientific method of wetland classification and functional assessment based on a wetland's location in the landscape and the sources and duration of water flow. The HGM approach identifies the wetland classes present in each region, defines the functions that each class of wetlands performs, and establishes reference sites to define the range of functioning of each wetland class.

(6) **"Outstanding State Wetlands"** or **"OSWs"** are reference standard wetlands identified within each Oregon region.

(7) **"Reference Standard Wetlands"** are one component of an HGM and, for the purposes of these rules, are those sites that best exhibit the highest sustainable level of functional capacity for the functions performed by the regional wetland class or subclass.

(8) **"Region"** means an ecosystem-based geographical subdivision of the state, such as the Level III and IV Ecoregions of Oregon (e.g., the Willamette Valley) mapped by the U. S. Environmental Protection Agency.

(9) **"Wetlands"** means those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.

Stat. Auth.: ORS 273 .045 & ORS 273 .051

Stats. Implemented: ORS 197.279(3), ORS 196.672 & ORS 196.674

Hist.: LB 4-1997, f. 4-15-97, cert. ef. 5-1-97

## **141-086-0380**

### ***Applicability***

- (1) These rules set forth the criteria and procedures by which the Division will identify outstanding state wetlands and provide the information to local governments. Due to the state's interest in OSWs and the expertise required for their identification, the Division is responsible for applying these rules.
- (2) The Land Conservation and Development Commission will determine any local land use planning responsibilities regarding OSWs identified by the Division.
- (3) OSWs identified according to these rules become part of the Statewide Wetlands Inventory.

Stat. Auth.: ORS 273 .045 & ORS 273 .051

Stats. Implemented: ORS 197.279(3), ORS 196.672 & ORS 196.674

Hist.: LB 4-1997, f. 4-15-97, cert. ef. 5-1-97

## **141-086-0390**

### ***Criteria and Procedures***

- (1) A wetland shall be identified as an OSW if it is judged by the Division to be a reference standard wetland as defined in sections 141-086-0370(7).
- (2) The Division may convene one or more technical panel(s) of wetland scientists with expertise in wetland functions, wetland classification, and/or regional wetland types in Oregon. The technical panel(s) will assist the Division in developing the hydrogeomorphic classification and functional assessment method (HGM) for Oregon, identifying the regional wetland classes and subclasses, primary functions, and reference standard wetlands. The Oregon HGM will be developed in stages, region by region, as resources allow. The Oregon HGM will be developed in cooperation with the Army Corps of Engineers, Environmental Protection Agency, Natural Resources Conservation Service, state resource agencies, and others as appropriate, and will incorporate protocols developed by the U.S. Army Corps of Engineers Waterways Experiment Station (for example, Technical Report WRP-DE-9, R. D. Smith et al., 1995).
- (3) Prior to designating a reference standard wetland as an OSW, the Division shall:
  - (a) Identify and map site boundaries;
  - (b) Develop management recommendations to conserve and protect the documented wetland functions of the site;
  - (c) Develop draft findings describing how the site has met the standards for an OSW;
  - (d) Provide public notice on the draft findings to the local government, affected landowners and land managers and other interested parties, and provide a 45-day public comment period;
  - (e) Hold at least one public meeting within the area of the proposed OSW(s) during the comment period; and
  - (f) Finalize the findings and site boundaries after consideration of public comment.

(4) The Division shall provide all maps, criteria findings and supporting information regarding an identified OSW to the appropriate local government(s) for their use in land use planning activities.

Stat. Auth.: ORS 273 .045 & ORS 273 .051

Stats. Implemented: ORS 197.279(3), ORS 196.672 & ORS 196.674

Hist.: LB 4-1997, f. 4-15-97, cert. ef. 5-1-97

## **Appendix B**

### **Abbreviations and Definitions**

*This page intentionally left blank.*



## B.1. ABBREVIATIONS

AW00	Artificial Water number
BSC	Bear Creek South drainage basin
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
DSL	Department of State Lands
ESH	Essential Salmonid Habitat
ESU	Evolutionarily Significant Unit
°F	degrees Fahrenheit
FEMA	Federal Emergency Management Agency
GPS	global positioning system
H	High (OFWAM function)
HGM	Hydrogeomorphic Method of Wetland Assessment
HUC	Hydrologic Unit Code
L	Low (OFWAM function)
LCDC	Land Conservation and Development Commission
LiDAR	light detection and ranging
LPC	Lone Pine Creek drainage basin
LSC	Larson Creek drainage basin
LSW	Locally Significant Wetland
LWI	Local Wetland Inventory
M	Medium (OFWAM function)
MWC	Midway Creek drainage basin
NHD	National Hydrography Dataset (supplied by USGS)
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
OAR	Oregon Administrative Rule
ODF	Oregon Department of Forestry
ODFW	Oregon Department of Fish and Wildlife
OFWAM	Oregon Freshwater Wetland Assessment Method
ORBIC	Oregon Biodiversity Information Center
P00	Plot number
PAB	Palustrine Aquatic Bed Wetland
PEM	Palustrine Emergent Wetland
PFO	Palustrine Forested Wetland
PSS	Palustrine Scrub-Shrub Wetland
PUB	Palustrine Unconsolidated Bottom Wetland
PW	Probable Wetland
SWCA	SWCA Environmental Consultants
UGB	Urban Growth Boundary
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
W00	Wetland number
WA00	Natural Waterbody number
WD	Wetland Delineation or Determination

## B.2. DEFINITIONS

### Wetlands

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% of the growing season; typically 11 to 14 consecutive days during the growing season (Environmental Laboratory 1987). The regional supplement manual (USACE 2010) provides a technical standard for water-table monitoring for highly disturbed or problematic sites. It states that wetland hydrology is present when 14 or more consecutive days of flooding or ponding, or a water table 12 inches or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability).

### Goal 5

Goal 5 is one of Oregon’s Statewide Planning Goals and Guidelines for Natural Resources, Scenic and Historic Areas, and Open Spaces (OAR 660-015-0000(5) and 660-023-0000). To protect natural resources and conserve scenic and historic areas and open spaces, local governments shall adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations. These resources promote a healthy environment and natural landscape that contributes to Oregon’s livability. The following resources shall be inventoried:

- a. Riparian corridors, including water and riparian areas and fish habitat;
- b. Wetlands;
- c. Wildlife Habitat;
- d. Federal Wild and Scenic Rivers;
- e. State Scenic Waterways;
- f. Groundwater Resources;
- g. Approved Oregon Recreation Trails;
- h. Natural Areas;
- i. Wilderness Areas;
- j. Mineral and Aggregate Resources;
- k. Energy sources; and
- l. Cultural areas.

Following procedures, standards, and definitions contained in the Land Conservation and Development Commission rules, local governments shall determine significant sites for inventoried resources and develop programs to achieve the goal.

Goal 5 Safe Harbor provides an inventory method for riparian corridors, including water and riparian areas and fish habitat, wetlands, and wildlife habitat. A “safe harbor” approach allows local governments to identify “significant” habitats using the safe harbor criteria, which, for example, has required buffer setbacks from streams based on water flow and fish presence. The rule states:

As a safe harbor in order to address the requirements under OAR 660-023-0030, a local government may determine the boundaries of significant riparian corridors within its jurisdiction using a standard setback distance from all fish-bearing lakes and streams shown on ODF stream classification maps, USGS 7.5-minute quadrangle maps, NWI maps, ODFW maps indicating fish habitat, FEMA flood maps; and/or aerial photographs, as follows ([http://arcweb.sos.state.or.us/rules/OARS\\_600/OAR\\_660/660\\_023.html](http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_023.html)):

- (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.

## **B-3 COWARDIN WETLAND CLASSIFICATION (ADAPTED FROM COWARDIN ET AL., 1979)**

### **Palustrine System (P)**

**Definition.** The Palustrine System includes all nontidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 ‰. It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 ha (20 acres); (2) active wave-formed or bedrock shoreline features lacking; (3) water depth in the deepest part of basin less than 2 m at low water; and (4) salinity due to ocean-derived salts less than 0.5 ‰.

**Limits.** The Palustrine System is bounded by upland or by any of the other four systems: Marine (ocean), Estuarine (estuary), Riverine (freshwater rivers and their tributaries), or Lacustrine (open water greater than 8 ha (20 acres) in size).

**Description.** The Palustrine System was developed to group the vegetated wetlands traditionally called by such names as marsh, swamp, bog, fen, and prairie, which are found throughout the United States. It also includes the small, shallow, permanent or intermittent water bodies often called ponds. Palustrine wetlands may be situated shoreward of lakes, river channels, or estuaries; on river floodplains; in isolated catchments; or on slopes. They may also occur as islands in lakes or rivers. The erosive forces of wind and water are of minor importance except during severe floods.

The emergent vegetation adjacent to rivers and lakes is often referred to as “the shore zone” or the “zone of emergent vegetation”, and is generally considered separately from the river or lake. As an example, one researcher wrote in reference to riverine habitats, “We will not here consider the long list of emergent plants which may occur along the banks out of the current, as they do not belong, strictly speaking, to the running water habitat.” There are often great similarities between wetlands lying adjacent to lakes or rivers and isolated wetlands of the same class in basins without open water.

Subsystems. None.

Classes. Rock Bottom, Unconsolidated Bottom, Aquatic Bed, Unconsolidated Shore, Moss-Lichen Wetland, Emergent Wetland, Scrub-Shrub Wetland, and Forested Wetland.

## **Classes**

### **EMERGENT WETLAND (EM)**

**Definition.** The Emergent Wetland Class is characterized by erect, rooted, herbaceous hydrophytes, excluding mosses and lichens. This vegetation is present for most of the growing season in most years. These wetlands are usually dominated by perennial plants. All water regimes are included except subtidal and irregularly exposed.

**Description.** In areas with relatively stable climatic conditions, Emergent Wetlands maintain the same appearance year after year. In other areas, such as the prairies of the central United States, violent climatic fluctuations cause them to revert to an open water phase in some years. Emergent Wetlands are found throughout the United States and occur in all Systems except the Marine. Emergent Wetlands are known by many names, including marsh, meadow, fen, prairie pothole, and slough. Areas that are dominated by pioneer plants which become established during periods of low water are not Emergent Wetlands and should be classified as Vegetated Unconsolidated Shores or Vegetated Streambeds.

### **Subclasses and Dominance Types:**

**Persistent (1).** Persistent Emergent Wetlands are dominated by species that normally remain standing at least until the beginning of the next growing season. This Subclass is found only in the Estuarine and Palustrine Systems.

Persistent Emergent Wetlands dominated by saltmarsh cordgrass (*Spartina alterniflora*), saltmeadow cordgrass (*S. patens*), big cordgrass (*S. cynosuroides*), needlerush (*Juncus roemerianus*), narrowleaved cattail (*Typha angustifolia*), and southern wild rice (*Zizaniopsis miliacea*) are major components of the Estuarine systems of the Atlantic and Gulf Coasts of the United States. On the Pacific Coast, common pickleweed (*Salicornia virginica*), sea blite (*Suaeda californica*), arrow grass (*Triglochin maritimum*), and California cordgrass (*Spartina foliosa*) are common dominants.

Palustrine Persistent Emergent Wetlands contain a vast array of grass-like plants such as cattails (*Typha* spp.), bulrushes (*Scirpus* spp.), saw grass (*Cladium jamaicense*), sedges (*Carex* spp.); and true grasses such as reed (*Phragmites australis*), manna grasses (*Glyceria* spp.), slough grass (*Beckmannia syzigachne*), and whitetop (*Scolochloa festuacea*). There is also a variety of broadleaved persistent emergents such as purple loosestrife (*Lythrum salicaria*), dock (*Rumex mexicanus*), waterwillow (*Decodon verticillatus*), and many species of smartweeds (*Polygonum*).

**Nonpersistent (2).** Wetlands in this Subclass are dominated by plants which fall to the surface of the substrate or below the surface of the water at the end of the growing season so that, at certain seasons of the year, there is no obvious sign of emergent vegetation. For example, wild rice (*Zizania aquatica*) does not become apparent in the North Central States until midsummer and fall, when it may form dense emergent stands. Nonpersistent emergents also include species such as arrow arum (*Peltandra virginica*), pickerelweed (*Pontederia cordata*), and arrowheads (*Sagittaria* spp.). Movement of ice in Estuarine, Riverine, or Lacustrine Systems often removes all traces of emergent vegetation during the winter. Where this occurs the area should be classified as Nonpersistent Emergent Wetland.

## SCRUB-SHRUB WETLAND (SS)

**Definition.** The Class Scrub-Shrub Wetland includes areas dominated by woody vegetation less than 6 meters (m [20 feet]) tall. The species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. All water regimes except subtidal are included.

**Description.** Scrub-Shrub Wetlands may represent a successional stage leading to Forested Wetland, or they may be relatively stable communities. They occur only in the Estuarine and Palustrine Systems, but are one of the most widespread classes in the United States. Scrub-Shrub Wetlands are known by many names, such as shrub swamp, shrub carr, bog, and pocosin. For practical reasons the class also includes forests composed of young trees less than 6 m tall.

### Subclasses and Dominance Types:

Broad-leaved Deciduous (1). In Estuarine System Wetlands the predominant deciduous and broadleaved trees or shrubs are plants such as sea-myrtle (*Baccharis halimifolia*) and marsh elder (*Iva frutescens*). In the Palustrine System typical Dominance Types are alders (*Alnus* spp.), willows (*Salix* spp.), buttonbush (*Cephalanthus occidentalis*), red-osier dogwood (*Cornus stolonifera*), honeycup (*Zenobia pulverulenta*), spirea (*Spiraea douglasii*), bog birch (*Betula pumila*), and young trees of species such as red maple (*Acer rubrum*) or black spruce (*Picea mariana*).

Needle-leaved Deciduous (2). This Subclass, consisting of wetlands where trees or shrubs are predominantly deciduous and needleleaved, is represented by young or stunted trees such as tamarack or bald cypress (*Taxodium distichum*).

Broad-leaved Evergreen (3). In the Estuarine System, vast wetland acreages are dominated by mangroves (*Rhizophora mangle*, *Languncularia racemosa*, *Conocarpus erectus*, and *Avicennia germinans*) that are less than 6 m tall. In the Palustrine System, the broad-leaved evergreen species are typically found on organic soils. Northern representatives are labrador tea (*Ledum groenlandicum*), bog rosemary (*Andromeda glaucophylla*), bog laurel (*Kalmia polifolia*), and the semi-evergreen leatherleaf (*Chamaedaphne calyculata*). In the south, fetterbush (*Lyonia lucida*), coastal sweetbells (*Leucothoe axillaris*), inkberry (*Ilex glabra*), and the semi-evergreen black ti-ti (*Cyrilla racemiflora*) are characteristic broad-leaved evergreen species.

Needle-leaved Evergreen (4). The dominant species in Needle-leaved Evergreen Wetlands are young or stunted trees such as black spruce or pond pine (*Pinus serotina*).

Dead (5). Dead woody plants less than 6 m tall dominate Dead Scrub-Shrub Wetlands. These wetlands are usually produced by a prolonged rise in the water table resulting from impoundment of water by landslides, man, or beavers. Such wetlands may also result from various other factors such as fire, salt spray, insect infestation, air pollution, and herbicides.

## FORESTED WETLAND (FO)

**Definition.** The Class Forested Wetland is characterized by woody vegetation that is 6 m tall or taller. All water regimes are included except subtidal.

**Description.** Forested Wetlands are most common in the eastern United States and in those sections of the West where moisture is relatively abundant, particularly along rivers and in the mountains. They occur only in the Palustrine and Estuarine Systems and normally possess an overstory of trees, an understory of young trees or shrubs, and an herbaceous layer. Forested Wetlands in the Estuarine System, which include the mangrove forests of Florida, Puerto Rico, and the Virgin Islands, are known by such names as

swamps, hammocks, heads, and bottoms. These names often occur in combination with species names or plant associations such as cedar swamp or bottomland hardwoods.

### **Subclasses and Dominance Types:**

Broad-leaved Deciduous (1). Dominant trees typical of Broadleaved Deciduous Wetlands, which are represented throughout the United States, are most common in the South and East. Common dominants are species such as red maple, American elm (*Ulmus americana*), ashes (*Fraxinus pennsylvanica* and *F. nigra*), black gum (*Nyssa sylvatica*), tupelo gum (*N. aquatica*), swamp white oak (*Quercus bicolor*), overcup oak (*Q. lyrata*), and basket oak (*Q. michauxii*). Wetlands in this subclass generally occur on mineral soils or highly decomposed organic soils.

Needle-leaved Deciduous (2). The southern representative of the Needle-leaved Deciduous Subclass is bald cypress (*Taxodium distichum*), which is noted for its ability to tolerate long periods of surface inundation. Tamarack is characteristic of the Boreal Forest Region, where it occurs as a dominant on organic soils. Relatively few other species are included in this Subclass.

Broad-Leaved Evergreen (3). In the Southeast, Broadleaved Evergreen Wetlands reach their greatest development. Red bay (*Persea borbonia*), loblolly bay (*Gordonia lasianthus*), and sweet bay (*Magnolia virginiana*) are prevalent, especially on organic soils. This Subclass also includes red mangrove, black mangrove (*Avicennia germinans*), and white mangrove (*Languncularia racemosa*), which are adapted to varying levels of salinity.

Needle-leaved Evergreen (4). Black spruce, growing on organic soils, represents a major dominant of the Needle-leaved Evergreen Subclass in the North. Though black spruce is common on nutrient poor soils, Northern white cedar (*Thuja occidentalis*) dominates northern wetlands on more nutrient rich sites. Along the Atlantic Coast, Atlantic white cedar (*Chamaecyparis thyoides*) is one of the most common dominants on organic soils. Pond pine is a common needle-leaved evergreen found in the Southeast in association with dense stands of broad-leaved evergreen and deciduous shrubs.

Dead (5). Dead Forested Wetlands are dominated by dead woody vegetation taller than 6 m (20 feet). Like Dead Scrub-Shrub Wetlands, they are most common in, or around the edges of, man-made impoundments and beaver ponds. The same factors that produce Dead Scrub-Shrub Wetlands produce Dead Forested Wetlands.

### **AQUATIC BED AND UNCONSOLIDATED BOTTOM (AB / UB)**

**Definition.** The Class Aquatic Bed includes wetlands and deepwater habitats dominated by plants that grow principally on or below the surface of the water for most of the growing season in most years. Water regimes include subtidal, irregularly exposed, regularly flooded, permanently flooded, intermittently exposed, semi-permanently flooded, and seasonally flooded.

**Description.** Aquatic Beds represent a diverse group of plant communities that requires surface water for optimum growth and reproduction. They are best developed in relatively permanent water or under conditions of repeated flooding. The plants are either attached to the substrate or float freely in the water above the bottom or on the surface.

### **UNCONSOLIDATED BOTTOM (UB)**

**Definition.** The Class Unconsolidated Bottom includes all wetland and deepwater habitats with at least 25% cover of particles smaller than stones, and a vegetative cover less than 30%. Water regimes are restricted to subtidal, permanently flooded, intermittently exposed, and semi-permanently flooded.

Description: Unconsolidated Bottoms are characterized by the lack of large stable surfaces for plant and animal attachment. They are usually found in areas with lower energy than Rock Bottoms and may be very unstable. Exposure to wave and current action, temperature, salinity, and light penetration determines the composition and distribution of organisms. Most macroalgae attach to the substrate by means of basal hold-fast cells or discs; in sand and mud, however, algae penetrate the substrate and higher plants can successfully root if wave action and currents are not too strong. Most animals in unconsolidated sediments live within the substrate, e.g., *Macoma* and the amphipod *Melita*. Some, such as the polychaete worm *Chaetopterus*, maintain permanent burrows, and others may live on the surface, especially in coarse-grained sediments.

In the Marine and Estuarine Systems, Unconsolidated Bottom communities are relatively stable. They vary from the Arctic to the tropics, depending largely on temperature, and from the open ocean to the upper end of the estuary, depending on salinity.

In the Riverine System, the substrate type is largely determined by current velocity, and plants and animals exhibit a high degree of morphologic and behavioral adaptation to flowing water. Certain species are confined to specific substrates and some are at least more abundant in one type of substrate than in others. One researcher commented “The larger the stones, and hence the more complex the substratum, the more diverse is the invertebrate fauna.”

In the Lacustrine and Palustrine Systems, there is usually a high correlation, within a given water body, between the nature of the substrate and the number of species and individuals. For example, in the profundal bottom of eutrophic lakes where light is absent, oxygen content is low, and carbon dioxide concentration is high, the sediments are ooze-like organic materials and species diversity is low. Each substrate type typically supports a relatively distinct community of organisms.

## **NONTIDAL WATER REGIME MODIFIERS**

Though not influenced by oceanic tides, nontidal water regimes may be affected by wind or seiches in lakes. Water regimes are defined in terms of the growing season, which we equate to the frost-free period. The rest of the year is defined as the dormant season, a time when even extended periods of flooding may have little influence on the development of plant communities.

Permanently Flooded (H). Water covers the land surface throughout the year in all years. Vegetation is composed of obligate hydrophytes.

Intermittently Exposed (Z). Surface water is present throughout the year except in years of extreme drought.

Semi-permanently Flooded (F). Surface water persists throughout the growing season in most years. When surface water is absent, the water table is usually at or very near the land surface.

Seasonally Flooded (C). Surface water is present for extended periods especially early in the growing season, but is absent by the end of the season in most years. When surface water is absent, the water table is often near the land surface.

Saturated (B). The substrate is saturated to the surface for extended periods during the growing season, but surface water is seldom present.

Temporarily Flooded (A). Surface water is present for brief periods during the growing season, but the water table usually lies well below the soil surface for most of the season. Plants that grow both in uplands and wetlands are characteristic of the temporarily flooded regime.

Intermittently Flooded (J). The substrate is usually exposed, but surface water is present for variable periods without detectable seasonal periodicity. Weeks, months, or even years may intervene between periods of inundation. The dominant plant communities under this regime may change as soil moisture conditions change. Some areas exhibiting this regime do not fall within our definition of wetland because they do not have hydric soils or support hydrophytes.

Artificially Flooded (K). The amount and duration of flooding is controlled by means of pumps or siphons in combination with dikes or dams. The vegetation growing on these areas cannot be considered a reliable indicator of water regime. Examples of artificially flooded wetlands are some agricultural lands managed under a rice-soybean rotation, and wildlife management areas where forests, crops, or pioneer plants may be flooded or dewatered to attract wetland wildlife. Neither wetlands within or resulting from leakage from man-made impoundments, nor irrigated pasture lands supplied by diversion ditches or artesian wells, are included under this modifier.

## **SPECIAL MODIFIERS**

Many wetlands and deepwater habitats are man-made, and natural ones have been modified to some degree by the activities of man or beavers. Since the nature of these modifications often greatly influences the character of such habitats, special modifying terms have been included here to emphasize their importance. The following modifiers should be used singly or in combination wherever they apply to wetlands and deepwater habitats.

### Excavated (x)

Lies within a basin or channel excavated by man.

### Impounded (h)

Created or modified by a barrier or dam which purposefully or unintentionally obstructs the outflow of water. Both man-made dams and beaver dams are included.

### Diked (h)

Created or modified by a man-made barrier or dike designed to obstruct the inflow of water.

### Partially drained/ditched (d)

The water level has been artificially lowered, but the area is still classified as wetland because soil moisture is sufficient to support hydrophytes. Drained areas are not considered wetlands if they can no longer support hydrophytes.

### Farmed (f)

The soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become reestablished if farming is discontinued.

### Artificial substrate (r)

Refers to substrates classified as Rock Bottom, Unconsolidated Bottom, Rocky Shore, and Unconsolidated Shore that were emplaced by man, using either natural materials such as dredge spoil or synthetic materials such as discarded automobiles, tires, or concrete. Jetties and breakwaters are examples of Artificial Rocky Shores. Man-made reefs are an example of Artificial Rock Bottoms.



## B-4 HGM WETLAND CLASSIFICATION - KEY TO OREGON SUBCLASSES

(Key from the Guidebook for Hydrogeomorphic (HGM)–based Assessment of Oregon Wetland and Riparian Sites: Statewide Classification and Profiles by Adamus, P.R. 2001)

Note: Frequently, areas belonging to one HGM subclass will be situated within or adjacent to an area belonging to another HGM subclass. Normally, each area should be assessed separately. However, for practical purposes the areas may be combined into one site (assessment unit) if the smaller of the two areas comprises less than 20% of their total combined acreage. An example is a perennial channel (Riverine Flow-through subclass) that bisects an ash swale (Slope subclass) and which, even including the channel's 2-year floodplain, occupies less than 20% of their combined acreage. In this example, for most purposes the entire site should be classified as Slope.

1. Exposed at least annually to tidal surface water. Note that salinity is not considered in this determination.  
YES: **Estuarine** class, go to 2 (Note that salinity is not considered in this determination).  
NO: Go to 3
2. Site receives significant marine-sourced water during all or part of the year. Often located within or along the fringes of a major estuarine embayment or a slough off the embayment, rather than adjacent to a narrower tidal river channel. Typically located within zones classified as "Marine" or "Brackish" on maps published by Hamilton (1984), the National Estuarine Inventory (NOAA 1988), and/or as "Estuarine" on maps of the National Wetland Inventory. The site and its immediate receiving waters have one or more of the following indicators suggestive of marine water: barnacles, stranded seaweed, salt marsh plant species, springtide high tide minimum salinities of >5 ppt, or a preponderance (in adjacent flats) of rounded sediment particles indicative of recent marine-derived sediments  
YES: Estuarine Marine-sourced (EMS) subclasses (High Marsh EMS and Low Marsh EMS)  
NO: Estuarine River-sourced (EMR) subclass
3. Closely associated with a channel or floodplain. Upland wetted edge of site expands at least once every other year (biennial flood) primarily as a result of overbank flow, channel inflow, or pumped water from a nearby and/or connected or bisecting channel. Includes active (2-yr) floodplain wetlands, sloughs, and riparian areas.  
On NWI maps, includes many sites labeled R or PUB, PEM, PSS, or PFO with -A, -C, -F, or -H water regime codes appended, and others.  
YES: **Riverine** class, Go to 4  
NO: Go to 5
4. Water throughout most of site flows visibly during most of wet season. The site may be a channel, an island in a channel, or border a channel or ditch. It should include any channel to the 2 m depth. It often bisects or is bordered by a wetland in another HGM subclass.  
YES: **Riverine Flow-through (RFT)** subclass, Figure 2  
Includes scoured floodplains with no seasonal ponding of flood water, wetlands that comprise entire islands within channels, and some ditches and channels.  
NO: **Riverine Impounding (RI)** subclass, Figure 2  
Includes sloughs connected (seasonally or permanently) to main channels, channels dammed by beavers or humans (such wetlands may be broader at their downhill/ outlet side), wetlands sustained primarily by water diverted or pumped from offsite channels, river alcoves with seasonally stagnant conditions, and depressions or temporarily ponded areas within active biennial floodplains.

5. Consists mostly of permanent or seasonal standing water with pH>8. Situated in a depression or lake basin without an outlet channel. Includes areas that are shallower than 2 m during annual maximum inundation.  
  
YES: **Depressional Alkaline (DA)** subclass  
NO: Go to 6
6. Located on margin of or within a lake, i.e., a body of permanent standing water that is deeper than 2 m over an area of >8 hectares (20 acres).  
On NWI maps, includes most sites labeled “L” and others with –A, -C, -F, or –H water regime codes that border an L site.  
YES: **Lacustrine Fringe** class, go to 7  
NO: Go to 8
7. Located in headwater position (i.e., closer to a region’s major drainage divides than to lowlands in the region) and usually higher than the mean elevation of the region<sup>1</sup>.  
YES: **Lacustrine Fringe Headwater (LFH)** subclass  
NO: **Lacustrine Fringe Valley (LFV)** subclass
8. Consists of >10% cover of Sphagnum moss over an area of >0.25 acre, and has a mean annual water pH of <5.5. Usually situated in a depression with little if any standing water.  
YES: **Depressional Bog (DB)** subclass  
NO: Go to 9
9. Lacks permanent inlet channel. Has a surface water outlet that connects to a permanent river or lake less than once every 2 years. Not located on a noticeable slope. Water level fluctuations are mainly in response to runoff and direct precipitation.  
YES: **Depressional Outflow (DO)** subclass  
NO: Go to 10
10. Located on, or near base of, a slope, but the slope may be barely perceptible. Inlet channel absent or very short. Outlet channel frequently present. Downhill-flowing sheet flow may be visible at land surface, especially during wet months. Downhill side of site sometimes partly blocked by berm or dam (natural or manmade). Fed by runoff and precipitation but with a proportionally large (compared with other wetlands) component of lateral subsurface flow or discharging groundwater. Soil moisture (and surface water, if present and shallow) tends to persist more into the summer than in other wetlands of similar size, depth, climate, and soil type. Ratio of wetland surface area to area of the apparently contributing watershed is relatively large. Includes springs, seeps, sites sustained in summer mainly by seepage (not runoff) from upslope irrigated fields, some sites with water impounded seasonally by push-up dams at their downhill side, and some ash swales.  
On NWI maps, includes many sites labeled PEM, PSS, or PFO with –B water regime codes, and less often with –A, -C, or –F codes.  
YES: **Slope** class, Go to 11  
NO: Go to 12.

---

<sup>1</sup> Approximate mean elevations of regions (in meters): Blue Mountains= 1351, Basin & Range= 1515, Columbia Basin= 539, Coast/Range= 256, East Cascades Slope= 1435, Klamath Mountains= 734, High Lava Plains= 1179, Owyhee Uplands= 1269, West Cascade Slope= 1037, Western Interior (Willamette) Valley= 191.

11. Outlet channel is present (but may be small and partly dammed by beaver, roads, slides). Slope may be slight but is always noticeable. No inlet channel. Located in topographically high or intermediate positions such as stream heads, montane wet meadows, avalanche chutes. Usually closer to a region's major drainage divides than to lowlands in the region, and usually higher than the average elevation of the region.  
YES: **Slope Headwater (SH)**  
NO: **Slope Valley (SV)**
12. Fed mainly by direct precipitation, secondarily by lateral subsurface flow or surface runoff. Precipitation may be "ponded" at the site due to surrounding natural levees, ridge-swale topography, humocks or constructed dikes; and/or due to soils with subsurface layers that strongly impede infiltration; and/or due to high water table due to subsurface seepage from nearby river, lake, or irrigated fields. Usually in a shallow (<2 ft.) basin situated on a broad flat terrace. Includes wet prairie, wet wooded flats, some fens and some ash swales. On NWI maps, includes many sites labeled PUS, PEM, PFO, or PSS with -A, -B, or -C water regime codes.  
YES: **Flats class**. No subclasses defined yet.  
Many are inundated only seasonally. Altered (diked) flats sites may function similar to depressional class sites, but their only significant water comes from runoff from dike surfaces and precipitation.  
NO: **Depressional class**, Go to 13  
Fed mainly by overland runoff (sheet flow) which enters from all 3 or 4 compass directions, and/or by stormwater pipes, drainage ditches. Usually in a deep (>2 ft.) basin, which may have been deepened by excavation. Usually is inundated permanently. Often in natural depressions in rolling or mountainous terrain. On NWI maps, includes many of the sites labeled PUB or PAB, some L, and a few others.
13. More than 0.25 acre of standing water remains in the basin during the driest season of most years.  
YES: **Depressional Closed Permanent (DCP)** subclass

## B-5 OFWAM FUNCTIONS

Diverse Wildlife Habitat. 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 1 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% of the wetland's edge is bordered by a vegetated buffer at least 25 feet wide.

Intact Fish Habitat. More than 75% 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% 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.

Intact Water Quality Protection. 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%; 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-mile 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.

Intact Hydrologic Control. 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.

## **Appendix C**

### **Vegetation List and Sample Plot Data Forms**

*This page intentionally left blank.*

**City or Medford Urban Reserve Local Wetland Inventory**  
**Vegetation List**  
**April 6-9 and 20-23, 2015**

Common Name	Scientific Name	Wetland Indicator Status	Native and Invasive, Noxious
<b>WETLANDS</b>			
American deerweed	<i>Acmispon americanus</i>	FACU	native
spreading bent	<i>Agrostis stolonifera</i>	FAC	native
field meadow-foxtail	<i>Alopecurus pratensis</i>	FAC	non-native
clustered field sedge	<i>Carex praegracilis</i>	FACW	native
Fuller's teasel	<i>Dipsacus fullonum</i>	FAC	invasive
needle spike-rush	<i>Eleocharis acicularis</i>	OBL	native
common spike-rush	<i>Eleocharis palustris</i>	OBL	native
fescue	<i>Festuca species</i>	FAC to NOL	-
Baltic rush	<i>Juncus balticus</i>	FACW	native
lamp rush	<i>Juncus effusus</i>	FACW	native
spreading rush	<i>Juncus patens</i>	FACW	native
garden bird's-foot-trefoil	<i>Lotus corniculatus</i>	FAC	non-native
toothed medick	<i>Medicago polymorpha</i>	FACU	non-native
reed canary grass	<i>Phalaris arundinacea</i>	FACW	invasive
balsam poplar	<i>Populus balsamifera</i>	FAC	native
creeping buttercup	<i>Ranunculus repens</i>	FAC	non-native
Himalayan blackberry	<i>Rubus armeniacus</i>	FACU	invasive, noxious
Scouler's willow	<i>Salix scouleriana</i>	FAC	native
Lemmon's willow	<i>Salix lemmonii</i>	FACW	native
tall false rye grass / tall fescue	<i>Schedonorus arundinaceus</i>	FAC	non-native
broad-leaf cat-tail	<i>Typha latifolia</i>	OBL	native
neckweed	<i>Veronica peregrina</i>	OBL	native
vetch	<i>Vicia species</i>	FAC to UPL	-
<b>UPLANDS</b>			
American deerweed	<i>Acmispon americanus</i>	FACU	native
spreading bent	<i>Agrostis stolonifera</i>	FAC	native
wild onion or wild garlic	<i>Allium species</i>	OBL to NOL	-
field meadow-foxtail	<i>Alopecurus pratensis</i>	FAC	non-native
ripgut brome	<i>Bromus diandrus</i>	NOL	non-native
small camas	<i>Camassia quamash</i>	FACW	native
hairy bittercress	<i>Cardamine hirsuta</i>	FACU	non-native
clustered field sedge	<i>Carex praegracilis</i>	FACW	native
bull thistle	<i>Cirsium vulgare</i>	FACU	invasive, noxious
poison-hemlock	<i>Conium maculatum</i>	FAC	noxious
tufted hair grass	<i>Deschampsia caespitosa</i>	FACW	native
Fuller's teasel	<i>Dipsacus fullonum</i>	FAC	invasive
filaree	<i>Erodium cicutarium</i>	NOL	non-native
fescue	<i>Festuca species</i>	FAC to NOL	-
cutleaf geranium	<i>Geranium dissectum</i>	NOL	non-native
dovefoot geranium	<i>Geranium molle</i>	NOL	non-native
prickly lettuce	<i>Lactuca serriola</i>	FACU	non-native
great Basin lyme grass	<i>Leymus cinereus</i>	FAC	native

Common Name	Scientific Name	Wetland Indicator Status	Native and Invasive, Noxious
two-color lupine	<i>Lupinus bicolor</i>	NOL	native
toothed medick	<i>Medicago polymorpha</i>	FACU	non-native
reed canary grass	<i>Phalaris arundinacea</i>	FACW	invasive
English plantain	<i>Plantago lanceolata</i>	FACU	non-native
bulbous blue grass	<i>Poa bulbosa</i>	FACU	non-native
bluegrass	<i>Poa species</i>	FAC ?	-
sagebrush buttercup	<i>Ranunculus glaberrimus</i>	FACU	native
creeping buttercup	<i>Ranunculus repens</i>	FAC	non-native
Himalayan blackberry	<i>Rubus armeniacus</i>	FACU	invasive, noxious
curly dock	<i>Rumex crispus</i>	FAC	non-native
tall false rye grass / tall fescue	<i>Schedonorus arundinaceus</i>	FAC	non-native
red clover	<i>Trifolium pratense</i>	FACU	non-native
white clover	<i>Trifolium repens</i>	FAC	non-native
broad-leaf cat-tail	<i>Typha latifolia</i>	OBL	native
neckweed	<i>Veronica peregrina</i>	OBL	native
Persian speedwell	<i>Veronica persica</i>	NOL	non-native
American purple vetch	<i>Vicia americana</i>	FAC	native
tiny vetch	<i>Vicia hirsuta</i>	NOL	non-native
vetch	<i>Vicia species</i>	FAC to UPL	-
desert fescue	<i>Vulpia microstachys</i>	NOL	native

Wetland Indicator Status and taxonomy for the Western Mountains, Valleys, and Coast Region per the National Wetland Plant List 2014v1. Accessed April 2015.

Native per Hitchcock & Cronquist 1973 and

<http://rsgisias.crrel.usace.army.mil/NWPL/>

Invasive per Clean Water Services 2008:

<http://plants.usda.gov/>

Noxious per ODA 2015:

<http://www.cleanwaterservices.org/PermitCenter/DesignAndConstruction/default.aspx>

<http://www.oregon.gov/ODA/PLANT/WEEDS/lists.shtml>

WETLAND INDICATOR STATUS (WIS)	
OBL	Obligate Wetland Plant - Almost always occurs in wetlands (hydrophyte), rarely in uplands
FACW	Facultative Wetland Plant - Usually occur in wetlands (hydrophyte), but may occur found in non-wetlands
FAC	Facultative Plant - Occurs in wetlands (hydrophyte) and uplands (nonhydrophyte)
FACU	Facultative Upland Plant - Usually occur in non-wetlands (non-hydrophyte), but may occur in wetlands
UPL	Upland Plant - Almost always occurs in uplands (non-hydrophyte), almost never occurs in wetlands. UPL plants have a WIS in other regions
NOL	Not Listed - Plants that are not on the National Wetland Plant List are assumed to be UPL and have no WIS in any region



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/6/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P01  
 Investigator(s): Clare Kenny, Taya K. MacLean, C. Mirth Walker Section, Township, Range: Section 34, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): 3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.302070 Long: -122.813100 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland located in flood irrigated pasture - Wetland W01. Signatures visible on multiple imagery.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)
1.					
2.					
3.					
4.					
		0% = Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>10</u> x 1 = <u>10</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>80</u> x 3 = <u>240</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>95</u> (A) <u>260</u> (B) Prevalence Index = B/A = <u>2.74</u>
1.					
2.					
3.					
4.					
5.					
		0% = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1.	<u>Alopecurus pratensis</u>	<u>70%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Agrostis stolonifera</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
3.	<u>Eleocharis acicularis</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	
4.	<u>Carex praegracilis</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		95% = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u> <b>Present?</b>
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum <u>5%</u>					
Remarks:					Entered by: <u>tkm</u> QC by: <u>cmw</u>

# SOIL

Sampling Point: **P01**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 3/2	80	2.5YR 3/6	20	C	M	C	
5-20+	10YR 3/1	80	2.5YR 3/6	20	C	M, PL	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes ☒ No ☐**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): 4  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present? Yes ☒ No ☐**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Seeps at 4" and free water.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/6/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P02  
 Investigator(s): Clare Kenny, Taya K. MacLean, C. Mirth Walker Section, Township, Range: Section 34, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): convex Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.302450 Long: -122.811700 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Flood irrigated pasture - ditches in place to the north. Obvious signature on multiple imagery.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>17</u> x 4 = <u>68</u> UPL species <u>8</u> x 5 = <u>40</u> Column Totals: <u>100</u> (A) <u>333</u> (B) Prevalence Index = B/A = <u>3.33</u>	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
1.	<u>Alopecurus pratensis</u>	<u>75%</u>	<u>Yes</u>	<u>FAC</u>		
2.	<u>Poa bulbosa</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>		
3.	<u>Geranium dissectum</u>	<u>5%</u>	<u>No</u>	<u>NOL</u>		
4.	<u>Medicago polymorpha</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
5.	<u>Veronica persica</u>	<u>3%</u>	<u>No</u>	<u>NOL</u>		
6.	<u>Cardamine hirsuta</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
7.	<u>Lactuca serriola</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
8.						
9.						
10.						
11.						
		<u>100%</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u>10' r</u> )					
1.						
2.						
		<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum		<u>0%</u>				

Remarks: Planted pasture grasses. Subdominant vegetation not hydrophytic. Vegetation in this area was distinctively different than in wetland area to the north - this is also visible on aerial imagery from 2005, 2010, 2013 and 2014.

# SOIL

Sampling Point: **P02**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	7.5YR 2.5/3	100					CL	rooty
3-16+	7.5YR 3/2	95	7.5YR 4/6	5	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	wetland hydrology must be present,
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Redox is likely present as a result of ongoing flood irrigation.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☐ No ☒ Depth (inches): >16  
Saturation Present? Yes ☐ No ☒ Depth (inches): >16  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Water would not be held in this landscape location.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/6/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P03  
 Investigator(s): Clare Kenny, Taya K. MacLean, C. Mirth Walker Section, Township, Range: Section 34, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.302040 Long: -122.810300 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Wetland W02_A and W02_B <u>PEM wetland</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u> = Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>80</u> x 3 = <u>240</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>255</u> (B) Prevalence Index = B/A = <u>2.83</u>
1.					
2.					
3.					
4.					
		<u>0%</u> = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1.	<u>Alopecurus pratensis</u>	<u>80%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Juncus balticus</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
3.	<u>Eleocharis acicularis</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		<u>90%</u> = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>10%</u>					
Remarks:					

# SOIL

Sampling Point: **P03**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-5	10YR 2/2	100					L	roots
5-14	10YR 2/1	98	5YR 3/4	2	C	M	C	very stiff

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	wetland hydrology must be present,
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes ☒ No ☐**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): 2  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present? Yes ☒ No ☐**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Seeps at 2".

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/7/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P04  
 Investigator(s): Clare Kenny, Taya K. MacLean, C. Mirth Walker Section, Township, Range: Section 31, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.399160 Long: -122.868200 Datum: NAD 1983  
 Soil Map Unit Name: Unit 35A: Cove clay (hydric) NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Upland</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u>	= Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>82</u> x 3 = <u>246</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>103</u> (A) <u>350</u> (B) Prevalence Index = B/A = <u>3.40</u>
1.					
2.					
3.					
4.					
		<u>0%</u>	= Total Cover		
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1.	<u>Poa species</u>	<u>40%</u>	<u>Yes</u>	<u>FAC ?</u>	
2.	<u>Leymus cinereus</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>Bromus diandrus</u>	<u>10%</u>	<u>No</u>	<u>NOL</u>	
4.	<u>Festuca species</u>	<u>10%</u>	<u>No</u>	<u>FAC*</u>	
5.	<u>Geranium dissectum</u>	<u>10%</u>	<u>No</u>	<u>NOL</u>	
6.	<u>Rumex crispus</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
7.	<u>Poa bulbosa</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
8.	<u>Vicia americana</u>	<u>1%</u>	<u>No</u>	<u>FAC</u>	
9.					
10.					
11.					
		<u>103%</u>	= Total Cover		
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
		<u>0%</u>	= Total Cover		
% Bare Ground in Herb Stratum		<u>0%</u>			

Remarks: \* or ? = Assumed FAC.

Entered by: tkm QC by: cmw

## SOIL

Sampling Point: P04

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 3/2	100					CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No **X**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>14**

Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>14**  
(includes capillary fringe)

Wetland Hydrology Present?

Yes \_\_\_\_\_ No **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Entered by: tkm QC by: cmw



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/7/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P05  
 Investigator(s): Clare Kenny, Taya K. MacLean, C. Mirth Walker Section, Township, Range: Section 31, T36W, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <2  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.394580 Long: -122.861800 Datum: NAD 1983  
 Soil Map Unit Name: Unit 141A: Phoenix clay (hydric) NWI classification: PEMC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland W04. Hydrologically connected to vernal pool mosaic.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		0% = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>90</u> x 3 = <u>270</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>90</u> (A) <u>270</u> (B) Prevalence Index = B/A = <u>3.00</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
3.					
4.					
5.					
		0% = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum (Plot size: <u>5' r</u> )					
1.	<u>Alopecurus pratensis</u>	<u>85%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Vicia species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		90% = Total Cover			<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Woody Vine Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum		<u>10%</u>			

Remarks: \* = Assumed FAC.

Entered by: tkm QC by: cmw

## SOIL

Sampling Point: P05

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 2/2	100					C	thick roots
3-20	10YR 4/1	98	7.5YR 4/6	2	C	M, PL	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Common 1"-4" gravels and cobbles.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input checked="" type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_

Water Table Present? Yes ☐ No ☒ Depth (inches): >18

Saturation Present? Yes ☒ No ☐ Depth (inches): 18  
(includes capillary fringe)

Wetland Hydrology Present?

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Hummocks. Obvious green signature in 2010. Signature also visible in 2013 and 2014 imagery.

Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/7/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P06  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 32, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <2  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.396690 Long: -122.851500 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Upland. Flood irrigated hay pasture with extensive ditching. See also P23, collected on 4/22/15 during site re-visit.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)
1.					
2.					
3.					
4.					
		0% = Total Cover			
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>96</u> x 3 = <u>288</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>102</u> (A) <u>302</u> (B) Prevalence Index = B/A = <u>2.96</u>
1.					
2.					
3.					
4.					
5.					
		0% = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1.	<u>Alopecurus pratensis</u>	95%	Yes	FAC	
2.	<u>Carex praegracilis</u>	5%	No	FACW	
3.	<u>Ranunculus glaberrimus</u>	1%	No	FACU	
4.	<u>Poa species</u>	1%	No	FAC ?	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		102% = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u> <b>Present?</b>
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum		0%			
Remarks: ? = Assumed FAC.					Entered by: <u>tkm</u> QC by: <u>cmw</u>

# SOIL

Sampling Point: **P06**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	7.5YR 3/2	100					C	root layer
2-17	7.5YR 4/1	100					C	very stiff

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Extremely stiff soil - dry throughout.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>17**  
Saturation Present? Yes \_\_\_\_\_ No **X** Depth (inches): **>17**  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/7/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P07  
 Investigator(s): Clare Kenny, Taya MacLean, C. Mirth Walker Section, Township, Range: Section 32, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <2  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.397740 Long: -122.846600 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>      </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Upland plot collected to investigate green signature.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
1.						
2.						
3.						
4.						
		0% = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>53</u> x 3 = <u>159</u> FACU species <u>6</u> x 4 = <u>24</u> UPL species <u>42</u> x 5 = <u>210</u> Column Totals: <u>101</u> (A) <u>393</u> (B) Prevalence Index = B/A = <u>3.89</u>	
1.						
2.						
3.						
4.						
		0% = Total Cover				
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>	
1.	<u>Schedonorus arundinaceus</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>		
2.	<u>Bromus diandrus</u>	<u>40%</u>	<u>Yes</u>	<u>NOL</u>		
3.	<u>Alopecurus pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>		
4.	<u>Dipsacus fullonum</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>		
5.	<u>Trifolium pratense</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
6.	<u>Geranium dissectum</u>	<u>2%</u>	<u>No</u>	<u>NOL</u>		
7.	<u>Cirsium vulgare</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>		
8.	<u>Acmispon americanus</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>		
9.						
10.						
11.						
		101% = Total Cover				
Woody Vine Stratum	(Plot size: <u>10' r</u> )					
1.						
2.						
		0% = Total Cover				
% Bare Ground in Herb Stratum		<u>0%</u>				
Remarks:					Entered by: <u>tkm</u> QC by: <u>cmw</u>	

# SOIL

Sampling Point: **P07**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-14	10YR 3/2	100					CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>14** \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>14** \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/8/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P08  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 32, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.392390 Long: -122.846200 Datum: NAD 1983  
 Soil Map Unit Name: Unit 35A: Cove clay (hydric) NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM Wetland W09. Connected to Swanson creek and to wetlands offsite (including WD2009-0470). Cattle present. This portion of the site is not a hay pasture.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>75</u> x 2 = <u>150</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>85</u> (A) <u>180</u> (B) Prevalence Index = B/A = <u>2.12</u>
Sapling/Shrub Stratum		(Plot size: <u>10' r</u> )			
1.					
2.					
3.					
4.					
5.					
		<u>0%</u>	= Total Cover		<b>Hydrophytic Vegetation Indicators:</b> <u>      </u> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> 5 - Wetland Non-Vascular Plants <sup>1</sup> <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum		(Plot size: <u>5' r</u> )			
1.	<u>Juncus patens</u>	<u>50%</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Carex praegracilis</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Agrostis stolonifera</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4.	<u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		<u>85%</u>	= Total Cover		<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u>  <b>Present?</b>
Woody Vine Stratum		(Plot size: <u>10' r</u> )			
1.					
2.					
		<u>0%</u>	= Total Cover		
% Bare Ground in Herb Stratum		<u>15%</u>			
Remarks:					
Entered by: <u>tkm</u> QC by: <u>cmw</u>					

# SOIL

Sampling Point: **P08**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/2	100					CL	
3-12	5Y 2.5/1	98	10YR 4/6	2	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes ☒ No ☐**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☒ No ☐ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): surface  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present?**

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:  
1-2" of water in hoof prints and between hummocks in and adjacent to plot.

Entered by: tkm QC by: cmw



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/8/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P09  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 5, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.387490 Long: -122.851300 Datum: NAD 1983  
 Soil Map Unit Name: Unit 139A: Padigan clay (hydric) NWI classification: PEMC, PFOC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Wetland W10 in WD2007-0106. Approx. 15' from stream. Broad depression.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		0% = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>2</u> x 4 = <u>8</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>82</u> (A) <u>208</u> (B) Prevalence Index = B/A = <u>2.54</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
3.					
4.					
		0% = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum (Plot size: <u>5' r</u> )					
1.	<u>Juncus patens</u>	<u>40%</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Festuca species</u>	<u>40%</u>	<u>Yes</u>	<u>FAC*</u>	
3.	<u>Medicago polymorpha</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
4.					
5.					
6.					
7.					
8.					
9.					
		82% = Total Cover			
Woody Vine Stratum (Plot size: <u>10' r</u> )					<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u> <b>Present?</b>
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum		<u>18%</u>			

Remarks: \* = Assumed FAC.

Entered by: tkm QC by: cmw

# SOIL

Sampling Point: **P09**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 2/2	100					SiCL	
2-15	10YR 4/1	77	7.5YR 4/3	20	C	M	C	
			7.5YR 4/6	3	C	M, PL		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input checked="" type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): surface  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present?**

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Pondered water within hoof prints in plot. Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/8/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P10  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 9, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <5  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.372640 Long: -122.834200 Datum: NAD 1983  
 Soil Map Unit Name: Unit 139A: Padigan clay (hydric) NWI classification: PABHx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland W11. Former pear orchard. Mapped hydric soil unit runs diagonally through parcel.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)
1.					
2.					
3.					
4.					
		<u>0%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>85</u> x 1 = <u>85</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>95</u> (A) <u>115</u> (B) Prevalence Index = B/A = <u>1.21</u>
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
3.					
4.					
5.					
		<u>0%</u> = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum	(Plot size: <u>5' r</u> )				
1.	<u>Typha latifolia</u>	<u>75%</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Eleocharis palustris</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	
3.	<u>Festuca species</u>	<u>10%</u>	<u>No</u>	<u>FAC*</u>	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		<u>95%</u> = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u> <b>Present?</b>
1.					
2.					
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum		<u>5%</u>			

Remarks: \* = Assumed FAC. Entered by: tkm QC by: cmw  
 Mowed vegetation.

## SOIL

Sampling Point: P10

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/1	100					SiC	Roots and OM.
3-16	10YR 4/1	80	7.5YR 4/6	20	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

"OM" = Organic matter

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>4</u>

Wetland Hydrology Present?

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: tkm QC by: cmw

Water table may have been present if pit was left to fill.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/8/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P11  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 34, T37S, R1W  
 Landform (hillslope, terrace, etc.): shoulder Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.312010 Long: -122.797100 Datum: NAD 1983  
 Soil Map Unit Name: Unit 27: Carney clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Former pond created in upland. Water likely used for irrigation of landscaping for adjacent home as evidenced by irrigation pipes.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>10</u> x 2 = <u>20</u> FAC species <u>97</u> x 3 = <u>291</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>107</u> (A) <u>311</u> (B) Prevalence Index = B/A = <u>2.91</u>	
1.	<u>Salix lemmonii</u>	<u>10%</u>	<u>Yes</u>	<u>FACW</u>		
2.						
3.						
4.						
		<u>10%</u> = Total Cover				
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>	
1.	<u>Alopecurus pratensis</u>	<u>95%</u>	<u>Yes</u>	<u>FAC</u>		
2.	<u>Rumex crispus</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
11.						
		<u>97%</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u>10' r</u> )					
1.						
2.						
		<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum <u>3%</u>						

Remarks: Salix sp. May be relict of wetter hydrology in the past. Entered by: tkm QC by: cmw

# SOIL

Sampling Point: **P11**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	10YR 3/2	100					CL	roots
2-5	10YR 3/2	95	7.5YR 4/6	5	C	M	CL	
5-16	10YR 3/2	100					C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
"Redox" / color mottles in 2-5" layer could possibly be pond lining material. Not F8, Redox Depressions, because it does not meet the landform definition.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>	<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>16** \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>16** \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/8/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P12  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 5, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.387570 Long: -122.852700 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Adjacent to/within area of swales, depressions and subtle mounding. Our observations were consistent with WD2007-0106.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>67</u> x 2 = <u>134</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>97</u> (A) <u>234</u> (B) Prevalence Index = B/A = <u>2.41</u>
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
3.					
4.					
5.					
		<u>0%</u> = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Herb Stratum	(Plot size: <u>5' r</u> )				
1.	<u>Deschampsia caespitosa</u>	<u>65%</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Poa species</u>	<u>10%</u>	<u>No</u>	<u>FAC*</u>	
3.	<u>Ranunculus repens</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
4.	<u>Allium species</u>	<u>5%</u>	<u>No</u>	<u>FAC*</u>	
5.	<u>Lactuca serriola</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
6.	<u>Medicago polymorpha</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
7.	<u>Camassia quamash</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
8.					
9.					
10.					
11.					
		<u>97%</u> = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>3%</u>					
Remarks: * = Assumed FAC. Entered by: <u>tkm</u> QC by: <u>cmw</u>					

## SOIL

Sampling Point: P12

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-3	10YR 3/1	100					CL	
3-14	7.5YR 2.5/1	100					C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes \_\_\_\_\_ No ☒ X

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input checked="" type="checkbox"/> X Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): \_\_\_\_\_

Water Table Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): >14

Saturation Present? Yes ☒ X No \_\_\_\_\_ Depth (inches): 11

(includes capillary fringe)

Wetland Hydrology Present?

