Oregon
Kate Brown, Governor

Department of Land Conservation and Development
635 Capitol Street NE, Suite 150
Salem, Oregon 97301-2540
Phone: 503-373-0050
Fax: 503-378-5518
www.oregon.gov/LCD

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

Date: May 17, 2016

Jurisdiction: City of Beaverton

Local file no.: CPA 2015-0008

DLCD file no.: 013-15

The Department of Land Conservation and Development (DLCD) received the attached notice of adopted amendment to a comprehensive plan or land use regulation on 05/16/2016. A copy of the adopted amendment is available for review at the DLCD office in Salem and the local government office.

Notice of the proposed amendment was submitted to DLCD 48 days prior to the first evidentiary hearing.

Appeal Procedures

Eligibility to appeal this amendment is governed by ORS 197.612, ORS 197.620, and ORS 197.830. Under ORS 197.830(9), a notice of intent to appeal a land use decision to LUBA must be filed no later than 21 days after the date the decision sought to be reviewed became final. If you have questions about the date the decision became final, please contact the jurisdiction that adopted the amendment.

A notice of intent to appeal must be served upon the local government and others who received written notice of the final decision from the local government. The notice of intent to appeal must be served and filed in the form and manner prescribed by LUBA, (OAR chapter 661, division 10).

If the amendment is not appealed, it will be deemed acknowledged as set forth in ORS 197.625(1)(a). Please call LUBA at 503-373-1265, if you have questions about appeal procedures.

DLCD Contact

If you have questions about this notice, please contact DLCD's Plan Amendment Specialist at 503-934-0017 or plan.amendments@state.or.us

DLCD FORM 2

NOTICE OF ADOPTED CHANGE TO A COMPREHENSIVE PLAN OR LAND USE REGULATION

FOR DLCD USE

File No.: 013-15 {24166}

Received: 5/16/2016

Local governments are required to send notice of an adopted change to a comprehensive plan or land use regulation **no more than 20 days after the adoption**. (*See* OAR 660-018-0040). The rules require that the notice include a completed copy of this form. **This notice form is not for submittal of a completed periodic review task or a plan amendment reviewed in the manner of periodic review.** Use Form 4 for an adopted urban growth boundary including over 50 acres by a city with a population greater than 2,500 within the UGB or an urban growth boundary amendment over 100 acres adopted by a metropolitan service district. Use Form 5 for an adopted urban reserve designation, or amendment to add over 50 acres, by a city with a population greater than 2,500 within the UGB. Use Form 6 with submittal of an adopted periodic review task.

Jurisdiction: City of Beaverton

Local file no.: **CPA2015-0008**

Date of adoption: 5/11/2016 Date sent: 5/16/2016

Was Notice of a Proposed Change (Form 1) submitted to DLCD?

Yes: Date (use the date of last revision if a revised Form 1was submitted): 12/14/2015

No

Is the adopted change different from what was described in the Notice of Proposed Change? Yes No

If yes, describe how the adoption differs from the proposal:

Local contact (name and title): Cassera Phipps, Associate Planner

Phone: 503-526-2247 E-mail: cphipps@beavertonoregon.gov

Street address: 12725 SW Millikan Way City: Beaverton Zip: 97005-

PLEASE COMPLETE ALL OF THE FOLLOWING SECTIONS THAT APPLY

For a change to comprehensive plan text:

Identify the sections of the plan that were added or amended and which statewide planning goals those sections implement, if any:

Comprehensive Plan: Add the South Cooper Mountain Local Wetland Inventory to Volume III, as Appendix F. The amendment implements Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) and Goal 6 (Air, Water and Land Resources Quality).

For a change to a comprehensive plan map:

Identify the former and new map designations and the area affected:

Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.
Change from	to	acres.	A goal exception was required for this change.

Location of affected property (T, R, Sec., TL and address): Twenty-two properties; Maps 1S131, 2S106 and 2S101

The subject property is entirely within an urban growth boundary

The subject property is partially within an urban growth boundary

If the comprehensive plan map change is a UGB amendment including less than 50 acres and/or by a city with a population less than 2,500 in the urban area, indicate the number of acres of the former rural plan designation, by type, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

If the comprehensive plan map change is an urban reserve amendment including less than 50 acres, or establishment or amendment of an urban reserve by a city with a population less than 2,500 in the urban area, indicate the number of acres, by plan designation, included in the boundary.

Exclusive Farm Use – Acres:	Non-resource – Acres:
Forest – Acres:	Marginal Lands – Acres:
Rural Residential – Acres:	Natural Resource/Coastal/Open Space – Acres:
Rural Commercial or Industrial – Acres:	Other: – Acres:

For a change to the text of an ordinance or code:
Identify the sections of the ordinance or code that were added or amended by title and number:

For a change to a zoning map:
Identify the former and new base zone designations and the area affected:

Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:
Change from	to	Acres:

Identify additions to or removal from an overlay zone designation and the area affected:

Overlay zone designation:	Acres added:	Acres removed:

Location of affected property (T, R, Sec., TL and address):

List affected state or federal agencies, local governments and special districts: Metro, Washington County, Clean Water Services, Oregon Department of State Lands, and United States Army Corps of Engineers

Identify supplemental information that is included because it may be useful to inform DLCD or members of the public of the effect of the actual change that has been submitted with this Notice of Adopted Change, if any. If the submittal, including supplementary materials, exceeds 100 pages, include a summary of the amendment briefly describing its purpose and requirements.