Yes ☒ X No \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

Moist throughout. High amount of precipitation previous day may account for hydrology present at 11". This is an area of patterned swales, depressions and mounds.



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/9/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P13  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 26, T37S, R1W  
 Landform (hillslope, terrace, etc.): ravine Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.325370 Long: -122.782700 Datum: NAD 1983  
 Soil Map Unit Name: Unit 27: Carney clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PSS wetland W14. Medford City parcel - leased for ranching cattle.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)
1.					
2.					
3.					
4.					
0% = Total Cover					<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>5</u> x 2 = <u>10</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>105</u> (A) <u>310</u> (B) Prevalence Index = B/A = <u>2.95</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.	<u>Salix species</u>	<u>50%</u>	<u>Yes</u>	<u>FAC*</u>	
2.					
3.					
4.					
5.					
50% = Total Cover					<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum (Plot size: <u>5' r</u> )					
1.	<u>Dipsacus fullonum</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Agrostis stolonifera</u>	<u>25%</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>Juncus effusus</u>	<u>5%</u>	<u>No</u>	<u>FACW</u>	
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
55% = Total Cover					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Woody Vine Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
0% = Total Cover					
% Bare Ground in Herb Stratum <u>45%</u>					
Remarks: * = Assumed FAC.					Entered by: <u>tkm</u> QC by: <u>cmw</u>
Grazed and impacted by cattle hooves.					

# SOIL

Sampling Point: **P13**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/1	80	7.5YR 5/8	20	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): 9  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Ponded water observed. Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/20/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P14  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 33, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace drainage Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.302050 Long: -122.825500 Datum: NAD 1983  
 Soil Map Unit Name: Unit 43: Darow silty clay loam NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland W17 - long linear feature in golf course, east of paved path. This wetland was partially captured in WD2004-0551.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.	<u>Populus balsamifera</u>	<u>15%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>60</u> x 2 = <u>120</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>255</u> (B) Prevalence Index = B/A = <u>2.22</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> ) 1. <u>Salix scouleriana</u> <u>20%</u> <u>Yes</u> <u>FAC</u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 3. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>20%</u> = Total Cover					
Herb Stratum (Plot size: <u>5' r</u> ) 1. <u>Carex praegracilis</u> <u>60%</u> <u>Yes</u> <u>FACW</u> 2. <u>Eleocharis acicularis</u> <u>15%</u> <u>No</u> <u>OBL</u> 3. <u>Alopecurus pratensis</u> <u>5%</u> <u>No</u> <u>FAC</u> 4. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 5. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 6. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 7. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 8. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 9. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 10. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 11. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>80%</u> = Total Cover					
Woody Vine Stratum (Plot size: <u>10' r</u> ) 1. <u>      </u> <u>      </u> <u>      </u> <u>      </u> 2. <u>      </u> <u>      </u> <u>      </u> <u>      </u> <u>0%</u> = Total Cover					
% Bare Ground in Herb Stratum <u>20%</u>					<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Remarks:					<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Entered by: <u>tkm</u> QC by: <u>cmw</u>					

# SOIL

Sampling Point: **P14**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-0.5	10YR 3/2	100					muck	
0.5-5.5	2.5Y 4/2	95	10YR 4/4	5	C	M	CL	Gravels, roots.

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes ☒ No ☐**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Gravel fill at 5.5" caused shovel refusal and prevented us from being able to confirm the 6" thickness requirement for A11. Gravels likely from construction of irrigation system. Muck may be from build-up of fertilizer and organic material under wet conditions. BPJ was used to check A11.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☒ No ☐ Depth (inches): 6  
Saturation Present? Yes ☒ No ☐ Depth (inches): surface  
(includes capillary fringe)

**Wetland Hydrology Present?**

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Strong algal matting, likely a result of golf green management practices.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/20/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P15  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 33, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.304000 Long: -122.827100 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>      </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u>      </u>	
Wetland Hydrology Present?	Yes <u>      </u> No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>		
Remarks: WD2004-0551 wetland polygons are located north and southwest of sample plot. It is likely that golf course management has altered the hydrology in the 11 years since.		

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
1.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
		<u>0%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>15</u> x 3 = <u>45</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>70</u> x 5 = <u>350</u> Column Totals: <u>100</u> (A) <u>455</u> (B) Prevalence Index = B/A = <u>4.55</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
3.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
4.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
5.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
		<u>0%</u> = Total Cover			
Herb Stratum (Plot size: <u>5' r</u> )					<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>
1.	<u>Geranium molle</u>	<u>30%</u>	<u>Yes</u>	<u>NOL</u>	
2.	<u>Vulpia microstachys</u>	<u>30%</u>	<u>Yes</u>	<u>NOL</u>	
3.	<u>Lupinus bicolor</u>	<u>10%</u>	<u>No</u>	<u>NOL</u>	
4.	<u>Medicago polymorpha</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>	
5.	<u>Alopecurus pratensis</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
6.	<u>Vicia americana</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
7.	<u>Poa bulbosa</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
8.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
9.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
10.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
11.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
		<u>100%</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>10' r</u> )					
1.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
2.	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>	
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>0%</u>					

Remarks:  
Relict *A. pratensis* hummocks.

Entered by: tkm QC by: cmw

# SOIL

Sampling Point: **P15**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	95	10YR 4/6	5	C	M	CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Recently drained as a result of golf course management. Redox may be relict from prior to golf course construction/drainage. Redox has distinct boundaries.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes ☐ No ☒ Depth (inches): >12  
Saturation Present? Yes ☐ No ☒ Depth (inches): >12  
(includes capillary fringe)

**Wetland Hydrology Present?** Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Surface soil cracks are worn and likely remnant from before draining.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/21/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P16  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 6, T38S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.299270 Long: -122.870600 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>      </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u>      </u>	
Wetland Hydrology Present?	Yes <u>      </u> No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>		
Remarks: <u>South of pond that has had some seepage. Pond water level low and owner mentioned that pond is no longer in use and will be plugged since the orchard was removed.</u>		

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>5</u> x 1 = <u>5</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>2</u> x 3 = <u>6</u> FACU species <u>13</u> x 4 = <u>52</u> UPL species <u>30</u> x 5 = <u>150</u> Column Totals: <u>50</u> (A) <u>213</u> (B) Prevalence Index = B/A = <u>4.26</u>	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>	
1.	<u>Geranium molle</u>	<u>30%</u>	<u>Yes</u>	<u>NOL</u>		
2.	<u>Lactuca serriola</u>	<u>10%</u>	<u>No</u>	<u>FACU</u>		
3.	<u>Typha latifolia</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>		
4.	<u>Cardamine hirsuta</u>	<u>3%</u>	<u>No</u>	<u>FACU</u>		
5.	<u>Dipsacus fullonum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>		
6.						
7.						
8.						
9.						
10.						
11.						
		<u>50%</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u>10' r</u> )					
1.						
2.						
		<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum		<u>50%</u>				

Remarks: T. latifolia not growing back in this season and is stunted due to lack of hydrology from pond. Entered by: tkm QC by: cmw

## SOIL

Sampling Point: **P16**

**Profile Description:** (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

[illegible]

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

### Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type:

Depth (inches): \_\_\_\_\_

Hydric Soil Present?	Yes	<b>X</b>	No
----------------------	-----	----------	----

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric soil are likely relict of previous hydrological regime when pond was filled and in active use.

## HYDROLOGY

### Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

– Secondary Indicators (2 or more required)

Secondary Indicators (2 or more required)		
Surface Water (A1)	Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>	Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
High Water Table (A2)	Salt Crust (B11)	Drainage Patterns (B10)
Saturation (A3)	Aquatic Invertebrates (B13)	Dry-Season Water Table (C2)
Water Marks (B1)	Hydrogen Sulfide Odor (C1)	Saturation Visible on Aerial Imagery (C9)
Sediment Deposits (B2)	Oxidized Rhizospheres along Living Roots (C3)	Geomorphic Position (D2)
Drift Deposits (B3)	Presence of Reduced Iron (C4)	Shallow Aquitard (D3)
Algal Mat or Crust (B4)	Recent Iron Reduction in Tilled Soils (C6)	FAC-Neutral Test (D5)
Iron Deposits (B5)	Stunted or Stressed Plants (D1) <b>(LRR A)</b>	Raised Ant Mounds (D6) <b>(LRR A)</b>
Surface Soil Cracks (B6)	Other (Explain in Remarks)	Frost-Heave Hummocks (D7)
Inundation Visible on Aerial Imagery (B7)		
Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes _____	No <u>X</u> _____	Depth (inches): _____
Water Table Present?	Yes _____	No <u>X</u> _____	Depth (inches): <u>&gt;12</u>
Saturation Present? (includes capillary fringe)	Yes _____	No <u>X</u> _____	Depth (inches): <u>&gt;12</u>

Wetland Hydrology Present?

Yes No **X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:	Entered by: <u>tkm</u> QC by: <u>cmw</u>
Downslope of pond. Was receiving hydrology from pond seepage prior to decommissioning of pond and orchard.	



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/21/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P17  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 31, T37S, R1W  
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: \_\_\_\_\_ Long: \_\_\_\_\_ Datum: NAD 1983  
 Soil Map Unit Name: Unit 23A: Camas-Newberg-Evans complex NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland W18 - SW corner of Bear Creek greenway. Plot placed on study area boundary in wetland because most of wetland surrounded by impenetrable blackberry. Near 'BCVSA' sign and water line manhole. Wetland receives hydrology from Bear Creek floodplain.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
1.	<u>Populus balsamifera</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
		<u>30%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>65</u> x 2 = <u>130</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>2.61</u>
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				
1.	<u>Rubus armeniacus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		<u>20%</u> = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation <u>X</u> 2 - Dominance Test is >50% <u>X</u> 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
1.	<u>Phalaris arundinacea</u>	<u>65%</u>	<u>Yes</u>	<u>FACW</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
11.	_____	_____	_____	_____	
		<u>65%</u> = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>35%</u>					

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# SOIL

Sampling Point: **P17**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 2/2	100					SCL	
4-10	10YR 3/1	85	7.5YR 4/4	15	C	M	SC	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

☐ Histosol (A1) ☒ Sandy Redox (S5)  
☐ Histic Epipedon (A2) ☐ Stripped Matrix (S6)  
☐ Black Histic (A3) ☐ Loamy Mucky Mineral (F1) **(except MLRA 1)**  
☐ Hydrogen Sulfide (A4) ☐ Loamy Gleyed Matrix (F2)  
☐ Depleted Below Dark Surface (A11) ☐ Depleted Matrix (F3)  
☐ Thick Dark Surface (A12) ☒ Redox Dark Surface (F6)  
☐ Sandy Mucky Mineral (S1) ☐ Depleted Dark Surface (F7)  
☐ Sandy Gleyed Matrix (S4) ☐ Redox Depressions (F8)

☐ 2 cm Muck (A10)  
☐ Red Parent Material (TF2)  
☐ Very Shallow Dark Surface (TF12)  
☐ Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
 Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
 Shovel refusal at 10" due to large cobbles.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

☐ Surface Water (A1) ☐ Water-Stained Leaves (B9) **(except MLRA 1, 2, 4A, and 4B)**  
☐ High Water Table (A2) ☐ Salt Crust (B11)  
☐ Saturation (A3) ☐ Aquatic Invertebrates (B13)  
☐ Water Marks (B1) ☐ Hydrogen Sulfide Odor (C1)  
☐ Sediment Deposits (B2) ☐ Oxidized Rhizospheres along Living Roots (C3)  
☐ Drift Deposits (B3) ☐ Presence of Reduced Iron (C4)  
☐ Algal Mat or Crust (B4) ☐ Recent Iron Reduction in Tilled Soils (C6)  
☐ Iron Deposits (B5) ☐ Stunted or Stressed Plants (D1) **(LRR A)**  
☐ Surface Soil Cracks (B6) ☐ Other (Explain in Remarks)  
☐ Inundation Visible on Aerial Imagery (B7)  
☐ Sparsely Vegetated Concave Surface (B8)

☒ Water-Stained Leaves (B9) **(MLRA 1, 2, 4A, and 4B)**  
☐ Drainage Patterns (B10)  
☐ Dry-Season Water Table (C2)  
☒ Saturation Visible on Aerial Imagery (C9)  
☒ Geomorphic Position (D2)  
☐ Shallow Aquitard (D3)  
☐ FAC-Neutral Test (D5)  
☐ Raised Ant Mounds (D6) **(LRR A)**  
☐ Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes ☐ No ☒ Depth (inches): \_\_\_\_\_  
 Water Table Present? Yes ☐ No ☒ Depth (inches): >10  
 Saturation Present? Yes ☐ No ☒ Depth (inches): >10  
 (includes capillary fringe)

**Wetland Hydrology Present?**  
 Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Moist throughout. Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/20/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P18  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 33, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.302120 Long: -122.823300 Datum: NAD 1983  
 Soil Map Unit Name: Unit 43: Darow silty clay loam NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>      </u> No <u>X</u>	Is the Sampled Area within a Wetland? Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>X</u> No <u>      </u>	
Wetland Hydrology Present?	Yes <u>      </u> No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>		
Remarks: <u>Recently drained by golf course management practices. No clear connection to S08 mapped ditch.</u>		

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status
1.				
2.				
3.				
4.				
		0% = Total Cover		
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )			
1.				
2.				
3.				
4.				
5.				
		0% = Total Cover		
Herb Stratum	(Plot size: <u>5' r</u> )			
1.	<u>Geranium molle</u>	<u>30%</u>	<u>Yes</u>	<u>NOL</u>
2.	<u>Vulpia microstachys</u>	<u>20%</u>	<u>Yes</u>	<u>NOL</u>
3.	<u>Medicago polymorpha</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>
4.	<u>Lupinus bicolor</u>	<u>10%</u>	<u>No</u>	<u>NOL</u>
5.	<u>Alopecurus pratensis</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>
6.	<u>Vicia americana</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>
7.	<u>Poa bulbosa</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>
8.				
9.				
10.				
11.				
		95% = Total Cover		
Woody Vine Stratum	(Plot size: <u>10' r</u> )			
1.				
2.				
		0% = Total Cover		
% Bare Ground in Herb Stratum		<u>5%</u>		

**Dominance Test worksheet:**  
 Number of Dominant Species  
 That Are OBL, FACW, or FAC: 0 (A)  
 Total Number of Dominant Species Across All Strata: 3 (B)  
 Percent of Dominant Species  
 That Are OBL, FACW, or FAC: 0% (A/B)

**Prevalence Index worksheet:**  
 Total % Cover of:        Multiply by:         
 OBL species 0 x 1 = 0  
 FACW species 0 x 2 = 0  
 FAC species 10 x 3 = 30  
 FACU species 25 x 4 = 100  
 UPL species 60 x 5 = 300  
 Column Totals: 95 (A) 430 (B)  
 Prevalence Index = B/A = 4.53

**Hydrophytic Vegetation Indicators:**  
 1 - Rapid Test for Hydrophytic Vegetation  
 2 - Dominance Test is >50%  
 3 - Prevalence Index is ≤3.0<sup>1</sup>  
 4 - Morphological Adaptations<sup>1</sup> (Provide supporting data in Remarks or on a separate sheet)  
 5 - Wetland Non-Vascular Plants<sup>1</sup>  
 Problematic Hydrophytic Vegetation<sup>1</sup> (Explain)  
<sup>1</sup>Indicators of hydric soil and wetland hydrology must be present.

**Hydrophytic Vegetation Present?** Yes        No X

Remarks:        Entered by: tkm QC by: cmw

## SOIL

Sampling Point: P18

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	95	10YR 4/6	5	C	M	CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	<sup>3</sup> Indicators of hydrophytic vegetation and
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	wetland hydrology must be present,
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

Hydric soils are likely relict due to recent changes in hydrological regime.

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;12</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;12</u>

Wetland Hydrology Present?

Yes ☐ No ☒

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Dry.

Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/22/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P20  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 5, T38S, R1W  
 Landform (hillslope, terrace, etc.): floodplain terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.293770 Long: -122.850400 Datum: NAD 1983  
 Soil Map Unit Name: Unit 76A: Gregory silty clay loam (hydric) NWI classification: PEMC, PUBHx  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Wetland W19_A. Low area adjacent to stream and well-defined topographically. Recieves surface flow from adjacent uplands and overflow from stream.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)
1.					
2.					
3.					
4.					
		0% = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>27</u> x 2 = <u>54</u> FAC species <u>18</u> x 3 = <u>54</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>60</u> (A) <u>123</u> (B) Prevalence Index = B/A = <u>2.05</u>
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
3.					
4.					
5.					
		0% = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
1.	<u>Juncus effusus</u>	<u>25%</u>	<u>Yes</u>	<u>FACW</u>	
2.	<u>Schedonorus arundinaceus</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
3.	<u>Eleocharis palustris</u>	<u>10%</u>	<u>No</u>	<u>OBL</u>	
4.	<u>Lotus corniculatus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5.	<u>Veronica peregrina</u>	<u>5%</u>	<u>No</u>	<u>OBL</u>	
6.	<u>Ranunculus repens</u>	<u>3%</u>	<u>No</u>	<u>FAC</u>	
7.	<u>Carex praegracilis</u>	<u>2%</u>	<u>No</u>	<u>FACW</u>	
8.					
9.					
10.					
11.					
		60% = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum		<u>40%</u>			
Remarks:					

# SOIL

Sampling Point: **P20**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100					C	
7-16	10YR 2/1	95	5YR 3/3	3	C	M	C	
			10YR 3/2	2	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>

**Wetland Hydrology Present?**

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/22/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P21  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 5, T38S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.293580 Long: -122.849500 Datum: NAD 1983  
 Soil Map Unit Name: Unit 127A: Medford silty clay loam NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Wetland W20. Recieves hydrology from surrounding topography and surface flow. May have subsurface connection to W19.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		0% = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>50</u> x 1 = <u>50</u> FACW species <u>30</u> x 2 = <u>60</u> FAC species <u>25</u> x 3 = <u>75</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>205</u> (B) Prevalence Index = B/A = <u>1.86</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
3.					
4.					
5.					
		0% = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Herb Stratum (Plot size: <u>5' r</u> )					
1.	<u>Eleocharis palustris</u>	<u>50%</u>	<u>Yes</u>	<u>OBL</u>	
2.	<u>Carex praegracilis</u>	<u>30%</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Ranunculus repens</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
4.	<u>Acmispon americanus</u>	<u>5%</u>	<u>No</u>	<u>FACU</u>	
5.	<u>Schedonorus arundinaceus</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
6.					
7.					
8.					
9.					
10.					
11.					
		110% = Total Cover			
Woody Vine Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
		0% = Total Cover			
% Bare Ground in Herb Stratum		<u>0%</u>			
Remarks: Stunted vegetation.					

# SOIL

Sampling Point: **P21**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-7	10YR 2/1	100					C	Dense clay.
7-16	10YR 2/1	95	5YR 3/3	3	C	M	C	
			10YR 3/2	2	C	M		

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes ☒ No ☐**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input checked="" type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>

**Wetland Hydrology Present?**

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/22/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P22  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 35, T37S, R2W  
 Landform (hillslope, terrace, etc.): \_\_\_\_\_ Local relief (concave, convex, none): none Slope (%): \_\_\_\_\_  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.313100 Long: -122.904200 Datum: NAD 1983  
 Soil Map Unit Name: Unit 76A: Gregory silty clay loam (hydric) NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No \_\_\_\_\_ (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Decommissioned pear orchard. No longer irrigated.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
		<u>0%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>8</u> x 3 = <u>24</u> FACU species <u>26</u> x 4 = <u>104</u> UPL species <u>25</u> x 5 = <u>125</u> Column Totals: <u>79</u> (A) <u>293</u> (B) Prevalence Index = B/A = <u>3.71</u>
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				
1.	<u>Rubus armeniacus</u>	<u>20%</u>	<u>Yes</u>	<u>FACU</u>	
2.	_____	_____	_____	_____	
3.	_____	_____	_____	_____	
4.	_____	_____	_____	_____	
5.	_____	_____	_____	_____	
		<u>20%</u> = Total Cover			
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1.	<u>Erodium cicutarium</u>	<u>25%</u>	<u>Yes</u>	<u>NOL</u>	
2.	<u>Phalaris arundinacea</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
3.	<u>Dipsacus fullonum</u>	<u>8%</u>	<u>No</u>	<u>FAC</u>	
4.	<u>Plantago lanceolata</u>	<u>4%</u>	<u>No</u>	<u>FACU</u>	
5.	<u>Lactuca serriola</u>	<u>2%</u>	<u>No</u>	<u>FACU</u>	
6.	_____	_____	_____	_____	
7.	_____	_____	_____	_____	
8.	_____	_____	_____	_____	
9.	_____	_____	_____	_____	
10.	_____	_____	_____	_____	
11.	_____	_____	_____	_____	
		<u>59%</u> = Total Cover			
Woody Vine Stratum	(Plot size: <u>10' r</u> )				
1.	_____	_____	_____	_____	
2.	_____	_____	_____	_____	
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum		<u>41%</u>			

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Dominated by non-hydric vegetation and differs slightly from adjacent upland vegetation community.

# SOIL

Sampling Point: **P22**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	100					CL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes \_\_\_\_\_ No ☒**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
In mapped hydric soil.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No ☒ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No ☒ Depth (inches): >12  
Saturation Present? Yes \_\_\_\_\_ No ☒ Depth (inches): >12  
(includes capillary fringe)

**Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Previously irrigated but irrigation system now decommissioned.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/22/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P23  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 32, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.396650 Long: -122.852600 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>      </u>	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Flood irrigated hay pasture.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>15</u> x 4 = <u>60</u> UPL species <u>45</u> x 5 = <u>225</u> Column Totals: <u>100</u> (A) <u>405</u> (B) Prevalence Index = B/A = <u>4.05</u>	
1.						
2.						
3.						
4.						
		<u>0%</u> = Total Cover				
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>      </u> No <u>X</u>	
1.	<u>Geranium dissectum</u>	<u>20%</u>	<u>Yes</u>	<u>NOL</u>		
2.	<u>Vicia hirsuta</u>	<u>20%</u>	<u>Yes</u>	<u>NOL</u>		
3.	<u>Schedonorus arundinaceus</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>		
4.	<u>Poa species</u>	<u>20%</u>	<u>Yes</u>	<u>FAC ?</u>		
5.	<u>Plantago lanceolata</u>	<u>15%</u>	<u>No</u>	<u>FACU</u>		
6.	<u>Veronica persica</u>	<u>5%</u>	<u>No</u>	<u>NOL</u>		
7.						
8.						
9.						
10.						
11.						
		<u>100%</u> = Total Cover				
Woody Vine Stratum	(Plot size: <u>10' r</u> )					
1.						
2.						
		<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum		<u>0%</u>				
Remarks: * = Assumed FAC.					Entered by: <u>tkm</u> QC by: <u>cmw</u>	
Poa assumed FAC. Vegetation highly disturbed due to historical land use.						

# SOIL

Sampling Point: **P23**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-12	10YR 3/2	100					C	Dense clay, roots.

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>12** \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>12** \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/23/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P24  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 32, T36S, R1W  
 Landform (hillslope, terrace, etc.): slight depression Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.397.86 Long: -122.847600 Datum: NAD 1983  
 Soil Map Unit Name: Unit 33: Coker clay NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: <u>Flood irrigated pasture. Sample collected in area of low topography.</u>			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
0% = Total Cover					
Sapling/Shrub Stratum	(Plot size: <u>10' r</u> )				<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>75</u> x 3 = <u>225</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>95</u> (A) <u>265</u> (B) Prevalence Index = B/A = <u>2.79</u>
1.					
2.					
3.					
4.					
5.					
0% = Total Cover					
Herb Stratum	(Plot size: <u>5' r</u> )				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1.	<u>Schedonorus arundinaceus</u>	<u>40%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Alopecurus pratensis</u>	<u>30%</u>	<u>Yes</u>	<u>FAC</u>	
3.	<u>Carex praegracilis</u>	<u>20%</u>	<u>Yes</u>	<u>FACW</u>	
4.	<u>Ranunculus repens</u>	<u>5%</u>	<u>No</u>	<u>FAC</u>	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
95% = Total Cover					
Woody Vine Stratum	(Plot size: <u>10' r</u> )				<b>Hydrophytic Vegetation</b> Yes <u>X</u> No <u>      </u> <b>Present?</b>
1.					
2.					
0% = Total Cover					
% Bare Ground in Herb Stratum <u>5%</u>					
Remarks:					Entered by: <u>tkm</u> QC by: <u>cmw</u>

# SOIL

Sampling Point: **P24**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-2	7.5YR 3/2	100					C	Many roots.
2-13	7.5YR 4/1	100					C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present?** Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)  
Dense clay w/ dense roots present in 0-2" layer.

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>13** \_\_\_\_\_  
Saturation Present? Yes \_\_\_\_\_ No **X** \_\_\_\_\_ Depth (inches): **>13** \_\_\_\_\_  
(includes capillary fringe)

**Wetland Hydrology Present?**  
Yes \_\_\_\_\_ No **X** \_\_\_\_\_

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: \_\_\_\_\_ Entered by: tkm QC by: cmw  
Dry throughout. Saturated signature on past aerial photographs is result of flood irrigation.

# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/23/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P25  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 5, T37S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <3  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.378590 Long: -122.852800 Datum: NAD 1983  
 Soil Map Unit Name: Unit 139A: Padigan clay (hydric) NWI classification: none  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>      </u> No <u>X</u>
Hydric Soil Present?	Yes <u>      </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u>      </u>	No <u>X</u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: Slight ditch to south/downslope. Previously mapped as wetland (WD2007-0106). May have received hydrology from orchard irrigation which is now decommissioned.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u> = Total Cover			<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>87</u> x 3 = <u>261</u> FACU species <u>1</u> x 4 = <u>4</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>88</u> (A) <u>265</u> (B) Prevalence Index = B/A = <u>3.01</u>
Sapling/Shrub Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
3.					
4.					
5.					
		<u>0%</u> = Total Cover			<b>Hydrophytic Vegetation Indicators:</b> <u>1</u> - Rapid Test for Hydrophytic Vegetation <u>X</u> <u>2</u> - Dominance Test is >50% <u>      </u> <u>3</u> - Prevalence Index is ≤3.0 <sup>1</sup> <u>      </u> <u>4</u> - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) <u>      </u> <u>5</u> - Wetland Non-Vascular Plants <sup>1</sup> <u>      </u> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.  <b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Herb Stratum (Plot size: <u>5' r</u> )					
1.	<u>Conium maculatum</u>	<u>75%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Dipsacus fullonum</u>	<u>10%</u>	<u>No</u>	<u>FAC</u>	
3.	<u>Agrostis stolonifera</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
4.	<u>Poa bulbosa</u>	<u>1%</u>	<u>No</u>	<u>FACU</u>	
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		<u>88%</u> = Total Cover			
Woody Vine Stratum (Plot size: <u>10' r</u> )					
1.					
2.					
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>12%</u>					
Remarks: Vegetation dominated by facultative species. Highly disturbed vegetation.					

# SOIL

Sampling Point: **P25**

**Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)**

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-16	10YR 3/2	100					C	trace sands

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup>Location: PL=Pore Lining, M=Matrix.

**Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)**

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) <b>(except MLRA 1)</b>
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)

**Indicators for Problematic Hydric Soils<sup>3</sup>:**

<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Other (Explain in Remarks)

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

**Restrictive Layer (if present):**

Type: \_\_\_\_\_  
Depth (inches): \_\_\_\_\_

**Hydric Soil Present? Yes \_\_\_\_\_ No ☒ X**

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) <b>(except MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) <b>(LRR A)</b>
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	

Secondary Indicators (2 or more required)

<input type="checkbox"/> Water-Stained Leaves (B9) <b>(MLRA 1, 2, 4A, and 4B)</b>
<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Raised Ant Mounds (D6) <b>(LRR A)</b>
<input type="checkbox"/> Frost-Heave Hummocks (D7)

**Field Observations:**

Surface Water Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): \_\_\_\_\_  
Water Table Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): >16  
Saturation Present? Yes \_\_\_\_\_ No ☒ X Depth (inches): >16  
(includes capillary fringe)

**Wetland Hydrology Present? Yes \_\_\_\_\_ No ☒ X**

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks: Dry. In large topographic swale. Entered by: tkm QC by: cmw



# WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: Medford Urban Reserve LWI City/County: Medford UR / Jackson Sampling Date: 4/23/2015  
 Applicant/Owner: City of Medford State: OR Sampling Point: P26  
 Investigator(s): Clare Kenny, Taya K. MacLean Section, Township, Range: Section 31, T36S, R1W  
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave Slope (%): <2  
 Subregion (LRR): A, Northwest Forests and Coast Lat: 42.395050 Long: -122.862300 Datum: NAD 1983  
 Soil Map Unit Name: Unit 35A: Cove clay (hydric) NWI classification: PEMC  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No        (If no, explain in Remarks)  
 Are Vegetation       , Soil       , or Hydrology        significantly disturbed? Are "Normal Circumstances" present? Yes X No         
 Are Vegetation       , Soil       , or Hydrology        naturally problematic? (If needed, explain any answers in Remarks.)

## SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u>X</u>	No <u>      </u>	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No <u>      </u>
Hydric Soil Present?	Yes <u>X</u>	No <u>      </u>	
Wetland Hydrology Present?	Yes <u>X</u>	No <u>      </u>	
Precipitation prior to fieldwork: <u>Dry spring evaluation</u>			
Remarks: PEM wetland W04-A. Sample collected in NW corner of parcel, in lowest area of topography. Roadside ditch feeds to wetland.			

## VEGETATION

Tree Stratum	(Plot size: <u>30' r</u> )	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)  Total Number of Dominant Species Across All Strata: <u>1</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
1.					
2.					
3.					
4.					
		<u>0%</u>	= Total Cover		<b>Prevalence Index worksheet:</b> Total % Cover of: <u>      </u> Multiply by: <u>      </u> OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>100</u> x 3 = <u>300</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>100</u> (A) <u>300</u> (B) Prevalence Index = B/A = <u>3.00</u>
Sapling/Shrub Stratum		(Plot size: <u>10' r</u> )			
1.					
2.					
3.					
4.					
5.					
		<u>0%</u>	= Total Cover		<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation <sup>1</sup> (Explain) <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
Herb Stratum		(Plot size: <u>5' r</u> )			
1.	<u>Alopecurus pratensis</u>	<u>98%</u>	<u>Yes</u>	<u>FAC</u>	
2.	<u>Dipsacus fullonum</u>	<u>2%</u>	<u>No</u>	<u>FAC</u>	
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
		<u>100%</u>	= Total Cover		<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No <u>      </u>
Woody Vine Stratum		(Plot size: <u>10' r</u> )			
1.					
2.					
		<u>0%</u>	= Total Cover		
% Bare Ground in Herb Stratum		<u>0%</u>			
Remarks: Entered by: <u>tkm</u> QC by: <u>cmw</u>					

## SOIL

Sampling Point: P26

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>		
0-4	10YR 3/1	95	7.5YR 4/6	5	C	M	C	
4-16	10YR 4/1	95	7.5YR 4/6	5	C	M	C	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils<sup>3</sup>:

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) ( <b>except MLRA 1</b> )	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input checked="" type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

<sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):

Type: \_\_\_\_\_

Depth (inches): \_\_\_\_\_

Hydric Soil Present? Yes ☒ No ☐

Remarks: S = sand; Si = silt; C = clay; L = loam or loamy; co = coarse; f = fine; vf = very fine; + = heavy (more clay); - = light (less clay)

## HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)

Secondary Indicators (2 or more required)

<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>except MLRA 1, 2, 4A, and 4B</b> )	<input type="checkbox"/> Water-Stained Leaves (B9) ( <b>MLRA 1, 2, 4A, and 4B</b> )
<input type="checkbox"/> High Water Table (A2)		
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input checked="" type="checkbox"/> Geomorphic Position (D2)
<input checked="" type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Stunted or Stressed Plants (D1) ( <b>LRR A</b> )	<input type="checkbox"/> Raised Ant Mounds (D6) ( <b>LRR A</b> )
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): _____
Water Table Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>
Saturation Present? (includes capillary fringe)	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Depth (inches): <u>&gt;16</u>

Wetland Hydrology Present?

Yes ☒ No ☐

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Entered by: tkm QC by: cmw

Receives hydrology from upslope, road ditch, and is connected to adjacent vernal pool mosaic.

## **Appendix D**

### **Wetland Summary Sheets**

*This page intentionally left blank.*

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W01		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3027 Long: -122.813		<b>Figure Number:</b> F-69	
<b>(C) Location:</b> Tax Lot(s): 371W345300, 371W345200, 371W345100			
T, R, S(s): T37S R01W Section 34, T38S R01W Section 03			
QQ(s): L13, L14, SWSW, SESW, NWNW			
<b>(D) Wetland Size (acres):</b> 2.16		<b>(E) Cowardin Class:</b> PEMCh	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> SV	
<b>(G) Mapped Soil Units:</b> Coker clay, Darow silty clay loam			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> P01, P02		<b>(M) If no plot - Visually confirmed?</b> N/A	
<b>Plot date (if any):</b> 4/6/2015		<b>Visual date (if any):</b>	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
Tree			
Shrub			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
spreading bent	<i>Agrostis stolonifera</i>		
needle spike-rush	<i>Eleocharis acicularis</i>		
<b>(L) Primary hydrology sources:</b> Drain and ditch			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">No</span> <b>LSW Criteria:</b> none			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Wetland is located in a flood irrigated pasture dominated by meadow foxtail. It is connected to W02 by a ditch line that runs along the southern boundary of the parcel.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W02-A		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3020 Long: -122.811		<b>Figure Number:</b> F-68, F-69	
<b>(C) Location:</b> Tax Lot(s): 381W03300			
T, R, S(s): T37S R01W Section 34, T38S R01W Section 03			
QQ(s): SESW, NENW, NWNW			
<b>(D) Wetland Size (acres):</b> 0.50	<b>(E) Cowardin Class:</b> PEMCh	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> SV		
<b>(G) Mapped Soil Units:</b> Coker clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> P03		<b>(M) If no plot - Visually confirmed?</b> N/A	
<b>Plot date (if any):</b> 4/6/2015		<b>Visual date (if any):</b>	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
Tree			
Shrub			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
Baltic rush	<i>Juncus balticus</i>		
needle spike-rush	<i>Eleocharis acicularis</i>		
<b>(L) Primary hydrology sources:</b> Ditch			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> No <b>LSW Criteria:</b> none			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Wetland is located in a flood irrigated pasture dominated by meadow foxtail. It is connected to W01 by ditches, however has been separated out as a separate OFWAM assessment unit.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W02-B</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3023</u>	Long: <u>-122.809</u>	<b>Figure Number:</b> <u>F-68</u>	<u>BCS-12</u>
<b>(C) Location:</b> Tax Lot(s): <u>381W03300</u>					
T, R, S(s): <u>T37S R01W Section 34, T38S R01W Section 03</u>					
QQ(s): <u>SESW, NENW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.17</u>		<b>(E) Cowardin Class:</b> <u>PEMCh</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RI</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>P03</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>			
<b>Plot date (if any):</b> <u>4/6/2015</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail		<i>Alopecurus pratensis</i>			
Baltic rush		<i>Juncus balticus</i>			
needle spike-rush		<i>Eleocharis acicularis</i>			
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">No</span> LSW Criteria: <u>none</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland is located in a flood irrigated pasture dominated by meadow foxtail. It is connected to W02 by ditches, however has been separated out as a separate OFWAM assessment unit.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W03			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3023	Long: -122.807	<b>Figure Number:</b> F-68	BCS-9
<b>(C) Location:</b> Tax Lot(s): 371W345300, 381W03300					
T, R, S(s): T37S R01W Section 34, T38S R01W Section 03					
QQ(s): SWSE, L12, L13, SESW, NWNE, NENW					
<b>(D) Wetland Size (acres):</b> 2.33		<b>(E) Cowardin Class:</b> PEMBh		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV			
<b>(G) Mapped Soil Units:</b> Brader-Debenger, Coker clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek					
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes			
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/6/2015 and 7/1/2015			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Viewed from Medford Irrigation District canal dike.			
<b>(J) DSL determination / delineation number (if any):</b> N/A					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail <i>Alopecurus pratensis</i>					
<b>(L) Primary hydrology sources:</b> Medford Irrigation District Canal					
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<div style="border: 2px solid black; padding: 2px; display: inline-block;">No</div>		<b>LSW Criteria:</b> none	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland is located in a flood irrigated pasture dominated by meadow foxtail. Obvious wetland signature observed on 4/6/15 from west of irrigation canal.					



# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W04-A</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3946</u>	Long: <u>-122.862</u>
		Figure Number: <u>F-8</u>	MWC-1
(C) Location: Tax Lot(s): <u>361W31D1700, 361W31D1800</u>			
T, R, S(s): <u>T36S R01W Section 31D</u>			
QQ(s): <u>NWSE</u>			
(D) Wetland Size (acres): <u>1.67</u>		(E) Cowardin Class: <u>PEMcd</u>	Cowardin breakdown if multiple =
		(F) HGM Class: <u>SV</u>	
(G) Mapped Soil Units: <u>Coker clay, Cove clay, Phoenix clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>			
(I) Sample Plot Numbers (if any): <u>P05, P26</u>		(M) If no plot - Visually confirmed? <u>N/A</u>	
Plot date (if any): <u>4/7/2015, 4/23/2015</u>		Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
spreading rush	<i>Juncus patens</i>		
Fuller's teasel	<i>Dipsacus fullonum</i>		
(L) Primary hydrology sources: <u>Ditch</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
Wetland is located south of Justice Road. Standing water was present in northwest corner of wetland where it receives ditch inflow. This wetland connects to W04-B via a ditch line, and is likely connected hydrologically to W04-Mosaic via hummocky microtopography to the southeast.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W04-B</u>			OFWAM Grouping Code:		
(B) Wetland Location (Centroid):		Lat: <u>42.3947</u>	Long: <u>-122.860</u>	Figure Number: <u>F-8</u>	MWC-1
(C) Location: Tax Lot(s): <u>361W31D1900</u>					
T, R, S(s): <u>T36S R01W Section 31D</u>					
QQ(s): <u>NESE</u>					
(D) Wetland Size (acres): <u>0.15</u>		(E) Cowardin Class: <u>PEMCh</u>	Cowardin breakdown if multiple =		
		(F) HGM Class: <u>RI</u>			
(G) Mapped Soil Units: <u>Phoenix clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>					
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>Yes</u>			
Plot date (if any): <u>N/A</u>		Visual date (if any): <u>4/7/2015</u>			
Method: <u>USACE; WMVC supplement</u>		Method (if any): <u>Confirmed during site visit without sample plot</u>			
(J) DSL determination / delineation number (if any): <u>N/A</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
Tree					
Shrub					
Herb					
lamp rush <u>Juncus effusus</u>					
(L) Primary hydrology sources: <u>Ditch</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Hydrologic Control</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
Wetland is depressional (marked by Medford City Marsh points) and fed by ditch inflow. It is distinct from the mosaic complex, but connected hydrologically to W04-A via roadside ditch.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W04-Mosaic				<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3939	Long: -122.861	<b>Figure Number:</b> F-8	
<b>(C) Location:</b>		Tax Lot(s): 361W31D1800, 361W31D1900			
		T, R, S(s): T36S R01W Section 31D			
		QQ(s): NWSE, NESE			
<b>(D) Wetland Size (acres):</b> 6.20		<b>(E) Cowardin Class:</b> PEMC		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV			
<b>(G) Mapped Soil Units:</b> Coker clay, Phoenix clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes			
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/7/2015			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Site visit and walk around			
<b>(J) DSL determination / delineation number (if any):</b> N/A					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail	<i>Alopecurus pratensis</i>	goldfields	<i>Lasthenia species</i>		
navarretia	<i>Navarretia species</i>				
peppergrass	<i>Lepidium species</i>				
popcorn-flower	<i>Plagiobothrys species</i>				
<b>(L) Primary hydrology sources:</b> None					
<b>(N) Locally Significant Wetland Determination:</b>		LSW?	<input checked="" type="checkbox"/> Yes	<b>LSW Criteria:</b> Hydrologic Control.	
Wetland of Special Interest for Protection (rare / unique)					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland appears to be a vernal pool/wetland mosaic. No plot was collected due to the dominance of hard pan soil (and to avoid disturbance). The northeast corner of the feature has been graded and has a selection of flowering vernal pool herbs. Vernal pools are listed as a strategy habitat in the ODFW Oregon Conservation Strategy (2006).					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W06		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3965 Long: -122.865		<b>Figure Number:</b> F-7, F-8	
<b>(C) Location:</b> Tax Lot(s): 361W31A2800, 361W31D1400, 361W31A800			
T, R, S(s): T36S R01W Section 31A, 31D			
QQ(s): SWNE, NWSE			
<b>(D) Wetland Size (acres):</b> 0.30		<b>(E) Cowardin Class:</b> PSS1C	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> RI	
<b>(G) Mapped Soil Units:</b> Cove clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/7/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from start of dirt road at Justice Lane	
<b>(J) DSL determination / delineation number (if any):</b> WD2012-0181			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
willow	<i>Salix species</i>		
narrow-leaf willow	<i>Salix exigua</i>		
<b>Shrub</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
<b>(L) Primary hydrology sources:</b> Swanson Creek			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<input checked="" type="checkbox"/> Yes	<b>LSW Criteria:</b> Wildlife Habitat, Fish Habitat, Water Quality, Hydrologic Control
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
SWCA expanded the WD wetland polygon based on review of historical aerial imagery which suggested the wetland has grown in size since 2012.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W07</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.4028</u>	<b>Long:</b> <u>-122.858</u>	<b>Figure Number:</b> <u>F-4, F-5</u>	<b>MWC-3</b>
<b>(C) Location:</b> Tax Lot(s): <u>361W31A200, 361W31A100</u>					
T, R, S(s): <u>T36S R01W Section 31A</u>					
QQ(s): <u>NENE</u>					
<b>(D) Wetland Size (acres):</b> <u>1.35</u>		<b>(E) Cowardin Class:</b> <u>PEMBh</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/7/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>WD wetland confirmed visually during site visit</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2005-0692</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
lamp rush	<i>Juncus effusus</i>				
creeping wild rye	<i>Elymus repens</i>				
Fuller's teasel	<i>Dipsacus fullonum</i>				
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>					
<b>(N) Locally Significant Wetland Determination:</b>		<b>LSW?</b>	<div style="border: 1px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b>	<u>Water Quality</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
<u>This wetland connects to wetland W38 to the west.</u>					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W08</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3939</u>	<b>Long:</b> <u>-122.852</u>	<b>Figure Number:</b> <u>F-9, F-10</u>	<u>MWC-13</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W32C500, 361W32C100</u>					
T, R, S(s): <u>T36S R01W Section 32C</u>					
QQ(s): <u>NWSW, NESW</u>					
<b>(D) Wetland Size (acres):</b> <u>1.76</u>		<b>(E) Cowardin Class:</b> <u>PEMB</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Cove Clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> <u>Water Quality</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland is located north of Swanson Creek and associated riparian vegetation, within a hydric soil unit. Connected to W39-A and W41.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W09		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3926	Long: -122.846
		<b>Figure Number:</b>	F-10
<b>(C) Location:</b> Tax Lot(s): 361W32C2400, 361W32C100			
T, R, S(s): T36S R01W Section 32, 32C			
QQ(s): NWSE, SESW, SWSE, NESW			
<b>(D) Wetland Size (acres):</b> 11.52	<b>(E) Cowardin Class:</b> PEMBh	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> SV		
<b>(G) Mapped Soil Units:</b> Cove clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> P08		<b>(M) If no plot - Visually confirmed?</b> N/A	
<b>Plot date (if any):</b> 4/8/2015		<b>Visual date (if any):</b>	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> WD2009-0470			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
unknown species			
willow	<i>Salix species</i>		
<b>Shrub</b>			
Oregon ash	<i>Fraxinus latifolia</i>	red osier dogwood	<i>Cornus alba</i>
currant or gooseberry	<i>Ribes species</i>		
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>	See WD2009-0470 for more species.	
spreading rush	<i>Juncus patens</i>		
clustered field sedge	<i>Carex praegracilis</i>		
spreading bent	<i>Agrostis stolonifera</i>		
<b>(L) Primary hydrology sources:</b> Swanson Creek			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Water Quality			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Wetland extends offsite to the northeast and flows into Swanson Creek. Site visit confirmed that a portion of the wetland was on map lot 361W32C2400 (accessible). The portion of the wetland from the DSL wetland delineation data on 361W32C100 was not accessible. Connected to W39-A.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W10-A</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b>	Lat: <u>42.3880</u>	Long: <u>-122.851</u>	<b>Figure Number:</b> <u>F-11, F-112</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W05300, 371W05313</u>			
T, R, S(s): <u>T37S R01W Section 05</u>			
QQ(s): <u>NWNW, SWNW, NENW</u>			
<b>(D) Wetland Size (acres):</b> <u>3.06</u>	<b>(E) Cowardin Class:</b>	<u>PEMcd</u>	<i>Cowardin breakdown if multiple =</i>
	<b>(F) HGM Class:</b>	<u>RFT</u>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>P09</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>	
<b>Plot date (if any):</b> <u>4/8/2015</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2007-0106</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
spreading rush	<i>Juncus patens</i>		
fescue	<i>Festuca species</i>		
toothed medick	<i>Medicago polymorpha</i>		
<b>(L) Primary hydrology sources:</b> <u>Stream</u>			
<b>(N) Locally Significant Wetland Determination:</b>	<u>LSW?</u>	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
<u>Polygon was copied from the DSL wetland delineation data.</u>			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W10-B			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3875	Long: -122.852	<b>Figure Number:</b> F-11	N/A
<b>(C) Location:</b> Tax Lot(s): 371W05300					
T, R, S(s): T37S R01W Section 05					
QQ(s): NWNW					
<b>(D) Wetland Size (acres):</b> 0.05		<b>(E) Cowardin Class:</b> PEMB		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV			
<b>(G) Mapped Soil Units:</b> Coker clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> P09		<b>(M) If no plot - Visually confirmed?</b> N/A			
<b>Plot date (if any):</b> 4/8/2015		<b>Visual date (if any):</b>			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> WD2007-0106					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
spreading rush	<i>Juncus patens</i>				
fescue	<i>Festuca species</i>				
toothed medick	<i>Medicago polymorpha</i>				
<b>(L) Primary hydrology sources:</b> None					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">N/A</span> LSW Criteria: N/A					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland was an upland/wetland mosaic area that was previously delineated. P09 is the representative plot located in the adjacent polygon W10-A. Excluded from OFWAM because <0.5 acre.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W10-C			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3871	Long: -122.852	<b>Figure Number:</b> F-11	N/A
<b>(C) Location:</b> Tax Lot(s): 371W05300					
T, R, S(s): T37S R01W Section 05					
QQ(s): NWNW					
<b>(D) Wetland Size (acres):</b> 0.05		<b>(E) Cowardin Class:</b> PEMB		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV			
<b>(G) Mapped Soil Units:</b> Coker clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> P09		<b>(M) If no plot - Visually confirmed?</b> N/A			
<b>Plot date (if any):</b> 4/8/2015		<b>Visual date (if any):</b>			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> WD2007-0106					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
spreading rush	<i>Juncus patens</i>				
fescue	<i>Festuca species</i>				
toothed medick	<i>Medicago polymorpha</i>				
<b>(L) Primary hydrology sources:</b> None					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> LSW Criteria: N/A					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland was dominated by an upland/wetland mosaic. P09 is the representative plot located in the adjacent polygon W10-A. Excluded from OFWAM because <0.5 acre.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W10-D			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3869	Long: -122.853	<b>Figure Number:</b> F-11	MWC-5
<b>(C) Location:</b> Tax Lot(s): 371W05300, 371W05313					
T, R, S(s): T37S R01W Section 05					
QQ(s): NWNW					
<b>(D) Wetland Size (acres):</b> 0.60		<b>(E) Cowardin Class:</b> PEMC		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV			
<b>(G) Mapped Soil Units:</b> Coker clay, Padigan clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> P09		<b>(M) If no plot - Visually confirmed?</b> N/A			
<b>Plot date (if any):</b> 4/8/2015		<b>Visual date (if any):</b>			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> WD2007-0106					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
spreading rush	<i>Juncus patens</i>				
fescue	<i>Festuca species</i>				
toothed medick	<i>Medicago polymorpha</i>				
<b>(L) Primary hydrology sources:</b> None					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Hydrologic Control					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland polygon was copied from the DSL wetland delineation data. P09 is the representative plot located in the adjacent polygon W10-A. Connected to W10-E and W22.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W10-E</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3867</u>	<b>Long:</b> <u>-122.854</u>	<b>Figure Number:</b> <u>F-11</u>	<b>MWC-5</b>
<b>(C) Location:</b> Tax Lot(s): <u>371W05313</u>					
T, R, S(s): <u>T37S R01W Section 05</u>					
QQ(s): <u>NWNW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.61</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay, Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>P09</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>			
<b>Plot date (if any):</b> <u>4/8/2015</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2007-0106</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
spreading rush	<i>Juncus patens</i>				
fescue	<i>Festuca species</i>				
toothed medick	<i>Medicago polymorpha</i>				
<b>(L) Primary hydrology sources:</b> <u>None</u>					
<b>(N) Locally Significant Wetland Determination:</b>		<u>LSW?</u>	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Wetland polygon was copied from the DSL wetland delineation data. P09 is the representative plot located in the adjacent polygon W10-A. Connected to W22.					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W10-F</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3814</u>	Long: <u>-122.852</u>
		Figure Number: <u>F-13, F-14</u>	
(C) Location: Tax Lot(s): <u>371W05900</u>			
T, R, S(s): <u>T37S R01W Section 05</u>			
QQ(s): <u>NWSW</u>			
(D) Wetland Size (acres): <u>3.80</u>	(E) Cowardin Class: <u>PEMFh</u>	Cowardin breakdown if multiple =	
	(F) HGM Class: <u>DCNP</u>		
(G) Mapped Soil Units: <u>Carney clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>			
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>Yes</u>	
Plot date (if any): <u>N/A</u>		Visual date (if any): <u>4/8/2015</u>	
Method: <u>USACE; WMVC supplement</u>		Method (if any): <u>Site walk through</u>	
(J) DSL determination / delineation number (if any): <u>WD2007-0106</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
spreading rush	<i>Juncus patens</i>		
fescue	<i>Festuca species</i>		
toothed medick	<i>Medicago polymorpha</i>		
(L) Primary hydrology sources: <u>Stream ?</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
Historically present pond no longer present due to decommissioning of orchard and associated irrigation			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W10-G			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3847	Long: -122.851	<b>Figure Number:</b> F-11, F-12, F-13, F-14	MWC-5
<b>(C) Location:</b> Tax Lot(s): 371W05300, 371W05600					
T, R, S(s): T37S R01W Section 05					
QQ(s): SWNW, SENW					
<b>(D) Wetland Size (acres):</b> 1.84		<b>(E) Cowardin Class:</b> PABHh		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> DCP			
<b>(G) Mapped Soil Units:</b> Carney clay, Coker clay, Padigan clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes			
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Site walk through			
<b>(J) DSL determination / delineation number (if any):</b> WD2007-0106					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
spreading rush	<i>Juncus patens</i>				
fescue	<i>Festuca species</i>				
toothed medick	<i>Medicago polymorpha</i>				
<b>(L) Primary hydrology sources:</b> Stream					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Hydrologic Control					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Polygon from previously mapped DSL wetland delineation data was separated in to water and wetland areas. Connected to W10-A and AW32.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W11</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3730 Long: -122.833</u>		<b>Figure Number:</b> <u>F-16, F-17</u>	
<b>(C) Location:</b> Tax Lot(s): <u>371W09800</u>			
T, R, S(s): <u>T37S R01W Section 09</u>			
QQ(s): <u>L1, L2</u>			
<b>(D) Wetland Size (acres):</b> <u>0.98</u>		<b>(E) Cowardin Class:</b> <u>PEMCx</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>SV</u>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>P10</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>	
<b>Plot date (if any):</b> <u>4/8/2015</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
broad-leaf cat-tail		<i>Typha latifolia</i>	
common spike-rush		<i>Eleocharis palustris</i>	
fescue		<i>Festuca species</i>	
<b>(L) Primary hydrology sources:</b> <u>Surface flow. Potential groundwater. Drains to AW17.</u>			
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u>		<div style="border: 2px solid black; padding: 2px; display: inline-block;"><u>No</u></div>	<b>LSW Criteria:</b> <u>none</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
<u>Wetland located within a former orchard. This wetland is connected to AW17 (man-made pond).</u>			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W13		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3082 Long: -122.791		<b>Figure Number:</b> F-65, F-66	
<b>(C) Location:</b> Tax Lot(s): 371W35126			
T, R, S(s): T37S R01W Section 35			
QQ(s): NESW			
<b>(D) Wetland Size (acres):</b> 0.96	<b>(E) Cowardin Class:</b> PEMCx	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> RFT		
<b>(G) Mapped Soil Units:</b> Coker clay, Padigan clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Viewed from Santa Barbara Drive to the west.	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
Tree			
Shrub			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
lamp rush	<i>Juncus effusus</i>		
broad-leaf cat-tail	<i>Typha latifolia</i>		
<b>(L) Primary hydrology sources:</b> East lateral canal and associated ditches. Connects to Larson Creek Reservoir.			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Within 1/4 mile of Larson Creek (water quality limited stream)			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Wetland is located in a valley and was viewed from Santa Barbara Drive to the west. Polygon was copied from NWI mapping data. Connected to AW21 (Larson Reservoir). W66 is nearby.			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W14</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3229 Long: -122.783</u>		<b>Figure Number:</b> <u>F-57, F-58</u>	
<b>(C) Location:</b> Tax Lot(s): <u>371W26104</u>			
T, R, S(s): <u>T37S R01W Section 26</u>			
QQ(s): <u>NWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.59</u>		<b>(E) Cowardin Class:</b> <u>PSS1A/PEMA</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>RI</u>	<u>PSS: 90% PEM: 10%</u>
<b>(G) Mapped Soil Units:</b> <u>Carney clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>P13</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>	
<b>Plot date (if any):</b> <u>4/9/2015</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
willow	<i>Salix species</i>		
<b>Herb</b>			
lamp rush	<i>Juncus effusus</i>		
Fuller's teasel	<i>Dipsacus fullonum</i>		
spreading bent	<i>Agrostis stolonifera</i>		
<b>(L) Primary hydrology sources:</b> <u>Stream/Drain</u>			
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u>		<input checked="" type="checkbox"/> <b>Yes</b>	<b>LSW Criteria:</b> <u>Water Quality</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Sample plot was taken in a small PEM wetland component. The road separates this wetland from W15. Grazed and impacted by cattle. Ponding water present.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W15</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3204</u>	Long: <u>-122.784</u>
		Figure Number: <u>F-57, F-58</u>	
(C) Location: Tax Lot(s): <u>371W26104</u>			
T, R, S(s): <u>T37S R01W Section 26</u>			
QQ(s): <u>SWSE</u>			
(D) Wetland Size (acres): <u>2.05</u>	(E) Cowardin Class: <u>PSS1d</u>	<i>Cowardin breakdown if multiple =</i>	
	(F) HGM Class: <u>RFT</u>	<u>% PEM unknown</u>	
(G) Mapped Soil Units: <u>Carney clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Larson Creek-Bear Creek</u>			
(I) Sample Plot Numbers (if any): <u>P13</u>		(M) If no plot - Visually confirmed? <u>N/A</u>	
Plot date (if any): <u>4/9/2015</u>		Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
Geyer's willow	<i>Salix geyeriana</i>		
Herb			
lamp rush	<i>Juncus effusus</i>		
(L) Primary hydrology sources: <u>Stream in flow</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Water Quality</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
This wetland connects to Mud Creek. Wetland appears to be identical to W14, with PEM component present as understory. The willow signature and contours were used for desktop delineation. Potential willow signature within the riparian corridor of Mud Creek was used to "connect" W15 to W63. Ground truthing would be helpful for this location. Plot P13 is located in polygon to the north - wetland characteristics identical, except for open PEM component.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W17</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3030 Long: -122.826</u>		<b>Figure Number:</b> <u>F-71, F-72</u>	<u>BCS-6</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W33CD4700</u>			
T, R, S(s): <u>T37S R01W Section 33, 33CD</u>			
QQ(s): <u>SESW, SWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.87</u>		<b>(E) Cowardin Class:</b> <u>PEMCx</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>RI</u>	
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Darow silty clay loam</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>P14</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>	
<b>Plot date (if any):</b> <u>4/20/2015</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2004-0551</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
needle spike-rush	<i>Eleocharis acicularis</i>		
clustered field sedge	<i>Carex praegracilis</i>		
<b>(L) Primary hydrology sources:</b> <u>None</u>			
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u>		<div style="border: 2px solid black; padding: 2px; display: inline-block;"><u>No</u></div>	<b>LSW Criteria:</b> <u>none</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Wetland is located within a golf course. Recent alteration to hydrology and wetland shape exists from golf course management. Strong algal matting, likely a result of golf green management practices.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W18		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.2889	Long: -122.827
		<b>Figure Number:</b>	F-74
<b>(C) Location:</b> Tax Lot(s): 381W04401			
T, R, S(s): T38S R01W Section 04			
QQ(s): NESW, SWSE			
<b>(D) Wetland Size (acres):</b> 0.96	<b>(E) Cowardin Class:</b> PFO1Ch	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> SV		
<b>(G) Mapped Soil Units:</b> Camas-Newberg-Evans, Medford silty clay loam, Pits, gravel			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> P17		<b>(M) If no plot - Visually confirmed?</b> N/A	
<b>Plot date (if any):</b> 4/21/2015		<b>Visual date (if any):</b>	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
balsam poplar	<i>Populus balsamifera</i>		
<b>Shrub</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		
<b>Herb</b>			
reed canary grass	<i>Phalaris arundinacea</i>		
<b>(L) Primary hydrology sources:</b> Bear Creek and surface flow from adjacent pedestrian / bike path.			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Fish habitat			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Bear Creek Greenway wetland from ODOT Salmon Resource and Sensitive Area Mapping survey (SRSAM) in 2004 was confirmed with a sample plot. This wetland extends offsite and connects to W79 (inaccessible). Impenetrable vegetation prevented confirmation of upland exclusion within the riparian vegetation.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

<b>(A) Wetland ID:</b> W19-A		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.2963 Long: -122.850		<b>Figure Number:</b> F-76	
<b>(C) Location:</b> Tax Lot(s): 381W054800, 381W05B2000, 381W05B1300, 381W052400			
T, R, S(s): T38S R01W Section 05, 05B			
QQ(s): SENW, SWNW, NESW, NWSW			
<b>(D) Wetland Size (acres):</b> 6.75		<b>(E) Cowardin Class:</b> PEMCd	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> SH	
<b>(G) Mapped Soil Units:</b> Coleman loam, Gregory silty clay loam, Medford silty clay loam			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> P20		<b>(M) If no plot - Visually confirmed?</b> N/A	
<b>Plot date (if any):</b> 4/22/2015		<b>Visual date (if any):</b>	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
Tree			
Shrub			
Herb			
lamp rush	<i>Juncus effusus</i>	neckweed	<i>Veronica peregrina</i>
tall fescue	<i>Schedonorus arundinaceus</i>	creeping buttercup	<i>Ranunculus repens</i>
common spike-rush	<i>Eleocharis palustris</i>	clustered field sedge	<i>Carex praegracilis</i>
garden bird's-foot-trefoil	<i>Lotus corniculatus</i>		
<b>(L) Primary hydrology sources:</b> Groundwater, ditches, adjacent impervious surfaces.			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Hydrologic Control			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located over a large area with varying topography. It is fed by groundwater and ditches in some portions. It is connected to W19-B via a culvert under Reed Lane.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W19-B		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.2951 Long: -122.851		<b>Figure Number:</b> F-76	
<b>(C) Location:</b> Tax Lot(s): 381W054800, 381W05B2100, 381W05B2200, 381W05C800			
T, R, S(s): T38S R01W Section 05, 05B, 05C			
QQ(s): SWNW			
<b>(D) Wetland Size (acres):</b> 0.49		<b>(E) Cowardin Class:</b> PSS1	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> DCP	
<b>(G) Mapped Soil Units:</b> Coleman loam, Gregory silty clay loam			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/22/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from parcel to the east.	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
balsam poplar	<i>Populus balsamifera</i>		
<b>Shrub</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		
Scouler's willow	<i>Salix scouleriana</i>		
<b>Herb</b>			
lamp rush	<i>Juncus effusus</i>		
<b>(L) Primary hydrology sources:</b> Groundwater, W19_A and associated ditches.			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Hydrologic Control			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland was inaccessible and viewed from adjacent parcel to the east and from Reed Lane. It is connected to W19-A via a culvert.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W20</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.2939</u> Long: <u>-122.849</u>		<b>Figure Number:</b> <u>F-76</u>	
<b>(C) Location:</b> Tax Lot(s): <u>381W054800, 381W05C700, 381W05B1700, 381W05C600, 381W05C500</u>			
T, R, S(s): <u>T38S R01W Section 05, 05B, 05C</u>			
QQ(s): <u>SENW, NESW</u>			
<b>(D) Wetland Size (acres):</b> <u>3.77</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>SV</u>	
<b>(G) Mapped Soil Units:</b> <u>Gregory silty clay loam</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>P21</u>		<b>(M) If no plot - Visually confirmed?</b> <u>N/A</u>	
<b>Plot date (if any):</b> <u>4/22/2015</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
common spike-rush	<i>Eleocharis palustris</i>	tall fescue	<i>Schedonorus arundinaceus</i>
clustered field sedge	<i>Carex praegracilis</i>		
creeping buttercup	<i>Ranunculus repens</i>		
American deerweed	<i>Acmispon americanus</i>		
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<div style="border: 2px solid black; padding: 2px; display: inline-block;">No</div>	<b>LSW Criteria:</b> <u>none</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is connected to a ditch along the eastern boundary of the parcel. Could not confirm connection to W19-A. (If connected then it would be an LSW).			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W21</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3649</u>	Long: <u>-122.824</u>
		Figure Number: <u>F-22, F-23</u>	
(C) Location: Tax Lot(s): <u>371W092600, 371W092700</u>			
T, R, S(s): <u>T37S R01W Section 09</u>			
QQ(s): <u>NWSE</u>			
(D) Wetland Size (acres): <u>2.06</u>	(E) Cowardin Class: <u>PFOd/PABFx</u>	<i>Cowardin breakdown if multiple =</i>	
	(F) HGM Class: <u>SV</u>	<u>unknown</u>	
(G) Mapped Soil Units: <u>Carney clay, Coker clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>			
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>Yes</u>	
Plot date (if any): <u>N/A</u>		Visual date (if any): <u>4/23/2015</u>	
Method: <u>USACE; WMVC supplement</u>		Method (if any): <u>Observed from N Foothill Rd.</u>	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
willow	<i>Salix species</i>		
Herb			
broad-leaf cat-tail	<i>Typha latifolia</i>		
Fuller's teasel	<i>Dipsacus fullonum</i>		
Himalayan blackberry	<i>Rubus armeniacus</i>		
lamp rush	<i>Juncus effusus</i>		
(L) Primary hydrology sources: <u>Pond WA28, and irrigation</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
A culvert was observed under N Foothill Road at the southern extent of the wetland finger. Unable to visually confirm pond WA28 due to upland area obscuring view on west side of N Foothill Road. Connected to W53.			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W22</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3877</u>	Long: <u>-122.854</u>	<b>Figure Number:</b> <u>F-11</u>	<u>MWC-5</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W05313</u>					
T, R, S(s): <u>T37S R01W Section 05</u>					
QQ(s): <u>NWNW</u>					
<b>(D) Wetland Size (acres):</b> <u>1.49</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker claym, Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/8/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Observed from adjoining fence (east and south sides)</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>Connected to WD2007-0106</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail		<i>Alopecurus pratensis</i>			
fescue		<i>Festuca species</i>			
<b>(L) Primary hydrology sources:</b> <u>None</u>					
<b>(N) Locally Significant Wetland Determination:</b>		<u>LSW?</u>	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Observed from eastern edge of parcel. Identical characteristics to P09 plot / W10 complex. Connected to W10-D and W10-E.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W23</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.4032 Long: -122.877</u>		<b>Figure Number:</b> <u>F-2</u>	<u>MWC-12</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W31B500, 362W36A102</u>			
T, R, S(s): <u>T36S R01W Section 31B, T36S R02W Section 25D, 36A</u>			
QQ(s): <u>NWNW, SESE, NENE</u>			
<b>(D) Wetland Size (acres):</b> <u>6.41</u>	<b>(E) Cowardin Class:</b> <u>PEMA</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>RI</u>		
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>	(likely)	
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> No <b>LSW Criteria:</b> <u>Fish Habitat, Water Quality, Hydrologic Control.</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland incorporates a City of Medford Marsh data point.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W24</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.4018</u>	<b>Long:</b> <u>-122.877</u>	<b>Figure Number:</b> <u>F-2</u>	<b>MWC-2</b>
<b>(C) Location:</b> Tax Lot(s): <u>362W36A102</u>					
T, R, S(s): <u>T36S R02W Section 36A</u>					
QQ(s): <u>NENE</u>					
<b>(D) Wetland Size (acres):</b> <u>0.19</u>		<b>(E) Cowardin Class:</b> <u>PEMA</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RI</u>			
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail <i>Alopecurus pratensis</i> (likely)					
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>					
<b>(N) Locally Significant Wetland Determination:</b>		<u>LSW?</u>	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Wildlife habitat, Water Quality, Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Mapped by the City of Medford as water; however, recent historical imagery does not show inundation, and, therefore, was mapped as a wetland. Connected to W86, the riparian wtland along Swanson Creek, and the water WA12.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W25</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3989</u>	Long: <u>-122.878</u>	<b>Figure Number:</b> <u>F-1, F-2, F-6</u>	<u>MWC-8</u>
<b>(C) Location:</b> Tax Lot(s): <u>362W36A600, 362W36A700</u>					
T, R, S(s): <u>T36S R02W Section 36A</u>					
QQ(s): <u>SENE</u>					
<b>(D) Wetland Size (acres):</b> <u>7.71</u>		<b>(E) Cowardin Class:</b> <u>PEMA</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>Flats</u>			
<b>(G) Mapped Soil Units:</b> <u>Agate-Winlo complex, Coker clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Ditches and surface flow</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> <b>Yes</b> <b>LSW Criteria:</b> <u>Hydrologic Control</u>					
<u>Wetland of Special Interest for Protection (rare / unique).</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
<u>This wetland is a vernal pool/wetland mosaic that was not apparent on aerials.</u>					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W26</u>				<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3972</u>	Long: <u>-122.865</u>	<b>Figure Number:</b> <u>F-3</u>	
<b>(C) Location:</b>		Tax Lot(s): <u>361W31A2800</u>			
		T, R, S(s): <u>T36S R01W Section 31</u>			
		QQ(s): <u>SWNE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.46</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RI</u>		<u>PSS: ~90% PEM: ~10%</u>	
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2012-0181</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
Scouler's willow	<i>Salix scouleriana</i>	black hawthorn	<i>Crataegus douglasii</i>	(listed vegetation - likely)	
Himalayan blackberry	<i>Rubus armeniacus</i>				
<b>Herb</b>					
Fuller's teasel	<i>Dipsacus fullonum</i>				
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
PEM wetland in old oxbow of Swanson Creek. Hydrologically connected by Swanson Creek and the adjoining riparian / Forested wetland feature. Site access would be helpful, as the mapped wetland polygons are conservatively based on the riparian vegetation shown in aerial imagery.					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W27</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3955</u>	Long: <u>-122.865</u>
		Figure Number: <u>F-8</u>	
(C) Location: Tax Lot(s): <u>361W31D1500</u>			
T, R, S(s): <u>T36S R01W Section 31</u>			
QQ(s): <u>NWSE</u>			
(D) Wetland Size (acres): <u>0.81</u>	(E) Cowardin Class: <u>PEME</u>	<i>Cowardin breakdown if multiple =</i>	
	(F) HGM Class: <u>SV</u>		
(G) Mapped Soil Units: <u>Phoenix clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>			
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>Yes</u>	
Plot date (if any): <u>N/A</u>		Visual date (if any): <u>4/7/2015</u>	
Method: <u>USACE; WMVC supplement</u>		Method (if any): <u>Drive-by on Justice Road</u>	
(J) DSL determination / delineation number (if any): <u>WD2012-0181</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
not field verified			
Herb			
field meadow-foxtail	<i>Alopecurus pratensis</i>		
lamp rush	<i>Juncus effusus</i>		
(L) Primary hydrology sources: <u>Surface flow</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> No LSW Criteria: <u>none</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
PEM wetland in field, south of Justice Road and east of private driveway. Connected under driveway via culvert.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W28</u>				OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3952</u>	Long: <u>-122.865</u>	Figure Number: <u>F-8</u>	
(C) Location:		Tax Lot(s): <u>361W31D1500</u>			
		T, R, S(s): <u>T36S R01W Section 31</u>			
		QQ(s): <u>NWSE</u>			
(D) Wetland Size (acres): <u>0.51</u>		(E) Cowardin Class:	<u>PEME</u>	Cowardin breakdown if multiple =	
		(F) HGM Class:	<u>SV</u>		
(G) Mapped Soil Units: <u>Phoenix clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>					
(I) Sample Plot Numbers (if any):		<u>N/A</u>	(M) If no plot - Visually confirmed? <u>Yes</u>		
Plot date (if any):		<u>N/A</u>	Visual date (if any): <u>4/7/2015</u>		
Method: <u>USACE; WMVC supplement</u>			Method (if any): <u>Drive-by on Justice Road</u>		
(J) DSL determination / delineation number (if any): <u>WD2012-0181</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
<b>Tree</b>					
Oregon ash	<i>Fraxinus latifolia</i>				
balsam poplar	<i>Populus balsamifera</i>				
<b>Shrub</b>					
Scouler's willow	<i>Salix scouleriana</i>	black hawthorn	<i>Crataegus douglasii</i>	(listed vegetation - likely)	
Himalayan blackberry	<i>Rubus armeniacus</i>				
<b>Herb</b>					
not field verified					
(L) Primary hydrology sources: <u>Surface flow</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> No LSW Criteria: <u>none</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
PEM wetland in field, south of Justice Road and west of private driveway. Connected under driveway via culvert.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W29</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3932</u>	<b>Long:</b> <u>-122.875</u>	<b>Figure Number:</b> <u>F-6</u>	<u>N/A</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W31C1700</u>					
T, R, S(s): <u>T36S R01W Section 31C</u>					
QQ(s): <u>NWSW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.19</u>		<b>(E) Cowardin Class:</b> <u>PSS1/PEM</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>		<u>unknown</u>	
<b>(G) Mapped Soil Units:</b> <u>Coker clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;"><u>N/A</u></span> LSW Criteria: <u>N/A</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Mapped by the City of Medford as water; however, this is likely a wetland feature and extends offsite.					



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W30</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3932</u>	<b>Long:</b> <u>-122.875</u>	<b>Figure Number:</b> <u>F-6</u>	<u>N/A</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W31C1700</u>					
T, R, S(s): <u>T36S R01W Section 31C</u>					
QQ(s): <u>NWSW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.14</u>		<b>(E) Cowardin Class:</b> <u>PEMB</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Ditch and surface flow</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;"><u>N/A</u></span> LSW Criteria: <u>N/A</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland incorporates a City of Medford Marsh data point					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W31</u>			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3923</u> Long: <u>-122.869</u> <b>Figure Number:</b> <u>F-7</u>			<b>MWC-9</b>	
<b>(C) Location:</b> Tax Lot(s): <u>361W31C2500, 361W31C2400, 361W31C2300, 361W31C2900, 361W31C3100, 361W31C300</u>				
T, R, S(s): <u>T36S R01W Section 31C</u>				
QQ(s): <u>NESW, SESW</u>				
<b>(D) Wetland Size (acres):</b> <u>0.52</u>		<b>(E) Cowardin Class:</b> <u>PEMA</u>	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RI</u>		
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Padigan clay</u>				
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>				
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>		
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/7/2015</u>		
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Observed from Peace Lane to the west</u>		
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
<b>Shrub</b>				
<b>Herb</b>				
lamp rush <i>Juncus effusus</i> (likely)				
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>				
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<b>No</b>	<b>LSW Criteria:</b> <u>none</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
Wetland was inaccessible, however Juncus sp. (rush) was observed from Peace Lane.				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W32</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3920</u> Long: <u>-122.866</u>		<b>Figure Number:</b> <u>F-7</u>	
<b>(C) Location:</b> Tax Lot(s): <u>361W31C2400, 361W31C3100</u>			
T, R, S(s): <u>T36S R01W Section 31C</u>			
QQ(s): <u>SESW</u>			
<b>(D) Wetland Size (acres):</b> <u>0.49</u>		<b>(E) Cowardin Class:</b> <u>PEMA</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>Flats</u>	
<b>(G) Mapped Soil Units:</b> <u>Padigan clay, Phoenix clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2012-0181</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
field meadow-foxtail <i>Alopecurus pratensis</i> (likely)			
<b>(L) Primary hydrology sources:</b> <u>Surface flow, and potentially ditch.</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> LSW Criteria: <u>N/A</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland may connect offsite to an existing county-mapped wetland.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W33			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.4011	Long: -122.867	<b>Figure Number:</b> F-3
<b>(C) Location:</b> Tax Lot(s): 361W31B1800				
T, R, S(s): T36S R01W Section 31B				
QQ(s): NENW				
<b>(D) Wetland Size (acres):</b> 0.14		<b>(E) Cowardin Class:</b> PUBFx	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> Flats		
<b>(G) Mapped Soil Units:</b> Coker clay, Cove clay				
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River				
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> No		
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b>		
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>		
<b>(J) DSL determination / delineation number (if any):</b> N/A				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
Tree				
Shrub				
Herb				
field meadow-foxtail	<i>Alopecurus pratensis</i>	(likley)		
<b>(L) Primary hydrology sources:</b> None				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> <b>LSW Criteria:</b>				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
NWI mapped a waterbody at this location; however, recent historical imagery does not show inundation, and, therefore, was mapped as a wetland.				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W34</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3979</u>	<b>Long:</b> <u>-122.866</u>	<b>Figure Number:</b> <u>F-3</u>	<b>MWC-2</b>
<b>(C) Location:</b> Tax Lot(s): <u>361W31B2600</u>					
T, R, S(s): <u>T36S R01W Section 31B</u>					
QQ(s): <u>SENW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.41</u>		<b>(E) Cowardin Class:</b> <u>PSS1F</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RFT</u>			
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/8/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Observed from road to the east</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
balsam poplar <i>Populus balsamifera</i>					
Oregon ash <i>Fraxinus latifolia</i>					
<b>Shrub</b>					
willow <i>Salix species</i>					
Himalayan blackberry <i>Rubus armeniacus</i>					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> <u>Wildlife habitat, Water Quality, Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
Swanson Creek riparian wetland, closely associated with W35. Dominant species based on observations south of the sample plot P04.					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W35</u>				OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3982</u>	Long: <u>-122.867</u>	Figure Number: <u>F-3</u>	
(C) Location:		Tax Lot(s): <u>361W31B2500</u>			
		T, R, S(s): <u>T36S R01W Section 31B</u>			
		QQ(s): <u>SENW</u>			
(D) Wetland Size (acres): <u>0.66</u>		(E) Cowardin Class:	<u>PSS1F</u>	Cowardin breakdown if multiple =	
		(F) HGM Class:	<u>RFT</u>		
(G) Mapped Soil Units: <u>Cove clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>					
(I) Sample Plot Numbers (if any):		<u>N/A</u>	(M) If no plot - Visually confirmed?		
Plot date (if any):		<u>N/A</u>	Yes		
Method: USACE; WMVC supplement			Visual date (if any): <u>4/8/2015</u>		
			Method (if any): <u>Observed from road to the east</u>		
(J) DSL determination / delineation number (if any): <u>N/A</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
<b>Tree</b>					
balsam poplar	<i>Populus balsamifera</i>				
Oregon ash	<i>Fraxinus latifolia</i>				
<b>Shrub</b>					
black hawthorn	<i>Crataegus douglasii</i>	willow	<i>Salix species</i>		
Himalayan blackberry	<i>Rubus armeniacus</i>				
<b>Herb</b>					
field meadow-foxtail	<i>Alopecurus pratensis</i>				
(L) Primary hydrology sources: <u>Swanson Creek</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Wildlife habitat, Water Quality, Hydrologic Control</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
Swanson Creek riparian wetland, closely associated with W34. Dominant species based on observations south of the sample plot P04.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W36</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3932</u>	<b>Long:</b> <u>-122.863</u>	<b>Figure Number:</b> <u>F-8</u>	<b>MWC-1</b>
<b>(C) Location:</b> Tax Lot(s): <u>361W31D1800, 361W31D1700</u>					
T, R, S(s): <u>T36S R01W Section 31D</u>					
QQ(s): <u>NWSE</u>					
<b>(D) Wetland Size (acres):</b> <u>0.28</u>		<b>(E) Cowardin Class:</b> <u>PEMCx</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RI</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Phoenix clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/7/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Site walk through</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
field meadow-foxtail		<i>Alopecurus pratensis</i>			
Fuller's teasel		<i>Dipsacus fullonum</i>			
<b>(L) Primary hydrology sources:</b> <u>Surface flow and ditch.</u>					
<b>(N) Locally Significant Wetland Determination:</b>		<u>LSW?</u>	<input checked="" type="checkbox"/> <b>Yes</b>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
<u>This wetland incorporates a City of Medford Marsh data point. Plots P05 and P26 in the adjacent W04-A wetland are representative.</u>					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W37</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3998</u> Long: <u>-122.864</u>	<b>Figure Number:</b> <u>F-4</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W31A900</u>			
T, R, S(s): <u>T36S R01W Section 31A</u>			
QQ(s): <u>SWNE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.12</u>	<b>(E) Cowardin Class:</b> <u>PSS1C</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>LFV</u>		
<b>(G) Mapped Soil Units:</b> <u>Coker clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>WA13</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> LSW Criteria: <u>N/A</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located on the west bank of waterbody WA13.			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W38			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.4033	Long: -122.863	<b>Figure Number:</b> F-4	MWC-3
<b>(C) Location:</b> Tax Lot(s): 361W31A200					
T, R, S(s): T36S R01W Section 30D, 31A					
QQ(s): SWSE, NWNE, NENE					
<b>(D) Wetland Size (acres):</b> 5.90		<b>(E) Cowardin Class:</b> PEMCd		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> RFT / SV			
<b>(G) Mapped Soil Units:</b> Coker clay, Padigan clay					
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River					
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes			
<b>Plot date (if any):</b> 4/7/2015		<b>Visual date (if any):</b> 4/7/2015			
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from Peace Lane and west edge of W07			
<b>(J) DSL determination / delineation number (if any):</b> WD2012-0181 on very western extent					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
Tree					
Shrub					
Herb					
field meadow-foxtail		Alopecurus pratensis			
lamp rush		Juncus effusus			
<b>(L) Primary hydrology sources:</b> Ditches and surace flow					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> Water Quality					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This area was labelled by the City of Medford as "marsh". Mapped area incorporates DSL wetland delineation data polygon at the west end of the City of Medford data. Visual confirmation was made from a distance. Connected to W07 to the east on Figures F-4 and F-5.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W39-A		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3940 Long: -122.848		<b>Figure Number:</b> F-10	
<b>(C) Location:</b> Tax Lot(s): 361W32C100			
T, R, S(s): T36S R01W Section 32C			
QQ(s): NESW, NWSE			
<b>(D) Wetland Size (acres):</b> 3.61		<b>(E) Cowardin Class:</b> PSS1/PEM	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> RFT / SV	PSS: 90% PEM: 10%
<b>(G) Mapped Soil Units:</b> Coker clay, Cove clay, Padigan clay, Phoenix clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Visually confirmed W39-B which is connected (E).	
<b>(J) DSL determination / delineation number (if any):</b> WD2009-0470			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
Oregon ash	<i>Fraxinus latifolia</i>		
<b>Shrub</b>			
willow	<i>Salix species</i>		
<b>Herb</b>			
spreading rush	<i>Juncus patens</i>		
field meadow-foxtail	<i>Alopecurus pratensis</i>		
clustered field sedge	<i>Carex praegracilis</i>		
spreading bent	<i>Agrostis stolonifera</i>		
<b>(L) Primary hydrology sources:</b> Swanson Creek and surface flow			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Wildlife Habitat, Water Quality, Hydrologic Control			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Riparian vegetation along banks of Swanson Creek. Connected to W08 and W09.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W39-B</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3925</u>	<b>Long:</b> <u>-122.847</u>	<b>Figure Number:</b> <u>F-10, F-12</u>	<b>MWC-4</b>
<b>(C) Location:</b> Tax Lot(s): <u>361W32C2400, 361W32C100</u>					
T, R, S(s): <u>T36S R01W Section 32, 32C</u>					
QQ(s): <u>SWSE, NESW, SESW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.97</u>		<b>(E) Cowardin Class:</b> <u>PSS1F</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RFT</u>			
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/8/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Swanson creek crossed during site visit.</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
Oregon ash	<i>Fraxinus latifolia</i>				
willow	<i>Salix species</i>				
<b>Shrub</b>					
none					
<b>Herb</b>					
clustered field sedge	<i>Carex praegracilis</i>				
spreading rush	<i>Juncus patens</i>				
<b>(L) Primary hydrology sources:</b> <u>Swanson creek and surface flow</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> <b>Yes</b> <b>LSW Criteria:</b> <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
<u>Swanson Creek riparian wetland, dominated by Salix sp. (willow) and Fraxinus latifolia (ash). Connected to W41.</u>					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W40</u>			OFWAM Grouping Code:		
(B) Wetland Location (Centroid):		Lat: <u>42.3950</u>	Long: <u>-122.850</u>	Figure Number: <u>F-10</u>	MWC-15
(C) Location: Tax Lot(s): <u>361W32C100</u>					
T, R, S(s): <u>T36S R01W Section 32C</u>					
QQ(s): <u>NWSW, NESW</u>					
(D) Wetland Size (acres): <u>0.29</u>		(E) Cowardin Class: <u>PEMB</u>	Cowardin breakdown if multiple =		
		(F) HGM Class: <u>SV</u>			
(G) Mapped Soil Units: <u>Padigan clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>					
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>No</u>			
Plot date (if any): <u>N/A</u>		Visual date (if any):			
Method: <u>USACE; WMVC supplement</u>		Method (if any):			
(J) DSL determination / delineation number (if any): <u>WD2009-0470</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
Tree					
Shrub					
Herb					
field meadow-foxtail <u>Alopecurus pratensis</u> (likely)					
(L) Primary hydrology sources: <u>Ditch</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Water Quality</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
<0.5 acre area was mapped using DSL wetland delineation data. It is potentially connected to W09 via a ditch.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W41</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3939</u>	<b>Long:</b> <u>-122.852</u>	<b>Figure Number:</b> <u>F-9, F-10</u>	<u>MWC-4</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W32C500, 361W32C100</u>					
T, R, S(s): <u>T36S R01W Section 32C</u>					
QQ(s): <u>NWSW, NESW</u>					
<b>(D) Wetland Size (acres):</b> <u>1.80</u>		<b>(E) Cowardin Class:</b> <u>PSSF</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Cove clay, Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
Oregon ash	<i>Fraxinus latifolia</i>				
<b>Shrub</b>					
willow	<i>Salix species</i>				
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is a part of the Swanson Creek riparian wetland complex. Connected to W39-B and W43.					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W42</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3946</u>	Long: <u>-122.852</u>
		Figure Number: <u>F-9, F-10</u>	
(C) Location: Tax Lot(s): <u>361W32C500</u>			
T, R, S(s): <u>T36S R01W Section 32C</u>			
QQ(s): <u>NWSW</u>			
(D) Wetland Size (acres):	<u>0.58</u>	(E) Cowardin Class:	<u>PEMCh</u>
		(F) HGM Class:	<u>SV</u>
Cowardin breakdown if multiple = _____			
(G) Mapped Soil Units:	<u>Coker clay, Padigan clay</u>		
(H) Watershed Boundary (6th Field HUC):	<u>Whetstone Creek-Rogue River</u>		
(I) Sample Plot Numbers (if any):	<u>N/A</u>	(M) If no plot - Visually confirmed?	<u>No</u>
Plot date (if any):	<u>N/A</u>	Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
Tree			
Shrub			
Herb			
field meadow-foxtail	<u>Alopecurus pratensis</u>	(likely)	
(L) Primary hydrology sources: <u>Surface flow</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
This wetland is located north of the Swanson Creek riparian corridor and is connected hydrologically by surface flow.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W43</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3933</u> Long: <u>-122.853</u>		<b>Figure Number:</b> <u>F-9</u>	<u>MWC-11</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W32C500</u>			
T, R, S(s): <u>T36S R01W Section 32C</u>			
QQ(s): <u>NWSW</u>			
<b>(D) Wetland Size (acres):</b> <u>0.63</u>	<b>(E) Cowardin Class:</b> <u>PSS1B</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">No</span> <b>LSW Criteria:</b> <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located south of the Swanson Creek riparian corridor and directly abuts W41 PSS wetland.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W44</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3903</u>	<b>Long:</b> <u>-122.852</u>	<b>Figure Number:</b> <u>F-11</u>	<u>N/A</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W32C1700</u>					
T, R, S(s): <u>T36S R01W Section 32C</u>					
QQ(s): <u>SWSW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.15</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
<u>not field verified</u>					
<b>(L) Primary hydrology sources:</b> <u>None</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;"><u>N/A</u></span> LSW Criteria: <u>N/A</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
<u>This isolated wetland is located in a pasture.</u>					



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W45</u>			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3893</u> Long: <u>-122.853</u>			<b>Figure Number:</b> <u>F-11</u>	
<b>(C) Location:</b> Tax Lot(s): <u>361W32C1600, 361W32C1700</u>				
T, R, S(s): <u>T36S R01W Section 32C</u>				
QQ(s): <u>SWSW</u>				
<b>(D) Wetland Size (acres):</b> <u>0.16</u>		<b>(E) Cowardin Class:</b> <u>PEMCx</u>		<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>RI</u>		
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Padigan clay</u>				
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>				
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>		
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>		
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>		
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
<b>Shrub</b>				
<b>Herb</b>				
<u>not field verified</u>				
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> LSW Criteria: <u>N/A</u>				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
<u>This isolated wetland is located on a ditch line. Mapping data was derived from ODOT SRSAM survey in 2004.</u>				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W46</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3683</u>	<b>Long:</b> <u>-122.845</u>	<b>Figure Number:</b> <u>F-19</u>	<b>MWC-6</b>
<b>(C) Location:</b> Tax Lot(s): <u>371W08800</u>					
T, R, S(s): <u>T37S R01W Section 08</u>					
QQ(s): <u>SWNE</u>					
<b>(D) Wetland Size (acres):</b> <u>1.34</u>		<b>(E) Cowardin Class:</b> <u>PABHh</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>DO</u>			
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Padigan clay, Water</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>WA14, and ditch line</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> <u>Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is located at the headwaters of Midway Creek (Upton Slough) and Swanson Creek, on the banks of WA14 pond inside converging arms of Hopkins Canal. Connected to W48.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W47</u>		<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3685</u> Long: <u>-122.837</u>		<b>Figure Number:</b> <u>F-16, F-17, F-20, F-21</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W081000, 371W092600, 371W09900</u>		
T, R, S(s): <u>T37S R01W Section 08, 09</u>		
QQ(s): <u>SENE, SWNW, NWSW</u>		
<b>(D) Wetland Size (acres):</b> <u>5.74</u>	<b>(E) Cowardin Class:</b> <u>PEMBd</u>	<i>Cowardin breakdown if multiple =</i>
	<b>(F) HGM Class:</b> <u>RFT</u>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay, Padigan clay</u>		
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>		
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>		
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>		
<b>Tree</b>		
<u>none</u>		
<b>Shrub</b>		
<u>not field verified</u>		
<b>Herb</b>		
<u>not field verified</u>		
<b>(L) Primary hydrology sources:</b> <u>Ditches, streams, potential groundwater.</u>		
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> <u>Hydrologic Control</u>		
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>		
<u>This wetland is located at the headwaters of Midway Creek (Upton Slough) and Swanson Creek. It connects to PSS dominated W49.</u>		

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W48</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3686</u>	<b>Long:</b> <u>-122.844</u>	<b>Figure Number:</b> <u>F-19</u>	<b>MWC-6</b>
<b>(C) Location:</b> Tax Lot(s): <u>371W08900</u>					
T, R, S(s): <u>T37S R01W Section 08</u>					
QQ(s): <u>SWNE</u>					
<b>(D) Wetland Size (acres):</b> <u>0.39</u>		<b>(E) Cowardin Class:</b> <u>PSSC1h</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RFT</u>			
<b>(G) Mapped Soil Units:</b> <u>Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Ditch and upslope wetlands</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> <b>Yes</b> <b>LSW Criteria:</b> <u>Hydrologic Control</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is located at the headwaters of Midway Creek (Upton Slough) and Swanson Creek and upstream of WA14. It is connected directly to W46 and mapped based on NWI data.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W49</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3696</u> Long: <u>-122.837</u>		<b>Figure Number:</b> <u>F-16, F-19, F-20</u>	<u>MWC-6</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W08900, 371W081000, 371W09800, 371W09900</u>			
T, R, S(s): <u>T37S R01W Section 08, 09</u>			
QQ(s): <u>SWNW, SWNE, SENE, L1, NWNW</u>			
<b>(D) Wetland Size (acres):</b> <u>6.96</u>	<b>(E) Cowardin Class:</b> <u>PSS1Cd/PEMC</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>RFT</u>	<u>PSS: 80% PEM: 20%</u>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
willow	<i>Salix species</i>		
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>Stream</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> <u>Hydrologic Control</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is potentially fed by nearby leaking pond and is connected to PEM W47.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W50		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3715 Long: -122.840		<b>Figure Number:</b> F-16, F-19	
<b>(C) Location:</b> Tax Lot(s): 371W08100, 371W081000			
T, R, S(s): T37S R01W Section 08			
QQ(s): NENE, SENE			
<b>(D) Wetland Size (acres):</b> 2.04	<b>(E) Cowardin Class:</b> PUBHx/PSS1Bh	<i>Cowardin breakdown if multiple =</i>	
<b>(F) HGM Class:</b> SV	PUB: 50% PSS: 50%		
<b>(G) Mapped Soil Units:</b> Carney clay, Coker clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from Coker Butte road and parcel to the east	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> Wetland is on banks of irrigation pond AW13, and is connected to wetland complex to the south by mapped ditch.			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Hydrologic Control			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
NWI polygon re-sketched using offsite observation and desktop analysis. This wetland abuts W51 and is surrounded by former orchard.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W51		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.3709 Long: -122.841		<b>Figure Number:</b> F-16, F-19	
<b>(C) Location:</b> Tax Lot(s): 371W081000, 371W08100, 371W08900			
T, R, S(s): T37S R01W Section 08			
QQ(s): NENE, SWNE, SENE			
<b>(D) Wetland Size (acres):</b> 0.52	<b>(E) Cowardin Class:</b> PSS1Bh/PEMB	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> SV	PSS: 90% PEM: 10%	
<b>(G) Mapped Soil Units:</b> Carney clay, Coker clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from Coker Butte road and parcel to the east	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> Potentially fed by leaking irrigation pond (AW13)			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<input checked="" type="checkbox"/> Yes	<b>LSW Criteria:</b> Hydrologic Control
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
NWI mapped feature adjoins W50 and is adjacent to irrigation pond and former orchards.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W53</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3658</u>	<b>Long:</b> <u>-122.824</u>	<b>Figure Number:</b> <u>F-22</u>	<b>MWC-6</b>
<b>(C) Location:</b> Tax Lot(s): <u>371W092600</u>					
T, R, S(s): <u>T37S R01W Section 09</u>					
QQ(s): <u>NWSE</u>					
<b>(D) Wetland Size (acres):</b> <u>1.18</u>		<b>(E) Cowardin Class:</b> <u>PEMBd</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Carney clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/23/2015</u>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Observed from N Foothill Road</u>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
broad-leaf cat-tail <i>Typha latifolia</i>					
Fuller's teasel <i>Dipsacus fullonum</i>					
<b>(L) Primary hydrology sources:</b> <u>Potential downslope flow from irrigation canal located &lt;300 feet east of the wetland and N Foothill road.</u>					
<u>Surface flow from N Foothill road, and mapped ditches.</u>					
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u>		<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>		<b>LSW Criteria:</b> <u>Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is located on the western foothill slope of Coker Butte, west of N Foothill Road. The upland area is dominated by oaks, which are visible on aerial imagery. Teasel (Dipsacus fullonum) is dominant in the area and also creates a distinctive visual signature on aerial imagery. There are mapped ditches throughout.					



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W54</u>			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3656</u> Long: <u>-122.827</u>			<b>Figure Number:</b> <u>F-21, F-22</u>	
<b>(C) Location:</b> Tax Lot(s): <u>371W092600</u>				
T, R, S(s): <u>T37S R01W Section 09</u>				
QQ(s): <u>NWSE</u>				
<b>(D) Wetland Size (acres):</b> <u>2.25</u>		<b>(E) Cowardin Class:</b> <u>PEMB</u>		<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay</u>				
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>				
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>Yes</u>		
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b> <u>4/23/2015</u>		
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b> <u>Observed from N Foothill Road</u>		
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
<b>Shrub</b>				
<b>Herb</b>				
lamp rush <u>Juncus effusus</u> (likely)				
<b>(L) Primary hydrology sources:</b> <u>Surface flow and potential seep or surface flow from wetland W53 (therefore grouped in to MWC-6 OFWAM assessment unit).</u>				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> <u>Hydrologic Control</u>				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
This wetland is located in a valley at the base of Coker Butte foothill. Juncus effusus (lamprush) creates distinctive signature on aerals.				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W55</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3654</u> Long: <u>-122.830</u>		<b>Figure Number:</b> <u>F-21</u>	<u>MWC-6</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W092600</u>			
T, R, S(s): <u>T37S R01W Section 09</u>			
QQ(s): <u>NESW</u>			
<b>(D) Wetland Size (acres):</b> <u>0.51</u>	<b>(E) Cowardin Class:</b> <u>PEMBd</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Coker clay, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
<b>Herb</b>			
<u>lamp rush</u>	<u>Juncus effusus</u>	<u>(likely)</u>	
<b>(L) Primary hydrology sources:</b> <u>Ditching from W21 and W53 to the east (therefore included in WMC-6 OFWAM assessment unit)</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
<u>This wetland is located in a valley at the base of Coker Butte foothill. Juncus effusus (lamprush) creates distinctive signature on aerals.</u>			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W56</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3662</u>	Long: <u>-122.831</u>	<b>Figure Number:</b> <u>F-21</u>	<u>MWC-6</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W092600</u>					
T, R, S(s): <u>T37S R01W Section 09</u>					
QQ(s): <u>NWSW, NESW</u>					
<b>(D) Wetland Size (acres):</b> <u>1.87</u>		<b>(E) Cowardin Class:</b> <u>PEMBd</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>SV</u>			
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay, Padigan clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
<b>Shrub</b>					
<b>Herb</b>					
lamp rush <i>Juncus effusus</i> (likely)					
<b>(L) Primary hydrology sources:</b> <u>Surface flow and ditches, connecting to adjacent wetlands (therefore included in MWC-6 OFWAM assessment unit)</u>					
<b>(N) Locally Significant Wetland Determination:</b>		LSW?	<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Hydrologic Control</u>	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is located in a valley at the base of Coker Butte foothill. Juncus effusus (lamprush) creates distinctive signature on aerals.					

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W57</u>			OFWAM Grouping Code:		
(B) Wetland Location (Centroid):		Lat: <u>42.3651</u>	Long: <u>-122.831</u>	Figure Number: <u>F-21</u>	MWC-6
(C) Location: Tax Lot(s): <u>371W092600</u>					
T, R, S(s): <u>T37S R01W Section 09</u>					
QQ(s): <u>NWSW, NESW</u>					
(D) Wetland Size (acres): <u>0.65</u>		(E) Cowardin Class: <u>PEMBd</u>	Cowardin breakdown if multiple =		
		(F) HGM Class: <u>SV</u>			
(G) Mapped Soil Units: <u>Carney clay, Coker clay, Padigan clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>					
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>No</u>			
Plot date (if any): <u>N/A</u>		Visual date (if any):			
Method: <u>USACE; WMVC supplement</u>		Method (if any):			
(J) DSL determination / delineation number (if any): <u>N/A</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
Tree					
Shrub					
not field verified					
Herb					
lamp rush <u>Juncus effusus</u> (likely)					
(L) Primary hydrology sources: <u>Surface flow and mapped ditches. Therefore included in MWC-6 OFWAM assessment unit.</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Hydrologic Control</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
This wetland is located in a valley at the base of Coker Butte foothill. Juncus effusus (lamprush) creates distinctive signature on aerals.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W61			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3368	Long: -122.819	<b>Figure Number:</b> F-50
<b>(C) Location:</b> Tax Lot(s): 371W21A1400, 371W22500				
T, R, S(s): T37S R01W Section 21A, 21D				
QQ(s): NESE				
<b>(D) Wetland Size (acres):</b> 1.83		<b>(E) Cowardin Class:</b> PEMh/PSSh	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> RI	PEM: 90% PSS: 10%	
<b>(G) Mapped Soil Units:</b> Coker clay				
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek				
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> No		
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b>		
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>		
<b>(J) DSL determination / delineation number (if any):</b> N/A				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
<b>Shrub</b>				
willow Salix species (likely)				
<b>Herb</b>				
not field verified				
<b>(L) Primary hydrology sources:</b> Irrigation canal, and other irrigation ditches				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> No <b>LSW Criteria:</b> none				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
A small PSS component, likely with Salix sp. (willow), exists within this wetland. It is surrounded by intensive agriculture, orchards and pasture. Connected to the Phoenix Canal.				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W62</u>			<b>OFWAM Grouping Code:</b>		
<b>(B) Wetland Location (Centroid):</b>		<b>Lat:</b> <u>42.3206</u>	<b>Long:</b> <u>-122.796</u>	<b>Figure Number:</b> <u>F-56</u>	<u>LSC-4</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W26103, 371W26105</u>					
T, R, S(s): <u>T37S R01W Section 26</u>					
QQ(s): <u>NWSW, SWSW</u>					
<b>(D) Wetland Size (acres):</b> <u>0.72</u>		<b>(E) Cowardin Class:</b> <u>PSS1d</u>		<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> <u>RFT</u>			
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Coker clay</u>					
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>					
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>			
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>			
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>			
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>					
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>					
<b>Tree</b>					
not field verified					
<b>Shrub</b>					
not field verified					
<b>Herb</b>					
not field verified					
<b>(L) Primary hydrology sources:</b> <u>Drainage line</u>					
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">No</span> LSW Criteria: <u>None</u>					
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>					
This wetland is likely dominated by Salix sp. (willow).					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W63</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.3185</u> Long: <u>-122.786</u>	<b>Figure Number:</b> <u>F-57</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W26104</u>			
T, R, S(s): <u>T37S R01W Section 26</u>			
QQ(s): <u>SWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>2.31</u>	<b>(E) Cowardin Class:</b>	<u>PEMBh</u>	<i>Cowardin breakdown if multiple =</i>
	<b>(F) HGM Class:</b>	<u>DCNP</u>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>East Lateral Canal</u>			
<b>(N) Locally Significant Wetland Determination:</b>		<b>LSW Criteria:</b>	
LSW? <input checked="" type="checkbox"/> No		None	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located between Mud Creek and the East Lateral Irrigation Canal. The persistent signature that is visible on historical aerial imagery suggests the hydrology source may be leakage from the canal and not from overflow from the intermittent Mud Creek. Some willows were observed in the riparian corridor of Mud Creek (likely Salix exigua, viewed from E Barnett Avenue); however, aerial imagery suggests its distribution is limited; therefore, there is low likelihood of a PSS wetland existing here.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W64</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3176 Long: -122.788</u>		<b>Figure Number:</b> <u>F-57, F-62</u>	
<b>(C) Location:</b> <u>Tax Lot(s): 371W26104</u>			
<u>T, R, S(s): T37S R01W Section 26</u>			
<u>QQ(s): SESW, SWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>5.19</u>		<b>(E) Cowardin Class:</b> <u>PEMBh</u>	
<b>(F) HGM Class:</b> <u>DCNP</u>		<i>Cowardin breakdown if multiple =</i>	
<b>(G) Mapped Soil Units:</b> <u>Carney clay, Carney cobbly clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>East Lateral Canal</u>			
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u> <span style="border: 1px solid black; padding: 2px;">No</span> <b>LSW Criteria:</b> <u>None</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Some willows were observed in the riparian corridor of Mud Creek (likely <i>Salix exigua</i> (narrow-leaf willow), viewed from E Barnett Avenue); however, aerial imagery suggests its distribution is limited; therefore, there is low likelihood of a PSS wetland existing here.			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W66			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3074	Long: -122.791	<b>Figure Number:</b> F-66
<b>(C) Location:</b> Tax Lot(s): 371W35126				
T, R, S(s): T37S R01W Section 35				
QQ(s): NWSW, NESW				
<b>(D) Wetland Size (acres):</b> 0.79		<b>(E) Cowardin Class:</b> PEMCd	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> RFT		
<b>(G) Mapped Soil Units:</b> Coker clay, Padigan clay				
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek				
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> No		
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015		
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Not clearly observed from Santa Barbara Drive (wetland W13 was obvious)		
<b>(J) DSL determination / delineation number (if any):</b> N/A				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
none				
<b>Shrub</b>				
none				
<b>Herb</b>				
field meadow-foxtail <i>Alopecurus pratensis</i>				
<b>(L) Primary hydrology sources:</b> Flood irrigation run-off from East Lateral Canal				
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<input checked="" type="checkbox"/> Yes	<b>LSW Criteria:</b> Within 1/4 mile of Larson Creek (water quality limited stream)	
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
This wetland is located in a valley. No obvious wetland signature was observed from the adjacent road; however, this NWI mapped feature has been retained. It is near W13 and connected to Larson Reservoir (AW. )				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W68</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3035 Long: -122.794</u>		<b>Figure Number:</b> <u>F-66</u>	<u>BCS-3</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W35602</u>			
T, R, S(s): <u>T37S R01W Section 35</u>			
QQ(s): <u>L 4</u>			
<b>(D) Wetland Size (acres):</b> <u>0.73</u>	<b>(E) Cowardin Class:</b> <u>PEMB</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Brader-Debenger, Carney clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>Groundwater or precipitation</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">No</span> LSW Criteria: <u>none</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located on a residential parcel, potentially fed by pond leakage from AW22. Obvious flow line to south connects this wetland to a Bear Creek tributary. No obvious active adjoining agriculture. Likely presence of oaks on site.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W69</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3039 Long: -122.804</u>		<b>Figure Number:</b> <u>F-68</u>	<u>N/A</u>
<b>(C) Location:</b> Tax Lot(s): <u>371W344102</u>			
T, R, S(s): <u>T37S R01W Section 34</u>			
QQ(s): <u>L 12</u>			
<b>(D) Wetland Size (acres):</b> <u>0.16</u>	<b>(E) Cowardin Class:</b> <u>PUBFx</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Brader-Debenger</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<u>none</u>			
<b>Shrub</b>			
<u>none</u>			
<b>Herb</b>			
<u>field meadow-foxtail</u>	<u><i>Alopecurus pratensis</i></u>	<u>(likely)</u>	
<b>(L) Primary hydrology sources:</b> <u>Precipitation</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;"><u>N/A</u></span> LSW Criteria: <u>N/A</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
<u>This wetland was mapped using NWI data. A faint signature was present in the mown field.</u>			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W70</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.2922</u>	Long: <u>-122.823</u>
		Figure Number:	<u>F-74</u>
(C) Location: Tax Lot(s): <u>381W04400, 381W04501</u>			
T, R, S(s): <u>T38S R01W Section 04</u>			
QQ(s): <u>NWSE</u>			
(D) Wetland Size (acres):	<u>2.32</u>	(E) Cowardin Class:	<u>PSS1Cd</u>
		(F) HGM Class:	<u>RI</u>
Cowardin breakdown if multiple = _____			
(G) Mapped Soil Units: <u>Darow silty clay loam, Medford silty clay loam, Padigan clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Larson Creek-Bear Creek</u>			
(I) Sample Plot Numbers (if any):		(M) If no plot - Visually confirmed?	
<u>N/A</u>		Yes	
Plot date (if any): <u>N/A</u>		Visual date (if any): <u>4/20/2015</u>	
Method: <u>USACE; WMVC supplement</u>		Method (if any): <u>Observed from golf course to the north,</u>	
		<u>near AW27 pond</u>	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
Willow species <u>Salix species</u>			
<b>Herb</b>			
not field verified			
(L) Primary hydrology sources: <u>Ditch inflow</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Water Quality, Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
This NWI mapped feature is located east of I-5 in flood irrigated pasture, with extensive ditching throughout. Feature connects to WA08 and WA22.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W71</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.2917 Long: -122.825</u>		<b>Figure Number:</b> <u>F-74</u>	<u>BCS-4</u>
<b>(C) Location:</b> Tax Lot(s): <u>381W04400</u>			
T, R, S(s): <u>T38S R01W Section 04</u>			
QQ(s): <u>NWSE, SWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>2.51</u>		<b>(E) Cowardin Class:</b> <u>PEMC</u>	<i>Cowardin breakdown if multiple =</i>
		<b>(F) HGM Class:</b> <u>SV</u>	
<b>(G) Mapped Soil Units:</b> <u>Darow silty clay loam, Medford silty clay loam, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
field meadow-foxtail	<i>Alopecurus pratensis</i>	(likely)	
<b>(L) Primary hydrology sources:</b> <u>Flood irrigation runoff</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px 10px;">Yes</span> <b>LSW Criteria:</b> <u>Water Quality, Hydrologic Control</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland is located on the southwest edge of a flood irrigated field which has extensive ditching throughout. Limited outlet exists due to I-5 bordering the western edge. SWCA edited polygon from ODOT SRSAM survey in 2004 to omit WA08 waterbody. Connected to W72.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W72</u>			OFWAM Grouping Code:		
(B) Wetland Location (Centroid):		Lat: <u>42.2926</u>	Long: <u>-122.827</u>	Figure Number: <u>F-74</u>	BCS-4
(C) Location: Tax Lot(s): <u>381W04400</u>					
T, R, S(s): <u>T38S R01W Section 04</u>					
QQ(s): <u>NESW, NWSE</u>					
(D) Wetland Size (acres): <u>2.28</u>		(E) Cowardin Class:	PEMC	Cowardin breakdown if multiple =	
		(F) HGM Class:	SV		
(G) Mapped Soil Units: <u>Medford silty clay loam, Padigan clay</u>					
(H) Watershed Boundary (6th Field HUC): <u>Larson Creek-Bear Creek</u>					
(I) Sample Plot Numbers (if any):		N/A		(M) If no plot - Visually confirmed? <u>No</u>	
Plot date (if any):		N/A		Visual date (if any):	
Method: USACE; WMVC supplement				Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>					
(K) Dominant Vegetation (Common and Scientific Name)					
<b>Tree</b>					
balsam poplar	<i>Populus balsamifera</i>				
<b>Shrub</b>					
willow	<i>Salix species</i>				
<b>Herb</b>					
not field verified					
(L) Primary hydrology sources: <u>Flood irrigation runoff</u>					
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Water Quality, Hydrologic Control</u>					
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).					
This wetland is from NWI map data and is located east of the I-5 corridor. It is interconnected with W71 (polygon from ODOT SRSAM 2004 survey) and is adjoined to WA23 and WA24. Salix sp. and Populus sp. (cottonwood) observed generally to the south from the golf course. Connected to W71.					