City of Beaverton Ordinance No. 4685; Letter of Approval from DSL, dated April 18, 2016; LWI Report for South Cooper Mountain Annexation Area

ORDINANCE NO. 4685

AN ORDINANCE AMENDING ORDINANCE 4187, THE COMPREHENSIVE PLAN; ADOPTION OF THE SOUTH COOPER MOUNTAIN LOCAL WETLAND INVENTORY, CPA 2015-0008

WHEREAS, the City of Beaverton has a Citywide Local Wetland Inventory (LWI), which was approved by the Oregon Department of State Lands (DSL) in December 2000 and is included within Volume III of the City of Beaverton Comprehensive Plan; and

WHEREAS, the South Cooper Mountain Annexation Area (SCMAA) is a 544-acre planning area that was annexed by the City in January 2013; and

WHEREAS, the City Council adopted the South Cooper Mountain Community Plan in February 2015 to guide development within the SCMAA; and

WHEREAS, the SCMAA is not included within the boundaries of the adopted Citywide LWI; and

WHEREAS, Statewide Planning Goal 5 requires local governments to maintain inventories and create protection programs for the state's natural resources within their planning areas; and

WHEREAS, on January 27, 2016, the Planning Commission conducted a public hearing to consider a City-initiated application to amend Volume III of the Comprehensive Plan by adding the South Cooper Mountain LWI to the Goal 5 Resource Inventory; and

WHEREAS, the Planning Commission received and considered the submitted staff report, exhibits, and public testimony on the Comprehensive Plan amendment; and

WHEREAS, the Planning Commission voted to recommend approval of the Comprehensive Plan amendment to the Beaverton City Council on January 27, 2016; and

WHEREAS, the South Cooper Mountain LWI was approved by DSL on April 18, 2016; and

WHEREAS, the Council adopts as to criteria applicable to this request and findings thereon the Planning Division Staff Report dated January 20, 2016, and the Planning Commission Land Use Order No. 2450; now, therefore,

THE CITY OF BEAVERTON ORDAINS AS FOLLOWS:

Section 1. Ordinance No. 4187, the Comprehensive Plan, is amended as shown in Exhibit "A" to this Ordinance, attached to and incorporated herein by this reference.

First reading this 3rd day of May, 2016.

Passed by the Council this 10th day of May, 2016.

Approved by the Mayor this 11th day of May, 2016.

ATTEST:

Catherine Jansen, City Recorder

APPROVED:

Denny Doyle, Mayor

Randy Ealy
Mayor Pro Tem

EXHIBIT A

Ordinance No. 4685

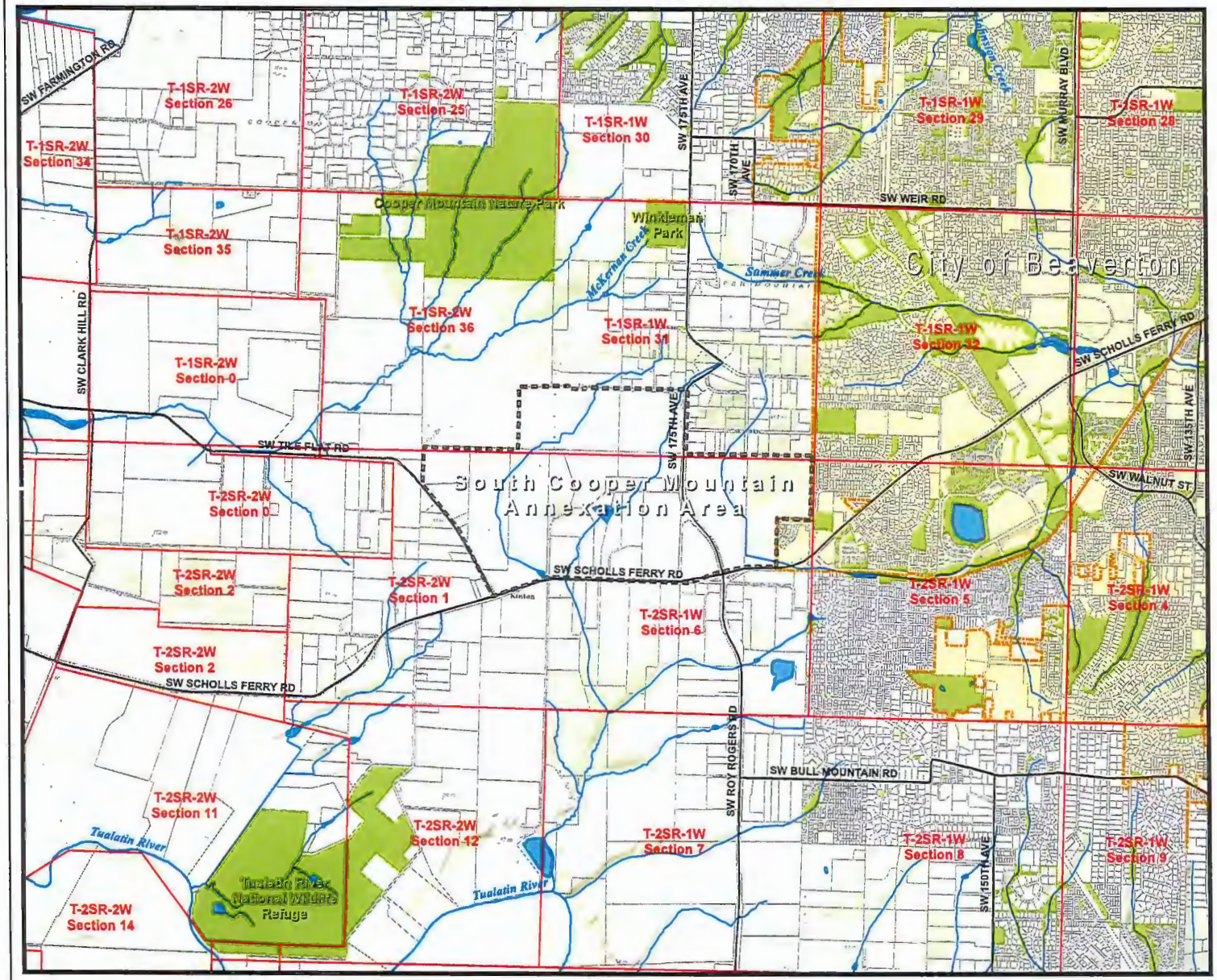


Figure 1
Vicinity Map

City of Beaverton
South Cooper Mountain Annexation Area

LOCAL WETLAND INVENTORY

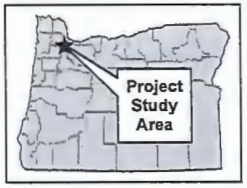
Legend

- LWI Study Area
- Section
- Beaverton City Limits
- Washington County Tax Lot
- Park/Greenspace
- Stream/River
- Waterbody
- Arterial

APPROVED LOCAL WETLANDS INVENTORY
4/18/2016 JB
OREGON DEPARTMENT OF STATE LANDS

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Tax Lots, Parks/Greenspaces, Arterials: Metro RLIS, 2012
Hydrology: USGS NHD
Service Layer: ESRI World Topo Map

Disclaimer: Information shown on this map is for planning purposes, represents the conditions that exist at the map date, and is subject to change.



0 750 1,500 Feet

North

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August 31, 2015

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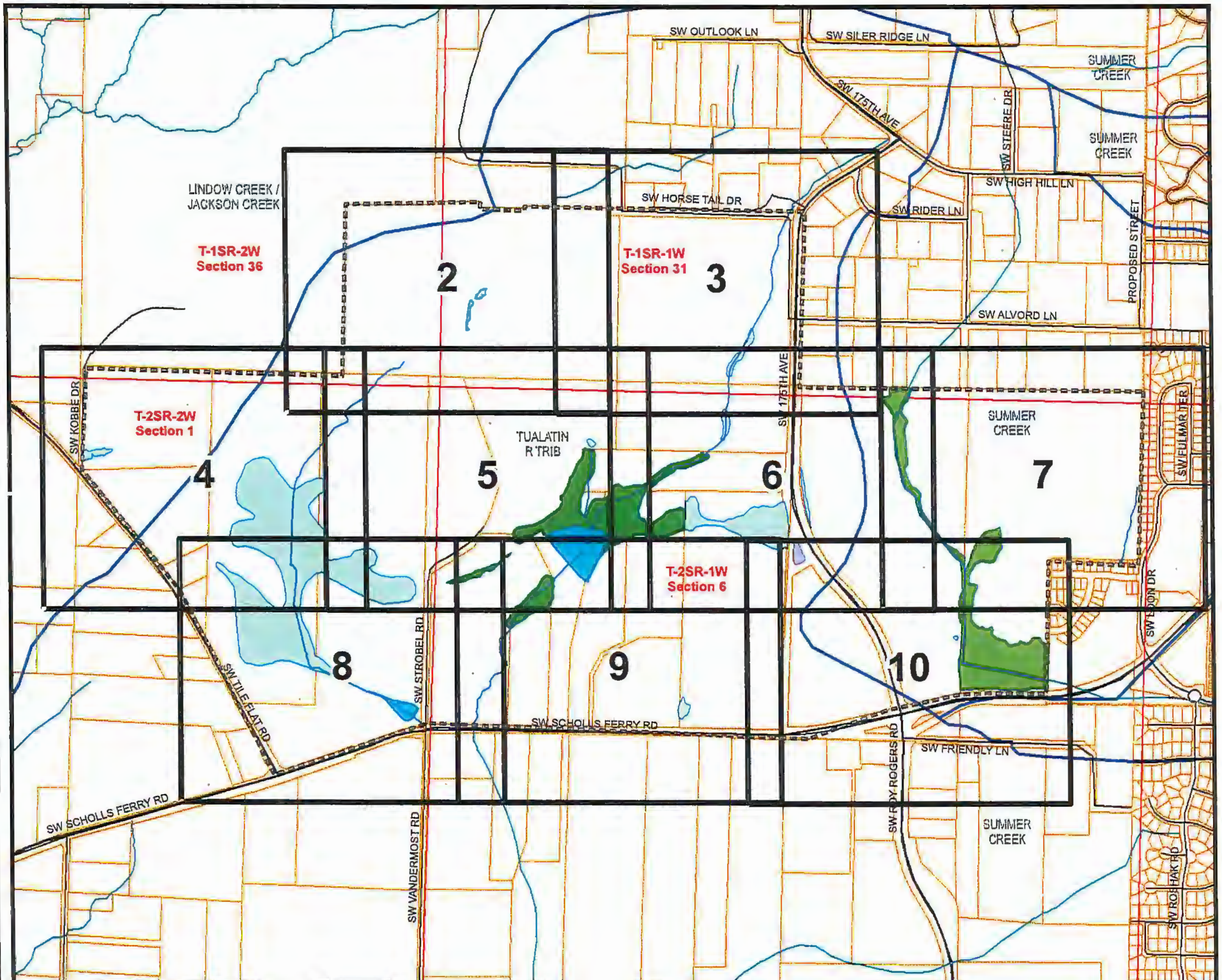