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W74</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.2950</u> Long: <u>-122.826</u>		<b>Figure Number:</b> <u>F-72, F-74</u>	<u>BCS-10</u>
<b>(C) Location:</b> Tax Lot(s): <u>381W04400</u>			
T, R, S(s): <u>T38S R01W Section 04</u>			
QQ(s): <u>SWNE, NESW, NWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>5.83</u>	<b>(E) Cowardin Class:</b> <u>PEMC</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Brader-Debenger, Coker clay, Padigan clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<u>none</u>			
<b>Shrub</b>			
<b>Herb</b>			
<u>field meadow-foxtail</u>	<u>Alopecurus pratensis</u>	<u>(likely)</u>	
<b>(L) Primary hydrology sources:</b> <u>Ditch</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<div style="border: 2px solid black; padding: 2px; display: inline-block;">Yes</div>	<b>LSW Criteria:</b> <u>Wildlife Habitat, Fish Habitat, Hydrologic Control</u>
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
<u>This NWI wetland is located in a pasture and is connected to a ditch that runs along the southern edge of the parcel. It has potential for connection to WA25 to the east. It has outflow to the west via a ditch.</u>			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W78</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3532</u>	Long: <u>-122.769</u>
		Figure Number: <u>F-38, F-39</u>	
(C) Location: Tax Lot(s): <u>371W13300</u>			
T, R, S(s): <u>T37S R01W Section 13</u>			
QQ(s): <u>SENW</u>			
(D) Wetland Size (acres): <u>1.32</u>	(E) Cowardin Class:	<u>PEMC</u>	<i>Cowardin breakdown if multiple = unknown</i>
	(F) HGM Class:	<u>RFT</u>	
(G) Mapped Soil Units: <u>McMullin-Rock outcrop complex</u>			
(H) Watershed Boundary (6th Field HUC): <u>Lower Antelope Creek</u>			
(I) Sample Plot Numbers (if any): <u>N/A</u>		(M) If no plot - Visually confirmed? <u>No</u>	
Plot date (if any): <u>N/A</u>		Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
(L) Primary hydrology sources: <u>Drainage</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Wildlife Habitat</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
<u>Located in tributary to Dry Creek</u>			



# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W79		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.2897	Long: -122.826
		<b>Figure Number:</b>	F-74
<b>(C) Location:</b> Tax Lot(s): 381W04401			
T, R, S(s): T38S R01W Section 04			
QQ(s): NESW, SWSE			
<b>(D) Wetland Size (acres):</b> 2.82	<b>(E) Cowardin Class:</b>	PFO1B/R3UB	<i>Cowardin breakdown if multiple =</i>
	<b>(F) HGM Class:</b>	RFT	unknown
<b>(G) Mapped Soil Units:</b> Brader-Debenger, Camas-Newberg-Evans, Medford silty clay loam, Pits, gravel			
<b>(H) Watershed Boundary (6th Field HUC):</b> Larson Creek-Bear Creek			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/21/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Observed from pedestrian/bike path on southern edge of feature	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
balsam poplar	<i>Populus balsamifera</i>		
<b>Shrub</b>			
Scouler's willow	<i>Salix scouleriana</i>		
sessile-leaf willow	<i>Salix sessilifolia</i>		
<b>Herb</b>			
Himalayan blackberry	<i>Rubus armeniacus</i>		
reed canary grass	<i>Phalaris arundinacea</i>		
<b>(L) Primary hydrology sources:</b> Bear Creek			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Wildlife Habitat, Fish Habitat			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This riparian wetland along Bear Creek is connected to wetland W18. It was originally delineated by the ODOT SRSAM survey in 2004. Impenetrable riparian and blackberry vegetation prevented collection of a sample plot; however, the wetland was visually confirmed from the southern boundary on the Greenway path.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W81</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b> <u>Lat: 42.3333 Long: -122.903</u>		<b>Figure Number:</b> <u>F-87</u>	<u>N/A</u>
<b>(C) Location:</b> <u>Tax Lot(s): 372W234700</u>			
<u>T, R, S(s): T37S R02W Section 23</u>			
<u>QQ(s): SWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.09</u>	<b>(E) Cowardin Class:</b> <u>PEMB</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>SV</u>		
<b>(G) Mapped Soil Units:</b> <u>Coleman loam, Gregory silty clay loam, Medford silty clay loam</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Larson Creek-Bear Creek</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
not field verified	<u>0</u>		
<b>Shrub</b>			
not field verified	<u>0</u>		
<b>Herb</b>			
not field verified	<u>0</u>		
<b>(L) Primary hydrology sources:</b> <u>Runoff</u>			
<b>(N) Locally Significant Wetland Determination:</b> <u>LSW?</u> <span style="border: 1px solid black; padding: 2px;"><u>N/A</u></span> <b>LSW Criteria:</b> <u>N/A</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
This wetland polygon was derived from City of Medford Hydrography data and is labelled as a storm water management feature. This feature was not visible from vantage point on Maple Park Drive.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W82			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.4019	Long: -122.881	<b>Figure Number:</b> F-1, F-2
<b>(C) Location:</b> Tax Lot(s): 362W36A102, 362W36A103, 362W36A100, 362W36A104				
T, R, S(s): T36S R02W Section 36A				
QQ(s): NWNE, NENE				
<b>(D) Wetland Size (acres):</b> 37.15		<b>(E) Cowardin Class:</b> PEMA	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> Flats		
<b>(G) Mapped Soil Units:</b> Agate-Winlo complex, Cove clay				
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River				
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes		
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/22/2015		
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Vernal pool characteristics observed from dirt road along southern edge		
<b>(J) DSL determination / delineation number (if any):</b> N/A				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
<b>Tree</b>				
oak	<i>Quercus species</i>	(likely)		
<b>Shrub</b>				
<b>Herb</b>				
field meadow-foxtail	<i>Alopecurus pratensis</i>	(likely)		
not field verified				
<b>(L) Primary hydrology sources:</b> Precipitation				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Wildlife Habitat, Fish Habitat, Water Quality, Hydrologic Control				
Wetland of Special Interest for Protection (rare / unique).				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
Vernal pool/wetland mosaic mapped by the Agate Desert Vernal Pool Planning Technical Advisory Committee (TAC 2000). The approximate percentage of vernal pools is unknown. SWCA extended the TAC 2000 polygon slightly to the northwest, based on aerial and LiDAR interpretation. This feature crosses into the mapped 100-year floodplain of Swanson Creek. Could not reach landowner at 362W36A104. A small water is present within the mapped mosaic - AW10 (man made pond).				

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W85		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: 42.4016 Long: -122.872		<b>Figure Number:</b> F-2, F-3	
<b>(C) Location:</b> Tax Lot(s): 361W31B1600, 361W31B1300, 361W31B700			
T, R, S(s): T36S R01W Section 31B			
QQ(s): NWNW			
<b>(D) Wetland Size (acres):</b> 0.71		<b>(E) Cowardin Class:</b> PSS1C/PEMC	<i>Cowardin breakdown if multiple =</i> PSS: ~90% PEM: ~10%
		<b>(F) HGM Class:</b> RFT	
<b>(G) Mapped Soil Units:</b> Cove clay			
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River			
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> Yes	
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b> 4/8/2015	
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b> Small portion observed from Peace Lane to the east.	
<b>(J) DSL determination / delineation number (if any):</b> N/A			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
Oregon ash	<i>Fraxinus latifolia</i>		
balsam poplar	<i>Populus balsamifera</i>		
<b>Shrub</b>			
Scouler's willow	<i>Salix scouleriana</i>	Himalayan blackberry	<i>Rubus armeniacus</i>
black hawthorn	<i>Crataegus douglasii</i>		
<b>Herb</b>			
not field verified	0		
<b>(L) Primary hydrology sources:</b> Swanson Creek			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> Wildlife habitat, Water Quality, Hydrologic Control			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Riparian wetland along Swanson Creek. Listed dominant vegetation is based on inspection of the corridor near sample plot P04. Connected to W86 to the west.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W86</u>			<b>OFWAM Grouping Code:</b>
<b>(B) Wetland Location (Centroid):</b>		Lat: <u>42.4021</u> Long: <u>-122.876</u>	<b>Figure Number:</b> <u>F-2</u>
<b>(C) Location:</b> Tax Lot(s): <u>361W31B1300, 361W31B700, 361W31B1400, 361W31B1500, 361W31B600, 362W36A102</u>			
T, R, S(s): <u>T36S R01W Section 31B, T36S R02W Section 36A</u>			
QQ(s): <u>NWNW, NENE</u>			
<b>(D) Wetland Size (acres):</b> <u>1.87</u>	<b>(E) Cowardin Class:</b>	<u>PSS1C/PEMC</u>	<i>Cowardin breakdown if multiple =</i> <u>PSS: ~90% PEM: ~10%</u>
	<b>(F) HGM Class:</b>	<u>RFT</u>	
<b>(G) Mapped Soil Units:</b> <u>Cove clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>N/A</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
Scouler's willow <i>Salix scouleriana</i>			
Himalayan blackberry <i>Rubus armeniacus</i>			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW? <input checked="" type="checkbox"/> Yes <b>LSW Criteria:</b> <u>Wildlife Habitat, Fish Habitat, Water Quality, Hydrologic Control</u>			
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>			
Riparian wetland along Swanson Creek. Listed dominant vegetation is based on inspection of the corridor near sample plot P04. The corridor was observed from a distance along the dirt road that borders the southern edge of the vernal pool/wetland mosaic. It connects to the water WA12 and wetland W24 (a PEM offshoot from the creek). Also connected to W85 to the east.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> <u>W87</u>		<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b> Lat: <u>42.3960</u> Long: <u>-122.862</u>		<b>Figure Number:</b> <u>F-8</u>	
<b>(C) Location:</b> Tax Lot(s): <u>361W31D1200, 361W31D1300</u>			
T, R, S(s): <u>T36S R01W Section 31D</u>			
QQ(s): <u>NWSE</u>			
<b>(D) Wetland Size (acres):</b> <u>0.42</u>	<b>(E) Cowardin Class:</b> <u>PEMC/PSS1C</u>	<i>Cowardin breakdown if multiple =</i>	
	<b>(F) HGM Class:</b> <u>RFT</u>	<u>PSS: ~90% PEM: ~10%</u>	
<b>(G) Mapped Soil Units:</b> <u>Cove Clay</u>			
<b>(H) Watershed Boundary (6th Field HUC):</b> <u>Whetstone Creek-Rogue River</u>			
<b>(I) Sample Plot Numbers (if any):</b> <u>N/A</u>		<b>(M) If no plot - Visually confirmed?</b> <u>No</u>	
<b>Plot date (if any):</b> <u>N/A</u>		<b>Visual date (if any):</b>	
<b>Method:</b> <u>USACE; WMVC supplement</u>		<b>Method (if any):</b>	
<b>(J) DSL determination / delineation number (if any):</b> <u>WD2002-0010</u>			
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>			
<b>Tree</b>			
<b>Shrub</b>			
not field verified <u>0</u>			
<b>Herb</b>			
not field verified			
<b>(L) Primary hydrology sources:</b> <u>Swanson Creek</u>			
<b>(N) Locally Significant Wetland Determination:</b> LSW?		<input checked="" type="checkbox"/> Yes	<b>LSW Criteria:</b> <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>
Mapped using the DSL wetland delineation data polygon along the disturbed banks of Swanson Creek, where riparian vegetation is largely absent. Surrounding land use is pasture land. Connected to W88 via culvert under fill road in pasture.			

# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W88</u>		OFWAM Grouping Code:	
(B) Wetland Location (Centroid):		Lat: <u>42.3963</u>	Long: <u>-122.860</u>
		Figure Number:	<u>F-8</u>
(C) Location: Tax Lot(s): <u>361W31D1000, 361W31D900</u>			
T, R, S(s): <u>T36S R01W Section 31D</u>			
QQ(s): <u>NESE, NWSE, SENE</u>			
(D) Wetland Size (acres):	<u>0.35</u>	(E) Cowardin Class:	<u>PSS1C/PEMC</u>
		(F) HGM Class:	<u>RFT</u>
		<i>Cowardin breakdown if multiple =</i>	
		<u>unknown</u>	
(G) Mapped Soil Units: <u>Cove clay</u>			
(H) Watershed Boundary (6th Field HUC): <u>Whetstone Creek-Rogue River</u>			
(I) Sample Plot Numbers (if any):		(M) If no plot - Visually confirmed?	
<u>N/A</u>		<u>No</u>	
Plot date (if any): <u>N/A</u>		Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
<b>Tree</b>			
Oregon ash	<i>Fraxinus latifolia</i>		
balsam poplar	<i>Populus balsamifera</i>		
<b>Shrub</b>			
Scouler's willow	<i>Salix scouleriana</i>	black hawthorn	<i>Crataegus douglasii</i>
black hawthorn	<i>Crataegus douglasii</i>		
<b>Herb</b>			
not field verified			
(L) Primary hydrology sources: <u>Swanson Creek</u>			
(N) Locally Significant Wetland Determination: LSW? <input checked="" type="checkbox"/> Yes LSW Criteria: <u>Wildlife Habitat, Water Quality, Hydrologic Control</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
Riparian wetland along Swanson Creek. Listed dominant vegetation is based on inspection of the corridor near sample plot P04. The adjoining land uses includes pasture and industrial. Connected to W87 via culvert under fill road in pasture.			

# **MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET**

<b>(A) Wetland ID:</b> W89			<b>OFWAM Grouping Code:</b>	
<b>(B) Wetland Location (Centroid):</b>		Lat: 42.3665	Long: -122.834	<b>Figure Number:</b> F-20
<b>(C) Location:</b> Tax Lot(s): 371W092600				
T, R, S(s): T37S R01W Section 9				
QQ(s): NWSW				
<b>(D) Wetland Size (acres):</b> 0.11		<b>(E) Cowardin Class:</b> PEMC	<i>Cowardin breakdown if multiple =</i>	
		<b>(F) HGM Class:</b> SV		
<b>(G) Mapped Soil Units:</b> Carney clay				
<b>(H) Watershed Boundary (6th Field HUC):</b> Whetstone Creek-Rogue River				
<b>(I) Sample Plot Numbers (if any):</b> N/A		<b>(M) If no plot - Visually confirmed?</b> No		
<b>Plot date (if any):</b> N/A		<b>Visual date (if any):</b>		
<b>Method:</b> USACE; WMVC supplement		<b>Method (if any):</b>		
<b>(J) DSL determination / delineation number (if any):</b> N/A				
<b>(K) Dominant Vegetation (Common and Scientific Name)</b>				
Tree				
Shrub				
Herb				
field meadow-foxtail	<i>Alopecurus pratensis</i>	(likely)		
<b>(L) Primary hydrology sources:</b> Surface flow				
<b>(N) Locally Significant Wetland Determination:</b> LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> <b>LSW Criteria:</b> none				
<b>(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).</b>				
NHD maps this feature as a waterbody, and LiDAR shows a defined depression at this location. Most imagery suggests it is an isolated seasonally inundated PEM wetland.				



# MEDFORD URBAN RESERVE LOCAL WETLANDS INVENTORY SUMMARY SHEET

(A) Wetland ID: <u>W90</u>			OFWAM Grouping Code:
(B) Wetland Location (Centroid):		Lat: <u>42.3191</u> Long: <u>-122.907</u>	Figure Number: <u>F-86</u>
(C) Location: Tax Lot(s): <u>372W26C5300</u>			
T, R, S(s): <u>T37S R01W Section 26</u>			
QQ(s): <u>SESW</u>			
(D) Wetland Size (acres):	<u>0.10</u>	(E) Cowardin Class:	<u>PEMC</u>
		(F) HGM Class:	<u>SV</u>
Cowardin breakdown if multiple = _____			
(G) Mapped Soil Units:	<u>Gregory silty clay loam</u>		
(H) Watershed Boundary (6th Field HUC):	<u>Larson Creek-Bear Creek</u>		
(I) Sample Plot Numbers (if any):	<u>N/A</u>	(M) If no plot - Visually confirmed?	<u>No</u>
Plot date (if any):	<u>N/A</u>	Visual date (if any):	
Method: <u>USACE; WMVC supplement</u>		Method (if any):	
(J) DSL determination / delineation number (if any): <u>N/A</u>			
(K) Dominant Vegetation (Common and Scientific Name)			
<b>Tree</b>			
not field verified			
<b>Shrub</b>			
not field verified			
<b>Herb</b>			
not field verified			
(L) Primary hydrology sources: <u>Surface flow</u>			
(N) Locally Significant Wetland Determination: LSW? <span style="border: 1px solid black; padding: 2px;">N/A</span> LSW Criteria: <u>none</u>			
(O) Comments that describe the wetland, including topographic position, land uses and significant alterations (including agricultural).			
The City has delineated this as a waterbody, however aerial imagery suggests it is now a PEM wetland. Wetland is located east of a ditch line, in a agricultural field or pasture.			



## **Appendix E**

**OFWAM Wetland Characterization Questions, Function Answer Sheets, and  
Function and Condition Summary Sheets**

*This page intentionally left blank.*

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	Rogue River is outside of Study Area
---	--------------------------------------

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.

a	Is upstream of Rogue River
---	----------------------------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	c		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

15 Modified for WH8: 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

c
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

a
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next question		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
b			

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

a	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	urban
---	-------------	------------------------	--------------	-------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
--	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

	a. >75%	b. bet. 50% & 75%	c. <50%
--	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

	a. >25%	b. bet. 10% & 25%	c. <10%
--	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

	a. yes	b. cannot be determined	c. no
--	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

	a. 60% or more	b. bet. 20% & <60%	c. <20%
--	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

	a. >25%	b. bet. 10% & 25%	c. <10%
--	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)
- Urban or urbanizing (mix of urban, agriculture and forest uses).
  - Agriculture (farming, ranching or grazing).
  - Forested or natural area.

b	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 303(d) reporting).
- Streams or portions of streams within the study area are listed as water quality limited.
  - No streams or portions of streams within the study area are listed as water quality limited.

b	
---	--

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.")
- All upstream reaches are listed as no problem (or no data available).
  - One or more upstream reaches are listed in moderate water quality condition.
  - One or more upstream reaches are listed in severe water quality condition.

a	
---	--

### Wetland Structure and Landscape

- 15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

- 15 Modified for WH8: What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

b
---

- 15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

b
---

- 16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next question		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

- 16 Modified for HC6: What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- Developed uses
- Agriculture
- Exclusive Forest Use or Open Space

b
---

- 17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

- 18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---



19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
---	-------------	------------------------	--------------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

OFWAM UNIT #		MWC-1
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	a	
4	c	
5	b	
6	a	
7	a	
8	c	
9b	c	
Provides habitat for some species		
<b>Fish Habitat</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	a	
3	b	
4	a	Ditches likely provide connectivity
5	a	
6	b	
Impacted or degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	a	
4	a	
5	c	
6	a	
7	b	
Intact		

OFWAM UNIT #		MWC-2
<b>Wildlife Habitat</b>		
1	a	
2	a	
3	b	
4	c	
5	a	
6	a	
7	a	
8	b	
9b	b	
Provides diverse wildlife habitat		
<b>Fish Habitat</b>		
<b>Streams and Rivers</b>		
1	a	
2	b	
3	b	
4	a	
5	b	
6	b	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	a	
4	b	
5	a	
6	b	
7	b	
Intact		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: MWC-1

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Relatively isolated, habitat not interspersed, low structural diversity, no open water, lacks woody vegetation. Adjacent land use is rural/residential and industrial. Located south of Swanson Creek
Fish Habitat	Not applicable	No stream / pond / lake present.
Water Quality	Impacted or degraded	Surface inflow. Fed by ditch in-flow; ponding; within floodplain of Swanson Creek, a tributary to Whetsone and the Rogue. Average vegetative cover <60% due to vernal pool component.
Hydrologic Control	Intact	Located within Swanson Creek 100-year floodplain.
<b>Description</b>		
Wetland ID's: W36, W04 (A, B and Mosaic components). These wetlands are hydrologically connected by shallow surface flow and ponding water in hummocky microtopography across the complex. For each wetland, the mapped boundaries are approximate - there is potential for a delineation study to in fact connect these wetlands in to a single polygon. The mosaic nature of the site resulted in a large coverage of wetland polygon.		

Wetland identification: MWC-2

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides diverse wildlife habitat	Forested, woody cover along Swanson Creek. Diverse herbaceous vegetation. Two wetland vegetation classes present, interspersed, large size. Provides meadow / pasture habitat for insects and small birds. Good structural diversity. Adjacent to developed areas.
Fish Habitat	Impacted or degraded	Wetland complex connected to natural stream channel (Swanson Creek). No recorded water quality issues upstream. Shaded riparian corridor. Small portions of stream ditched/culverted.
Water Quality	Intact	Surface inflow from Swanson Creek and surrounding upland. Interspersed ponding, well vegetated. Within floodplain of Swanson Creek, a tributary to Whetsone and the Rogue.
Hydrologic Control	Intact	Within 100-year floodplain of Swanson Creek. Adjacent industrial / residential land use. Restricted outflow. >5 acres in size.
<b>Description</b>		
Wetland ID's: W06, W34, W35, W24, W26 W85 through W88. Hydrologically connected by Swanson Creek and the adjoining riparian / Forested wetland feature. Site access would be helpful, as the mapped wetland polygons are conservatively based on the riparian vegetation shown in aerial imagery.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments: Light industrial also present. Pasture land dominant use.
---	---

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	comments: Rogue River is outside of Study Area
---	--

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.

a	comments: Extensive ditching to east for flood irrigation.
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	<i>see next two questions</i>		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	<i>see next question</i>		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

## Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

## Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**WETLAND CHARACTERIZATION QUESTIONS****Land uses within the watershed**

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	
---	--

**Water quality - see DEQ website**

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	
---	--

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.

a	
---	--

**Wetland Structure and Landscape**

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---



19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

## Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

## Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

OFWAM UNIT# MWC-3		
<b>Wildlife Habitat</b>		
1	b	
2	b	
3	c	
4	b	
5	a	
6	a	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	b	
2	c	
3	c	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	b	
5	b	
6	b	
7	b	
Impacted or Degraded		

OFWAM UNIT # MWC-4		
<b>Wildlife Habitat</b>		
1	b	
2	a	
3	c	
4	b	
5	a	
6	a	
7	a	
8	b	
9b	b	
Provides diverse wildlife habitat		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	a	
2	b	
3	b	
4	a	
5	b	
6	b	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	a	
4	c	
5	a	
6	a	
7	b	
Intact		

**Oregon Freshwater Wetland Assessment**  
**Function and Condition Summary Sheet**

Wetland identification: MWC-3

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Habitat not interspersed, adjoining waters are approximately 0.6 acres in total. Some structural diversity. Lacks woody vegetation. Adjacent land use is residential. Borderline diverse / some.
Fish Habitat	Impacted or Degraded	Ditches are channelized, one man-made irrigation pond present.
Water Quality	Intact	Overland sheet inflow and surface flow via ditches. Extensive ponding during growing season is likely, based on historical aerial imagery. Tributary to Swanson Creek.
Hydrologic Control	Impacted or Degraded	Agriculture is dominant surrounding land use.
<b>Description</b>		
<p>Wetland ID's: W07, W38. Adjoining waters: AW35, WA29.</p> <p>Site visit to W07 confirmed that it is hydrologically connected to W38 along its western edge where a flooding ditch is present. Delineation level study would be required to confirm connection.</p>		

Wetland identification: MWC-4

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides diverse wildlife habitat	Forested, woody cover along Swanson Creek. Diverse herbaceous vegetation. Two wetland vegetation classes present, interspersed, large size. Provides meadow / pasture habitat for insects and small birds. Good structural diversity. Adjacent to developed areas.
Fish Habitat	Impacted or Degraded	Wetland complex connected to natural stream channel (Swanson Creek). No recorded water quality issues upstream. Shaded riparian corridor. Small portions of stream ditched/culverted.
Water Quality	Intact	Surface inflow from Swanson Creek and surrounding upland. Interspersed ponding, well vegetated. Within floodplain of Swanson Creek, a tributary to Whetsone and the Rogue.
Hydrologic Control	Intact	Within 100-year floodplain of Swanson Creek. Adjacent industrial / residential land use. Restricted outflow; Complex >5 acres in size.
<b>Description</b>		
<p>Wetland ID's: W39-(A-B), W41. Connected by Swanson Creek and associated riparian / forested / scrub-shrub wetlands (confirmed by WD2009-0407)</p>		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	comments: housing development upstream
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	comments:
---	-----------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

1. Open Space	a. <20%	b. bet. 20% & 50%	c. >50%
2. Agriculture	see next two questions		
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

1. Open Space	a. <20%	b. bet. 20% & 50%	c. >50%
2. Agriculture	see next question		
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	urban
---	-------------	------------------------	--------------	-------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

c	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

c	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

a

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---



19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wi

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

a	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
---	-------------	------------------------	--------------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

c	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# MWC-5		
<b>Wildlife Habitat</b>		
1	a	
2	b	
3	c	
4	b	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	c	
2	c	
3	c	
4	a	
5	b	
6	c	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	c	
2	a	
3	a	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	b	
6	a	
7	a	
Intact		

OFWAM UNIT # MWC-6		
<b>Wildlife Habitat</b>		
1	a	
2	c	
3	b	
4	a	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	c	
2	b	
3	c	
4	a	
5	b	
6	c	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	c	
2	a	
3	a	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	c	
6	a	
7	b	
Intact		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: MWC-5

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Mostly emergent with adjoining open water, interspersed, large size. Provides meadow / pasture habitat for insects and small birds. Somewhat mosaic distribution of wetland/upland areas. Surface water connection via channelized stream. Relatively undisturbed pasture.
Fish Habitat	Impacted or Degraded	Ditches are channelized, two ponds present.
Water Quality	Impacted or Degraded	Primarily groundwater input. Lacks woody vegetation. Seasonal ponding; adjacent to light industrial land use and agriculture. No clear connection to Swanson Creek.
Hydrologic Control	Intact	Complex >5 acres in size. Extensive flooding during growing season. Restricted outlet due to adjoining Vilas road and industrial development.
Description		
Wetland ID's: W10-(A, D-G), W22. Connected via shallow, pooling surface water in undulating microtopography (observed during site visit and in LiDAR data). Water ID's: AW16, AW32.		

Wetland identification: MWC-6

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Five wetland vegetation classes present, well interspersed, large size, diverse. Good structural at eastern end (W21, W53 on slope), open water interspersed, and streams / ditches present.
Fish Habitat	Impacted or Degraded	Ditches are channelized, several man made and natural ponds present.
Water Quality	Impacted or Degraded	Groundwater input. Streams extensively channelized. Surrounding land use is flood irrigated pasture. Downstream channel runs through / adjacent to Medford airport.
Hydrologic Control	Intact	Limited outlet. Not in floodplain, however ponding is likely. Adjacent to developed land uses. Drainage is headwater to Midway AND Swanson Creeks, feeding to pond with restricted outflow.
Description		
Wetland ID's: W21, W46 through W51, W53 through W57. This large complex has mostly unidirectional flow to the west/northwest and is connected via extensive ditching and straightened stream channels. Aerial imagery and use of LiDAR data assisted in this determination. Water ID's: WA14, WA15, AW33, AW17, WA16, WA28.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	comments: pasture, residential, industrial
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	comments:
---	-----------

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.

a	comments: Rogue river is outside study area, downstream
---	---

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next two questions		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next question		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

a	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
	RURAL a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	
---	--

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.

a	
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

a
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

a
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---



19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? c

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

a	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# MWC-7		
<b>Wildlife Habitat</b>		
1	b	rural
2	b	
3	a	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	c	
2	c	
3	c	
4	a	
5	b	
6	c	
Lakes and Ponds		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	b	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	a	
4	c	
5	b	
6	b	
7	a	
Intact		

OFWAM UNIT # MWC-8		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	a	
4	c	
5	b	
6	b	
7	a	
8	a	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	c	
4	a	
5	a	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	c	
6	a	
7	a	
Intact		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: MWC-7

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Limited structural diversity, very small waters and vernal pools interspersed, one Cowardin class. Adjacent to Swanson Creek, with a portion crossing in to the 100-year floodplain. Lacks woody vegetation.
Fish Habitat	Impacted or Degraded	Small ditch runs through center of complex.
Water Quality	Impacted or Degraded	Surface in-flow, however wetland vegetation percentage is low because of mosaic structure. Vernal pool ponding during the growing season evident in aerial imagery.
Hydrologic Control	Intact	Partly intersects with Swanson Creek 100-year floodplain. More than 5 acres in size.
<b>Description</b>		
Wetland ID: W82. Landform was visually observed from southern boundary of parcel, however the characteristics of the vernal pools were not confirmed due to denied access. This polygon is from the Agate Desert Vernal Pool Planning TAC (2000), which has been extended slightly to the NW using desktop interpretation. LiDAR data shows true extent of Vernal Pool complex. Water ID's: AW10, WA11		

Wetland identification: MWC-8

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Isolated with low structural diversity. Surrounded by developed land uses.
Fish Habitat	Not applicable	Not connected to a stream, ditch or open water.
Water Quality	Impacted or Degraded	Outside the floodplain of Swanson Creek. Low percentage of wetland vegetation cover due to mosaic structure.
Hydrologic Control	Intact	Polygon more than 5 acres in size, however actual wetland acreage may be smaller. No apparent outlet. Wetland surrounded by industrial and residential land use, and pasture.
<b>Description</b>		
Wetland ID's: W25. Not accessed for verification. This wetland polygon is from the Agate Desert Vernal Pool Planning TAC (2000), and the Medford Hydrography CAD (2013). Native oaks are present within the wetland polygon and were included as upland habitat in the OFWAM assessment.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	comments:
---	-----------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next two questions</i>			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next question</i>			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN a. Two or more

b. One w/ > 5 species

c. One w/ < 5 species

a

RURAL a. 3 or 4

b. 2

c. 1

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# **Oregon Freshwater Wetland Assessment Function Answer Sheet**

<b>OFWAM UNIT# MWC-9</b>		
<b>Wildlife Habitat</b>		
1	a	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	c	
5	c	
6	b	
7	a	
Impacted or Degraded		



## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: MWC-9

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	0.52 acres. Isolated, along boundary of field pasture. Disturbed. Potential PSS component <0.08 acres.
Fish Habitat	Not applicable	Minor ditch.
Water Quality	Impacted or Degraded	Isolated.
Hydrologic Control	Impacted or Degraded	Water likely moves through the wetland rapidly. Agriculture is dominant surrounding land use.
Description		
Wetland ID's: W31 along small ditch line (desktop delineation), likely artificial.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next two questions

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next question

16 Modified for HC6: 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

b

17 What is the (entire) wetland acreage?

b

a. >5 acres

b. bet. 0.5 & 5 acres

c. < 0.5 acres

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a

a. connected by surface water (culv., ditch, int./per. stream)

b. not connected to water body within 1 mile

c. not connected, no water bodies within 1 mile

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	c
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
---	-------------	------------------------	--------------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)
- Urban or urbanizing (mix of urban, agriculture and forest uses).
  - Agriculture (farming, ranching or grazing).
  - Forested or natural area.

b	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 303(d) reporting).
- Streams or portions of streams within the study area are listed as water quality limited.
  - No streams or portions of streams within the study area are listed as water quality limited.

b	
---	--

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.")

- All upstream reaches are listed as no problem (or no data available).
- One or more upstream reaches are listed in moderate water quality condition.
- One or more upstream reaches are listed in severe water quality condition.

a	
---	--

### Wetland Structure and Landscape

- 15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- Open Space
- Agriculture
- Exclusive Forest Use
- Developed uses
- Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 15 Modified for WH8: What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

b
---

- 15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

b
---

- 16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- Open Space
- Agriculture
- Exclusive Forest Use
- Developed uses
- Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 16 Modified for HC6: What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- Developed uses
- Agriculture
- Exclusive Forest Use or Open Space

a
---

- 17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

- 18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

c	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

OFWAM UNIT# MWC-10		
<b>Wildlife Habitat</b>		
1	c	
2	c	
3	c	
4	b	
5	a	
6	b	
7	a	
8	b	
9b	c	
Impacted or Degraded		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	b	
2	c	
3	c	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	a	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	b	
4	b	
5	c	
6	b	
7	b	
Impacted or Degraded		

OFWAM UNIT # MWC-11		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	b	
4	c	
5	b	
6	a	
7	a	
8	b	
9b	b	
Impacted or Degraded		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	c	
2	c	
3	c	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	a	
3	a	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	b	
4	b	
5	c	
6	a	
7	b	
Impacted or Degraded		



**Oregon Freshwater Wetland Assessment**  
**Function and Condition Summary Sheet**

Wetland identification: MWC-10

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Impacted or Degraded	Habitat not interspersed, adjoining waters are approximately 0.6 acres in total. Some structural diversity. Lacks woody vegetation. Adjacent land use is residential. Borderline diverse / some.
Fish Habitat	Impacted or Degraded	Ditches are channelized, one man-made irrigation pond present.
Water Quality	Impacted or Degraded	Overland sheet inflow and surface flow via ditches. Extensive ponding during growing season is likely, based on historical aerial imagery. Tributary to Swanson Creek.
Hydrologic Control	Impacted or Degraded	Agriculture is dominant surrounding land use.
Description		
Wetland ID: W11. Adjoining waters: AW17.		

Wetland identification: MWC-11

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Impacted or Degraded	Forested, woody cover along Swanson Creek. Diverse herbaceous vegetation. Two wetland vegetation classes present, interspersed, large size. Provides meadow / pasture habitat for insects and small birds. Good structural diversity. Adjacent to developed areas.
Fish Habitat	N/A	N/A
Water Quality	Impacted or Degraded	Interspersed ponding, well vegetated. Partially within floodplain of Swanson Creek, a tributary to Whetsone and the Rogue.
Hydrologic Control	Impacted or Degraded	Partially within 100-year floodplain of Swanson Creek. Adjacent industrial / residential land use. Restricted outflow; ponding during growing season.
Description		
Wetland ID: W43. Separated from W41.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next question

16 Modified for HC6: 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

b

17 What is the (entire) wetland acreage?

a

a. >5 acres

b. bet. 0.5 & 5 acres

c. < 0.5 acres

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a

a. connected by surface water (culv., ditch, int./per. stream)

b. not connected to water body within 1 mile

c. not connected, no water bodies within 1 mile

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	c
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
---	-------------	------------------------	--------------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**WETLAND CHARACTERIZATION QUESTIONS****Land uses within the watershed**

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	
---	--

**Water quality - see DEQ website**

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	
---	--

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.

a	
---	--

**Wetland Structure and Landscape**

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

## Wetland Hydrology

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	--------------------------------	--

37 Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	--	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	---------------------------------	--	-------------------------------------

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

OFWAM UNIT# MWC-12		
<b>Wildlife Habitat</b>		
1	c	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	a	
2	b	
3	b	
4	a	
5	b	
6	b	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	b	
3	a	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	b	
3	a	
4	c	
5	c	
6	b	
7	b	
Impacted or Degraded		

OFWAM UNIT # MWC-13		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	c	
4	c	
5	a	
6	a	
7	a	
8	b	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	a	
2	b	
3	b	
4	a	
5	b	
6	b	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	b	
4	c	
5	c	
6	a	
7	b	
Impacted or Degraded		



# **Oregon Freshwater Wetland Assessment**

## **Function and Condition Summary Sheet**

Wetland identification: MWC-12

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Provides meadow / pasture habitat for insects and small birds. Habitat not interspersed, and lacks woody vegetation.
Fish Habitat	Impacted or Degraded	Ditches are channelized.
Water Quality	Impacted or Degraded	Overland sheet inflow and surface flow via ditches. Som ponding during growing season is likely, based on historical aerial imagery. Swanson Creek connection.
Hydrologic Control	Impacted or Degraded	Agriculture is dominant surrounding land use.
Description		
Wetland ID's: W23		

Wetland identification: MWC-13

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Provides meadow / pasture habitat for insects and small birds. Adjacent to developed areas.
Fish Habitat	Impacted or Degraded	Wetland connected to natural stream channel (Swanson Creek). No recorded water quality issues upstream. Small portions of stream ditched/culverted.
Water Quality	Intact	Surface inflow from upslope and ditching, and possible Swanson Creek. Interspersed ponding, well vegetated. Within floodplain of Swanson Creek, a tributary to Whetsone and the Rogue.
Hydrologic Control	Impacted or Degraded	Within 100-year floodplain of Swanson Creek. Adjacent industrial / residential land use. Restricted outflow; ponding during growing season.
Description		
Wetland ID: W08		

**WETLAND CHARACTERIZATION QUESTIONS**

**Land uses within the watershed**

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)
- Urban or urbanizing (mix of urban, agriculture and forest uses).
  - Agriculture (farming, ranching or grazing).
  - Forested or natural area.

b	
---	--

**Water quality - see DEQ website**

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 303(d) reporting).
- Streams or portions of streams within the study area are listed as water quality limited.
  - No streams or portions of streams within the study area are listed as water quality limited.

b	
---	--

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.")

- All upstream reaches are listed as no problem (or no data available).
- One or more upstream reaches are listed in moderate water quality condition.
- One or more upstream reaches are listed in severe water quality condition.

a	
---	--

**Wetland Structure and Landscape**

- 15** What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

1. Open Space	a. <20%	b. bet. 20% & 50%	c. >50%
2. Agriculture	see next two questions		
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

- 15 Modified for WH8:** What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

a
---

- 15 Modified for WQ5:** What is the dominant existing land use within 500 feet of the wetland's edge?

- Exclusive Forest Use or Open Space
- Agriculture
- Developed uses

c
---

- 16** What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

1. Open Space	a. <20%	b. bet. 20% & 50%	c. >50%
2. Agriculture	see next question		
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

- 16 Modified for HC6:** What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- Developed uses
- Agriculture
- Exclusive Forest Use or Open Space

a
---

- 17** What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

- 18** How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

- 19** Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

## Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	c
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

## Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

37 Is there evidence of flooding or ponding during a portion of the growing season?

c	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

**WETLAND CHARACTERIZATION QUESTIONS****Land uses within the watershed**

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	
---	--

**Water quality - see DEQ website**

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	
---	--

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.

a	
---	--

**Wetland Structure and Landscape**

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

URBAN

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

## Wetland Hydrology

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	--------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	--	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	---------------------------------	--	-------------------------------------

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

OFWAM UNIT# MWC-14		
<b>Wildlife Habitat</b>		
1	c	
2	c	
3	c	
4	c	
5	b	
6	b	
7	a	
8	a	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
<b>Lakes and Ponds</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
n/a		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	c	
3	b	
4	b	
5	c	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	c	
3	b	
4	c	
5	c	
6	a	
7	b	
Impacted or Degraded		

OFWAM UNIT # MWC-15		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	c	
4	c	
5	b	
6	a	
7	a	
8	b	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
<b>Lakes and Ponds</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
n/a		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	a	
4	c	
5	c	
6	b	
7	b	
Impacted or Degraded		



## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: MWC-14

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Habitat not interspersed, adjoining waters are approximately 0.6 acres in total. Some structural diversity. Lacks woody vegetation. Adjacent land use is residential. Borderline diverse / some.
Fish Habitat	n/a	Ditches are channelized, one man-made irrigation pond present.
Water Quality	Impacted or Degraded	Overland sheet inflow and surface flow via ditches. Extensive ponding during growing season is likely, based on historical aerial imagery. Tributary to Swanson Creek.
Hydrologic Control	Impacted or Degraded	Agriculture is dominant surrounding land use.
Description		
Wetland ID: W42		

Wetland identification: MWC-15

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Diverse herbaceous vegetation, large size. Provides meadow / pasture habitat for insects and small birds. Structural diversity.
Fish Habitat	n/a	Not connected
Water Quality	Intact	Irrigation flooding still seems to contribute to this wetland, with downslope connection to Swanson Creek. Ponding observed near P08. Well vegetated. Within 100-year floodplain of Swanson Creek, a tributary to Whetsone and the Rogue.
Hydrologic Control	Impacted or Degraded	Within 100-year floodplain of Swanson Creek. Adjacent industrial / residential land use. Ponding during growing season; Complex >5 acres in size.
Description		
Wetland ID: W09 and W40		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next question

16 Modified for HC6: 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

b

17 What is the (entire) wetland acreage?

b

a. >5 acres

b. bet. 0.5 & 5 acres

c. < 0.5 acres

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b

a. connected by surface water (culv., ditch, int./per. stream)

b. not connected to water body within 1 mile

c. not connected, no water bodies within 1 mile

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	c
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
---	-------------	------------------------	--------------

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function (**  
**Answer Sheet**

<b>OFWAM UNIT# MWC-16</b>		
<b>Wildlife Habitat</b>		
1	c	
2	c	
3	c	
4	c	
5	b	
6	a	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
<b>Lakes and Ponds</b>		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
n/a		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	a	
3	b	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	a	
3	b	
4	b	
5	c	
6	b	
7	b	
Impacted or Degraded		

**Oregon Freshwater Wetland Assessment**  
**Function and Condition Summary Sheet**

Wetland identification: MWC-16

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Habitat not interspersed, adjoining waters are approximately 0.6 acres in total. Some structural diversity. Lacks woody vegetation. Adjacent land use is residential. Borderline diverse / some.
Fish Habitat	n/a	Ditches are channelized, one man-made irrigation pond present.
Water Quality	Impacted or Degraded	Overland sheet inflow and surface flow via ditches. Extensive ponding during growing season is likely, based on historical aerial imagery. Mowed pasture with limited vegetation diversity.
Hydrologic Control	Impacted or Degraded	Agriculture is dominant surrounding land use. Wetland is a mowed / managed field.
Description		
Wetland ID's: W27, W28. Connected under driveway via culvert.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	
---	--

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.

a	
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)	a			
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wi

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------



**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

<b>OFWAM UNIT # BCS-1</b>		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	b	
4	c	
5	b	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	b	
5	c	
6	a	
7	a	
Impacted or Degraded		

**Oregon Freshwater Wetland Assessment**  
**Function and Condition Summary Sheet**

Wetland identification: BCS-1

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Flood irrigated pasture with limited diversity, one Cowardin class. Adjacent land use is flood irrigated pasture and other agriculture, with a golf course to the west.
Fish Habitat	Not applicable	Highly altered irrigation canal.
Water Quality	Impacted or Degraded	No true surface water connection to Phoenix Canal. Flood irrigation is practiced on site by controlled use of ditches.
Hydrologic Control	Impacted or Degraded	Any ponding that occurs is a result of controlled flood irrigation. Canal is bordered by a dike on the west side. A small underground pipe connects the ditch along the east side of the wetland to the canal.
<b>Description</b>		
Wetland ID's: W01, W02-(A-B). Phoenix Canal runs along eastern edge of W02-B, separated by a dike. Phoenix Canal is a tributary to Larson Creek, and Larson Creek to Bear Creek (>1/4 mile away). Artificial waters to the west are part of golf course landscaping features - no connection to these was observed.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

c	comments: a portion is agriculture, and further upstream is open upland forest.
---	---

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Adjacent Larson creek is listed as water quality limited for temperature and dissolved oxygen
---	---

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- |                         |                               |                   |         |
|-------------------------|-------------------------------|-------------------|---------|
| 1. Open Space           | a. <20%                       | b. bet. 20% & 50% | c. >50% |
| 2. Agriculture          | <i>see next two questions</i> |                   |         |
| 3. Exclusive Forest Use |                               |                   |         |
| 4. Developed uses       |                               |                   |         |
| 5. Other                |                               |                   |         |

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- |                         |                          |                   |         |
|-------------------------|--------------------------|-------------------|---------|
| 1. Open Space           | a. <20%                  | b. bet. 20% & 50% | c. >50% |
| 2. Agriculture          | <i>see next question</i> |                   |         |
| 3. Exclusive Forest Use |                          |                   |         |
| 4. Developed uses       |                          |                   |         |
| 5. Other                |                          |                   |         |

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Lakes or ponds (entire lake or pond and wetland complex)**

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

b	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	--------------------------------	--

37 Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	--	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	---------------------------------	--	-------------------------------------

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comment: Downstream Bear creek is listed as water quality limited - Temperature, sediment, and bacteria.
---	--

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.

a	
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next two questions	
2. Agriculture		
3. Exclusive Forest Use		
4. Developed uses		
5. Other		

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next question	
2. Agriculture		
3. Exclusive Forest Use		
4. Developed uses		
5. Other		

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN a. Two or more b. One w/ > 5 species c. One w/ < 5 species

RURAL a. 3 or 4 b. 2 c. 1

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wi

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
	RURAL a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------



**Lakes or ponds (entire lake or pond and wetland complex)**

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	--------------------------------	--

37 Is there evidence of flooding or ponding during a portion of the growing season?

c	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	--	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	---------------------------------	--	-------------------------------------

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# BCS-2		
<b>Wildlife Habitat</b>		
1	b	
2	b	
3	b	
4	b	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1	b	
2	c	
3	b	
4	a	
5	b	
6	b	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	a	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	a	
5	b	
6	b	
7	c	
Impacted or Degraded		

OFWAM UNIT # BCS-3		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	b	
4	c	
5	a	
6	a	
7	a	
8	b	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	c	
2	b	
3	c	
4	a	
5	b	
6	a	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	c	
3	b	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	c	
3	b	
4	c	
5	c	
6	b	
7	b	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: BCS-2

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Riparian vegetation along Larson Creek includes oak, ash, willow, and blackberry. One wetland type.
Fish Habitat	Impacted or Degraded	Larson Creek reservoir is small. It adjoins the wetlands, but does not have a clear connection to Larson Creek.
Water Quality	Impacted or Degraded	Could be intact if ponding is occurring (unable to determine). Evidence that main source of hydrology is from up-slope canal and associated ditches used for flood irrigation.
Hydrologic Control	Impacted or Degraded	Larson Creek reservoir connects to wetlands, but does not have a clear connection to Larson Creek. No culvert observed under road to west.
Description		
Wetland ID: W13 Water ID's: AW21 - Larson Creek Reservoir. East Lateral Canal is upslope. Passes LSW criteria because it is within 1/4 mile of water quality limited Larson creek.		