Figure 5, Sheet 1 of 10
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- Sheet Extent
- LWI Study Area
- Arterial
- Street
- LWI Stream
- NHD Stream
- Section
- Beaverton City Limits
- Washington County Tax Lot
- CWS Small Streamsheds Boundary

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)
- Scrub/Shrub (PSS)
- Detention Pond

APPROVED LOCAL WETLANDS INVENTORY
4/18/2016 JB
OREGON DEPARTMENT OF STATE LANDS

0 250 500 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
Tax Lots, PLSS, City Limits, Arterials, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: Anchor QEA, DKS Engineering, PHS, DEA, 2015; City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Streams: Metro RLIS, 2012; Modified by DEA. USGS NHD, 2015.

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North

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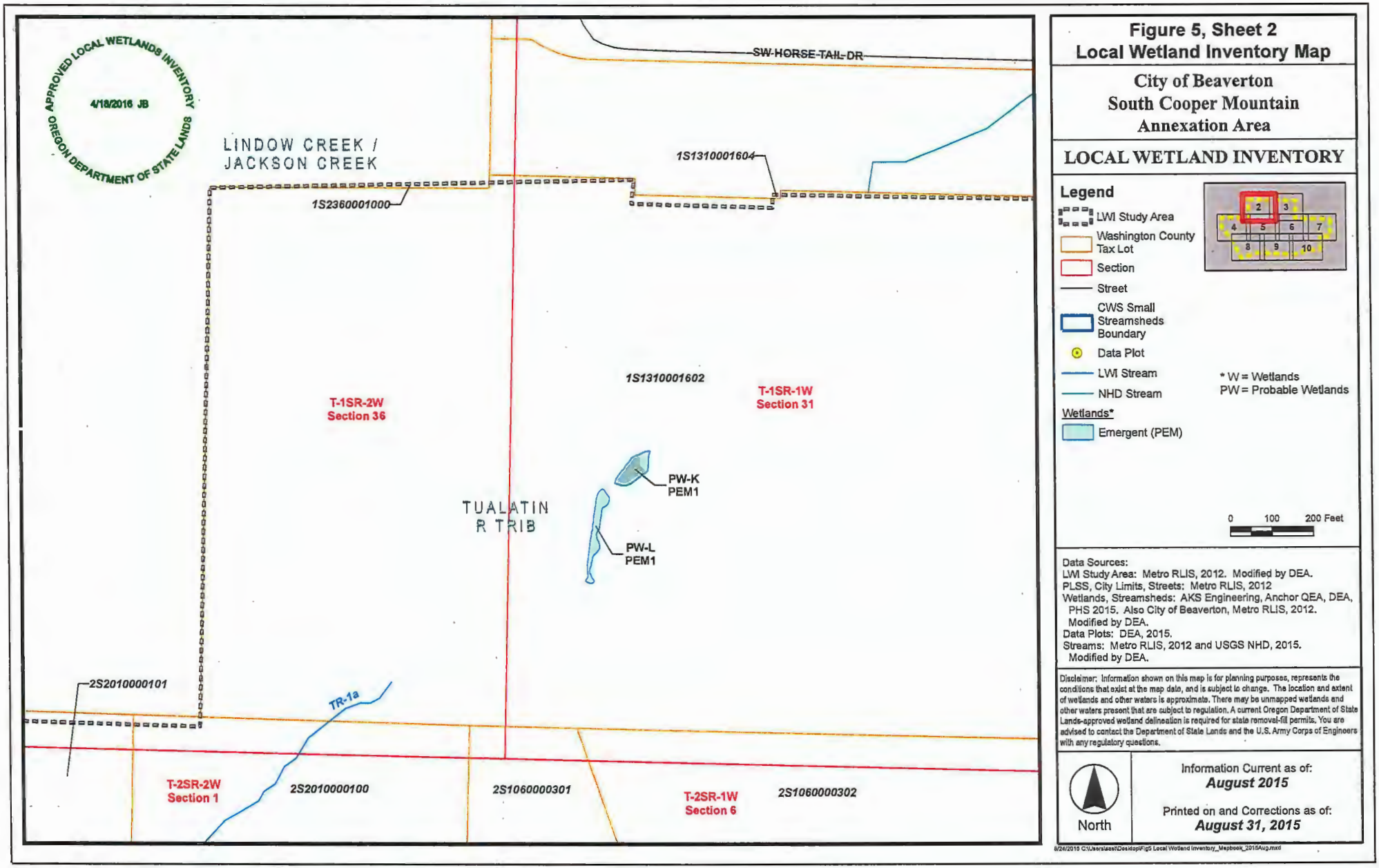

Figure 5, Sheet 2
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*
- Emergent (PEM)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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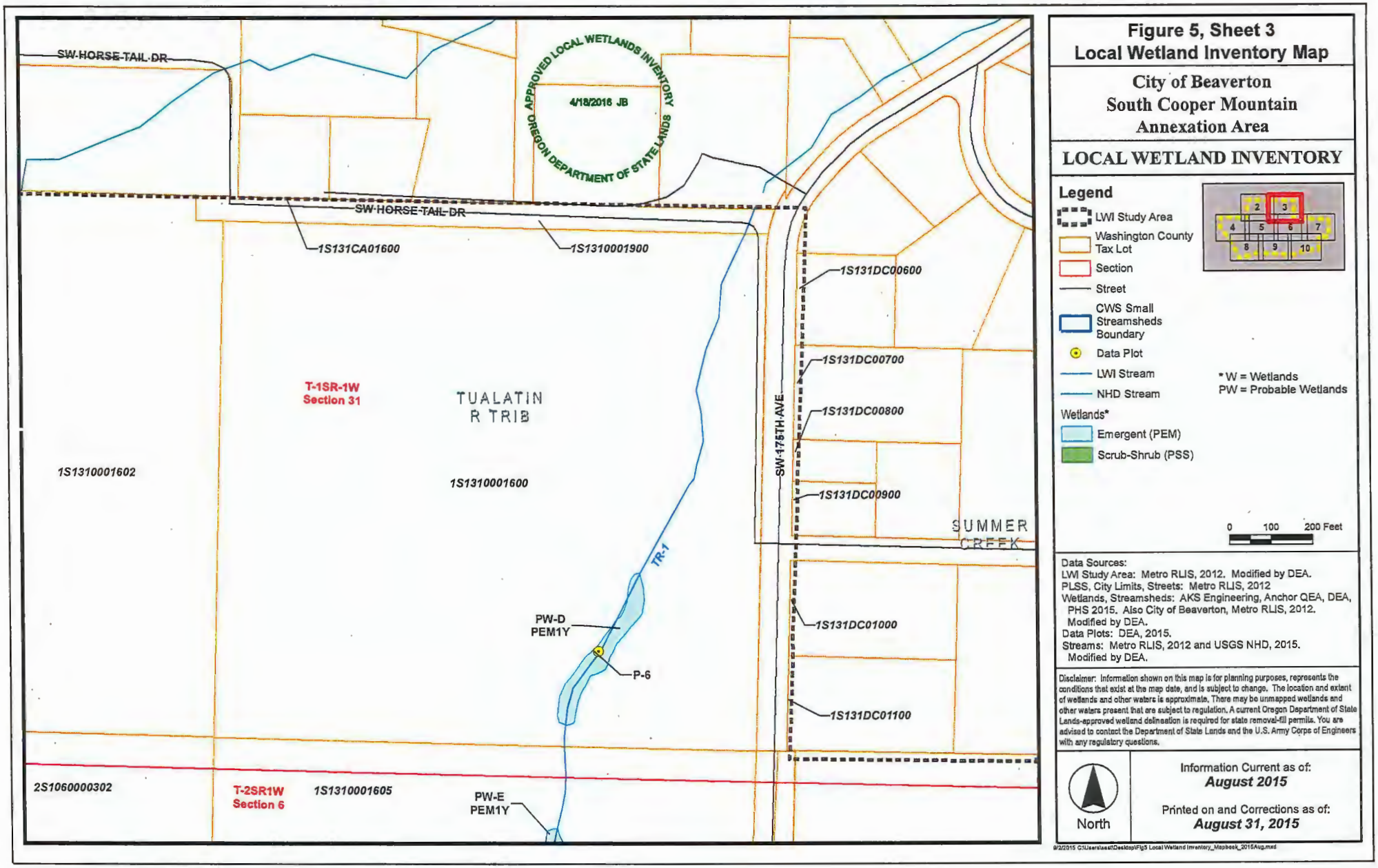

Figure 5, Sheet 3
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Scrub-Shrub (PSS)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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North