Wetland identification: BCS-3

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Adjoining upland vegetation somewhat sparse. Single Cowardin class.
Fish Habitat	Impacted or Degraded	Wetland connected to tributary via intermittent or potentially ephemeral drainage / ditch that lacks woody vegetation.
Water Quality	Impacted or Degraded	Connected to tributary by likely intermittent stream. Inflow potentially from East Lateral Canal and AW22 pond.
Hydrologic Control	Impacted or Degraded	Residence is in close proximity, however majority of surrounding land use is flood irrigated pasture.
Description		
Wetland ID's: W68. Unnamed tributary to Bear Creek is located approximately 300 feet to the south, outside the study area and is connected by an ephemeral drainage.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments: Pasture
---	-------------------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Bear Creek, downstream
---	----------------------------------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next two questions			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next question			

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Bear Creek is 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.

c	comments: Bear creek is listed as severe with data
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

15 Modified for WH8: 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

a
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

a
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

16 Modified for HC6: 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

c
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

a	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

a	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by a vegetative buffer at least 25 feet wide?

a	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

a	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------



**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# BCS-4		
<b>Wildlife Habitat</b>		
1	a	
2	b	
3	b	
4	b	
5	a	
6	a	
7	a	
8	b	
9b	c	
Provides diverse wildlife habitat		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1	b	
2	c	
3	c	
4	a	
5	b	
6	a	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	b	
6	a	
7	b	
Intact		

OFWAM UNIT # BCS-5		
<b>Wildlife Habitat</b>		
1	a	
2	a	
3	a	
4	c	
5	a	
6	a	
7	c	
8	a	
9b	a	
Provides diverse wildlife habitat		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	a	
2	b	
3	b	
4	c	
5	a	
6	a	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Intact		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	a	
4	a	
5	a	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	a	
2	b	
3	b	
4	b	
5	a	
6	c	
7	a	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: BCS-4

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides diverse wildlife habitat	Two Cowardin classes present, dominated by emergent vegetation with limited diversity and moderate interspersed. Adjoins open water, and I-5 corridor.
Fish Habitat	Impacted or Degraded	Coho present in Bear Creek, downstream. Connected to Bear Creek via culvert under I-5 corridor.
Water Quality	Intact	Large area, well vegetated, tributary to Bear Creek.
Hydrologic Control	Intact	Aerial imagery suggests flooding / ponding present. Receives flow from ditches and tributaries leading to Bear Creek.
<b>Description</b>		
Wetland ID's: W70, W71, W72. Hydrologically connected via ditching, surface flow, and water WA08. Water ID's: WA08, WA22, WA24, WA28		

Wetland identification: BCS-5

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides diverse wildlife habitat	Forested, woody, scrub-shrub cover. Diverse vegetation. Two Cowardin classes present, interspersed, large size, good structural diversity. Bear Creek runs through middle. Adjacent to developed areas.
Fish Habitat	Intact	Provides shade to Bear Creek, a natural channel with good structural diversity. Coho recorded in Bear Creek (federally threatened).
Water Quality	Impacted or Degraded	Bear Creek is water quality limited due to temperature, bacteria and sediment.
Hydrologic Control	Impacted or Degraded	Dominant downstream cover within 500 feet is natural area within the Bear Creek Greenway.
<b>Description</b>		
Wetland ID's: W18, W79. Hydrologically connected via floodplain of Bear Creek. Water ID's: Bear Creek		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Bear creek, downstream
---	----------------------------------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next two questions			

15 Modified for WH8: 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

a
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

a
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next question			

16 Modified for HC6: 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

c
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by a vegetative buffer at least 25 feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
--	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

	a. >75%	b. bet. 50% & 75%	c. <50%
--	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

	a. >25%	b. bet. 10% & 25%	c. <10%
--	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

b	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comment: Bear creek
---	---------------------

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.

a	
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by a vegetative buffer at least 25 feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------



**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

c	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# BCS-6		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	a	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1	b	
2	c	
3	c	
4	a	
5	a	
6	b	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	b	
2	b	
3	a	
4	b	
5	a	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	a	
5	c	
6	c	
7	b	
Impacted or Degraded		

OFWAM UNIT # BCS-7		
<b>Wildlife Habitat</b>		
1	a	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	c	
2	a	
3	a	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	c	
6	b	
7	a	
Intact		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: BCS-6

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Isolated wetland within golf course.
Fish Habitat	Impacted or Degraded	Culvert from wetland flows to underground piping, and into artificial pond
Water Quality	Impacted or Degraded	Wetland on slope, surrounded by golf course, drained by underground culvert.
Hydrologic Control	Impacted or Degraded	Wetland on slope, surrounded by golf course, drained by underground culvert. Not in floodplain, not upstream of developed areas. Extensive ponding not likely.
Description		
Wetland ID's: W17. Other small probable wetlands on golf course too small for functional assessment. Water ID's: Artificial ponds on golf course include AW27, AW36, AW37, AW38, AW39		

Wetland identification: BCS-7

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Isolated, habitat not interspersed, no open water. Two Cowardin classes. Adjacent to Bear Creek which is water quality limited.
Fish Habitat	Not applicable	Ditch is minor.
Water Quality	Impacted or Degraded	Ground water input. Lacks extensive woody vegetation.
Hydrologic Control	Intact	Ground water fed wetland, ponding evident in ditch that runs through site. Large area. Woody vegetation present.
Description		
Wetland ID's: W19-(A-B). Connected via ditching, surface flow, and culvert. Field visit found no surface connection to W20 wetland which has, therefore, been excluded from this assessment unit (see BCS-8).		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Bear creek is water quality limited for temperature, bacteria, sediment.
---	--

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next two questions</i>			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next question</i>			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

c	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

c	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a	
---	--

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	Bear Creek is 303(d) for multiple criteria
---	--

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.

a	
---	--

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)	a			
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	c
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

c	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------



**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Questions Answer Sheet

OFWAM UNIT# BCS-8		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	c	
2	c	
3	a	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	c	
3	b	
4	a	
5	c	
6	b	
7	a	
Impacted or Degraded		

OFWAM UNIT # BCS-9		
<b>Wildlife Habitat</b>		
1	c	
2	c	
3	b	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	c	
2	c	
3	c	
4	a	
5	b	
6	c	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	c	
5	c	
6	b	
7	a	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: BCS-8

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Limited structural diversity. Isolated. Agriculture and developed land uses surround the wetland.
Fish Habitat	Not applicable	Very small pond present.
Water Quality	Impacted or Degraded	Ground water fed. No connection to ditch along southern boundary of parcel.
Hydrologic Control	Impacted or Degraded	Ground water fed. No connection to flood plain. Slight slope - little to no ponding.
Description		
Wetland ID's: W20 Water ID's: WA26		

Wetland identification: BCS-9

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Flood irrigated pasture with limited diversity, one Cowardin class. Adjacent land use is flood irrigated pasture and other agriculture.
Fish Habitat	Impacted or Degraded	Highly altered irrigation canal that is not diked on eastern side and therefore connected to W03.
Water Quality	Impacted or Degraded	Connected to Phoenix Canal, used for flood irrigation. FAC vegetation is dominated by meadow foxtail as a result of flood irrigation activities on clay soils.
Hydrologic Control	Impacted or Degraded	No ponding, as wetland is located on a slope. Receives hydrology from ditches used for flooding along the east side of the parcel.
Description		
Wetland ID's: W03. Highly altered setting limits functional value. Phoenix Canal runs along western edge, and is a tributary to Larson Creek, and Larson Creek to Bear Creek.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments: Pasture, and golf course
---	------------------------------------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Bear Creek, downstream
---	----------------------------------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next two questions		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space	see next question		
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

16 Modified for HC6: 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

a
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Answer Sheet

<b>OFWAM UNIT# BCS-10</b>		
<b>Wildlife Habitat</b>		
1	a	
2	b	
3	b	
4	b	
5	a	
6	a	
7	a	
8	b	
9b	c	
Provides diverse wildlife habitat		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	b	
2	c	
3	c	
4	a	
5	b	
6	a	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	a	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	a	
4	a	
5	b	
6	a	
7	b	
Intact		

# **Oregon Freshwater Wetland Assessment**

## **Function and Condition Summary Sheet**

Wetland identification: BCS-10

<b>Function</b>	<b>Evaluation Descriptor</b>	<b>Rationale</b>
Wildlife Habitat	Provides diverse wildlife habitat	Two Cowardin classes present, dominated by emergent vegetation with limited diversity and moderate interspersed. Adjoins open water, and I-5 corridor.
Fish Habitat	Impacted or Degraded	Coho present in Bear Creek, downstream. Connected to Bear Creek via culvert under I-5 corridor.
Water Quality	Intact	Large area, well vegetated, tributary to Bear Creek.
Hydrologic Control	Intact	Aerial imagery suggests flooding / ponding present. Receives flow from ditches and tributaries leading to Bear Creek.
<b>Description</b>		
Wetland ID: W74. Water ID: WA25		



## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

c	comments: a portion is agriculture, and further upstream is open upland forest.
---	---

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Adjacent Larson creek is listed as water quality limited for temperature and dissolved oxygen
---	---

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- |                         | a. <20%                | b. bet. 20% & 50% | c. >50% |
|-------------------------|------------------------|-------------------|---------|
| 1. Open Space           | see next two questions |                   |         |
| 2. Agriculture          |                        |                   |         |
| 3. Exclusive Forest Use |                        |                   |         |
| 4. Developed uses       |                        |                   |         |
| 5. Other                |                        |                   |         |

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- |                         | a. <20%           | b. bet. 20% & 50% | c. >50% |
|-------------------------|-------------------|-------------------|---------|
| 1. Open Space           | see next question |                   |         |
| 2. Agriculture          |                   |                   |         |
| 3. Exclusive Forest Use |                   |                   |         |
| 4. Developed uses       |                   |                   |         |
| 5. Other                |                   |                   |         |

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

a
---

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

b	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

b	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Lakes or ponds (entire lake or pond and wetland complex)**

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

b	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	--------------------------------	--

37 Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	--	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	---------------------------------	--	-------------------------------------

(bold questions =field; office review important for 15, 16, 26)

# Oregon Freshwater Wetland Assessment Function Answer Sheet

<b>OFWAM UNIT# BCS-11</b>		
<b>Wildlife Habitat</b>		
1	b	
2	b	
3	b	
4	b	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	b	
2	c	
3	b	
4	a	
5	b	
6	b	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	a	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	a	
5	b	
6	b	
7	c	
Impacted or Degraded		

# **Oregon Freshwater Wetland Assessment**

## **Function and Condition Summary Sheet**

Wetland identification: BCS-11

<b>Function</b>	<b>Evaluation Descriptor</b>	<b>Rationale</b>
Wildlife Habitat	Provides habitat for some species	Riparian vegetation along Larson Creek includes oak, ash, willow, and blackberry. One wetland type.
Fish Habitat	Impacted or Degraded	Larson Creek reservoir is small. It adjoins the wetlands, but does not have a clear connection to Larson Creek.
Water Quality	Impacted or Degraded	Could be intact if ponding is occurring (unable to determine). Evidence that main source of hydrology is from up-slope canal and associated ditches used for flood irrigation.
Hydrologic Control	Impacted or Degraded	Larson Creek reservoir connects to wetlands, but does not have a clear connection to Larson Creek. No culvert observed under road to west.
<b>Description</b>		
Wetland ID: W66 Water ID's: AW21 - Larson Creek Reservoir. East Lateral Canal is upslope. Passes LSW criteria because it is within 1/4 mile of water quality limited Larson creek.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

c	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b	comments:
---	-----------

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next two questions</i>			

15 Modified for WH8: 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

a
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

a
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next question</i>			

16 Modified for HC6: 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

c
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

a	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

a	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
	RURAL a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

b	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)



## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

a

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

b

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

a. <20%	b. bet. 20% & 50%	c. >50%
see next two questions		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

a. <20%	b. bet. 20% & 50%	c. >50%
see next question		

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

16 Modified for HC6: 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

a

17 What is the (entire) wetland acreage?

b

a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)	a			
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

c	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

n/a	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
-----	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

b	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

# **Oregon Freshwater Wetland Assessment Function Questions Answer Sheet**

OFWAM UNIT# DRC-1		
<b>Wildlife Habitat</b>		
1	a	
2	a	
3	a	
4	c	
5	a	
6	a	
7	a	
8	a	
9b	a	
Provides diverse wildlife habitat		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	b	
2	a	
3	b	
4	a	
5	a	
6	c	
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	a	
4	a	
5	a	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	c	
5	a	
6	c	
7	c	
Impacted or Degraded		

OFWAM UNIT # BCS-12		
<b>Wildlife Habitat</b>		
1	b	
2	c	
3	c	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
not applicable		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	b	
4	b	
5	c	
6	a	
7	a	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: DRC-1

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides diverse wildlife habitat	Likley diverse vegetation, with at least 2 wetland vegetation classes present, interspersed. Stream present. Woody vegetation; connected to tributary to Dry Creek. Surrounded by open space in Prescott Park
Fish Habitat	Impacted or Degraded	No species recorded in Dry Creek, however natural channel shaded by vegetation in a open space area
Water Quality	Impacted or Degraded	Somewhat diverse wetland vegetation with high percentage cover that filters water draining to Dry Creek.
Hydrologic Control	Impacted or Degraded	Receives hydrology from stream channel and surrounding overland sheet flow and freely drains from site
<b>Description</b>		
Wetland ID: W78 in tributary to Dry Creek		

Wetland identification: BCS-12

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Flood irrigated pasture with limited diversity, one Cowardin class. Adjacent land use is flood irrigated pasture and other agriculture.
Fish Habitat	not applicable	Highly altered irrigation canal is separated by a pump & gate. Steelhead have been recorded in Larson Creek, downstream.
Water Quality	Impacted or Degraded	Irrigation Canal & adjoining ditch used for flood irrigation. FAC vegetation is dominated by meadow foxtail as a result of flood irrigation activities on clay soils.
Hydrologic Control	Impacted or Degraded	Receives hydrology from ditches used for flooding along the east side of the parcel.
<b>Description</b>		
Wetland ID's: W02-A & W02-B. Connected via ditching and surface flow.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a

comment: Lazy creek (ajacent) water quality limited for bacteria.

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- |         |                   |         |
|---------|-------------------|---------|
| a. <20% | b. bet. 20% & 50% | c. >50% |
|---------|-------------------|---------|

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

see next two questions

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- |         |                   |         |
|---------|-------------------|---------|
| a. <20% | b. bet. 20% & 50% | c. >50% |
|---------|-------------------|---------|

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

see next question

16 Modified for HC6: 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

b

17 What is the (entire) wetland acreage?

b

- |             |                       |                |
|-------------|-----------------------|----------------|
| a. >5 acres | b. bet. 0.5 & 5 acres | c. < 0.5 acres |
|-------------|-----------------------|----------------|

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a

- |  |  |   |
|--|--|---|
| a. connected by surface water (culv., ditch, int./per. stream) | b. not connected to water body within 1 mile | c. not connected, no water bodies within 1 mile |
|--|--|---|

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

**URBAN a. Two or more**

**b. One w/ > 5 species**

**c. One w/ < 5 species**

a

**RURAL a. 3 or 4**

**b. 2**

**c. 1**

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)?

c

23 What is the dominant wetland vegetation cover?

c	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet wide?

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

c	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre

**URBAN**

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

b	a. yes	b. cannot be determined	c. no
---	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

c	a. 60% or more	b. bet. 20% & <60%	c. <20%
---	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)



**Oregon Freshwater Wetland Assessment Function Questions  
Answer Sheet**

<b>OFWAM UNIT # LPC-1</b>		
<b>Wildlife Habitat</b>		
1	a	
2	c	
3	b	
4	c	
5	a	
6	c	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1		
2		
3		
4		
5		
6		
<b>Lakes and Ponds</b>		
1	b	
2	c	
3	c	
4	a	
5	b	
6	c	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	c	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	c	
5	c	
6	b	
7	b	
Impacted or Degraded		

# **Oregon Freshwater Wetland Assessment** **Function and Condition Summary Sheet**

Wetland identification: LPC-1

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Surrounded by active orchards. Two Cowardin classes present. Well vegetated.
Fish Habitat	Impacted or Degraded	Artificial canal and pond - highly altered.
Water Quality	Impacted or Degraded	Adjacent to Lazy Creek. Abuts Phoenix Canal. Lacks woody vegetation with low degree of cover; small size. Adjacent agricultural land use.
Hydrologic Control	Impacted or Degraded	Connects to Phoenix Canal and irrigation pond.
Description		
Wetland ID's: W61 Water ID's: AW18, and Phoenix Canal. More than 1/4 mile distance from Lazy Creek.		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a

comment: Larson and Bear creeks are water quality limited for multiple criteria.

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.

a

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next two questions

15 Modified for WH8: 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

b

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

- 1. Open Space
- 2. Agriculture
- 3. Exclusive Forest Use
- 4. Developed uses
- 5. Other

a. <20%

b. bet. 20% & 50%

c. >50%

see next question

16 Modified for HC6: 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

b

17 What is the (entire) wetland acreage?

b

a. >5 acres

b. bet. 0.5 & 5 acres

c. < 0.5 acres

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

b

a. connected by surface water (culv., ditch, int./per. stream)

b. not connected to water body within 1 mile

c. not connected, no water bodies within 1 mile

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

n/a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
-----	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

n/a	a. >75%	b. bet. 50% & 75%	c. <50%
-----	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

a	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Larson creek is listed as water quality limited for temperature, bacteria.
---	--

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next two questions</i>			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
<i>see next question</i>			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

c	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

**Connection  
estimated - not  
confirmed**

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	a
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

a	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
	RURAL a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

**Connection estimated - not confirmed**

31 What percentage of the stream is shaded by riparian vegetation?

a	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

***East Lateral  
Canal***

37 Is there evidence of flooding or ponding during a portion of the growing season?

a	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

38 Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)



# **Oregon Freshwater Wetland Assessment Function Questions Answer Sheet**

OFWAM UNIT# LSC-1		
<b>Wildlife Habitat</b>		
1	a	
2	a	
3	b	
4	c	
5	b	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1		
2		
3		
4		
5		
6		
Lakes and Ponds		
1		
2		
3		
4		
5		
6		
Not applicable		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	b	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	b	
4	a	
5	a	
6	b	
7	b	
Impacted or Degraded		

OFWAM UNIT # LSC-2		
<b>Wildlife Habitat</b>		
1	a	
2	a	
3	b	
4	c	
5	a	
6	a	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
Streams and Rivers		
1	a	
2	b	
3	c	
4	a	
5	b	
6	c	
Lakes and Ponds		
1	n/a	
2	n/a	
3	n/a	
4	n/a	
5	n/a	
6	n/a	
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	a	
3	a	
4	b	
5	b	
6	c	
Intact		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	a	
3	c	
4	c	
5	a	
6	b	
7	b	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: LSC-1

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Heavily impacted by cattle. Isolated, habitat not interspersed, low structural diversity, no open water. Two Cowardin classes; scrub-shrub dominated.
Fish Habitat	Not applicable	Drainage is ephemeral.
Water Quality	Intact	Ponding observed during site visit. PSS component is well vegetated with willow.
Hydrologic Control	Impacted or Degraded	Sheet flow and ephemeral drainage provide hydrology. Surrounding land use is agriculture.
Description		
Wetland ID's: W15. Water ID's: Feeds to Mud Creek		

Wetland identification: LSC-2

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Habitat with limited interspersed, some structural diversity, no open water. Two Cowardin classes; PSS dominated with emergent understory. Connected to Mud Creek and associated riparian vegetation. Adjacent land use is agricultural.
Fish Habitat	Impacted or Degraded	Unnamed tributary is intermittent or ephemeral and flows into intermittent Mud Creek. Unable to determine whether there is an "unimpeded surface water connection to the stream". If there is no connection, this function is not applicable.
Water Quality	Intact	Ponding occurs in wetland, and two Cowardin classes are present; PSS dominated with emergent understory.
Hydrologic Control	Impacted or Degraded	Not located on a floodplain. Surrounded by pasture. Wetland is associated with drainage which feeds to Mud Creek.
Description		
Wetland ID's: W62 Water ID's: Ditch feeds to Mud Creek		

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments: not visually confirmed
---	----------------------------------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Larson creek is listed as water quality limited for temperature, bacteria.
---	--

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

*see next two questions*

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			

*see next question*

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

a	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

**Connection  
estimated - not  
confirmed**

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? b

23 What is the dominant wetland vegetation cover?

b	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

b	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
	RURAL a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

a	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

**Connection estimated - not confirmed**

31 What percentage of the stream is shaded by riparian vegetation?

b	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

b	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

***East Lateral  
Canal***

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)

## WETLAND CHARACTERIZATION QUESTIONS

### Land uses within the watershed

6. What is the dominant land use in the watershed upstream from the assessment area? (Modified for HC7)

- a. Urban or urbanizing (mix of urban, agriculture and forest uses).
- b. Agriculture (farming, ranching or grazing).
- c. Forested or natural area.

b	comments:
---	-----------

### Water quality - see DEQ website

7. Consult the most recent State of Oregon DEQ 305(b) Report to determine whether any streams in the study area are listed as water quality limited (included in CWA 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.

a	comments: Larson creek is listed as water quality limited for temperature, bacteria.
---	--

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.

a	comments:
---	-----------

### Wetland Structure and Landscape

15 What percentage of area within 500 feet of the wetland edge is dedicated to these land uses?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next two questions			

15 Modified for WH8: 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

b
---

15 Modified for WQ5: What is the dominant existing land use within 500 feet of the wetland's edge?

- c. Exclusive Forest Use or Open Space
- b. Agriculture
- a. Developed uses

b
---

16 What is the dominant existing land use within 500 feet of the wetland on the downstream or down-slope edge of the wetland?

	a. <20%	b. bet. 20% & 50%	c. >50%
1. Open Space			
2. Agriculture			
3. Exclusive Forest Use			
4. Developed uses			
5. Other			
see next question			

16 Modified for HC6: 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

b
---

17 What is the (entire) wetland acreage?

b	a. >5 acres	b. bet. 0.5 & 5 acres	c. < 0.5 acres
---	-------------	-----------------------	----------------

18 How is wetland connected to a stream, lake, or pond ? (see Figure, p. 35)

a	a. connected by surface water (culv., ditch, int./per. stream)	b. not connected to water body within 1 mile	c. not connected, no water bodies within 1 mile
---	--	--	---

19 Is all or part of the wetland located within the 100-year floodplain or within an enclosed basin?

b	a. yes	b. no
---	--------	-------

### Wetland Habitat

21 What is percentage wetland area by Cowardin class (10% or more)?

	a. bet. 70% & 100%	b. bet. 50% & <70%	c. bet. 20% & <50%	d. bet. 10% & <20%
Open water (OW >6.6ft)				
Emergent (EM)				
Scrub-shrub (SS)				
Forested (FO)				

21 Modified for WH1: How many Cowardin wetland classes are present?

URBAN	a. Two or more	b. One w/ > 5 species	c. One w/ < 5 species	b
RURAL	a. 3 or 4	b. 2	c. 1	

21 Modified for WQ3: What is the degree of wetland vegetation cover (a.H>60%/ b.M/ c.L<60%)? a

23 What is the dominant wetland vegetation cover?

a	a. woody (FO & SS)	b. emergent and ponding, or open water only (EM w/ water or OW)	c. emergent vegetation only or wet meadow (EM)
---	--------------------	---	--

24 How interspersed are the Cowardin classes (and upland inclusions)? (see Figure p. 37)

b	a. high	b. moderate	c. low
---	---------	-------------	--------

26 For urban areas, what percentage of the wetland edge is bordered by upland wildlife habitat buffer at least 25ft feet w

c	a. >40%	b. bet. 10% & 40%	c. <10%
---	---------	-------------------	---------

27 How is the wetland connected to other wetlands?

b	a. connected within 3 miles by surface water	b. not connected; wetlands present within 3 miles	c. not connected, no other wetlands within 3 miles
---	--	---	--

28 Estimate area of unvegetated, open water within the wetland.

c	a. >1 acres	b. bet. 0.5 and 1 acre	c. <0.5 acre	URBAN
RURAL	a. >3 acres	b. bet. 0.5 and 3 acre	c. <0.5 acre	

### Fisheries Habitat

29 Are fish present in a stream, lake or pond connected to the wetland?

c	a. salmon, trout or sensitive species are present at some time during the year	b. other fish species are present at some time during the year	c. no species are present at any time during the year
---	--	--	---

#### Streams connected to the wetland

30 What is the physical character of the stream channel?

b	a. natural channel, or modified portions are returning to a natural channel	b. only portions of stream modified	c. extensively modified or confined in a non-vegetated channel or pipe
---	---	-------------------------------------	--

31 What percentage of the stream is shaded by riparian vegetation?

c	a. >75%	b. bet. 50% & 75%	c. <50%
---	---------	-------------------	---------

32 What percentage of the stream contains instream structures such as large woody debris, floating/submerged vegetation, large rocks or boulders?

c	a. >25%	b. bet. 10% & 25%	c. <10%
---	---------	-------------------	---------

#### Lakes or ponds (entire lake or pond and wetland complex)

33 Does the lake or pond contain areas of deep and shallow water?

n/a	a. yes	b. cannot be determined	c. no
-----	--------	-------------------------	-------

34 What percentage of the shoreline is shaded at the water's edge by forested or scrub-shrub vegetation?

n/a	a. 60% or more	b. bet. 20% & <60%	c. <20%
-----	----------------	--------------------	---------

35 What percentage of the wetland complex contains cover objects such as submerged logs, floating or submerged vegetation, large rocks or boulders?

n/a	a. >25%	b. bet. 10% & 25%	c. <10%
-----	---------	-------------------	---------

**Wetland Hydrology**

36 What is the wetland's primary source of water? (emphasis on primary)

a	a. surface flow, including streams and ditches	b. precipitation or sheet flow	c. groundwater, including springs or seeps
---	--	-----------------------------------	--

**37** Is there evidence of flooding or ponding during a portion of the growing season?

b	a. yes (describe)	b. unable to determine or not applicable	c. no
---	-------------------	---	-------

**38** Is the water flow out of the wetland restricted (beaver dam, concrete structure, undersized culvert)?

c	a. yes, restricted or no outlet	b. minor restrictions slow down the water (i.e., undersized culvert)	c. no, outlet has unrestricted flow
---	------------------------------------	--	--

(bold questions =field; office review important for 15, 16, 26)



# **Oregon Freshwater Wetland Assessment Function Questions Answer Sheet**

<b>OFWAM UNIT# LSC-3</b>		
<b>Wildlife Habitat</b>		
1	b	
2	b	
3	b	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	b	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	b	
2	a	
3	b	
4	a	
5	b	
6	c	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	b	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	a	
4	c	
5	b	
6	b	
7	b	
Impacted or Degraded		

<b>OFWAM UNIT # LSC-4</b>		
<b>Wildlife Habitat</b>		
1	b	
2	a	
3	b	
4	c	
5	a	
6	b	
7	a	
8	b	
9b	c	
Provides habitat for some species		
<b>Fish Habitat (if applicable)</b>		
<b>Streams and Rivers</b>		
1	c	
2	b	
3	c	
4	a	
5	b	
6	c	
<b>Lakes and Ponds</b>		
1		
2		
3		
4		
5		
6		
Impacted or Degraded		
<b>Water Quality (pollutant removal)</b>		
1	a	
2	b	
3	a	
4	b	
5	b	
6	c	
Impacted or Degraded		
<b>Hydrologic Control (flood control &amp; water supply)</b>		
1	b	
2	b	
3	b	
4	c	
5	a	
6	b	
7	b	
Impacted or Degraded		

## Oregon Freshwater Wetland Assessment Function and Condition Summary Sheet

Wetland identification: LSC-3

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Habitat with limited interspersions, some structural diversity, no open water. One Cowardin class; herbaceous dominated. Adjacent to a small portion of intermittent Mud Creek, and to the east lateral canal. Adjacent land use is agricultural.
Fish Habitat	Impacted or Degraded	Mud Creek is intermittent. Unable to determine whether there is an "unimpeded surface water connection to the stream". If there is no connection, this function is not applicable.
Water Quality	Impacted or Degraded	Potentially fed by flood irrigation from the East Lateral Canal. No evidence of ponding. Connection to Mud Creek not confirmed.
Hydrologic Control	Impacted or Degraded	Not located on a floodplain. Surrounded by pasture. Fed potentially by flood irrigation waters from East Lateral Canal and drains down towards Mud Creek.
Description		
Wetland ID's: W63 and W64 - connected wetlands receiving hydrology from leaking East Lateral Canal. Water ID's: East Lateral Canal and potentially Mud Creek.		

Wetland identification: LSC-4

Function	Evaluation Descriptor	Rationale
Wildlife Habitat	Provides habitat for some species	Surrounded by agriculture. Well vegetated, however relatively small and isolated.
Fish Habitat	Impacted or Degraded	Drainages / ditches likely to be altered by agricultural activities.
Water Quality	Impacted or Degraded	Small wetland - associated with a minor drainage within an agricultural setting.
Hydrologic Control	Impacted or Degraded	Not located in a floodplain. Agriculture immediately downstream.
Description		
Wetland ID: W62 Water ID's: Ditch feeds to Mud Creek		

## **Appendix F**

### **Maps and Figures**

*This page intentionally left blank.*

## **Appendix F Contents**

**Figure A.** Project location

**Figure B.** Index Map for Figure Series C (Soil maps), D (Topography maps), and E (NWI and County Hydrography Maps)

**Figure Series C.** NRCS Soil Maps

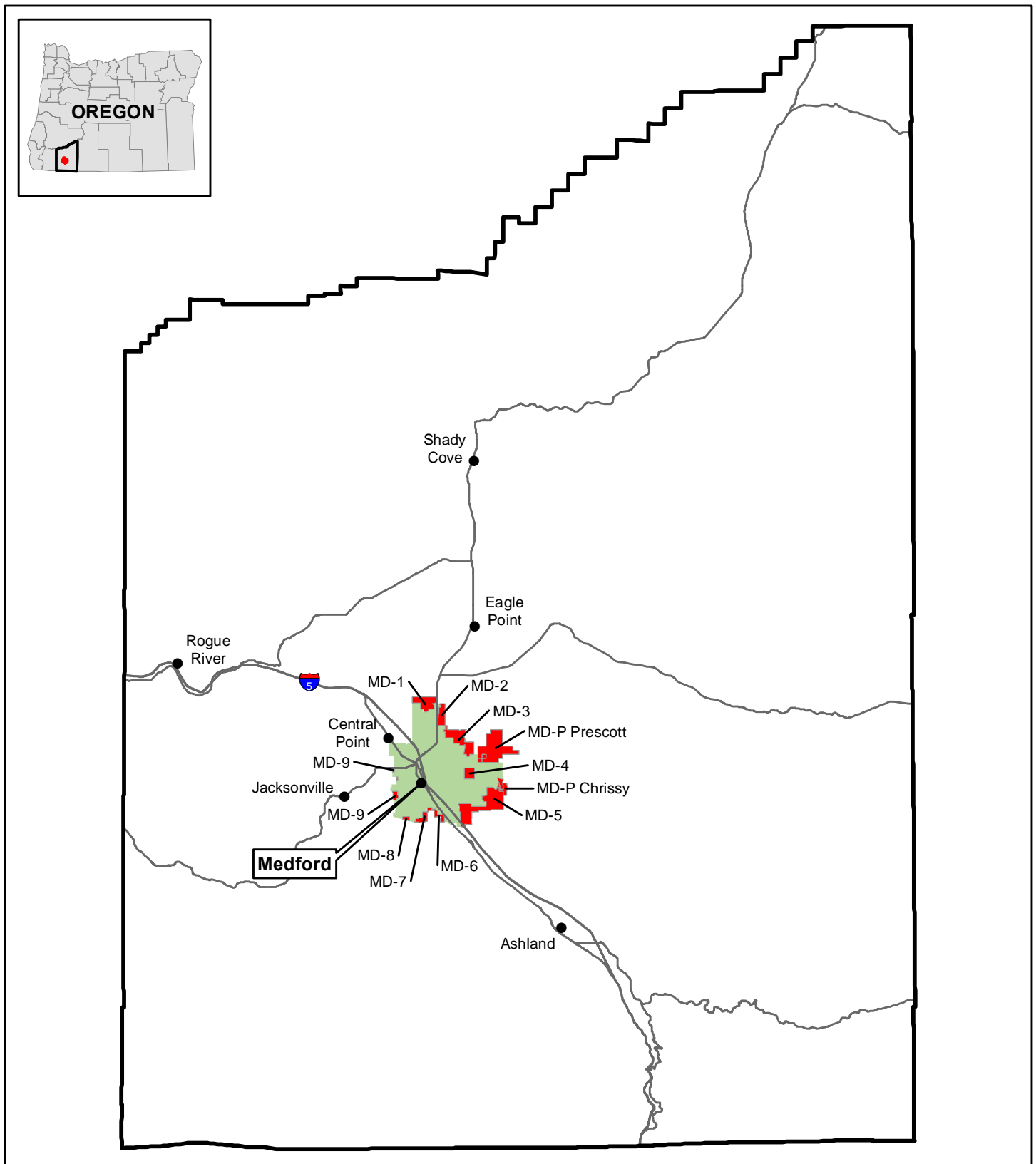
**Figure Series D.** USGS Topography Maps

**Figure Series E.** NWI and Hydrography Maps

**Figure Series F.** Index map and Drainage Basin Guide; and LWI Maps (under separate cover)

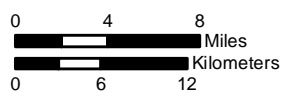
**Figure Series G.** Poster sized LWI Maps

**Figure A.** Project location



**Figure A – Project Location**

- Study Area
- Town/City
- Major Road
- Urban Growth Boundary
- Jackson County Line



1 inch = 8 miles

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

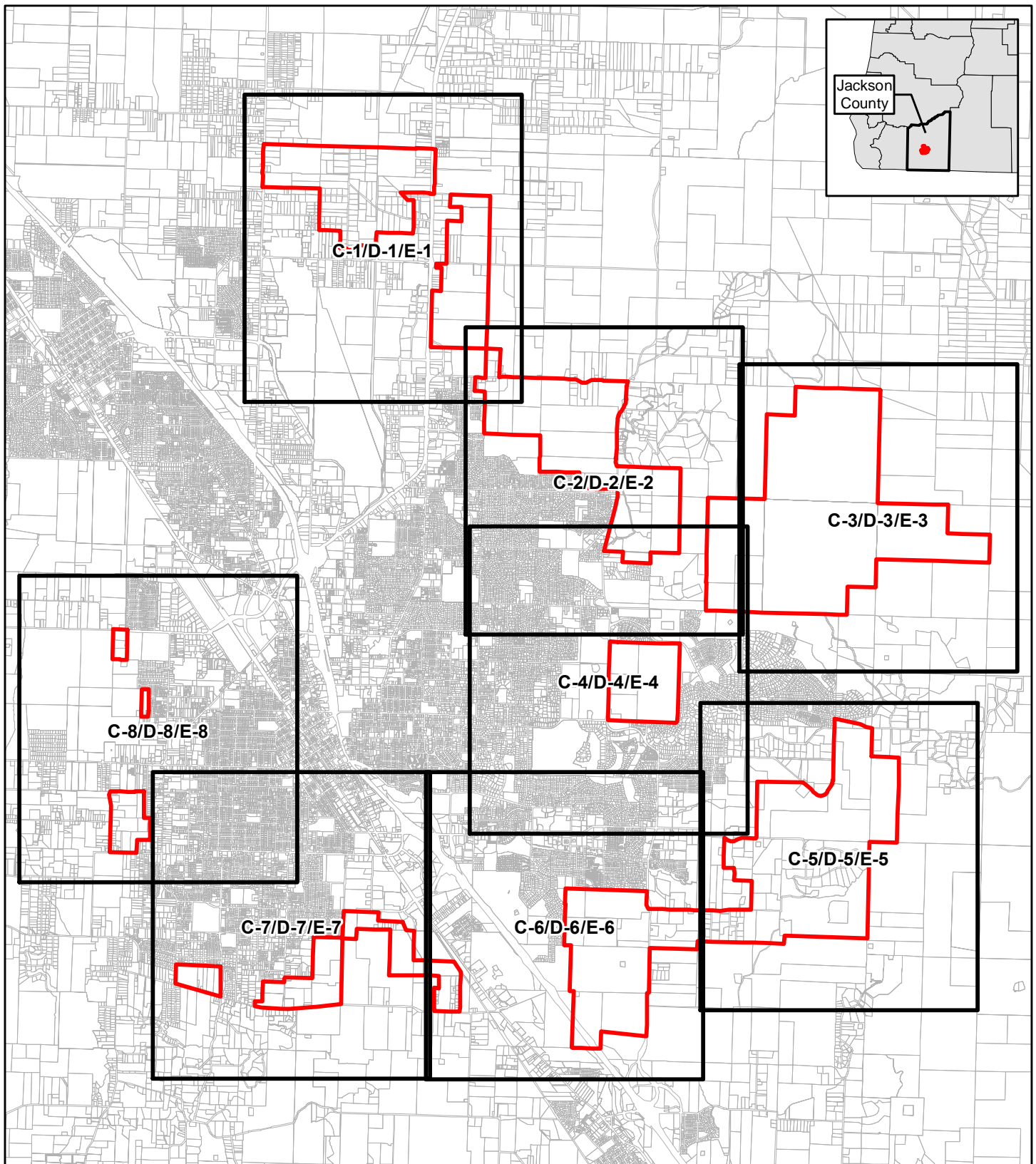
**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802




September 16, 2015

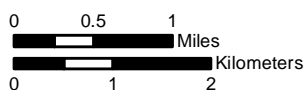
**Figure B.** Index Map for Figure Series C (Soil maps), D (Topography maps),  
and E (NWI and County Hydrography Maps)





**Figure B – Index Map for Figure Series C, D and E**

-  Index Map (Figure Series C, D, and E)
-  Study Area
-  Tax Lot



1 inch = 1 miles

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

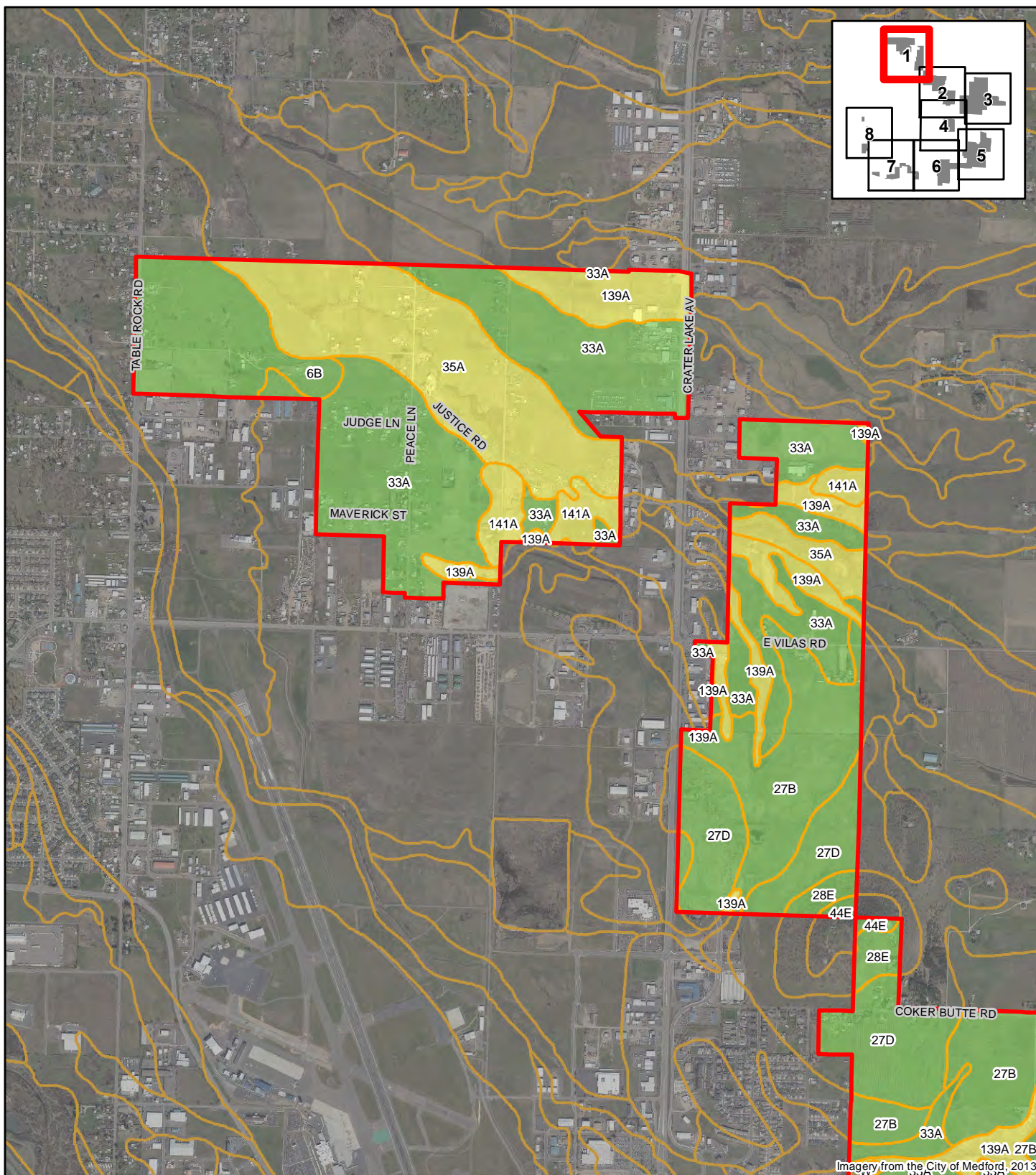
**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015

**Figure Series C. NRCS Soil Maps**

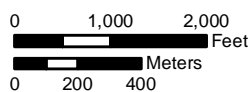




**Figure C-1 – NRCS Soil Map**

- |   |  |
|---|--|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area    | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Hydric           |
| <span style="border: 2px solid orange; padding: 2px;"> </span> Soil Unit* | <span style="background-color: green; border: 1px solid black; padding: 2px;"> </span> Hydric Inclusions |
|   | <span style="background-color: brown; border: 1px solid black; padding: 2px;"> </span> Non-Hydric        |

1 inch = 2,000 feet



\*See report table 4 for map unit legend  
 Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.



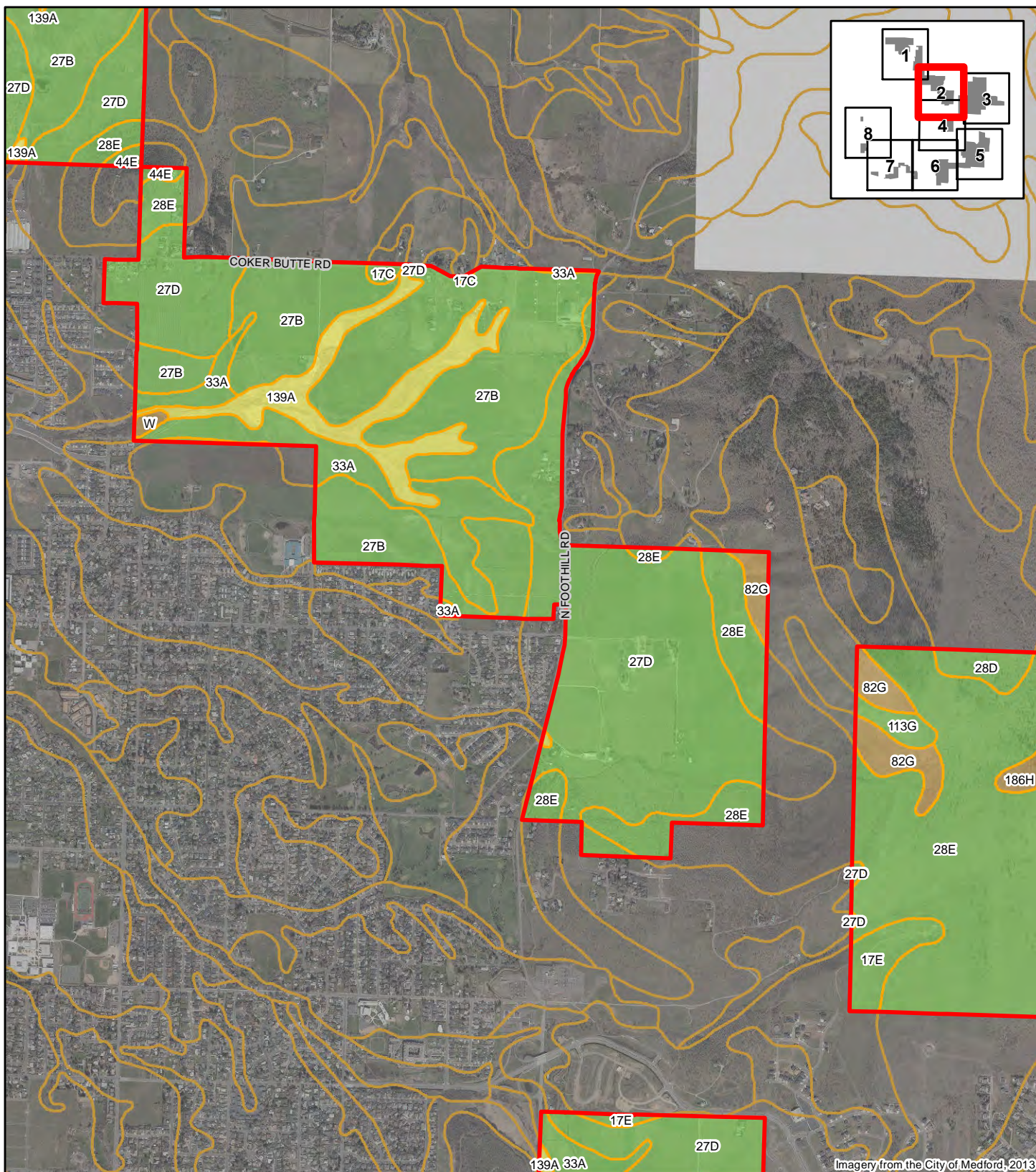
City of Medford Urban Reserve  
 Local Wetlands Inventory  
 Jackson County, OR

**SWCA**  
 ENVIRONMENTAL CONSULTANTS  
 1220 SW Morrison, Suite 700  
 Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
 503.224.0333

Project: 31802

September 21, 2015

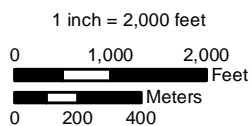




**Figure C-2 – NRCS Soil Map**

- |   |   |
|---|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area    | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Hydric                |
| <span style="border: 1px solid orange; padding: 2px;"> </span> Soil Unit* | <span style="background-color: lightgreen; border: 1px solid black; padding: 2px;"> </span> Hydric Inclusions |
|   | <span style="background-color: tan; border: 1px solid black; padding: 2px;"> </span> Non-Hydric               |

\*See report table 4 for map unit legend  
Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.



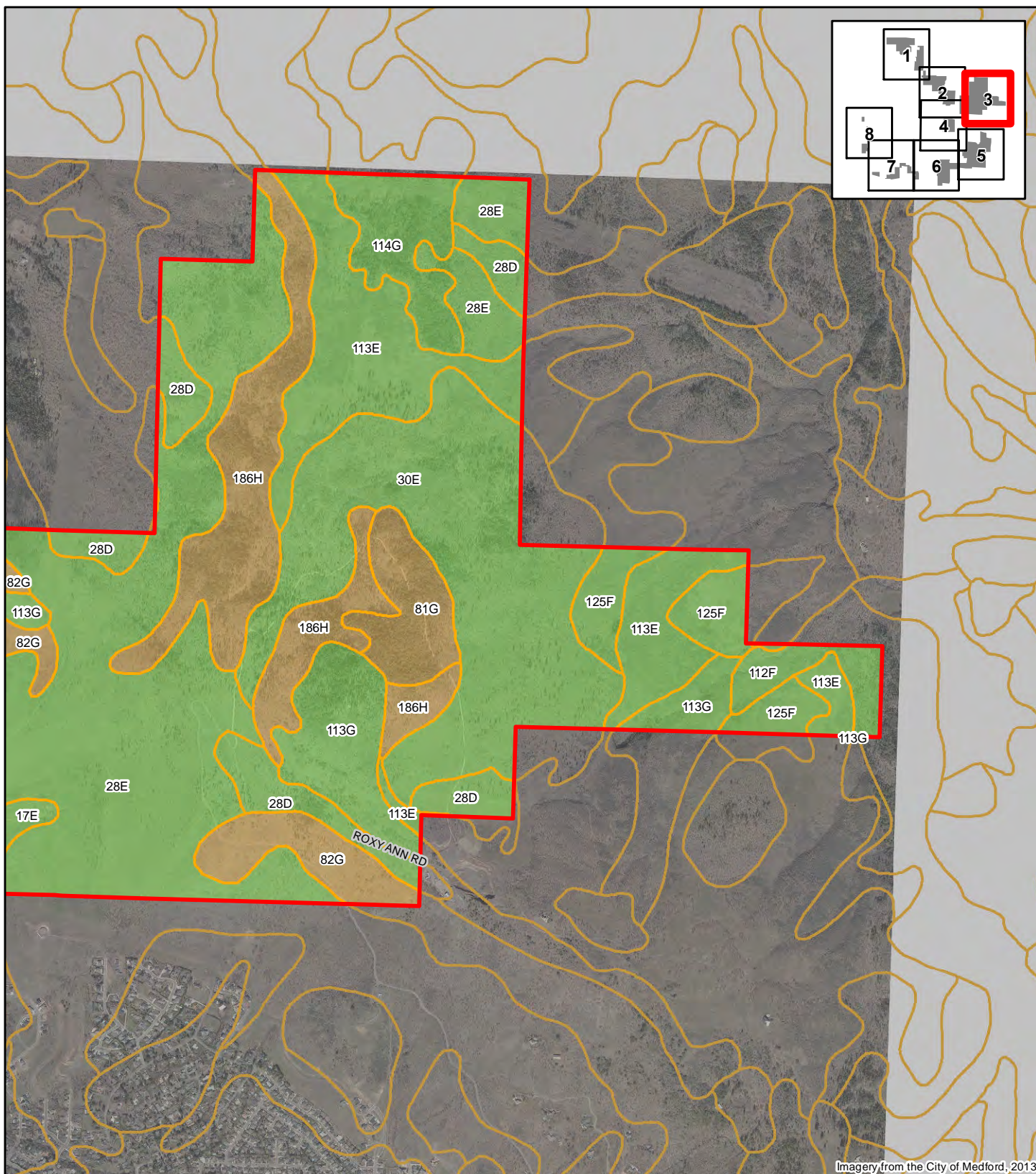
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 21, 2015





**Figure C-3 – NRCS Soil Map**

Study Area
  Hydric Inclusions
  Non-Hydric

Soil Unit\*

1 inch = 2,000 feet

0 1,000 2,000 Feet  
 0 200 400 Meters



\*See report table 4 for map unit legend

Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.

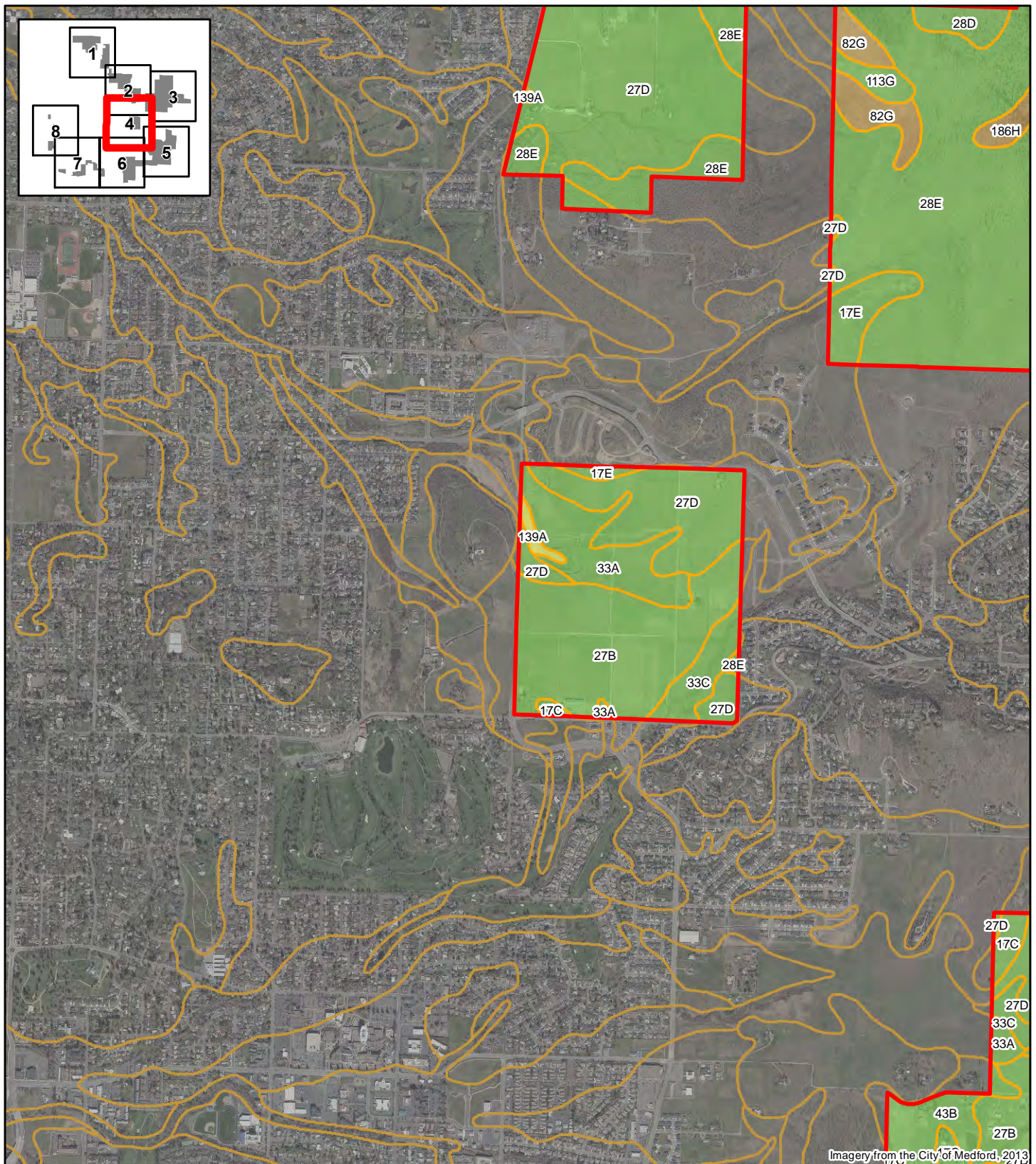
City of Medford Urban Reserve  
 Local Wetlands Inventory  
 Jackson County, OR

**SWCA**  
 ENVIRONMENTAL CONSULTANTS  
 1220 SW Morrison, Suite 700  
 Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
 503.224.0333

Project: 31802

September 21, 2015

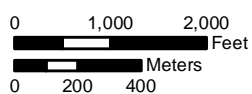




**Figure C-4 – NRCS Soil Map**

- |   |   |
|---|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area    | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Hydric                |
| <span style="border: 1px solid orange; padding: 2px;"> </span> Soil Unit* | <span style="background-color: lightgreen; border: 1px solid black; padding: 2px;"> </span> Hydric Inclusions |
|   | <span style="background-color: tan; border: 1px solid black; padding: 2px;"> </span> Non-Hydric               |

1 inch = 2,000 feet



\*See report table 4 for map unit legend

Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.



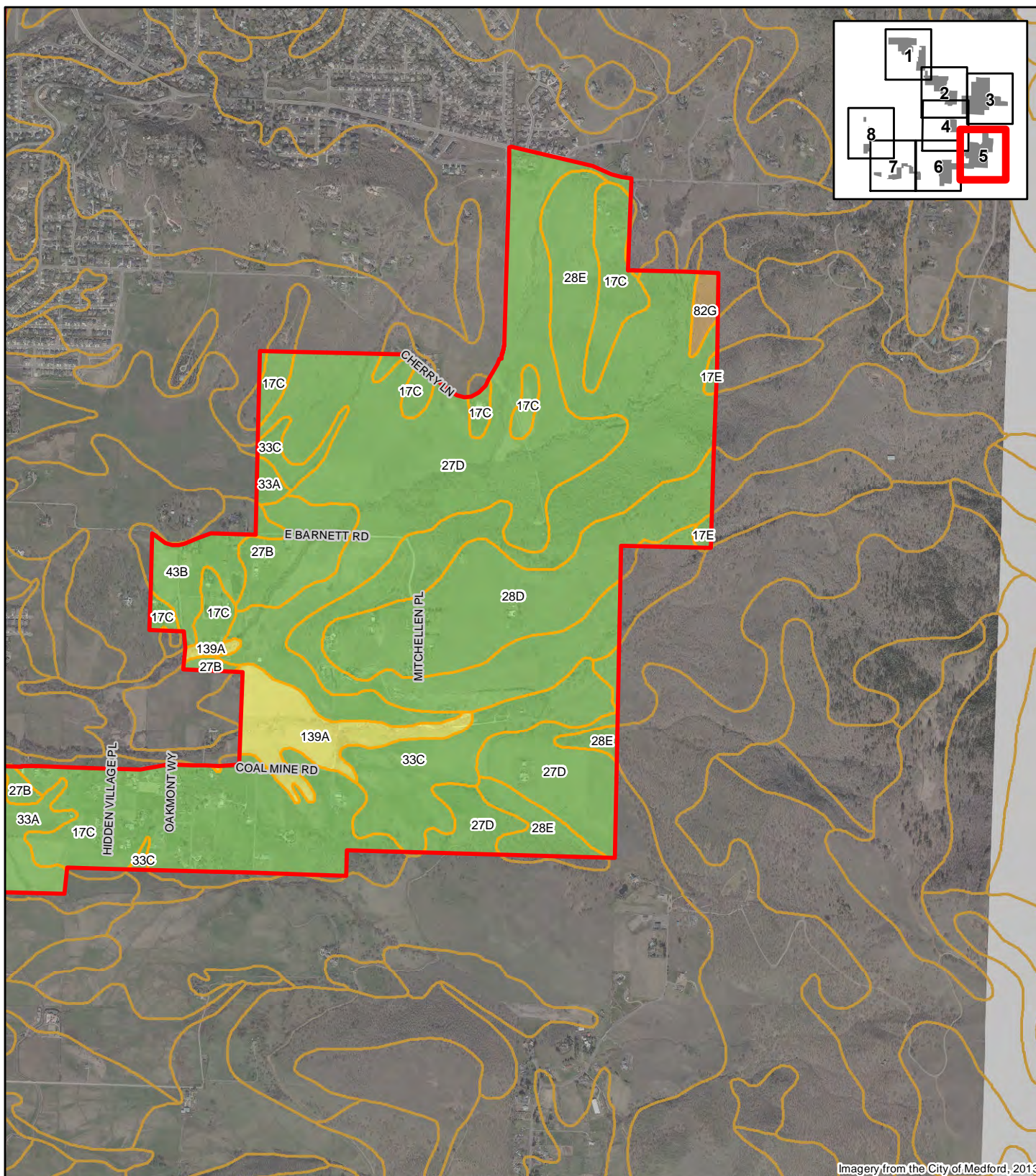
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
503.224.0333

Project: 31802

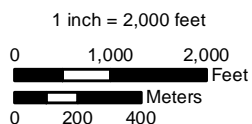
September 21, 2015





**Figure C-5 – NRCS Soil Map**

- |   |   |
|---|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area    | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Hydric                |
| <span style="border: 2px solid orange; padding: 2px;"> </span> Soil Unit* | <span style="background-color: lightgreen; border: 1px solid black; padding: 2px;"> </span> Hydric Inclusions |
|   | <span style="background-color: tan; border: 1px solid black; padding: 2px;"> </span> Non-Hydric               |



\*See report table 4 for map unit legend  
 Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.