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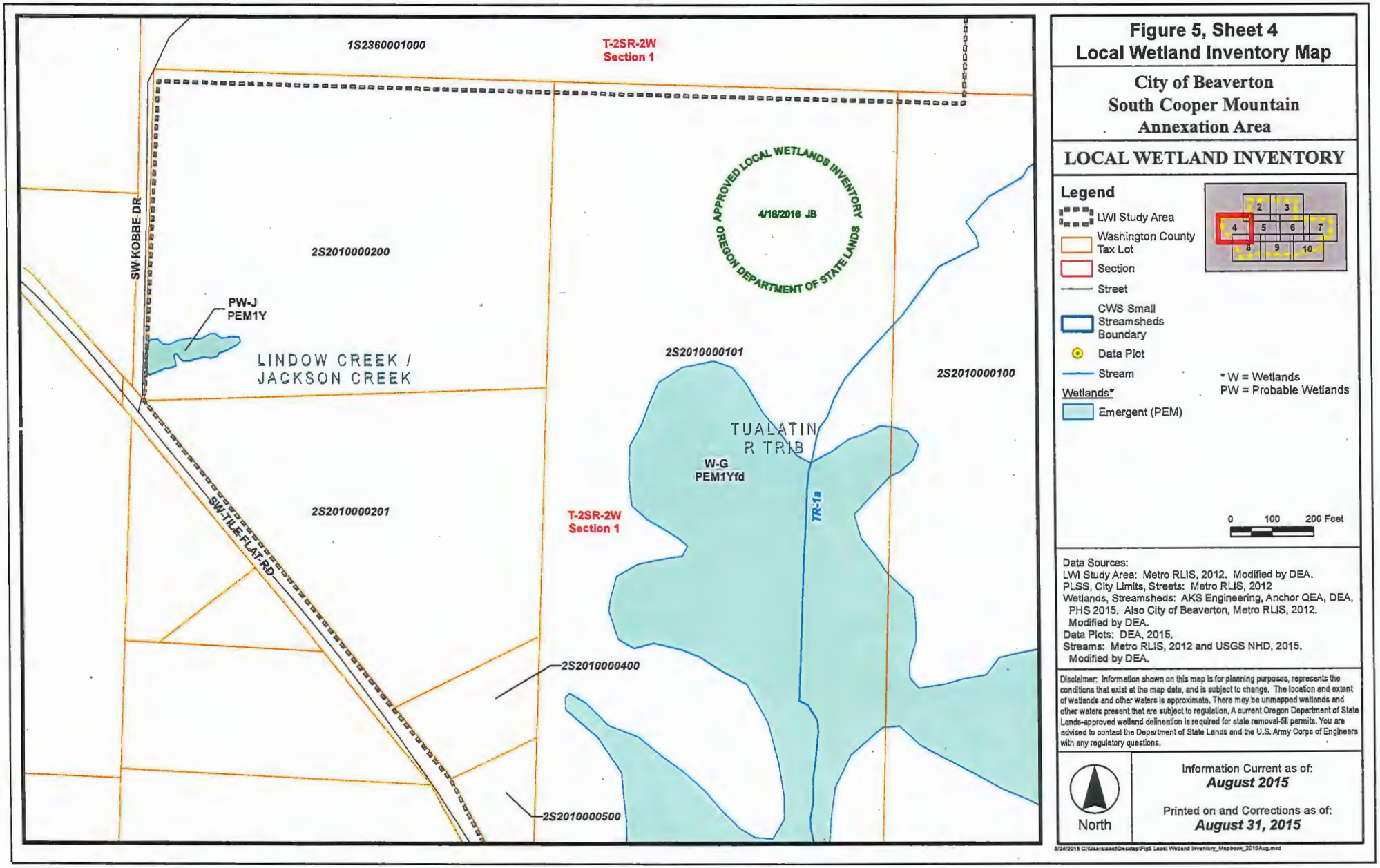