City of Medford Urban Reserve  
 Local Wetlands Inventory  
 Jackson County, OR

**SWCA**  
 ENVIRONMENTAL CONSULTANTS  
 1220 SW Morrison, Suite 700  
 Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
 503.224.0333

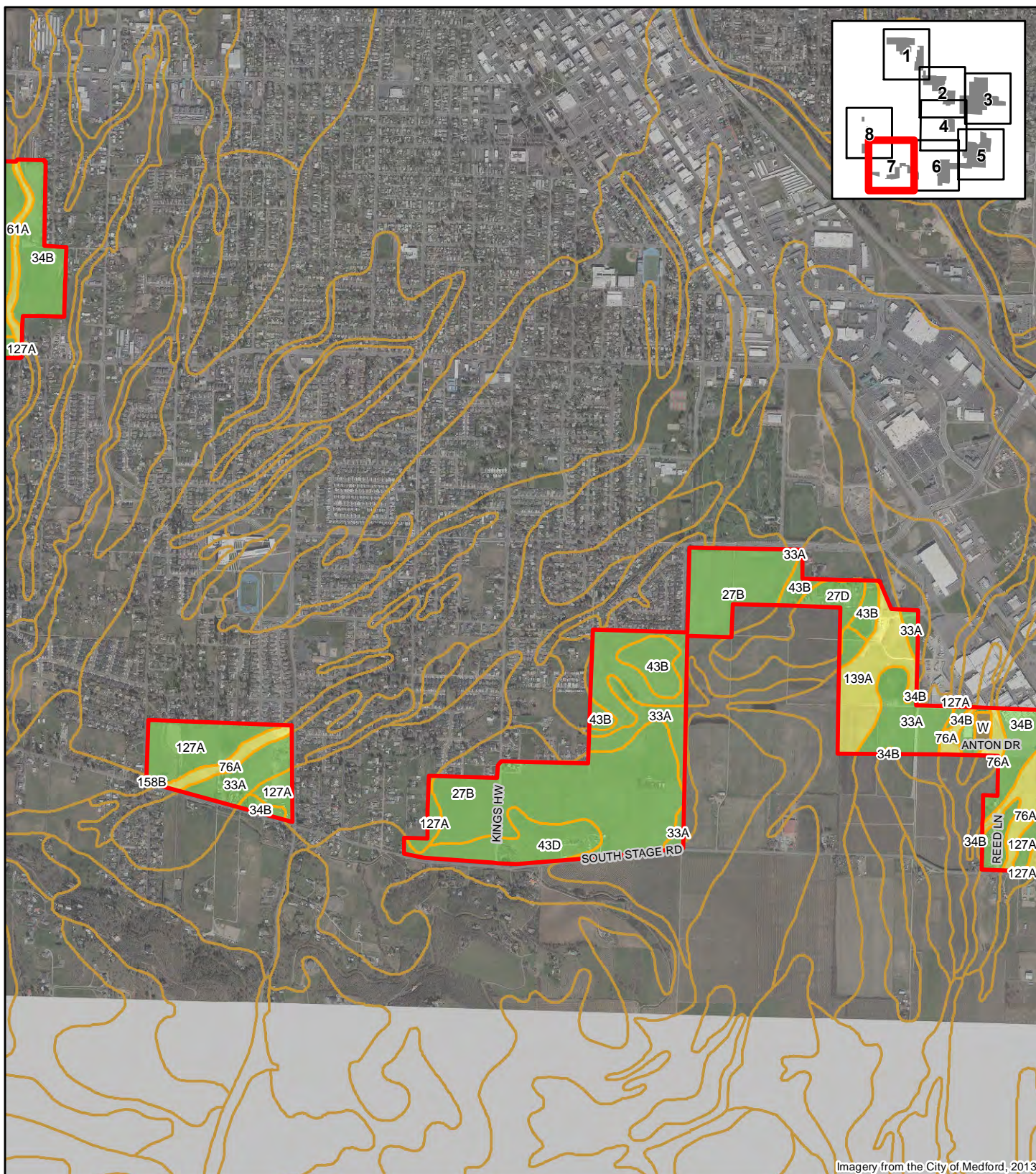
Project: 31802

September 21, 2015





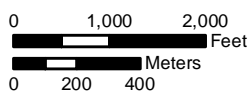




**Figure C-7 – NRCS Soil Map**

- |   |   |
|---|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area    | <span style="background-color: yellow; border: 1px solid black; padding: 2px;"> </span> Hydric                |
| <span style="border: 2px solid orange; padding: 2px;"> </span> Soil Unit* | <span style="background-color: lightgreen; border: 1px solid black; padding: 2px;"> </span> Hydric Inclusions |
|   | <span style="background-color: lightbrown; border: 1px solid black; padding: 2px;"> </span> Non-Hydric        |

1 inch = 2,000 feet



\*See report table 4 for map unit legend

Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.



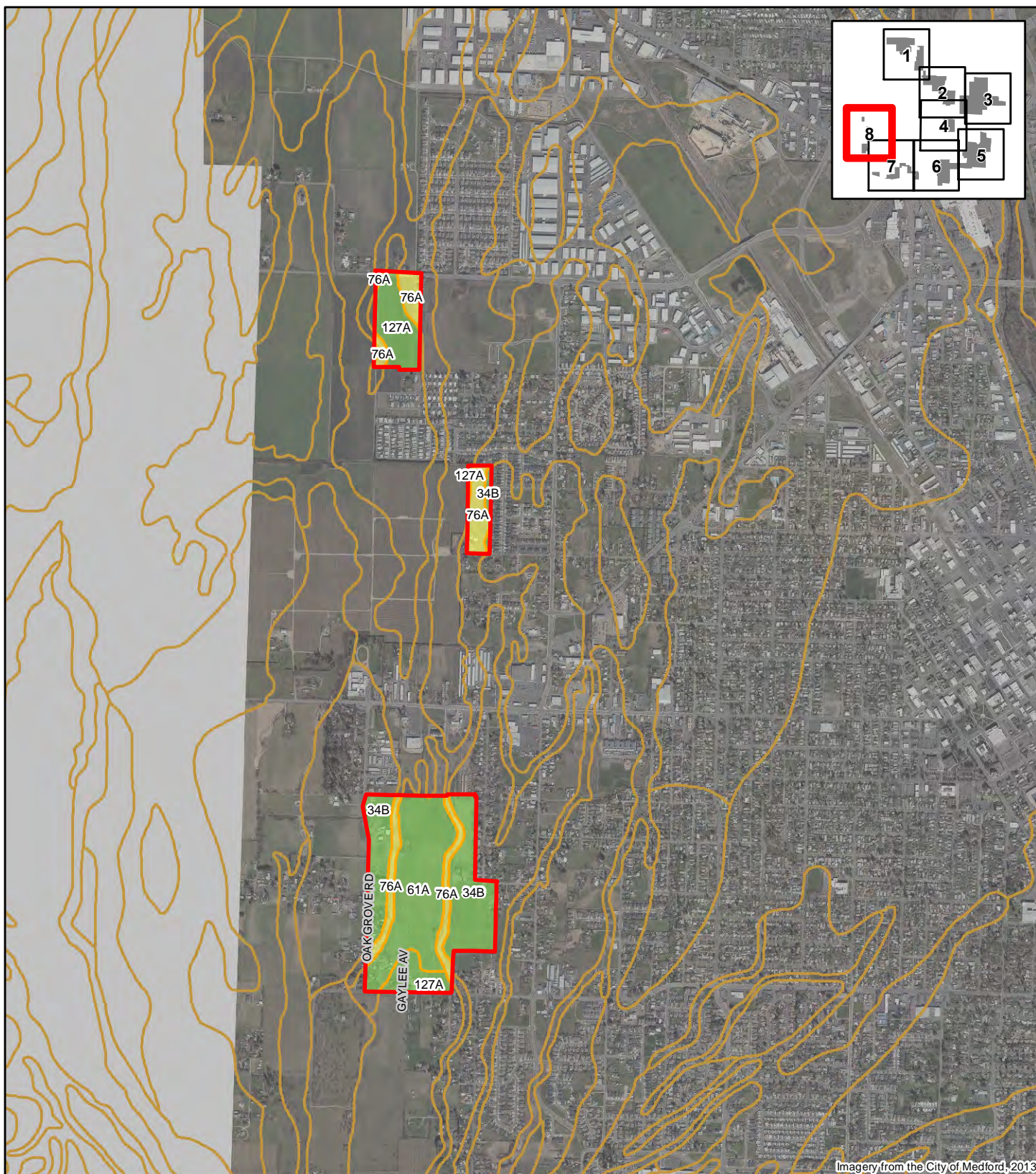
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
503.224.0333

Project: 31802

September 21, 2015





Imagery from the City of Medford, 2013

**Figure C-8 – NRCS Soil Map**

  Study Area        Hydric  
  Soil Unit\*        Hydric Inclusions

\*See report table 4 for map unit legend  
 Source: Soil Survey Geographic (SSURGO) Database for Jackson County, OR. <http://soildatamart.nrcs.usda.gov>, accessed 02/03/2015.

1 inch = 2,000 feet  
 0 1,000 2,000 Feet  
 0 200 400 Meters



City of Medford Urban Reserve  
 Local Wetlands Inventory  
 Jackson County, OR

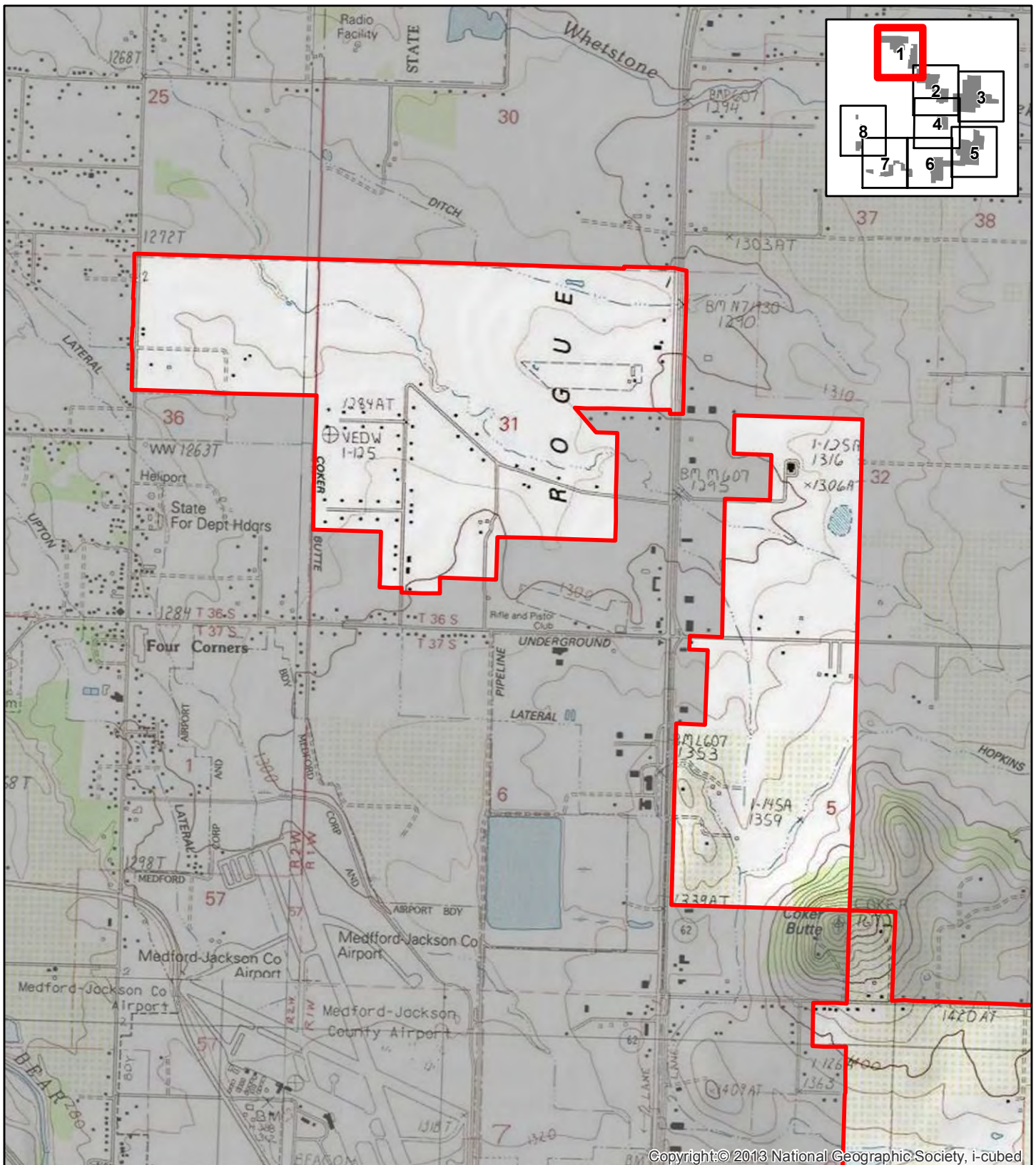
**SWCA**  
 ENVIRONMENTAL CONSULTANTS  
 1220 SW Morrison, Suite 700  
 Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
 503.224.0333

Project: 31802

September 21, 2015

**Figure Series D.** USGS Topography Maps





Copyright: © 2013 National Geographic Society, i-cubed

**Figure D-1 – USGS Topographic Map**

Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford East (1979), Medford West (1981), Sams Valley (1978), and Eagle Point (1979), OR.

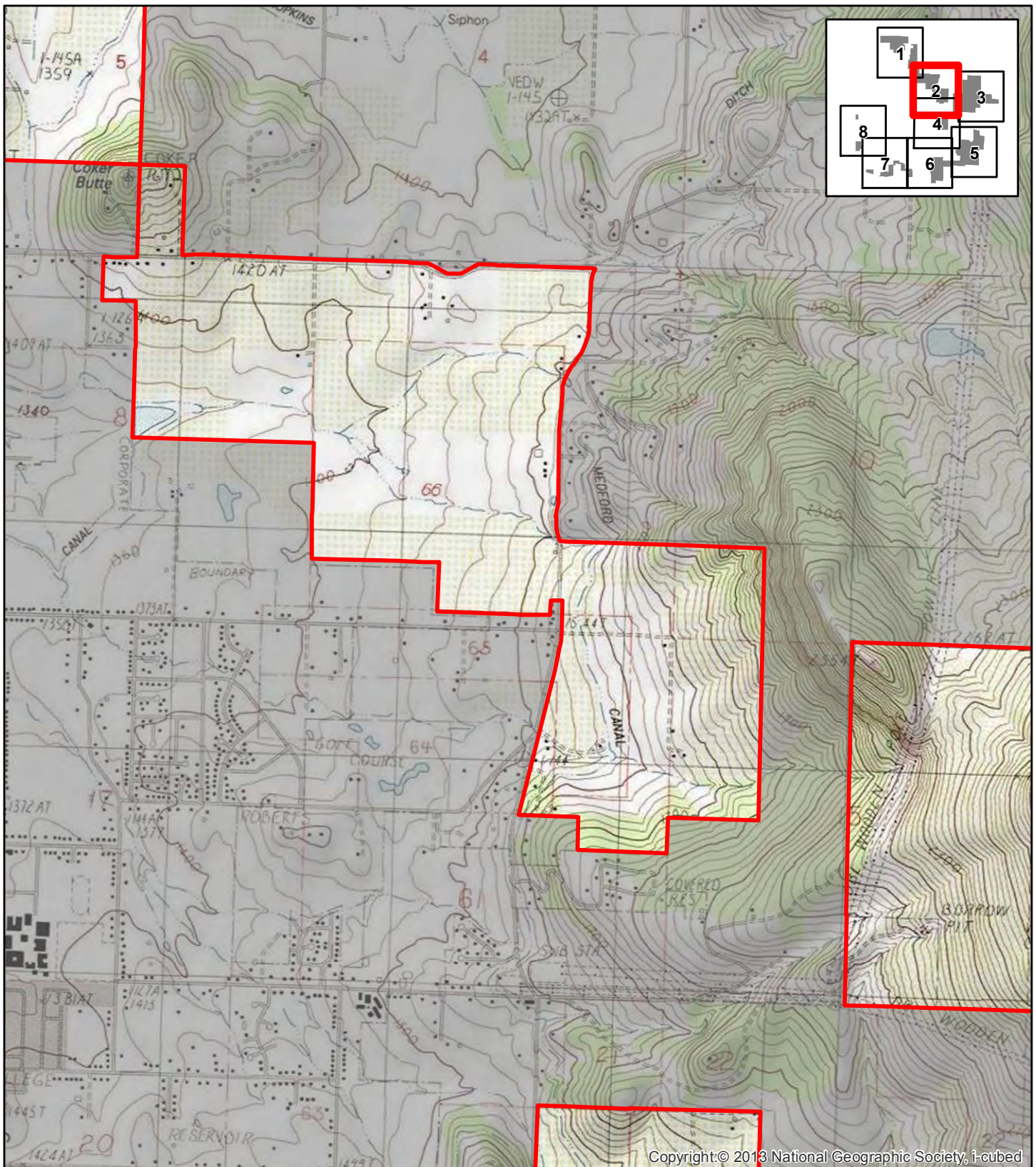
1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters



Project: 31802

September 16, 2015





Copyright: © 2013 National Geographic Society, I-cubed

**Figure D-2 – USGS Topographic Map**

Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford East (1979) and Eagle Point (1979), OR.

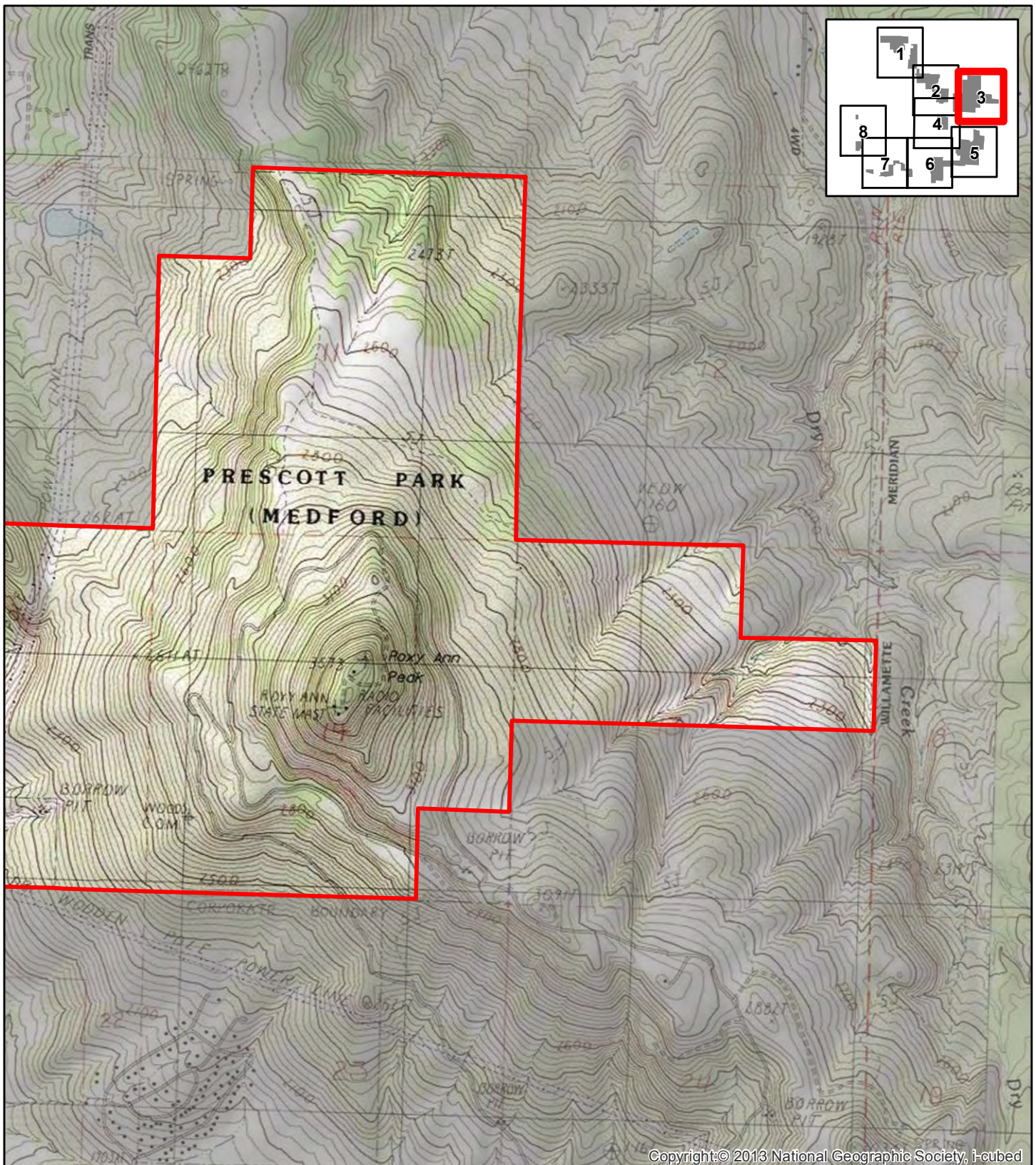
1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters



Project: 31802


September 16, 2015





Copyright © 2013 National Geographic Society, i-cubed

**Figure D-3 – USGS Topographic Map**

 Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford East (1979) and Eagle Point (1979), OR.

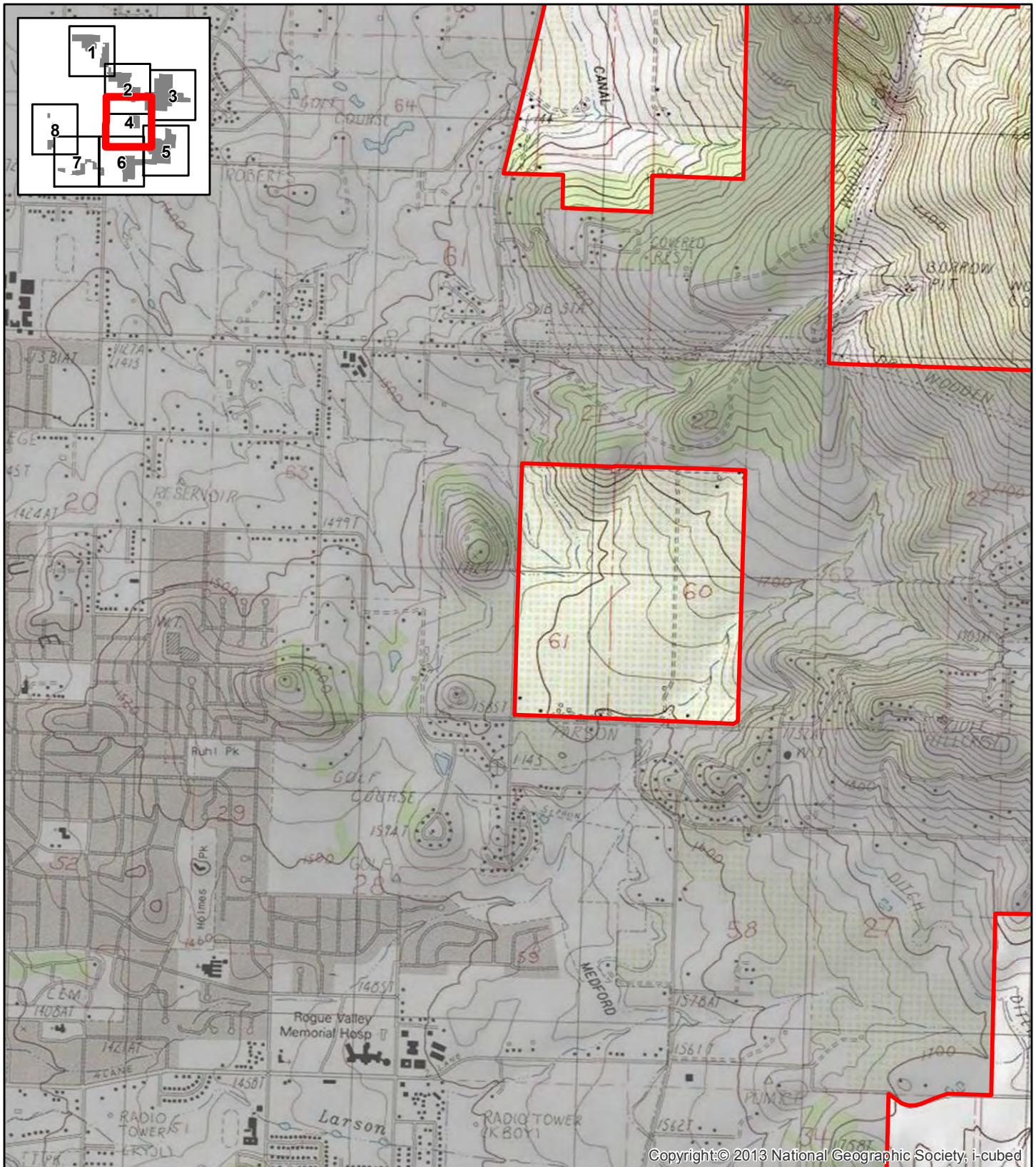
1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters



Project: 31802

September 16, 2015



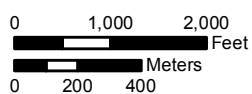


Copyright: © 2013 National Geographic Society, i-cubed

**Figure D-4 – USGS Topographic Map**

 Study Area

1 inch = 2,000 feet



Source: USGS 7.5' topographic quadrangles Medford East (1979), OR.



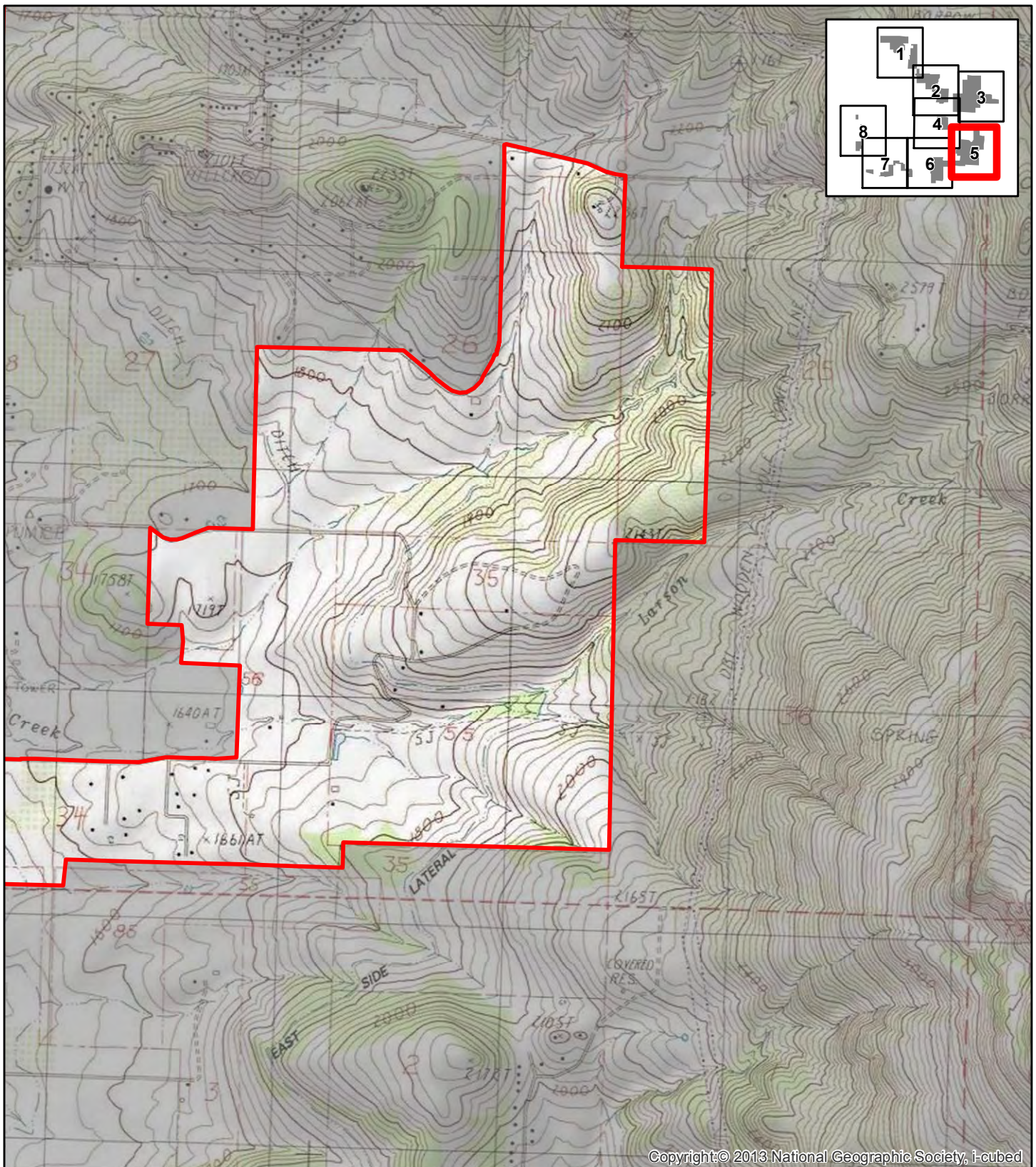
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802


September 21, 2015





Copyright: © 2013 National Geographic Society, I-cubed

**Figure D-5 – USGS Topographic Map**

 Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford East (1979), OR.

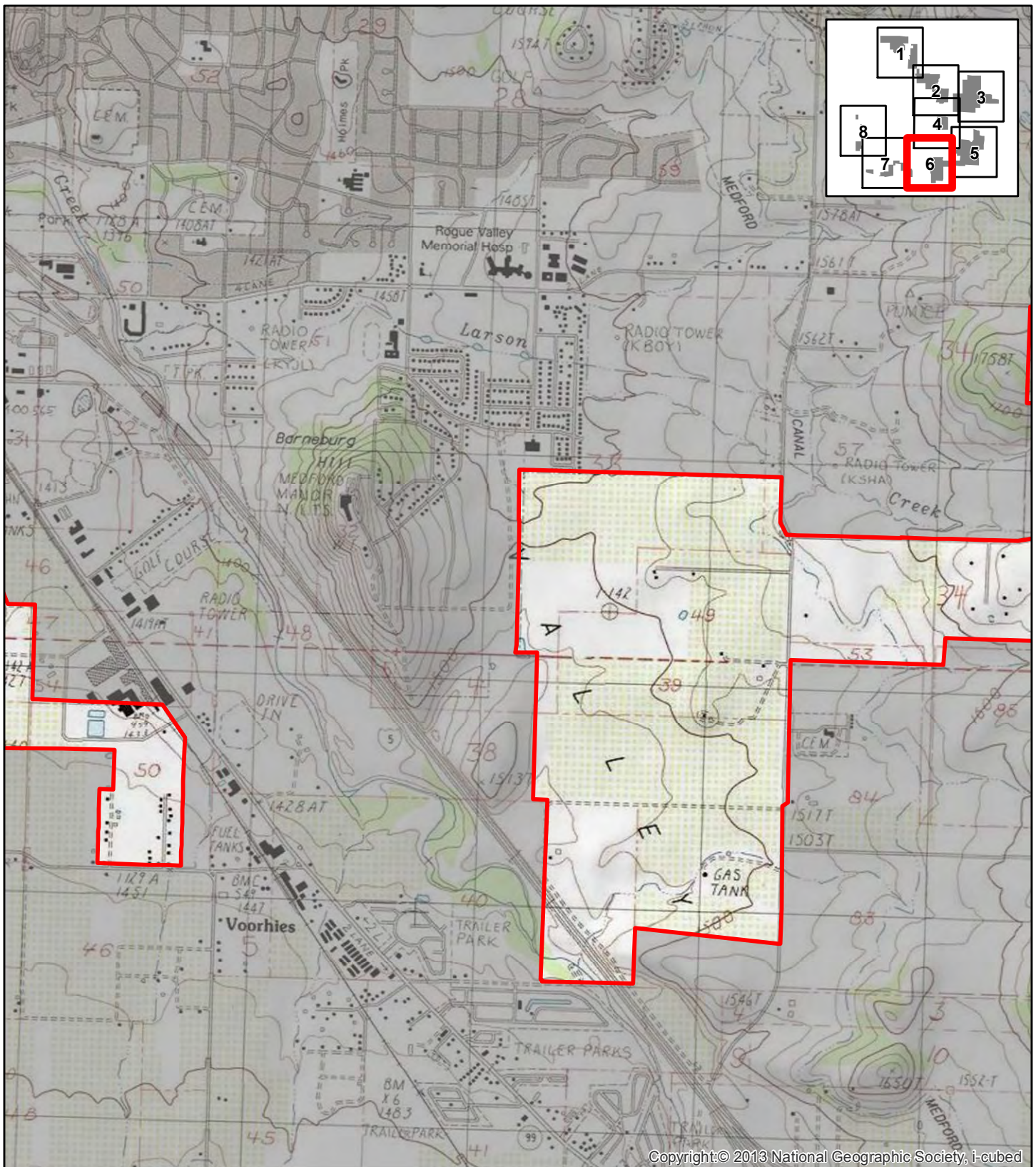
1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters



Project: 31802

September 16, 2015





Copyright: © 2013 National Geographic Society, I-cubed

**Figure D-6 – USGS Topographic Map**

Study Area

Source: USGS 7.5' topographic quadrangles Medford East (1979), OR.

1 inch = 2,000 feet

0 1,000 2,000 Feet

0 200 400 Meters



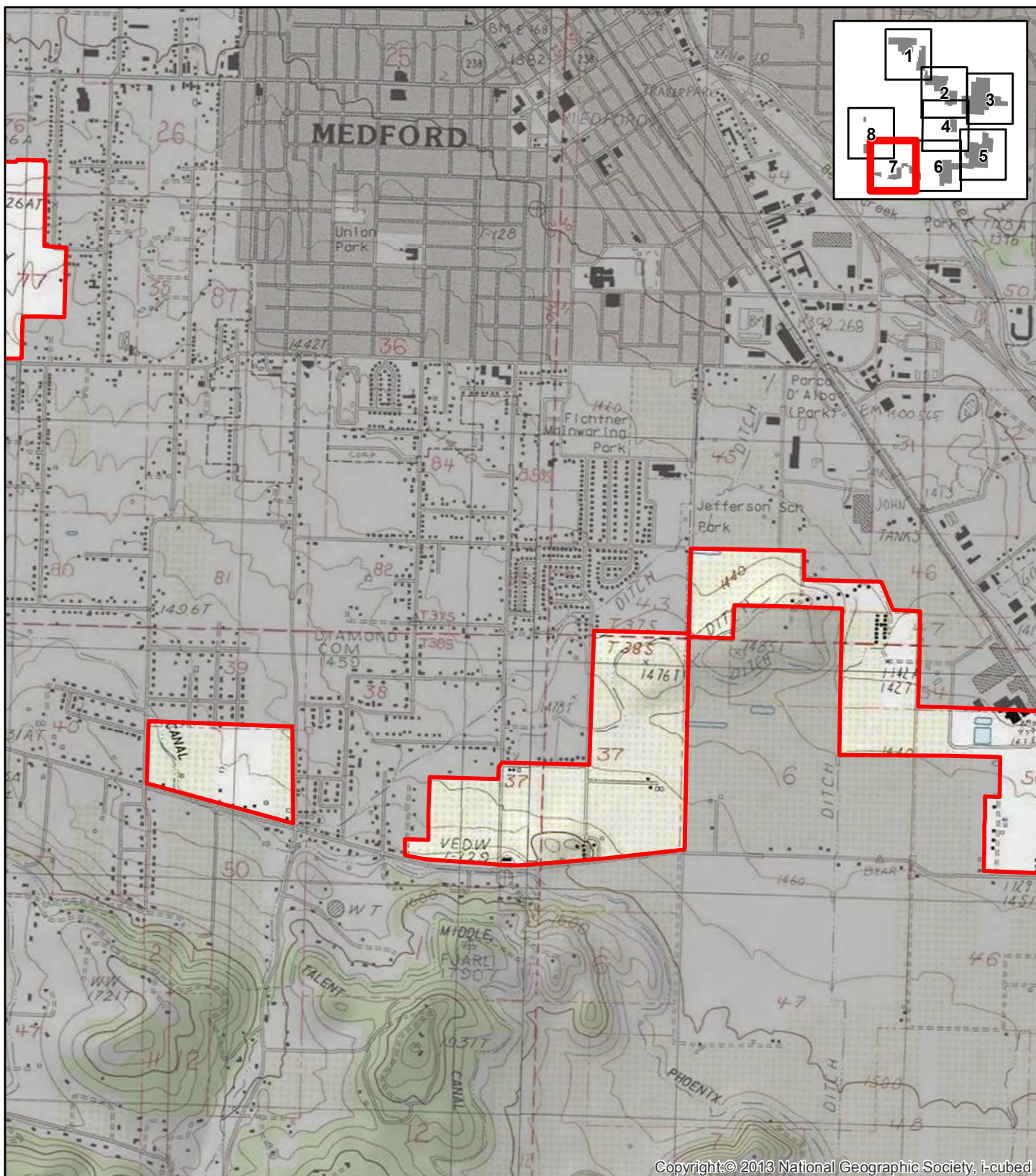
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802


September 16, 2015





Copyright: © 2013 National Geographic Society, i-cubed

**Figure D-7 – USGS Topographic Map**

 Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford East (1979) and Medford West (1981), OR.

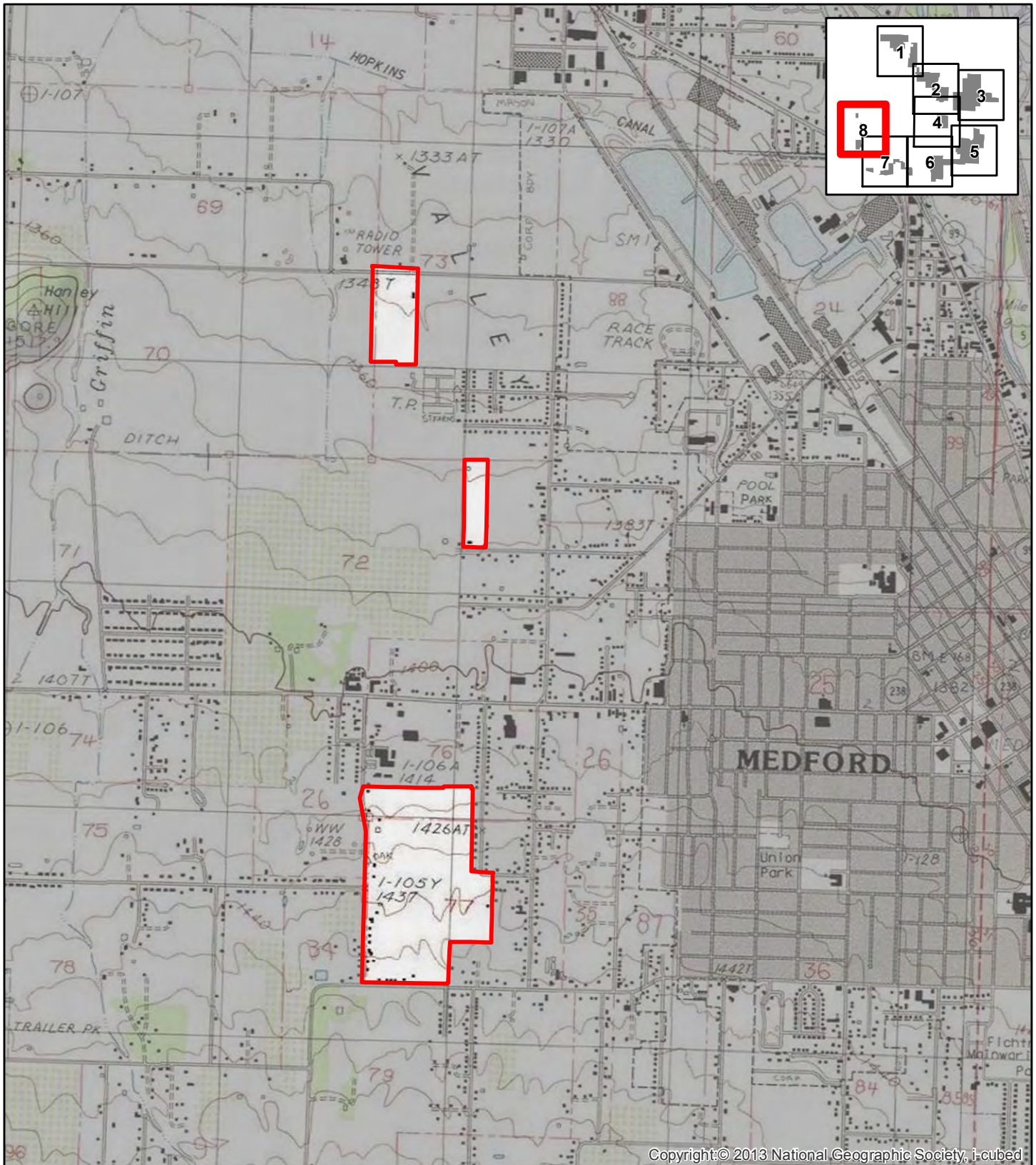
1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters



Project: 31802

September 16, 2015





Copyright © 2013 National Geographic Society, I-cubed

**Figure D-8 – USGS Topographic Map**

 Study Area

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Source: USGS 7.5' topographic quadrangles Medford West (1981), OR.

1 inch = 2,000 feet  
0 1,000 2,000 Feet  
0 200 400 Meters

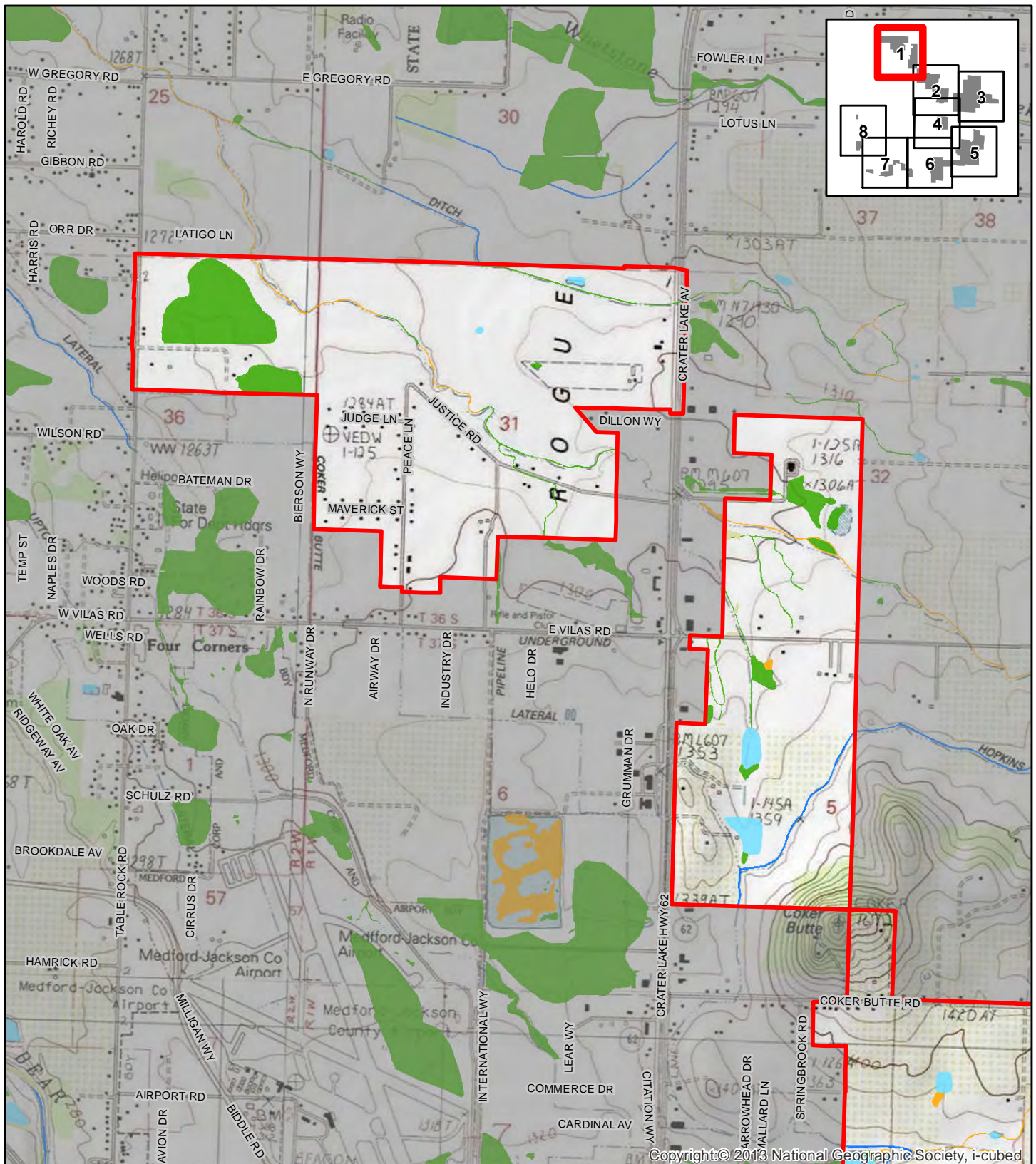


Project: 31802

September 16, 2015

**Figure Series E.** NWI and Hydrography Maps



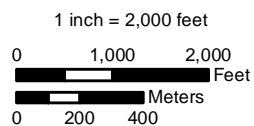


Copyright: © 2013 National Geographic Society, i-cubed

**Figure E-1 – NWI and County Hydrography Map**

- Study Area
- Cowardin Types
- Palustrine Emergent Wetland
- Palustrine Forested/Shrub Wetland
- Palustrine Pond
- Riverine
- Unknown

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.



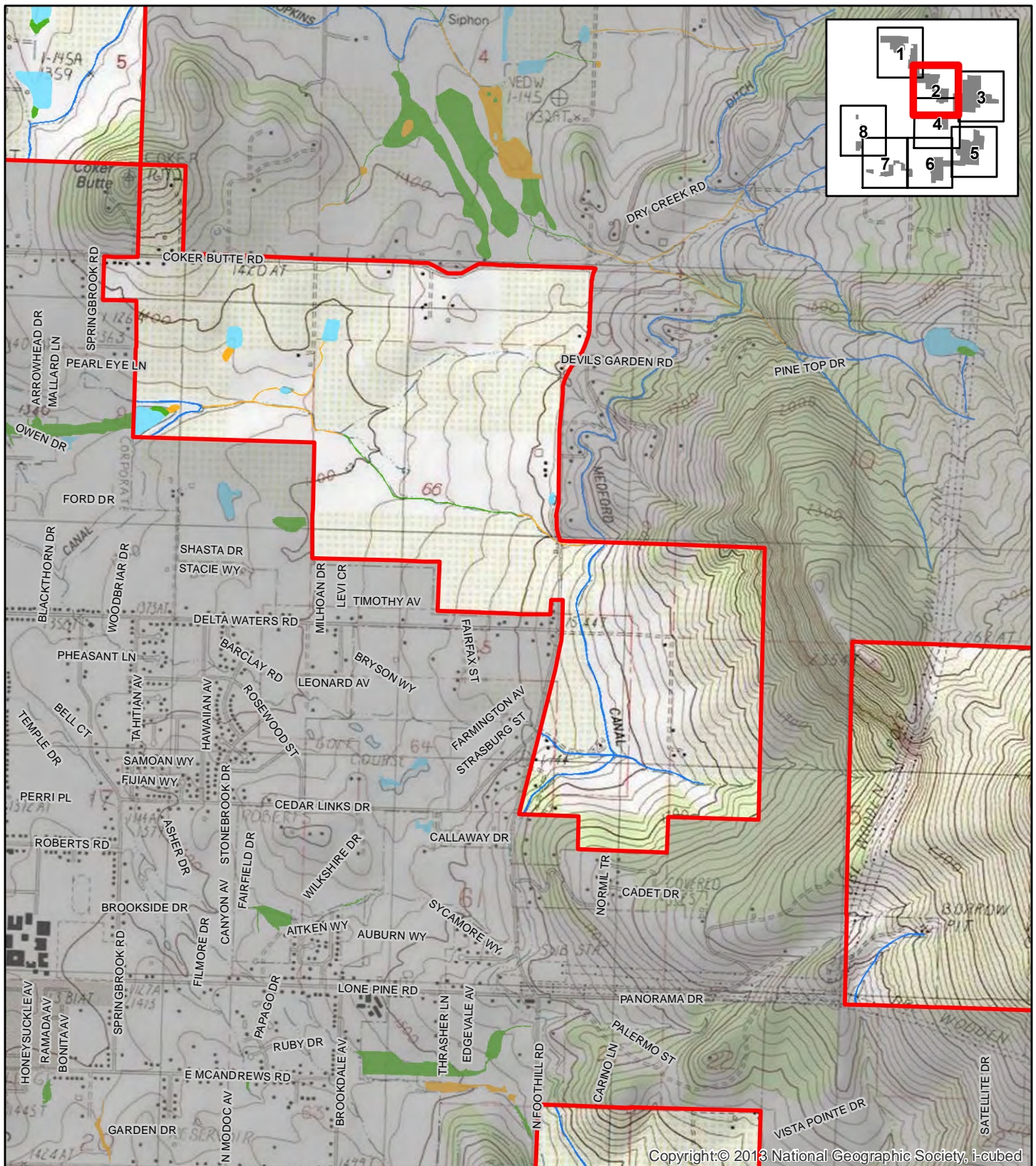
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015





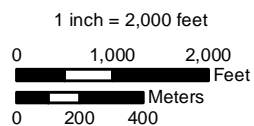
Copyright: © 2013 National Geographic Society, i-cubed

**Figure E-2 – NWI and County Hydrography Map**

- Study Area**
- Cowardin Types**
- Palustrine Emergent Wetland
  - Palustrine Forested/Shrub Wetland

- Palustrine Pond
- Riverine

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.



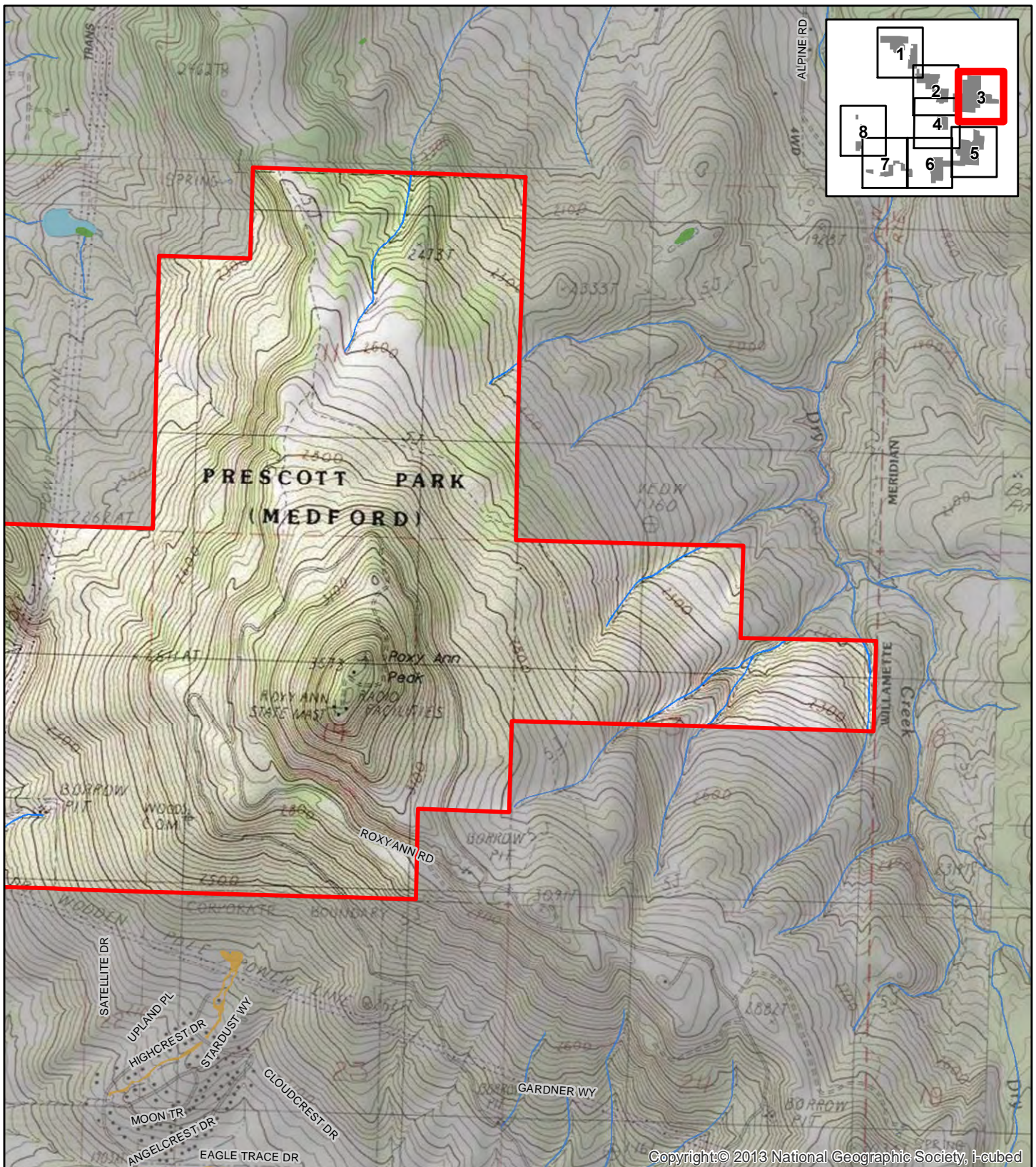
**City of Medford Urban Reserve**  
**Local Wetlands Inventory**  
 Jackson County, OR

**SWCA**  
 ENVIRONMENTAL CONSULTANTS  
 1220 SW Morrison, Suite 700  
 Portland, OR 97205-2235  
 www.swca.com  
 503.224.0333

Project: 31802

September 16, 2015





**Figure E-3 – NWI and County Hydrography Map**

- Study Area**
- Cowardin Types**
- Palustrine Emergent Wetland
  - Palustrine Forested/Shrub Wetland

- Palustrine Pond
- Riverine

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.

1 inch = 2,000 feet

0 1,000 2,000 Feet

0 200 400 Meters



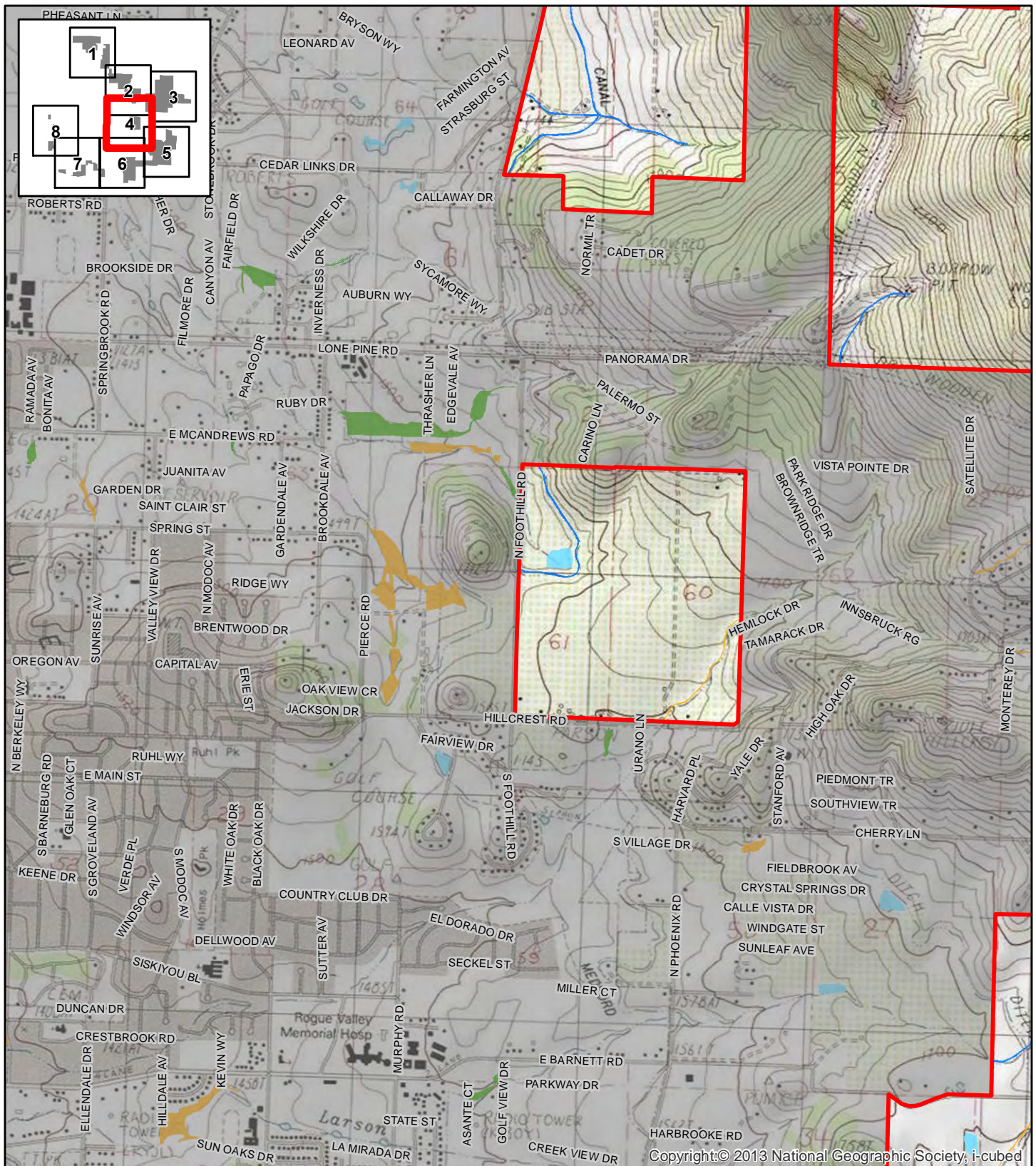
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015





**Figure E-4 – NWI and County Hydrography Map**

- Study Area**
- Cowardin Types**
- Palustrine Emergent Wetland
  - Palustrine Forested/Shrub Wetland

- Palustrine Pond
- Riverine

1 inch = 2,000 feet

0 1,000 2,000 Feet

0 200 400 Meters

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.



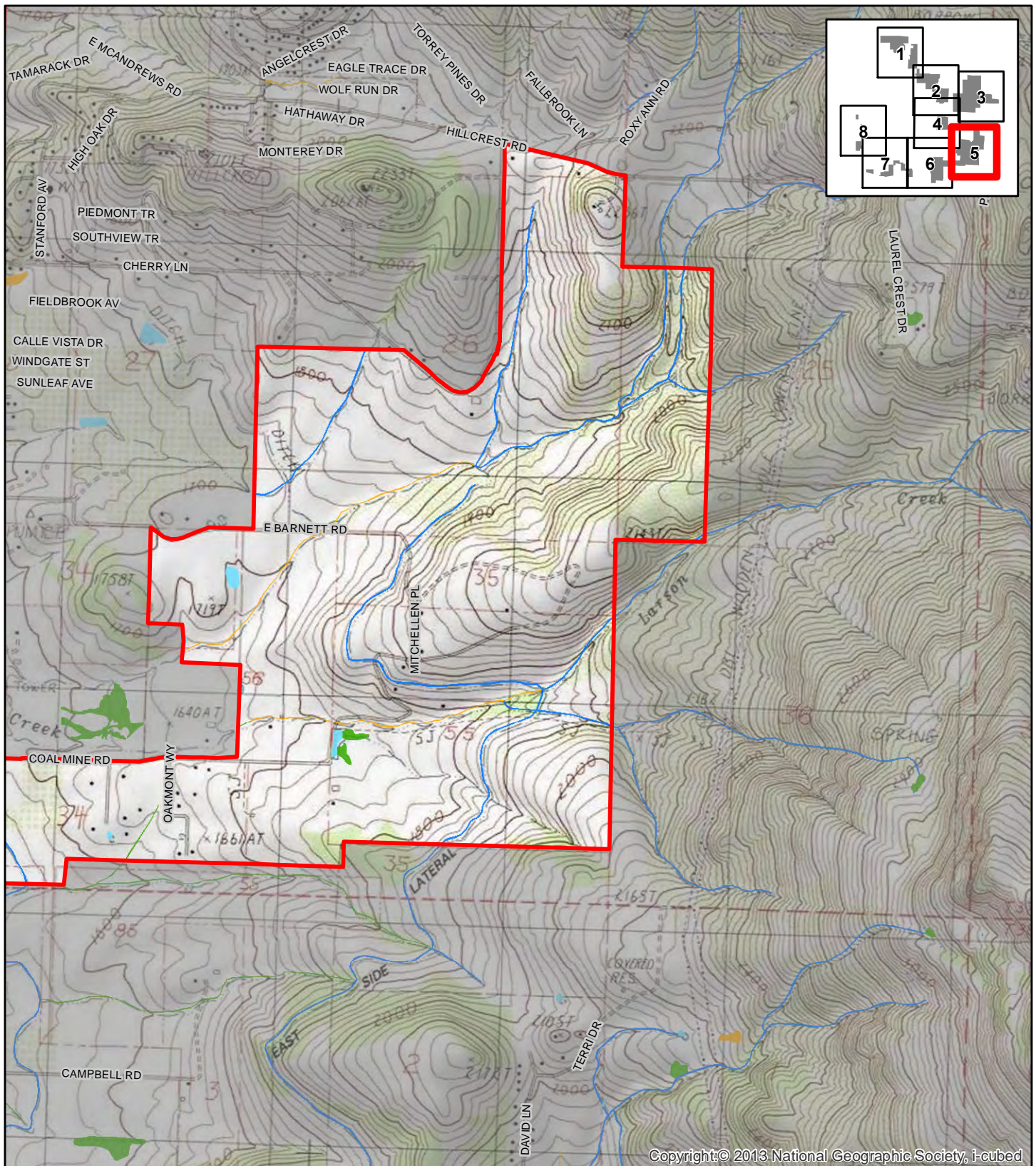
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 21, 2015





Copyright © 2013 National Geographic Society, i-cubed

**Figure E-5 – NWI and County Hydrography Map**

- Study Area**
- Cowardin Types**
- Palustrine Emergent Wetland
  - Palustrine Forested/Shrub Wetland

- Palustrine Pond
- Riverine

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.

1 inch = 2,000 feet

0 1,000 2,000 Feet

0 200 400 Meters



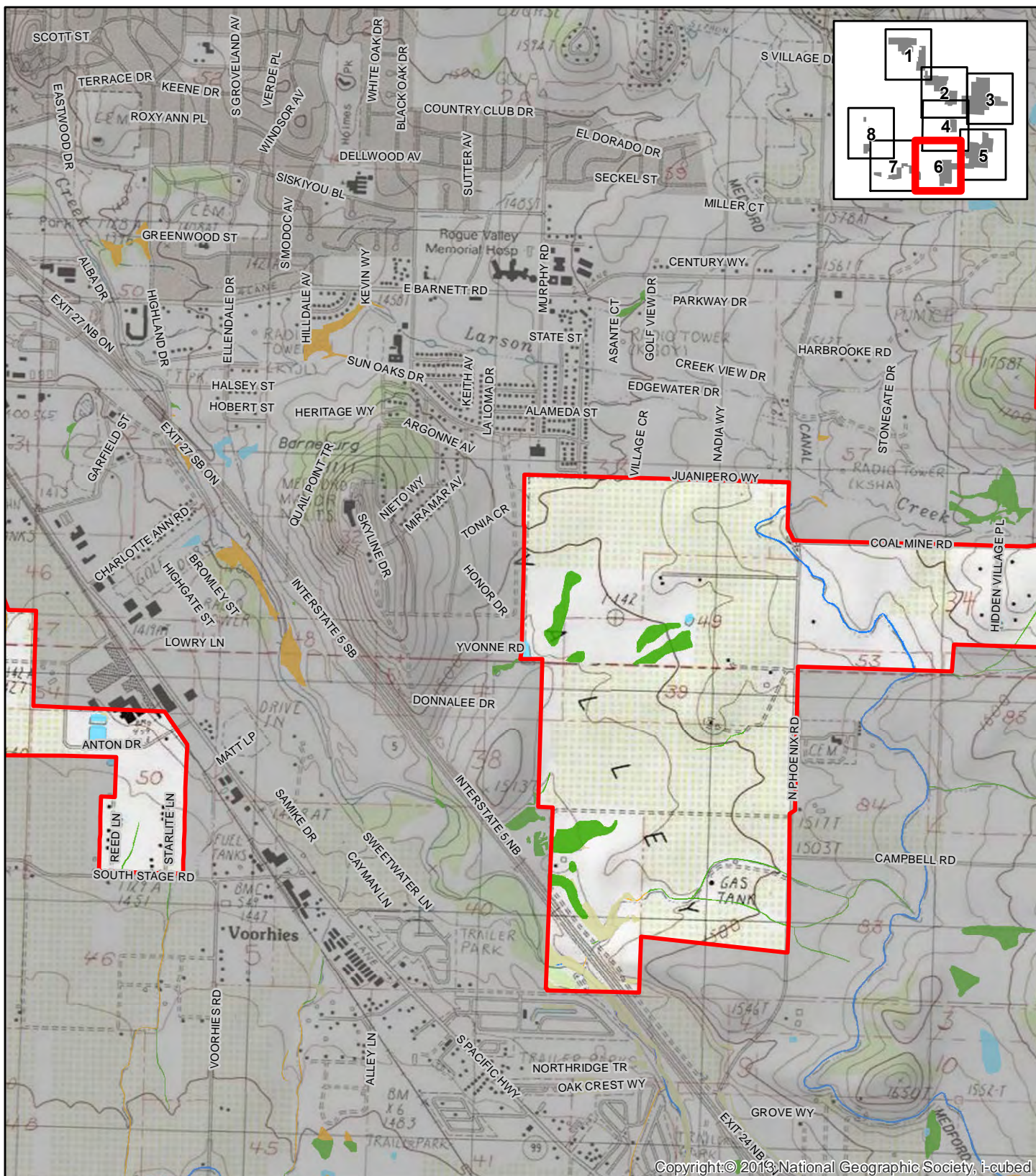
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015





**Figure E-6 – NWI and County Hydrography Map**

 Study Area

### Cowardin Types

Palustrine Emergent Wetland

Palustrine Forested/Shrub Wetland

 Palustrine Pond

 Riverine

Unknown

1 inch = 2,000 feet

0 1,000 2,000 Feet

A scale bar with a black background and white markings. It is labeled '0', '200', and '400' at the bottom, and 'Meters' at the right end. A white rectangular box is positioned between the 0 and 200 marks.

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.

City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

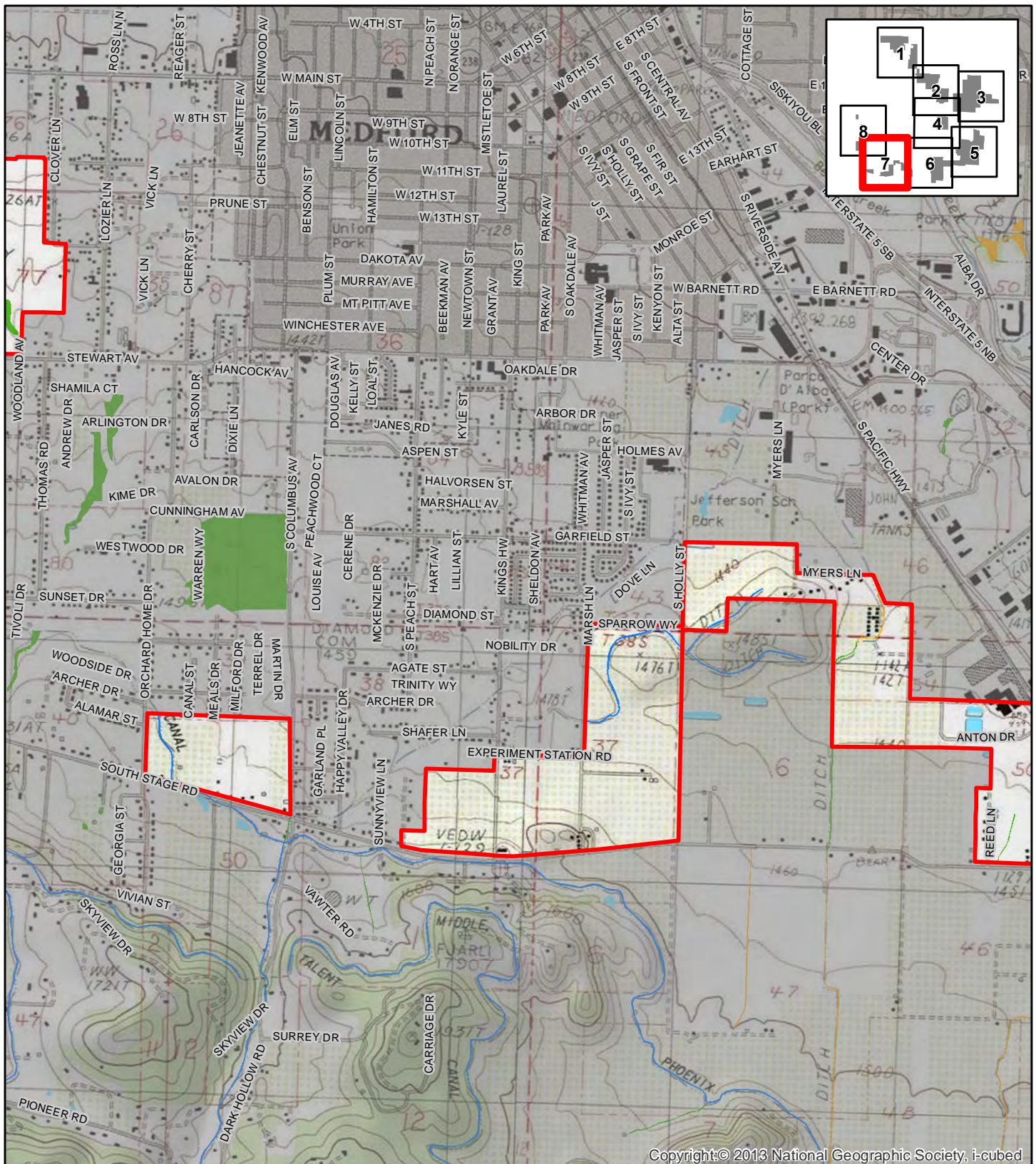
**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
[www.swca.com](http://www.swca.com)  
503.224.0333

Project: 31802

September 16, 2015





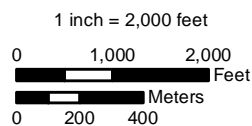


Copyright © 2013 National Geographic Society, i-cubed

**Figure E-7 – NWI and County Hydrography Map**

- |  |   |
|--|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area   | <span style="background-color: lightblue; border: 1px solid blue; padding: 2px;"> </span> Palustrine Pond |
| Cowardin Types   | <span style="background-color: blue; border: 1px solid blue; padding: 2px;"> </span> Riverine             |
| <span style="background-color: green; border: 1px solid green; padding: 2px;"> </span> Palustrine Emergent Wetland         | <span style="background-color: yellow; border: 1px solid yellow; padding: 2px;"> </span> Unknown          |
| <span style="background-color: orange; border: 1px solid orange; padding: 2px;"> </span> Palustrine Forested/Shrub Wetland |   |

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.



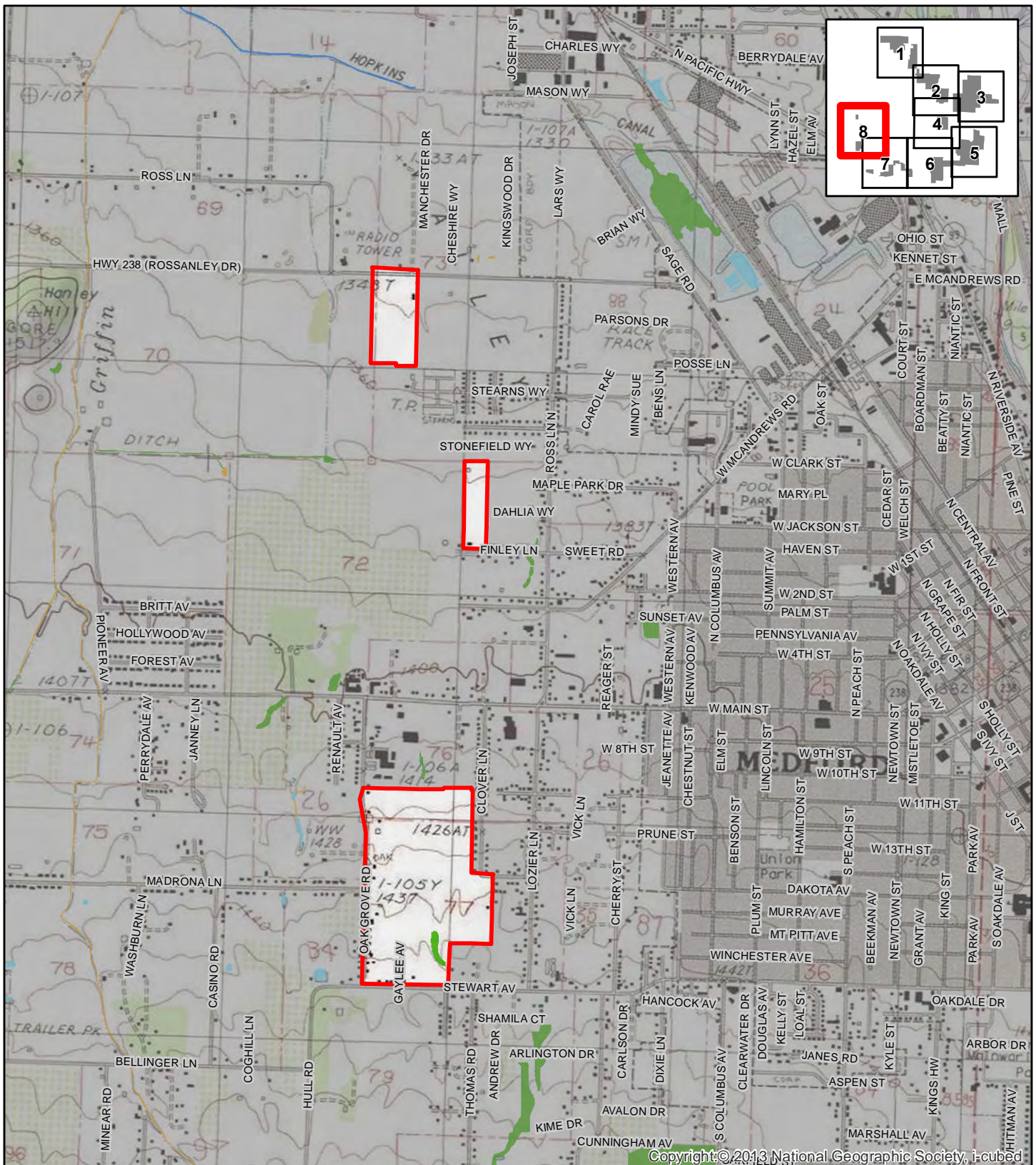
City of Medford Urban Reserve  
Local Wetlands Inventory  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015



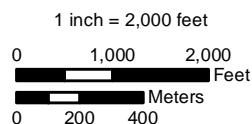


Copyright © 2013 National Geographic Society, i-cubed

**Figure E-8 – NWI and County Hydrography Map**

- |  |   |
|--|---|
| <span style="border: 2px solid red; padding: 2px;"> </span> Study Area   | <span style="background-color: lightblue; border: 1px solid blue; padding: 2px;"> </span> Palustrine Pond |
| Cowardin Types   | <span style="background-color: blue; border: 1px solid blue; padding: 2px;"> </span> Riverine             |
| <span style="background-color: green; border: 1px solid green; padding: 2px;"> </span> Palustrine Emergent Wetland         | <span style="background-color: yellow; border: 1px solid yellow; padding: 2px;"> </span> Unknown          |
| <span style="background-color: orange; border: 1px solid orange; padding: 2px;"> </span> Palustrine Forested/Shrub Wetland |   |

Source: Oregon Natural Heritage Information Center & The Wetlands Conservancy, 2009. Note that additional wetlands mapping data was referenced, not shown here.



**City of Medford Urban Reserve  
Local Wetlands Inventory**  
Jackson County, OR

**SWCA**  
ENVIRONMENTAL CONSULTANTS  
1220 SW Morrison, Suite 700  
Portland, OR 97205-2235  
www.swca.com  
503.224.0333

Project: 31802

September 16, 2015

**Figure Series F.** Index map and Drainage Basin Guide; and LWI Maps

**UNDER SEPARATE COVER**

*This page intentionally left blank.*

**Figure Series G.** Poster sized LWI Maps

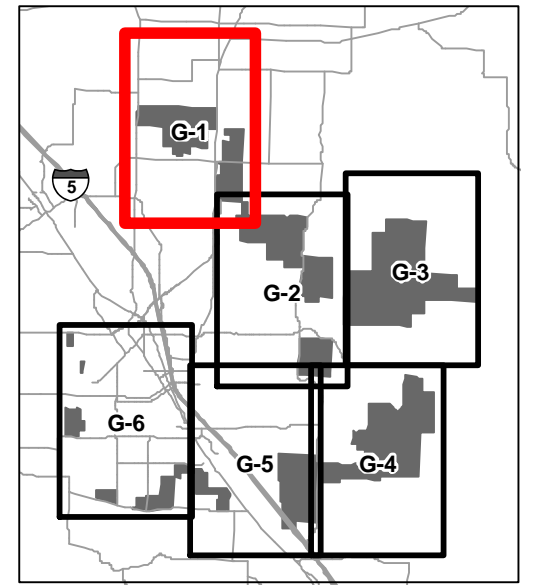
*This page intentionally left blank.*



# Local Wetland Inventory for the City of Medford Urban Reserve Areas

Map G-1

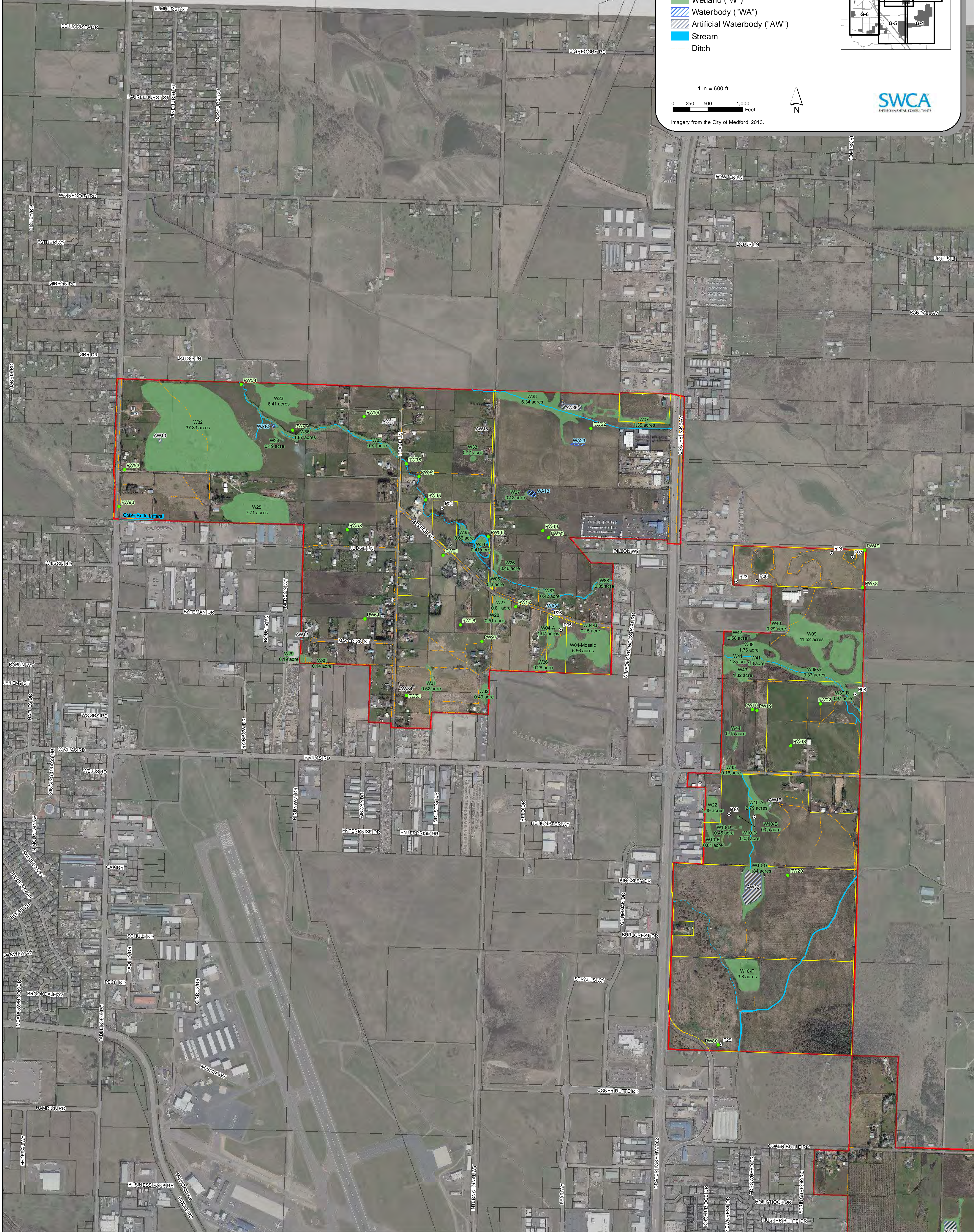
- Study Area
- Tax Lot, Accessed
- Tax Lot, Not Accessed
- SWCA LWI Data
  - SWCA Sample Plot
  - Probable Wetland ("PW", <0.5 acre)
  - Wetland ("W")
  - Waterbody ("WA")
  - Artificial Waterbody ("AW")
  - Stream
  - Ditch



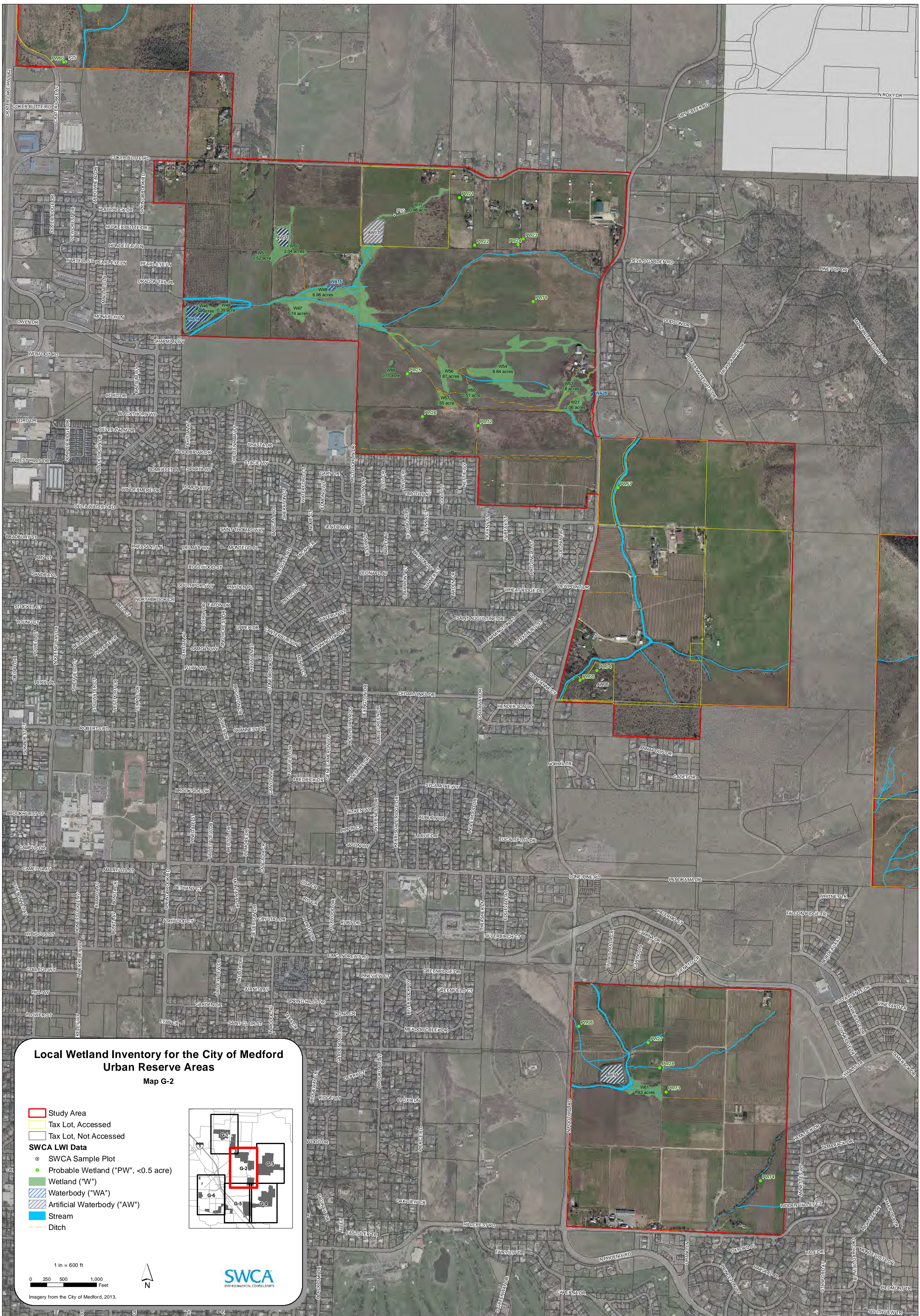
1 in = 600 ft  
0 250 500 1,000 Feet  
Imagery from the City of Medford, 2013.



SWCA  
ENVIRONMENTAL CONSULTANTS





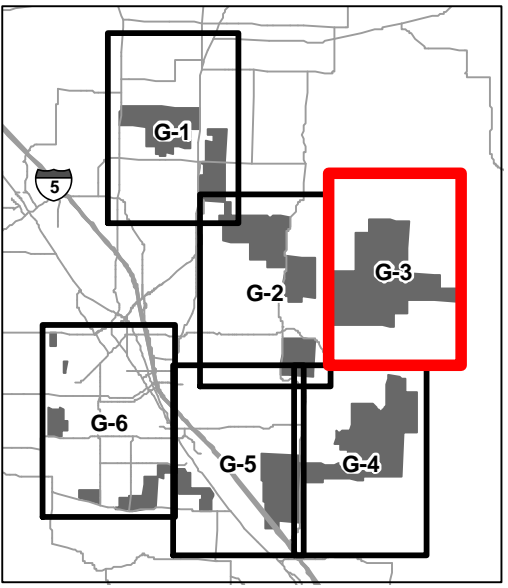




Local Wetland Inventory for the City of Medford  
Urban Reserve Areas

Map G-3

- Legend**
- Study Area
  - Tax Lot, Accessed
  - Tax Lot, Not Accessed
  - SWCA LWI Data**
    - SWCA Sample Plot
    - Probable Wetland ("PW", <0.5 acre)
    - Wetland ("W")
    - Waterbody ("WA")
    - Artificial Waterbody ("AW")
    - Stream
    - Ditch



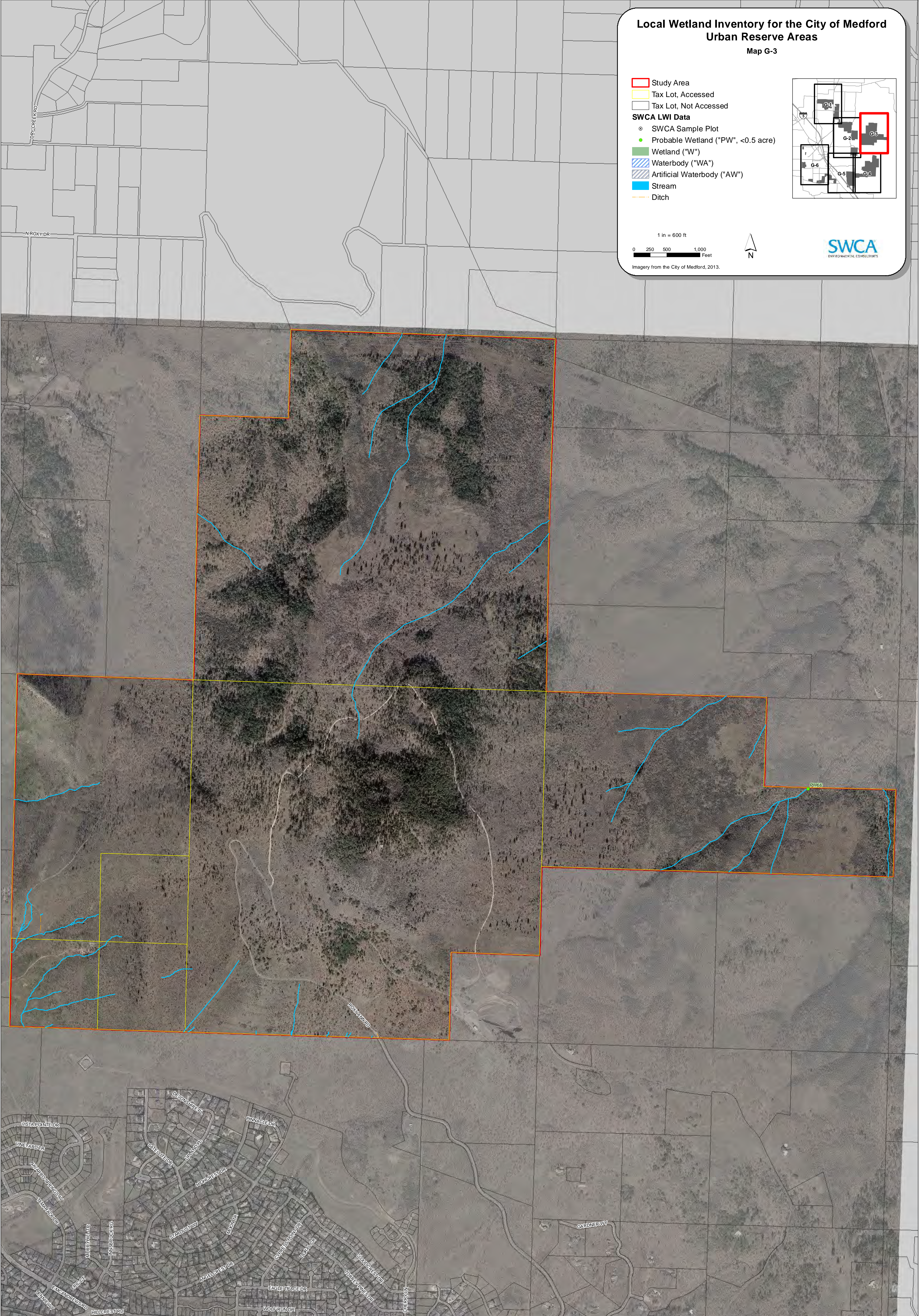
1 in = 600 ft

0 250 500 1,000 Feet

Imagery from the City of Medford, 2013.



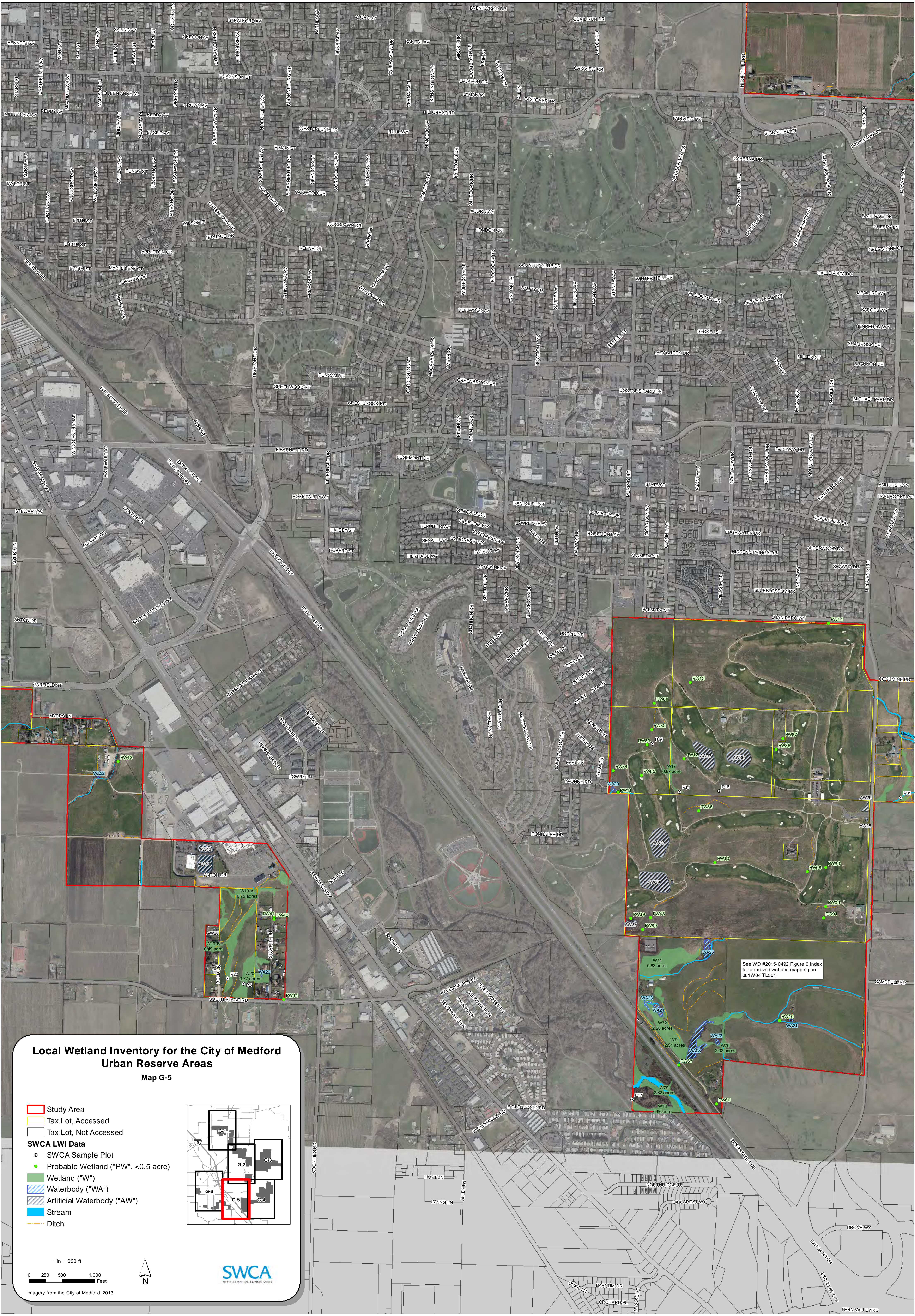
**SWCA**  
ENVIRONMENTAL CONSULTANTS









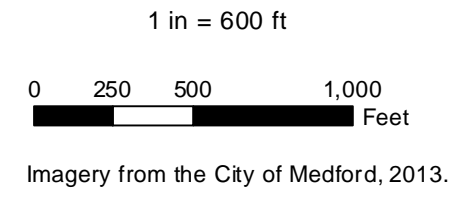
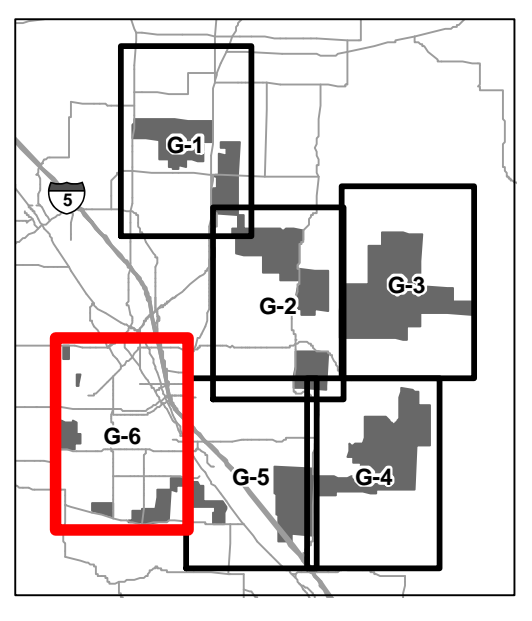




Local Wetland Inventory for the City of Medford  
Urban Reserve Areas

Map G-6

- Study Area**
- Tax Lot, Accessed
  - Tax Lot, Not Accessed
- SWCA LWI Data**
- SWCA Sample Plot
  - Probable Wetland ("PW", <0.5 acre)
  - Wetland ("W")
  - Waterbody ("WA")
  - Artificial Waterbody ("AW")
  - Stream
  - Ditch





## **Appendix G**

### **Staff Qualifications**

*This page intentionally left blank.*



### **C. Mirth Walker, Senior Wetland Scientist, B.A., PWS**

Responsibilities: Ms. Walker provided project management and quality assurance/quality control review. She assisted with the fieldwork, data analysis, digitizing, and report preparation.

Ms. Walker has over 25 years of experience conducting wetland delineations and functional assessments, and coordinating agency approvals of state and federal wetland permits. Ms. Walker has received training in the USACE Arid West and Western Mountains, Valleys and Coast Regional Supplements, and the Oregon Rapid Wetland Assessment Method. She has been managing and conducting LWIs for over 20 years, and has both a depth and breadth of wetland inventory experience. Inventory areas she has worked on include the cities of Ashland, Hillsboro, Lakeside, La Grande, Tigard, Tualatin, Stayton, and Wilsonville, as well as five cities for the Lane Council of Governments (LCOG): Adair Village, Harrisburg, Mill City, Monroe, and Scio. Ms. Walker understands wetland permitting and regulations, and she works collaboratively with clients, team members, and agency personnel to resolve issues and provide solutions that are easily attainable.

### **Clare Kenny, Wetlands Scientist, B.S., PWS**

Responsibilities: With support from the project team, Ms. Kenny led the fieldwork effort and designed the LWI geospatial database based on OAR. She completed digitization, the OFWAM assessment, and report preparation. Ms. Kenny also led the public open house meetings for the project.

Ms. Kenny has over 11 years of environmental consulting experience in the United States and overseas, including 6 years of specialization and local trainings in wetland and waterbody assessment and botanical surveys. Continuing education workshops have included a number of regional supplement trainings for the USACE wetland manual, the Oregon Rapid Wetland Assessment Protocol, the Washington Wetland Rating System, the Oregon Stream Duration Assessment Method, National Environmental Policy Act (NEPA), and geographic information system (GIS). Ms. Kenny additionally has expertise with habitat mapping, invasive species surveys, threatened and endangered species surveys, restoration monitoring, and associated reporting. She understands wetland reporting and permit application processes and is proficient using ArcGIS for large-scale data collection and analysis.

### **Taya MacLean, Botanist/Wetlands Scientist, M.S., B.S.**

Responsibilities: Taya assisted with fieldwork, wetland data entry, and wetland data quality assurance/quality control review.

Ms. MacLean has over 15 years of experience conducting botanical studies, habitat mapping, and wetland delineations, and plays an integral role on SWCA's wetland and wetland inventory team. In continuing her education to focus upon Pacific Northwest vegetation and wetland communities, Ms. MacLean regularly attends local botanical workshops and trainings on topics ranging from plant identification and management, to vegetation and habitat mapping, to rapid wetland functional assessment tool trainings. Her on-the-ground experience is diverse and includes the Lower Columbia River Estuary Partnership land cover mapping project and the LCOG Five City LWI. She has conducted vegetation monitoring at vernal pool and wetland mitigation sites for Roseburg Forest Products, the Oregon Parks and Recreation Department, and a variety of other clients throughout southern Oregon.

### **Catherine Smith, GIS and Mapping Specialist, B.A.**

Responsibilities: Catherine built and maintained the LWI geodatabase, sourced reference data, and prepared base and final report maps for the project.

Ms. Smith is a GIS specialist with 21 years of experience in GIS support for NEPA documents, wetland delineations, and vegetation inventory projects. She uses Esri ArcGIS applications to support and help solve natural resource management and planning issues. Ms. Smith has coordinated the GIS involvement for extensive environmental impact statement and environmental assessment projects, including some for the National Park Service, Bureau of Land Management, and U.S. Forest Service. She also has experience with aerial photography/satellite imagery interpretation and classification using ERDAS Imagine software.

### **Chris Moller, GIS and Remote Sensing Specialist, B.S.**

Responsibilities: Provided GIS and remote sensing support to the project team.

Mr. Moller has 15 years of technical experience in GIS and remote sensing as well as natural resources areas. His primary areas of expertise are land cover and land use mapping, wetland interpretation, GPS data collection, and associated GIS analysis. His background in the natural sciences allows him to work with landscape ecologists, botanists, fisheries scientists, restoration scientists, wetland scientists, and cultural resources specialists to gather, analyze, and display data. He also contributes to the development of new methods to answer environmental consulting questions and solve problems. Mr. Moller is familiar with current remote sensing techniques, satellite and aerial imagery manipulation, and accuracy assessment methods. He has used several types of satellite and aerial imagery as well as LiDAR data, and is proficient with different imagery analysis software for interpretation of imagery and classification. He is also practiced in current techniques related to land cover and land use classification as well as change detection.

## **Appendix H**

### **Example Landowner Letter**

*This page intentionally left blank.*



## *CITY OF MEDFORD*

# PLANNING DEPARTMENT

---

Date of Notice: March 11, 2015

Contact: Carla Paladino

### **Informational Meeting** **Medford Local Wetland Inventory Project for Urban Reserve**

You are receiving this invitation because you own property within the City of Medford's Urban Reserve and preliminary data indicates the possible presence of wetlands on your property.

**Wednesday, March 18, 2015**  
**5:00 p.m. – 7:00 p.m.**  
(Short Presentation starts at 5:15 p.m.)

**Carnegie Building**  
**413 W. Main Street, Top Floor**

**Scope of Project:** The City of Medford is about to conduct a Local Wetland Inventory (LWI) in the Urban Reserve. The City is required by Oregon law (Statewide Planning Goal 5) to identify and assess wetlands in order to update its Comprehensive Plan and meet requirements associated with expanding the City's Urban Growth Boundary. The City is requesting your participation in order to gather the most accurate information possible about the location and quality of wetlands within these areas. From preliminary data, part of your property may have wetland characteristics, contain part of a stream or drainage way, or may be located next to such a feature.

The City has hired SWCA Environmental Consultants, an environmental consulting firm to conduct the Local Wetland Inventory (LWI) and provide the technical expertise for the project. The LWI will provide useful planning information both for property owners and the City.

**Why attend?** The informational meeting will help explain the LWI project. Staff from the Oregon Department of State Lands (the state agency that sets wetland inventory standards), SWCA Environmental Consultants, and the City will be in attendance. After a brief presentation, staff will be available to answer questions and maps will be on display for the benefit of the audience.

**We Need Your Help!** The City is requesting your participation in order to gather the most accurate information possible about the location and quality of wetlands within the Medford Urban Reserve. While aerial photography, soil maps, and other information will also be used in this study to locate and map wetlands, for the best accuracy we would like your permission for SWCA to walk on the property and briefly study the vegetation and soils. **The consultant will not come onto your property without your consent. Therefore, we request that you please sign the "Permission to Access" form and mail it back by March 25th.** Otherwise, please bring the signed sheet with you to the informational meeting.

If you consent, the site visit will occur between the end of March through the end of April of this year. It would take place on a weekday and in most cases would not last longer than 30 minutes. When the consultant visits your property, he/she may dig a few small test holes (1 ft. wide by 1.5 ft. deep) to help identify wetland soils. The consultant will fill these holes back in when finished. No gardens or lawns will be disturbed. Although your presence is not necessary, SWCA will be flexible in working with you on any special arrangements that you may require in order to accommodate schedules, pets/animals etcetera.

**Who do I contact?** Questions can be directed to the contact listed above at 541-774-2380, or by visiting the Planning Department in person. The Planning Department is on the second floor of the Lausmann Annex, 200 S. Ivy Street and is open from 8 a.m. to 5 p.m. weekdays.

Sincerely,

*signed*

James E. Huber, AICP, Planning Director  
City of Medford

Enclosure: Permission to Access form

# Permission to Access

## Property Owner Consent Form

I understand that SWCA Environmental Consultants, an environmental consulting firm, has been contracted by the City of Medford to conduct a Local Wetland Inventory (LWI). In order to accurately determine the presence or location of a wetland, staff from SWCA needs to enter onto my property. By signing this form, I grant the consultant permission to access my property for the purposes of this inventory.

Map and Tax Lot(s): \_\_\_\_\_

Street Address: \_\_\_\_\_

Print Name: \_\_\_\_\_

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Should the consultant call first to make any special arrangements for access?

☐ No

☐ Yes Phone: \_\_\_\_\_ Best time to call \_\_\_\_\_

**Please return this form by March 25th or bring it with you to the informational meeting.**

**Thank you.**

*This page intentionally left blank.*



## **Appendix I**

### **Addenda**

*This page intentionally left blank.*

**Addendum 1:**

**Approval Letter WD #2015-0429 for Tax Map 381W04 Tax Lot 501**

*This page intentionally left blank.*



# Oregon

Kate Brown, Governor

## Department of State Lands

775 Summer Street NE, Suite 100

Salem, OR 97301-1279

(503) 986-5200

FAX (503) 378-4844

[www.oregon.gov/dsl](http://www.oregon.gov/dsl)

May 16, 2016

### State Land Board

Bear Creek Orchards, Inc.

Attn: Tom Forsythe

P.O. Box 9000

Medford, OR 97501

Kate Brown

Governor

Jeanne P. Atkins

Secretary of State

Re: WD #2015-0492 Wetland Delineation Report for Bear Creek  
Orchards, Jackson County; T 38S R 1W S 4 TL 501

Ted Wheeler

State Treasurer

Dear Mr. Forsythe:

The Department of State Lands has reviewed the wetland delineation report prepared by Schott & Associates, Inc. for the site referenced above. Based upon the information presented in the report and additional information submitted upon request, we concur with the wetland and waterway boundaries as mapped in revised Figure 6 (index + 9 sheets) of the report. Please replace all copies of the preliminary wetland maps with these final Department-approved maps.