Figure 5, Sheet 4
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- Stream

Wetlands*
- Emergent (PEM)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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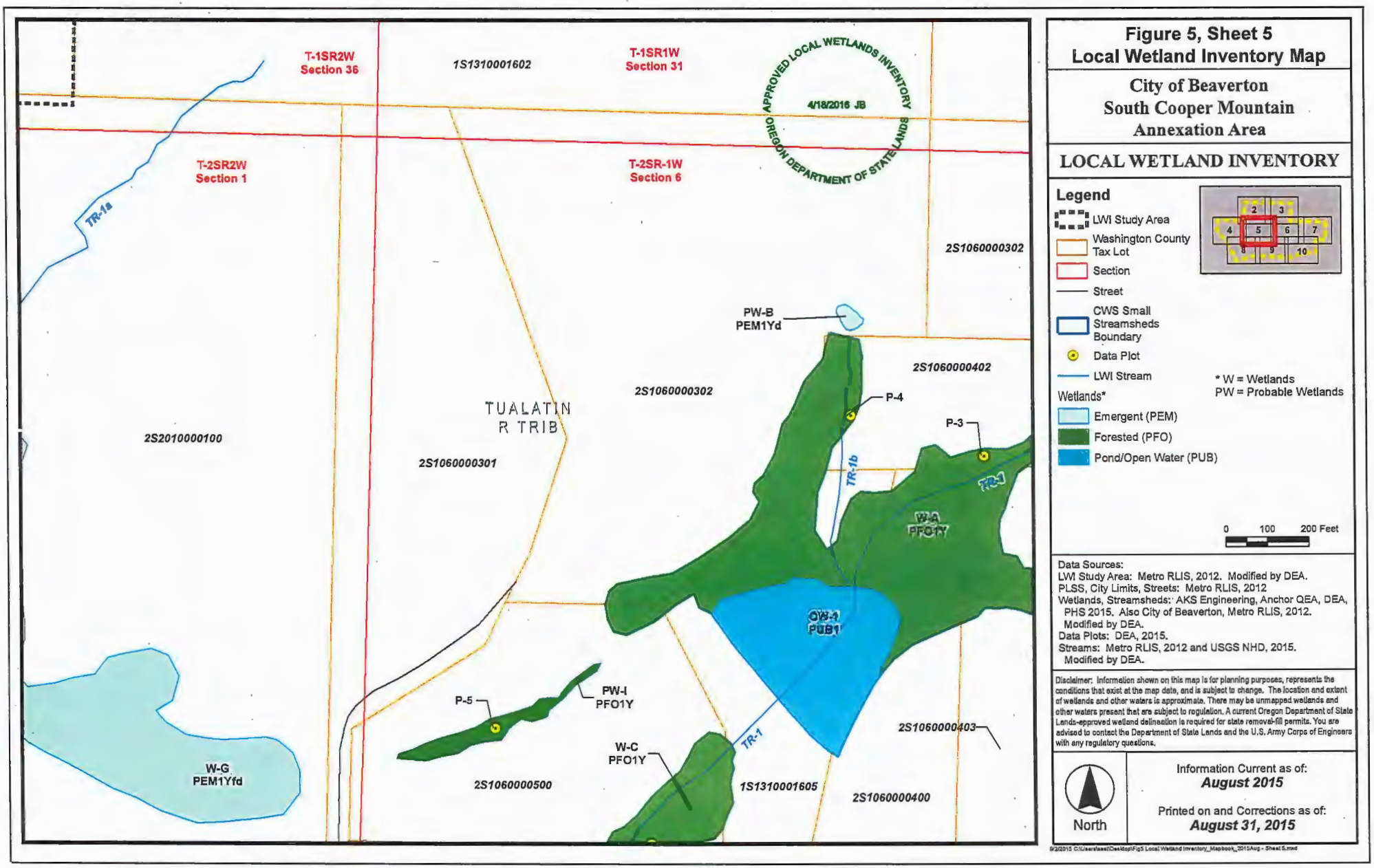

Figure 5, Sheet 5
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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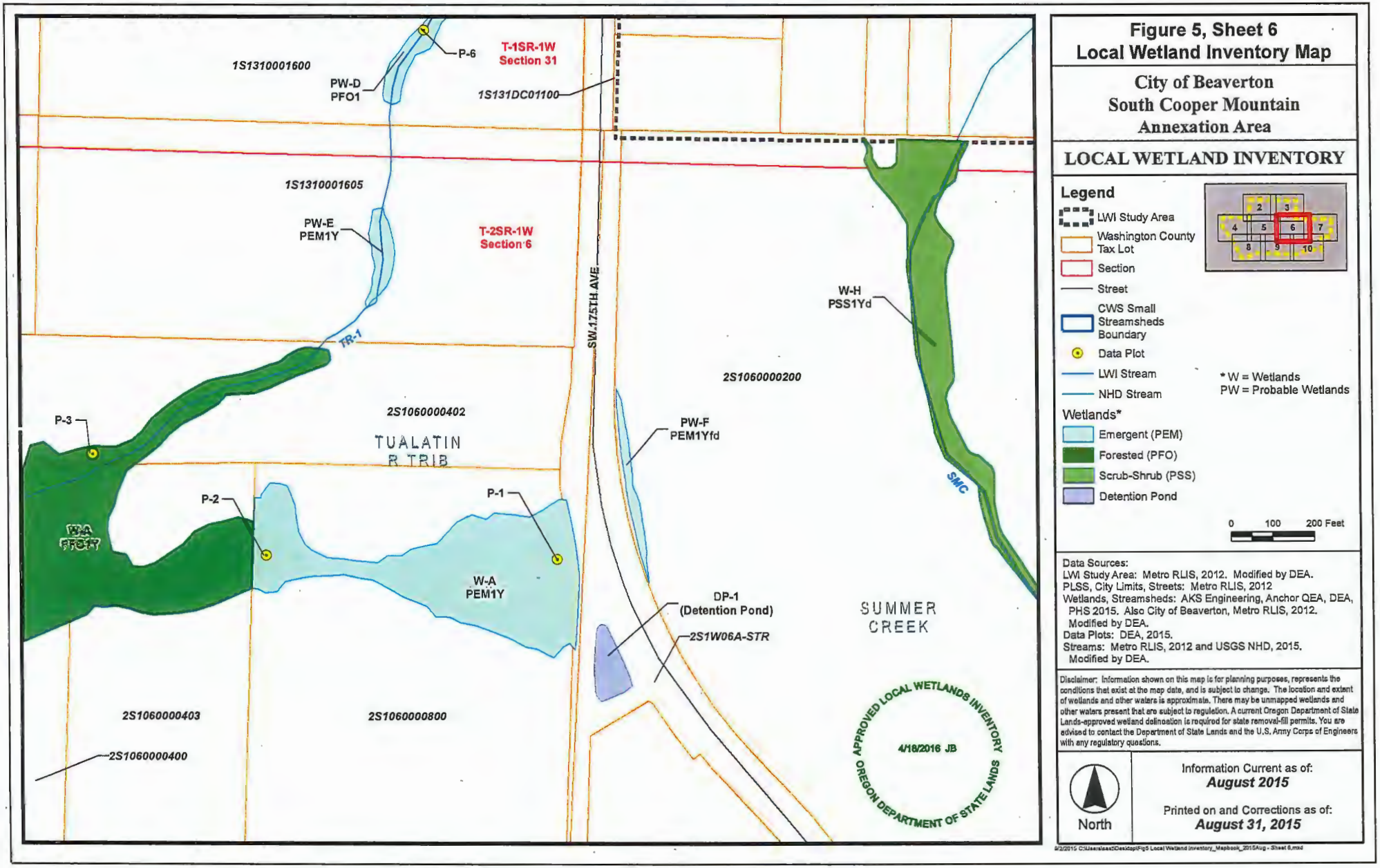