Within the study area, four wetlands, three wetland ditches (Ditches 1-3), and a wetland pond (totaling approximately 2.364 acres), one non-wetland ditch (Ditch 4), and one irrigation ditch (Ditch 5) were identified. The wetlands, Ditches 1-4, and the wetland pond are subject to the permit requirements of the state Removal-Fill Law. Under current regulations, a state permit is required for cumulative fill or annual excavation of 50 cubic yards or more in the wetlands or below the ordinary high water line (OHWL) of a waterway or pond (or the 2 year recurrence interval flood elevation if OHWL cannot be determined). Ditch 5 is exempt from state regulation per OAR 141-085-0515(9).

This concurrence is for purposes of the state Removal-Fill Law only. Federal or local permit requirements may apply as well. The Army Corps of Engineers will review the report and make a determination of jurisdiction for purposes of the Clean Water Act at the time that a permit application is submitted. We recommend that you attach a copy of this concurrence letter to both copies of any subsequent joint permit application to speed application review.

Please be advised that state law establishes a preference for avoidance of wetland impacts. Because measures to avoid and minimize wetland impacts may include reconfiguring parcel layout and size or development design, we recommend that you

work with Department staff on appropriate site design before completing the city or county land use approval process.

This concurrence is based on information provided to the agency. The jurisdictional determination is valid for five years from the date of this letter unless new information necessitates a revision. Circumstances under which the Department may change a determination are found in OAR 141-090-0045 (available on our web site or upon request). In addition, laws enacted by the legislature and/or rules adopted by the Department may result in a change in jurisdiction; individuals and applicants are subject to the regulations that are in effect at the time of the removal-fill activity or complete permit application. The applicant, landowner, or agent may submit a request for reconsideration of this determination in writing within six months of the date of this letter.

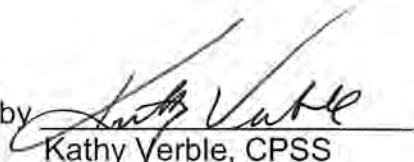
Thank you for having the site evaluated. Please phone me at 503-986-5300 if you have any questions.

Sincerely,



Lynne McAllister  
Jurisdiction Coordinator

Approved by



Kathy Verble, CPSS  
Aquatic Resource Specialist

Enclosures

cc: Jodi Reed, Schott & Associates, Inc.  
Jackson County Planning Department  
Medford Planning Department  
Benny Dean, Corps of Engineers  
Bob Lobdell, DSL



# WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach this form to the front of an unbound report or include a hard copy of the completed form with a CD/DVD that includes a single PDF file of the report cover form and report (minimum 300 dpi resolution) and submit to: **Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279**. A single PDF attachment of the completed cover form and report may be e-mailed to [Wetland\\_Delineation@dsl.state.or.us](mailto:Wetland_Delineation@dsl.state.or.us). For submittal of PDF files larger than 10 MB, e-mail instructions on how to access the file from your ftp or other file sharing website. Fees can be paid by check or credit card. Make the check payable to the Oregon Department of State Lands. To pay the fee by credit card, call 503-986-5200.

☒ Applicant ☐ Owner Name, Firm and Address:

**Bear Creek Orchards, Inc. Attn: Tom Forsythe**  
**PO Box 9000**  
**Medford, OR 97501**

Business phone # **541 864 2480**

Mobile phone # (optional)

E-mail: [TForsythe@HarryandDavid.com](mailto:TForsythe@HarryandDavid.com)

☒ Authorized Legal Agent, Name and Address:

**Schott & Associates, Inc. Attn: Jodi Reed**  
**PO Box 589**

Business phone # **503-678-6007**

Mobile phone #

E-mail: [Jodi@Schottandassociates.com](mailto:Jodi@Schottandassociates.com)

**Aurora, Oregon 97002**

I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact.

Typed/Printed Name: **TOM FORSYTHE**

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Special instructions regarding site access: \_\_\_\_\_

## Project and Site Information (using decimal degree format for lat/long., enter centroid of site or start & end points of linear project)

Project Name: **Tax Lot 501**

Latitude: **42.2927**

Longitude: **-122.8189**

Proposed Use: **Development**

Tax Map # **38 1W 04**

Project Street Address (or other descriptive location):

**Northeast of 1-5, west of North Phoenix Road, south of Centennial Golf Club**

Township **38S**

Range **1W**

Section **4**

QQ

Tax Lot(s) **501**

Waterway:

River Mile:

City: **Medford**

County: **Jackson**

NWI Quad(s):

## Wetland Delineation Information

Wetland Consultant Name, Firm and Address:

**Schott & Associates, Inc. Attn: Jodi Reed**  
**PO Box 589**

**Aurora, Oregon 97002**

Phone # **503-678-6007**

Mobile phone #

E-mail: [Jodi@schottandassociates.com](mailto:Jodi@schottandassociates.com)

The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.

Consultant Signature: \_\_\_\_\_

Date: **11/9/15**

Primary Contact for report review and site access is ☒ Consultant ☐ Applicant/Owner ☐ Authorized Agent

Wetland/Waters Present? ☒ Yes ☐ No

Study Area size: **92.32**

Total Wetland Acreage: **1.764 + 0.031 (Permit) + 0.569 (ditches)**

## Check Box Below if Applicable:

☐ R-F permit application submitted

☐ Mitigation bank site

☐ Wetland restoration/enhancement project (not mitigation)

☐ Industrial Land Certification Program Site

☐ Reissuance of a recently expired delineation

Previous DSL # \_\_\_\_\_

Expiration date \_\_\_\_\_

## Fees:

☒ Fee payment submitted \$ **406.00**

☐ Fee (\$100) for resubmittal of rejected report

☐ No fee for request for reissuance of an expired report

**RECEIVED**

**NOV 10 2015**

## Other Information:

Y N

Has previous delineation/application been made on parcel? ☐ Y ☒ N

If known, previous DSL # **ED \$ 406.00**

Does LWI, if any, show wetland or waters on parcel? ☐ Y ☒ N

**DEPARTMENT OF STATE LANDS**

**#1865**

## For Office Use Only

DSL Reviewer: **LM**

Fee Paid Date: **11 / 10 / 15**

DSL WD # **2015-0442**

Date Delineation Received: **11 / 10 / 15**

DSL Project # \_\_\_\_\_

DSL Site # \_\_\_\_\_

Scanned: ☒ Final Scan: ☐

DSL WN # \_\_\_\_\_

DSL App. # \_\_\_\_\_



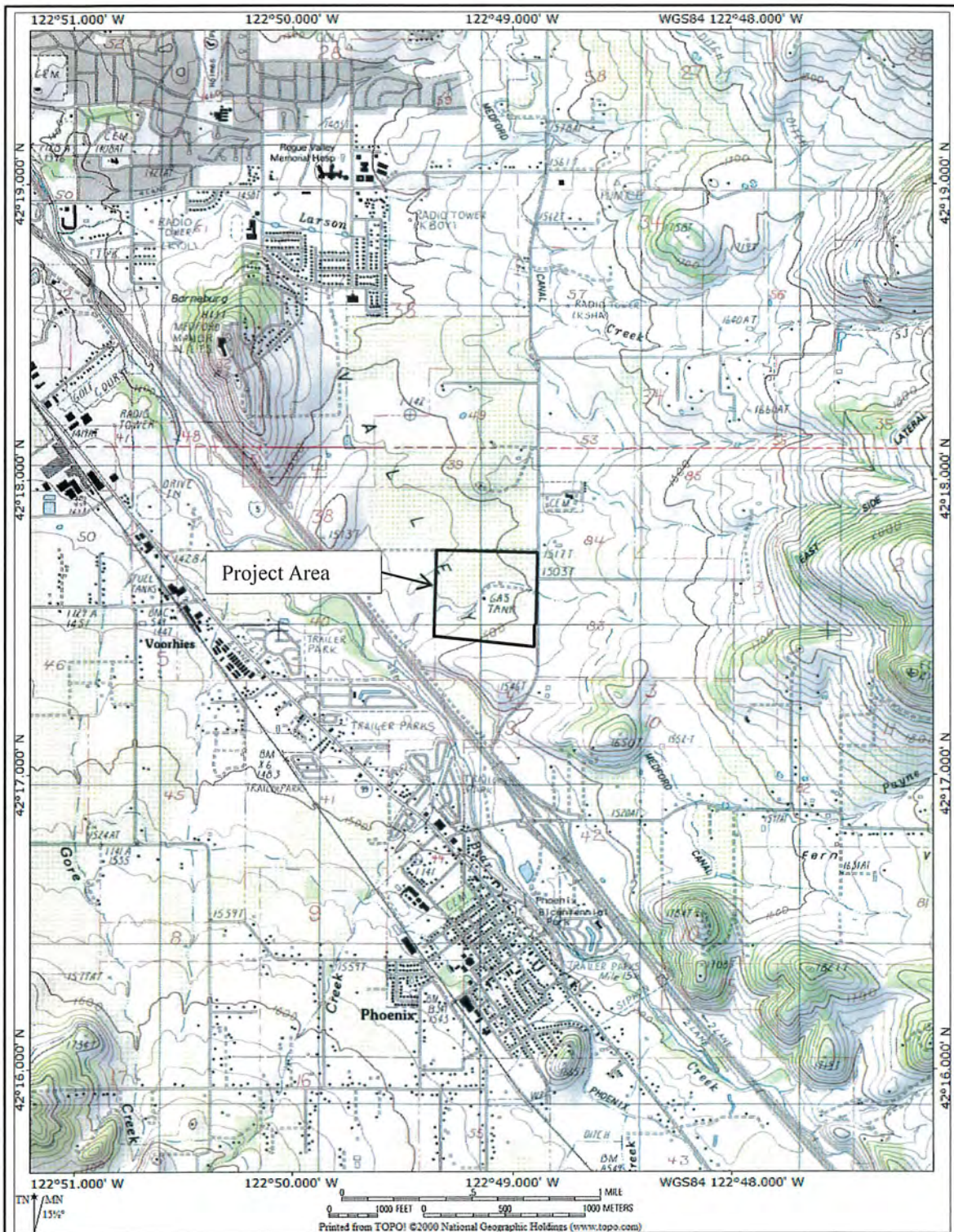


FIGURE 1. SITE LOCATION  
Tax Lot # 501  
S&A# 2379

Schott & Associates  
P.O. Box 589  
Aurora, OR. 97002  
503.678.6007



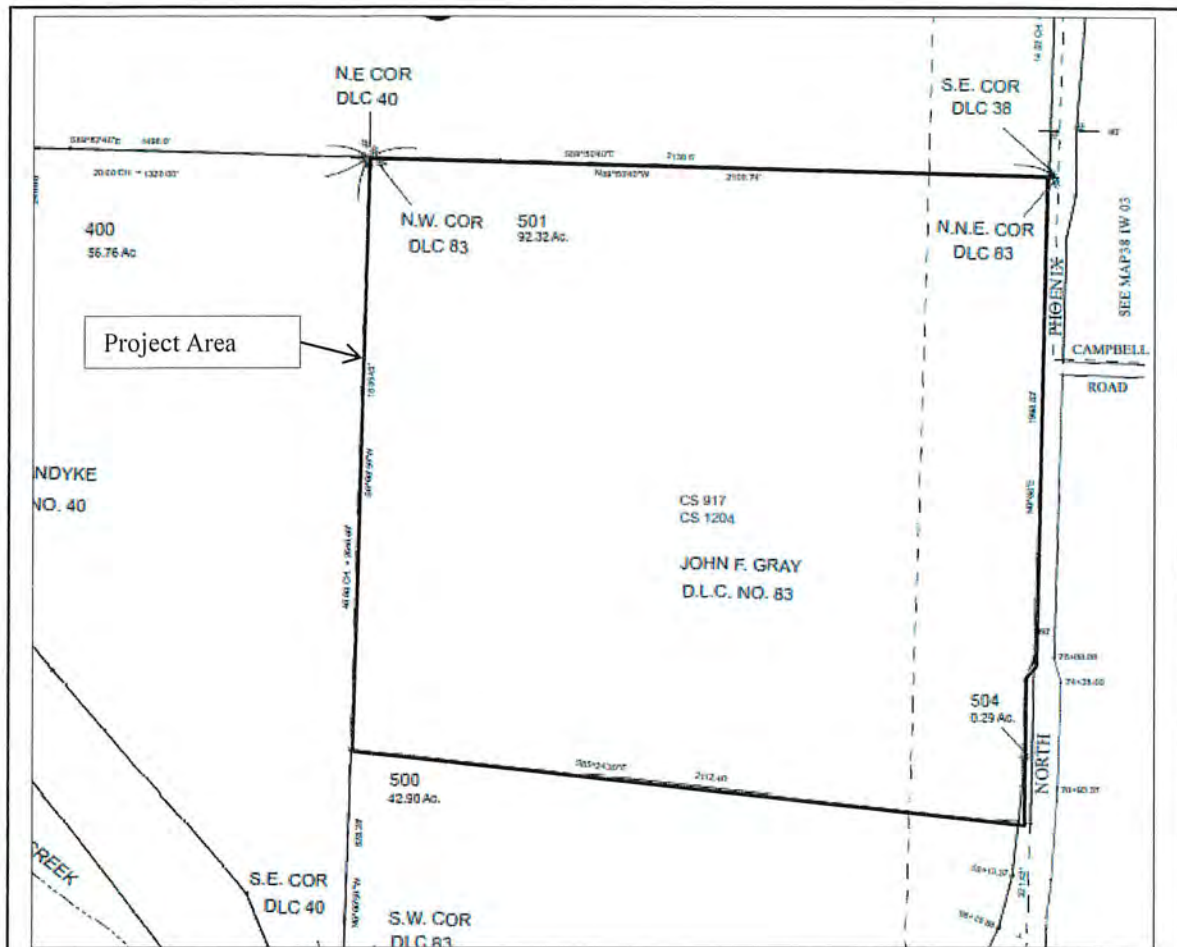
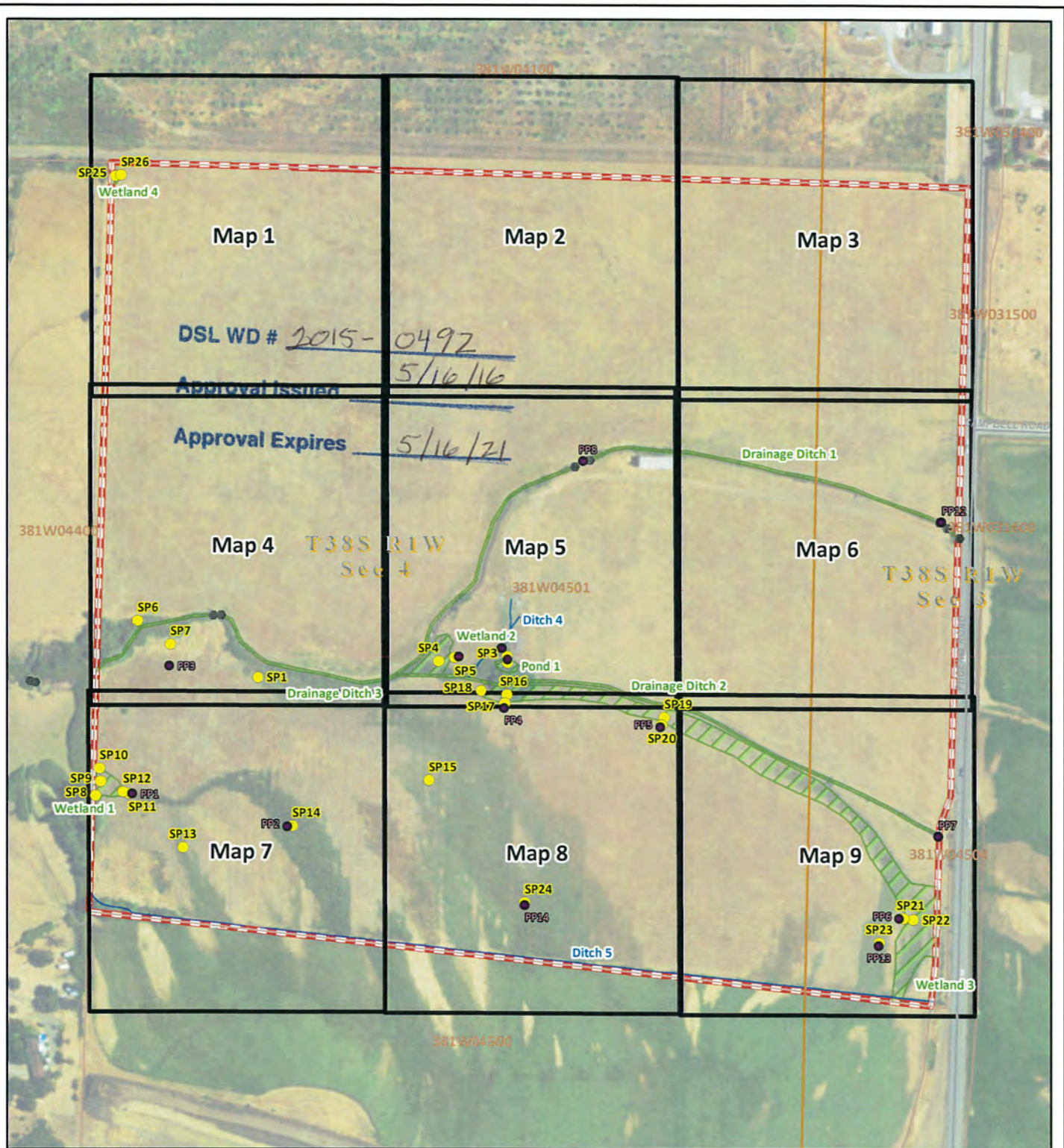


FIGURE 2. TAX LOT  
Tax Lot # 501  
S&A# 2379

Schott & Associates  
P.O. Box 589  
Aurora, OR. 97002  
503.678.6007



## Wetland and Waters Delineation Index Map

T38S, R1W, Sec 4, TL# 501  
Jackson County, Oregon

Figure 6 (Index)



**Cafferata Consulting, LLC**  
Practical Environmental Solutions

- Map Pages
- Study Area
- Sample Plots
- Photo Points
- Waterbody
- Wetland
- Sections
- Taxlots
- Culverts

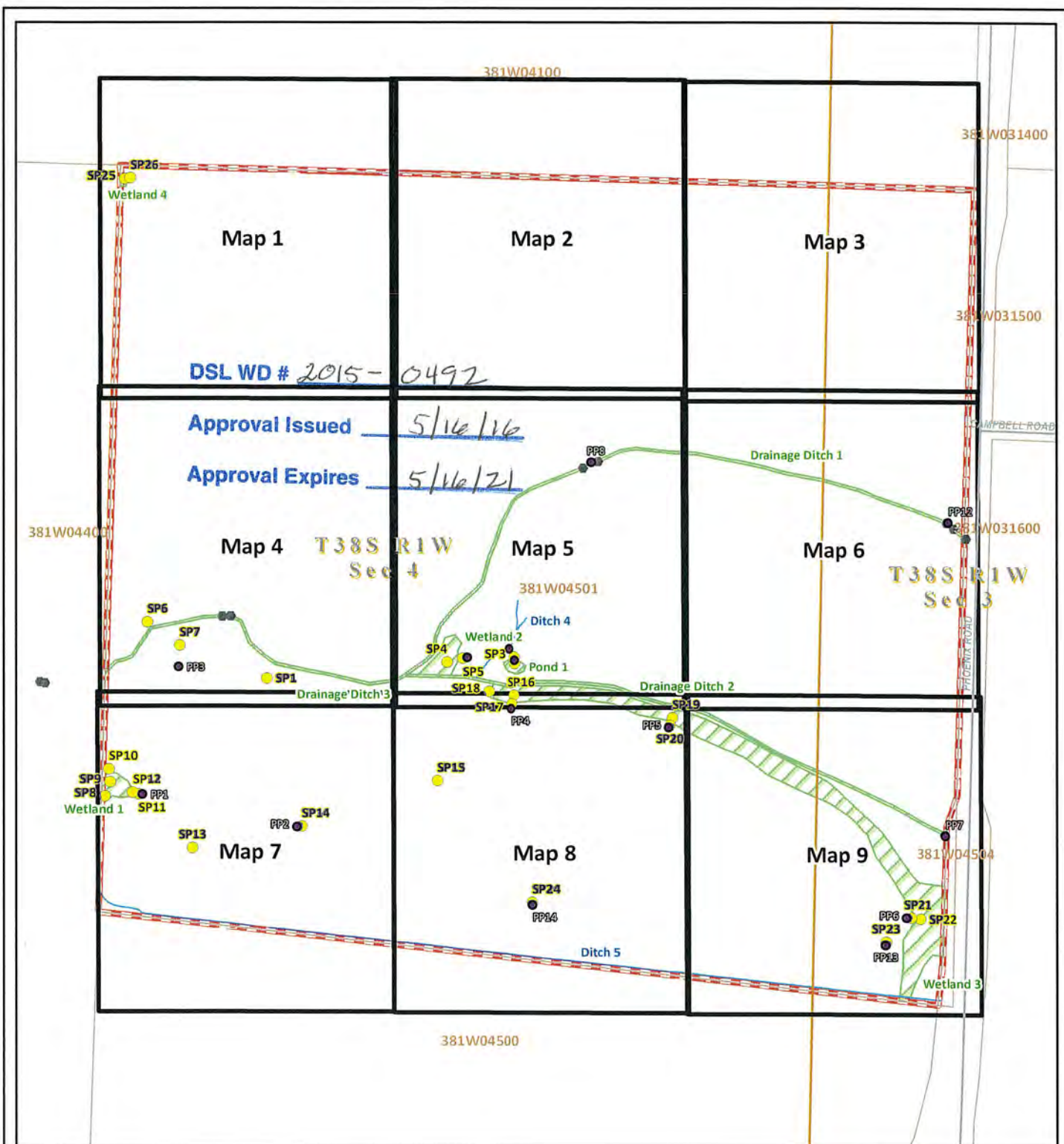


0 125 250 500 Feet

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.





# Wetland and Waters Delineation Index Map

T38S, R1W, Sec 4. TL# 501  
Jackson County, Oregon

Figure 6 (Index)

- Map Pages
- Study Area
- Sample Plots
- Photo Points
- Waterbody
- Wetland
- Culverts
- Sections
- Taxlots



0 125 250 500 Feet

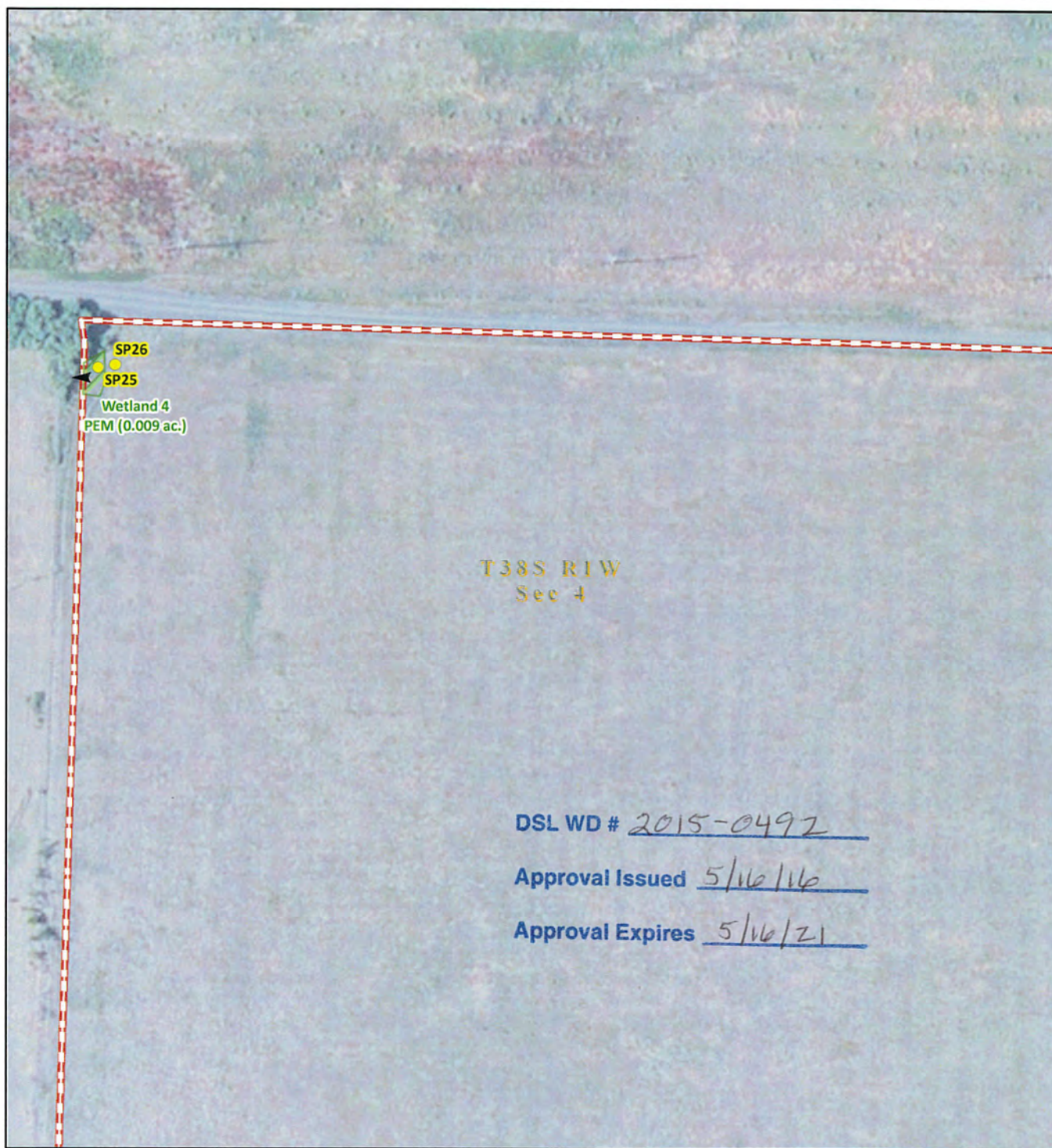


**Cafferata Consulting, LLC**  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



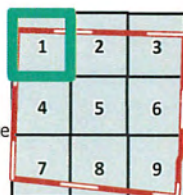
Culverts



Sections



Fill Area



### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501

Jackson County, Oregon

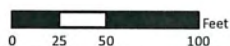


Figure 6-1

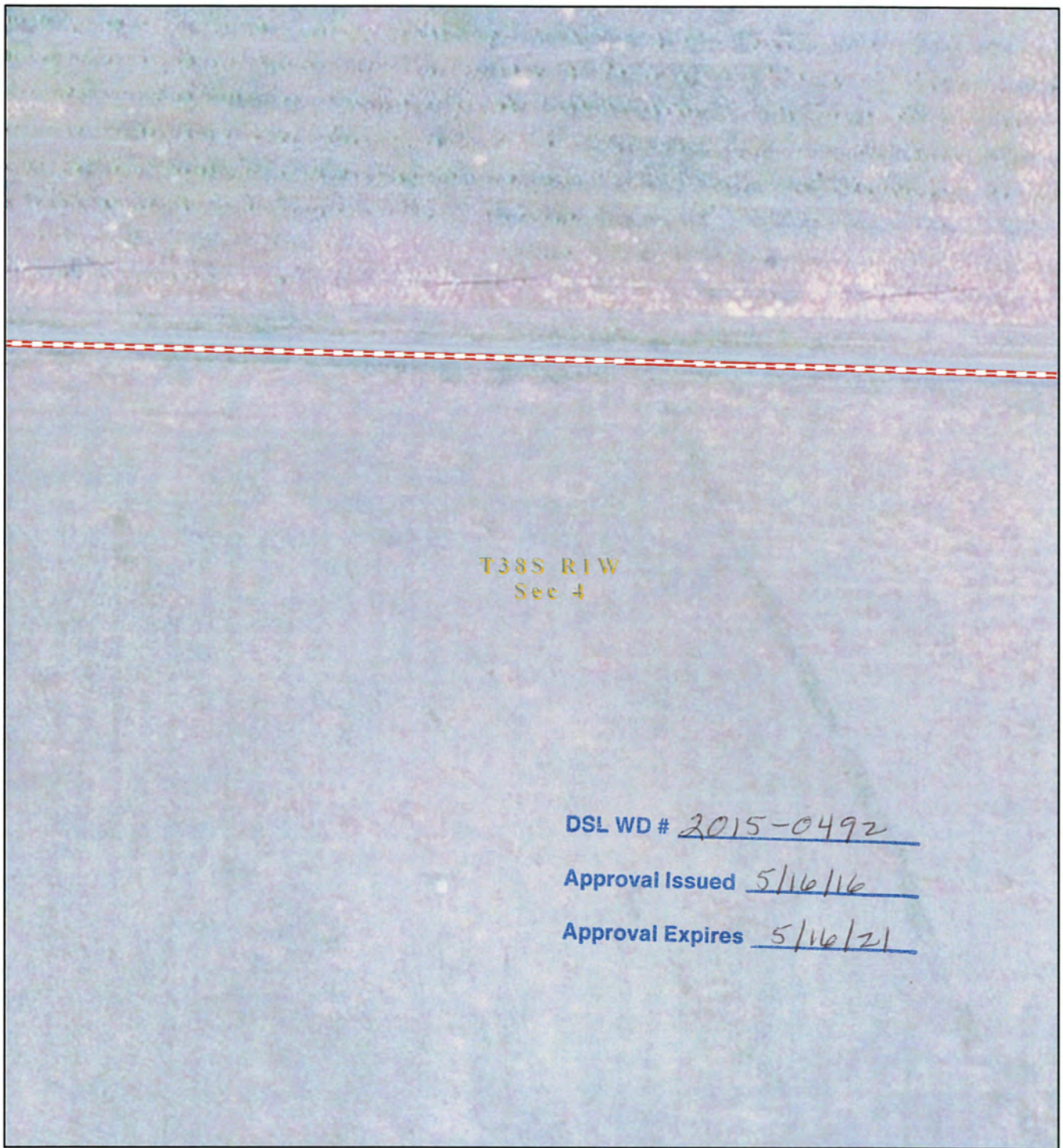


**Cafferata Consulting, LLC**  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



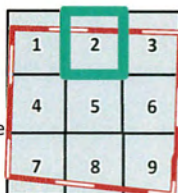
Sections



Fill Area

### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501  
Jackson County, Oregon



0 25 50 100 Feet



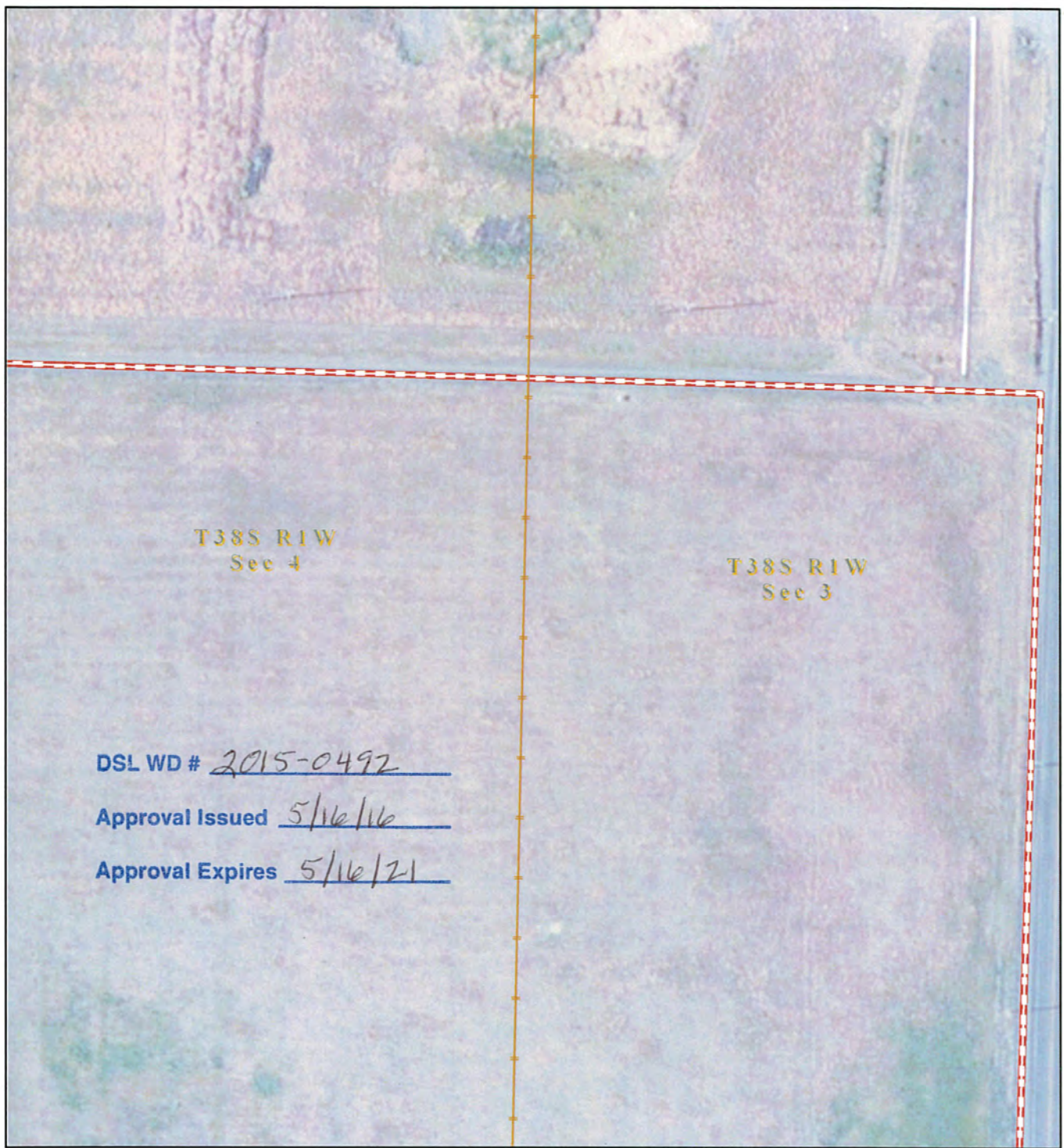
Cafferata Consulting, LLC  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-2





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



Sections



Fill Area

### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501  
Jackson County, Oregon

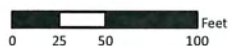
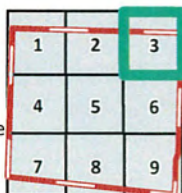


Figure 6-3



**Cafferata Consulting, LLC**  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

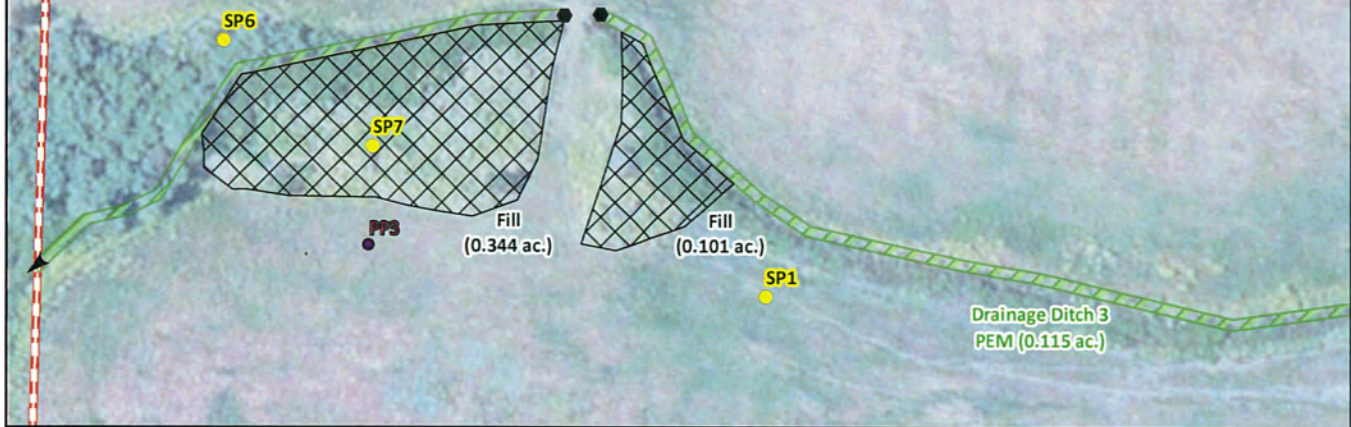


DSL WD # 2015-0492

Approval Issued 5/16/16

Approval Expires 5/16/21

T38S R1W  
Sec 4



- Study Area
- Sample Plots
- Photo Points
- Waterbody
- Wetland
- Feature Continues Offsite
- Culverts
- Sections
- Fill Area

### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501  
Jackson County, Oregon



0 25 50 100  
Feet



Cafferata Consulting, LLC  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-4



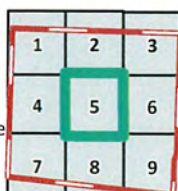
DSL WD # 2015-0492

Approval Issued 5/16/16

Approval Expires 5/16/21



- Study Area
- Sample Plots
- Photo Points
- Waterbody
- Wetland
- Feature Continues Offsite
- Culverts
- Sections
- Fill Area



**Wetland and Waters Delineation Map**  
T38S, R1W, Sec 4. TL# 501  
Jackson County, Oregon



0 25 50 100 Feet

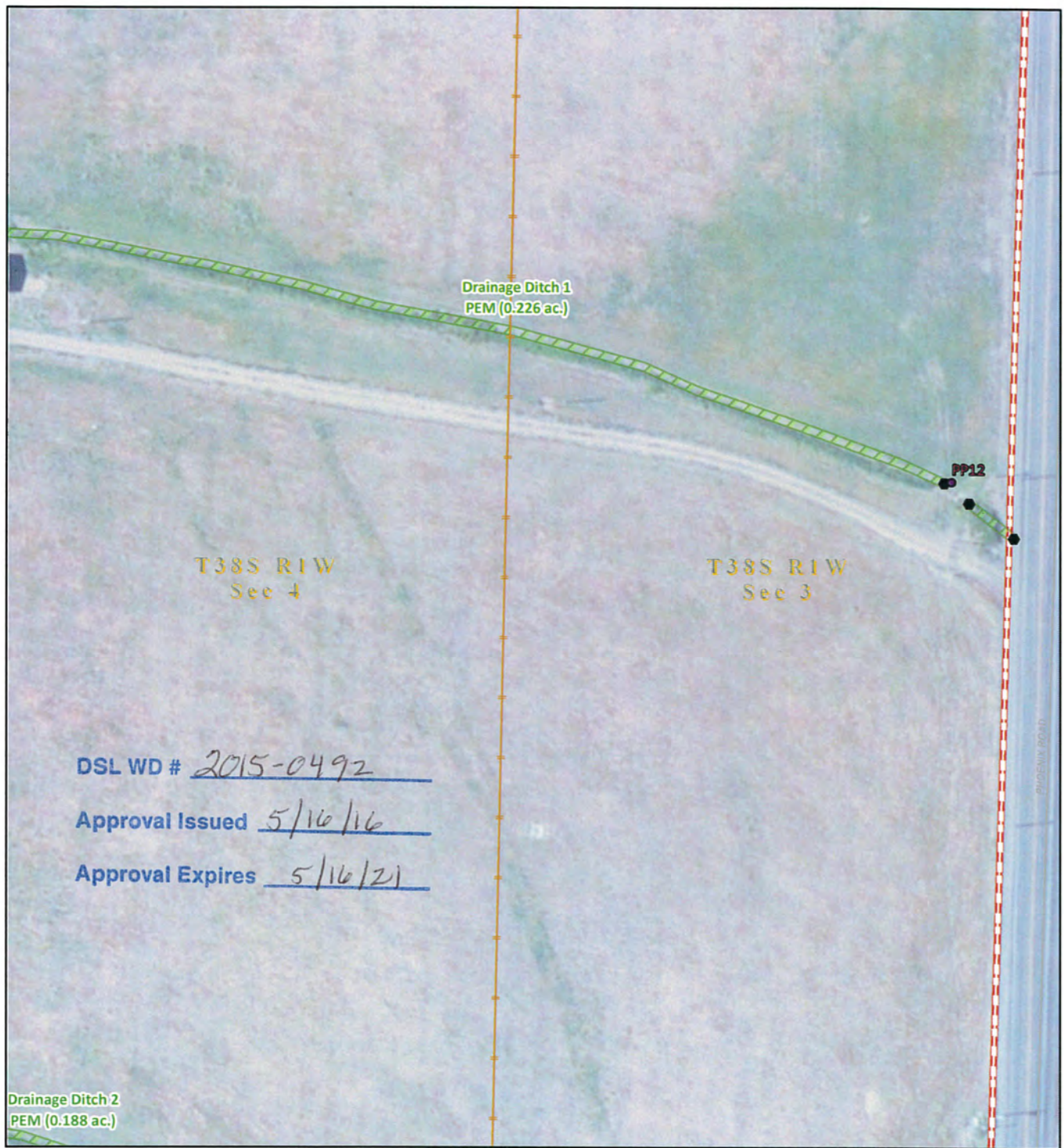


**Cafferata Consulting, LLC**  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.  
Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-5





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



Sections



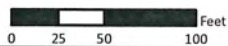
Fill Area



### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501

Jackson County, Oregon



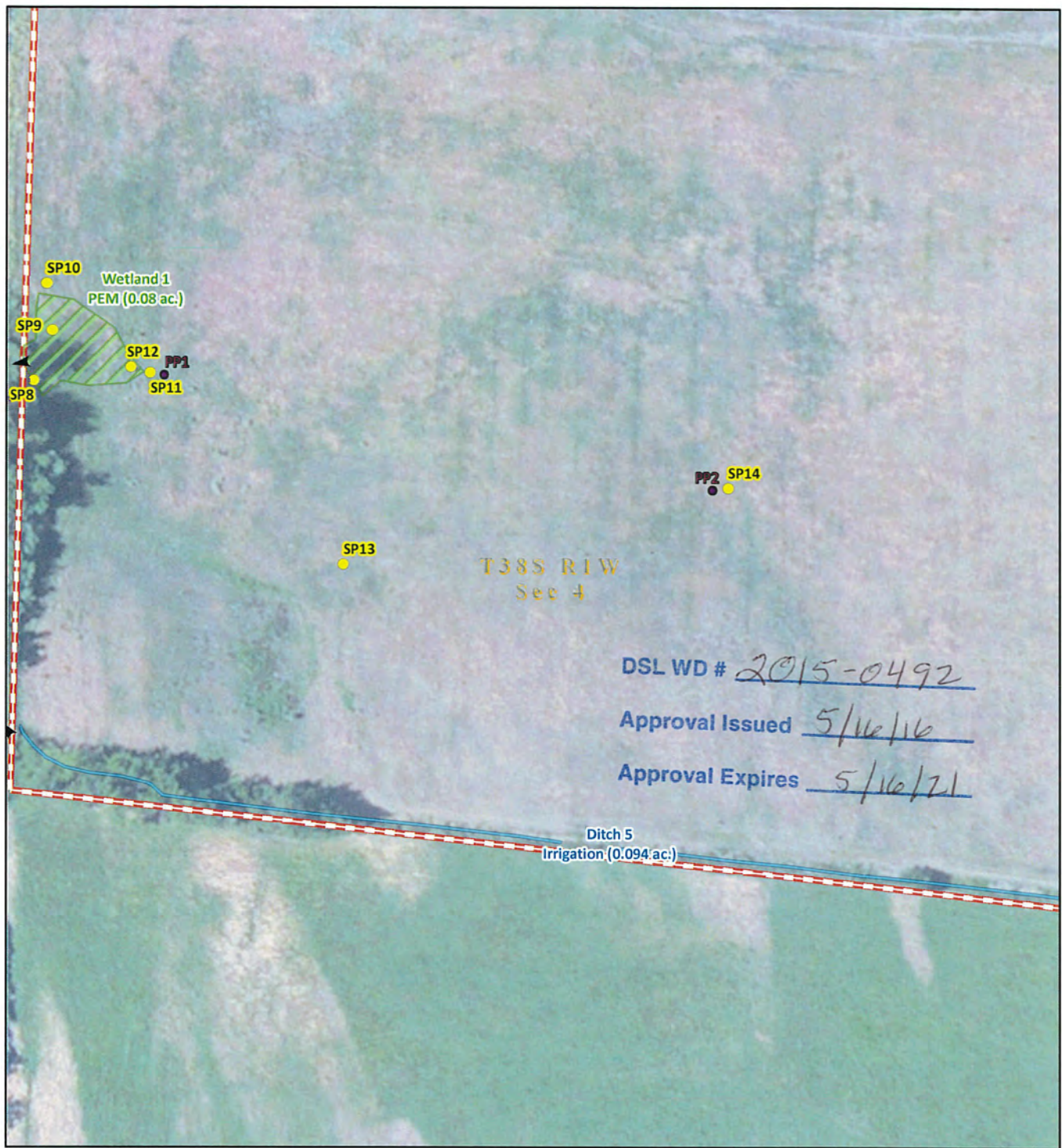
**Cafferata Consulting, LLC**  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-6





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



Sections



Fill Area

1	2	3
4	5	6
7	8	9

### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501

Jackson County, Oregon



0 25 50 100 Feet



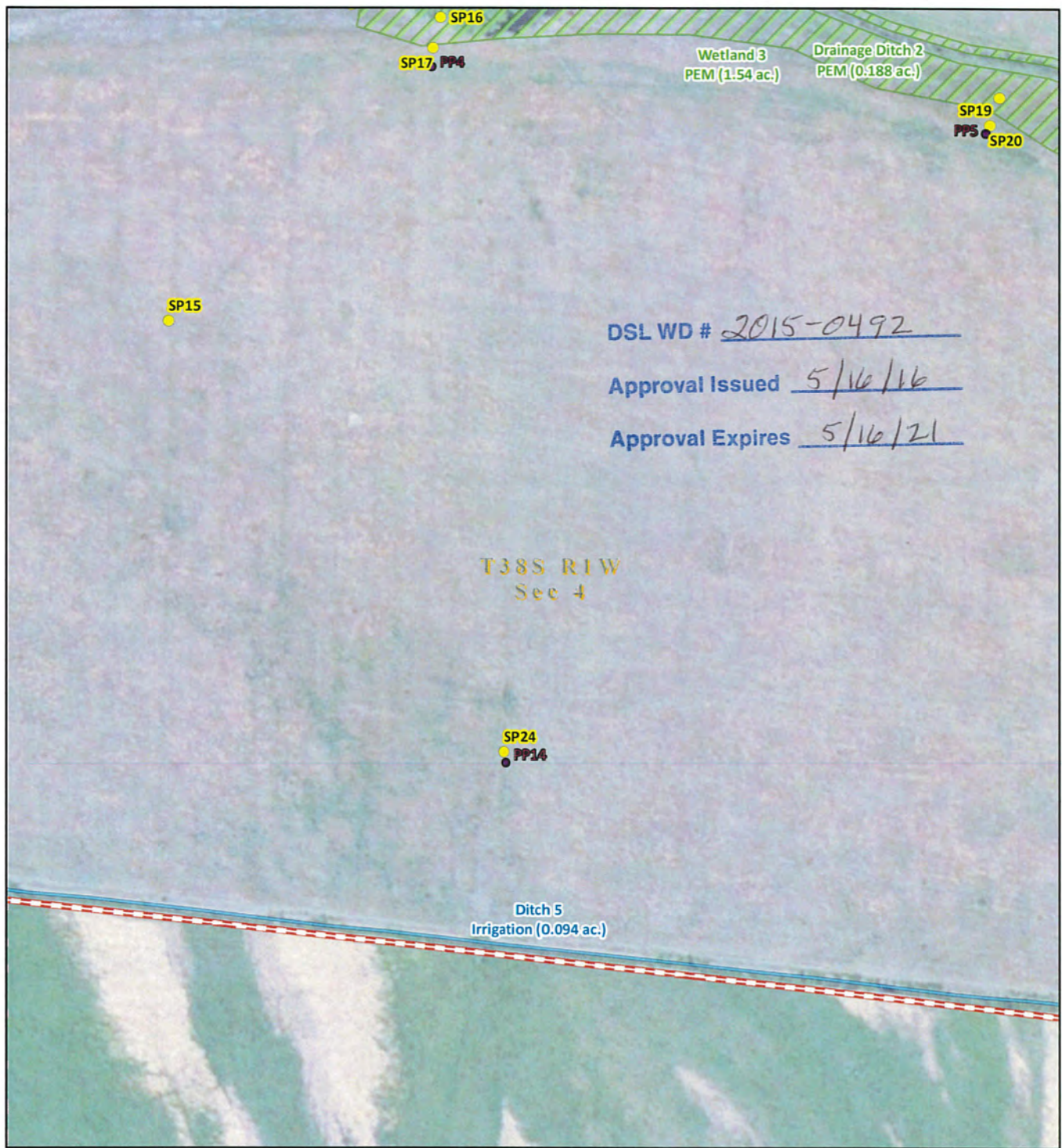
Cafferata Consulting, LLC  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-7





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



Sections



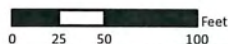
Fill Area

1	2	3
4	5	6
7	8	9

### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501

Jackson County, Oregon



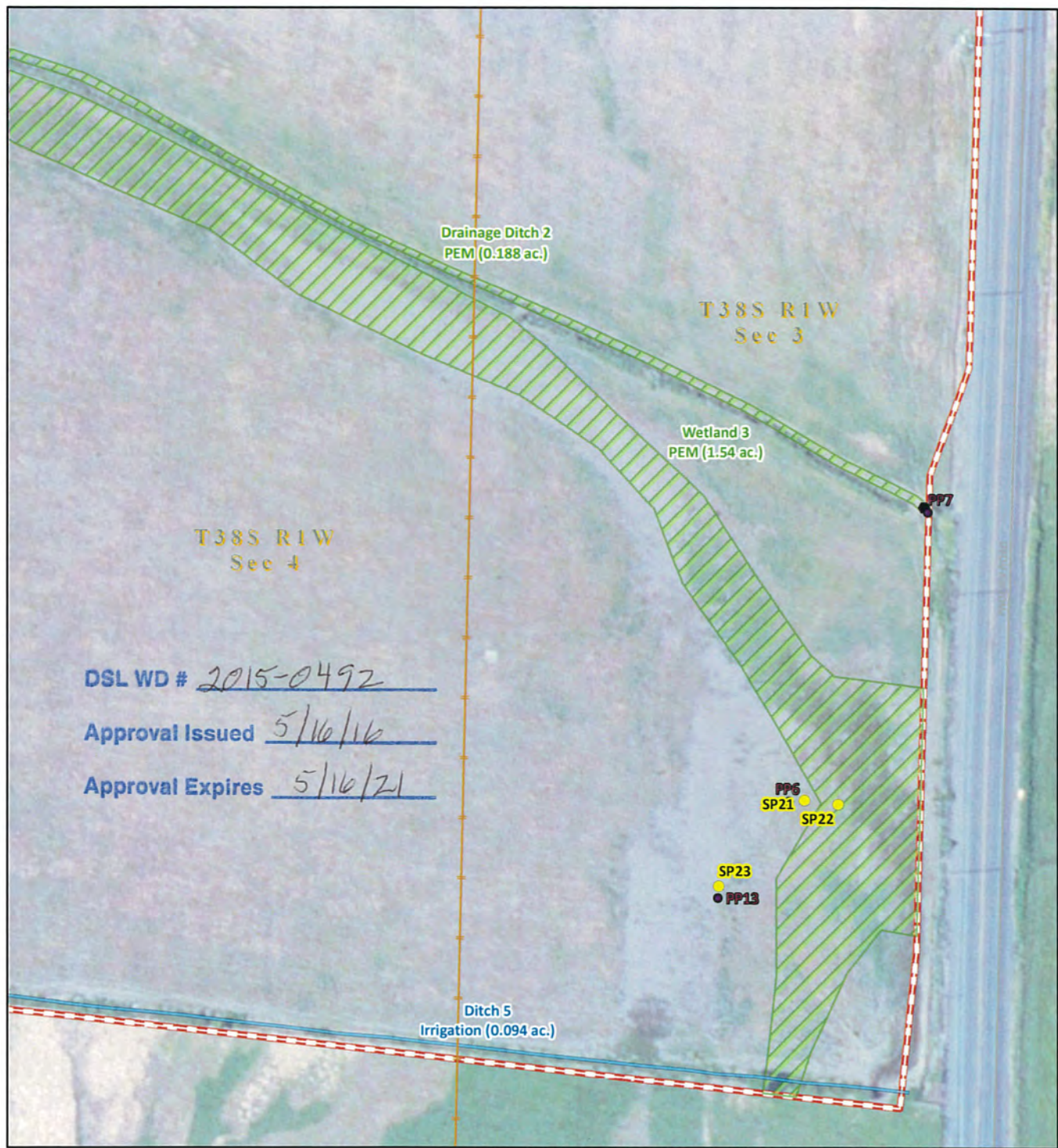
Cafferata Consulting, LLC  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-8





Study Area



Sample Plots



Photo Points



Waterbody



Wetland



Feature Continues Offsite



Culverts



Sections



Fill Area



### Wetland and Waters Delineation Map

T38S, R1W, Sec 4. TL# 501

Jackson County, Oregon



0 25 50 100 Feet



Cafferata Consulting, LLC  
Practical Environmental Solutions

This product is for information purposes only and may not be suitable for legal, engineering or surveying purposes. Please consult the original data sources to ascertain the usability of this product.

Data Sources: Taxlots from Jackson County, Sections and from USGS, Roads from ODOT. All other data from Schott & Associates. Map created by Cafferata Consulting on October 27, 2015.

Figure 6-9