Figure 5, Sheet 6
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

* W = Wetlands
PW = Probable Wetlands

Wetlands*
- Emergent (PEM)
- Forested (PFO)
- Scrub-Shrub (PSS)
- Detention Pond

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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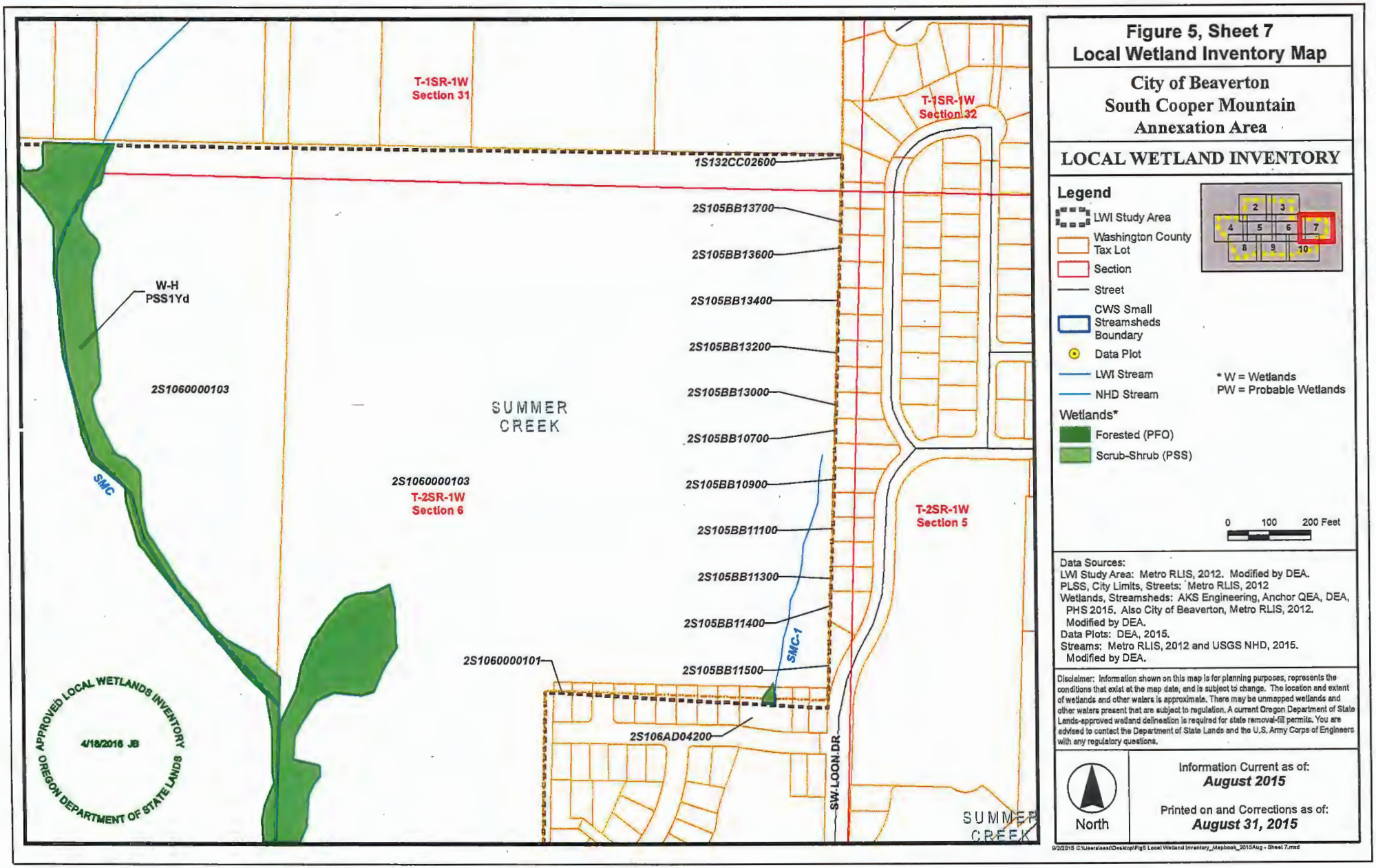

Figure 5, Sheet 7
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Forested (PFO)
- Scrub-Shrub (PSS)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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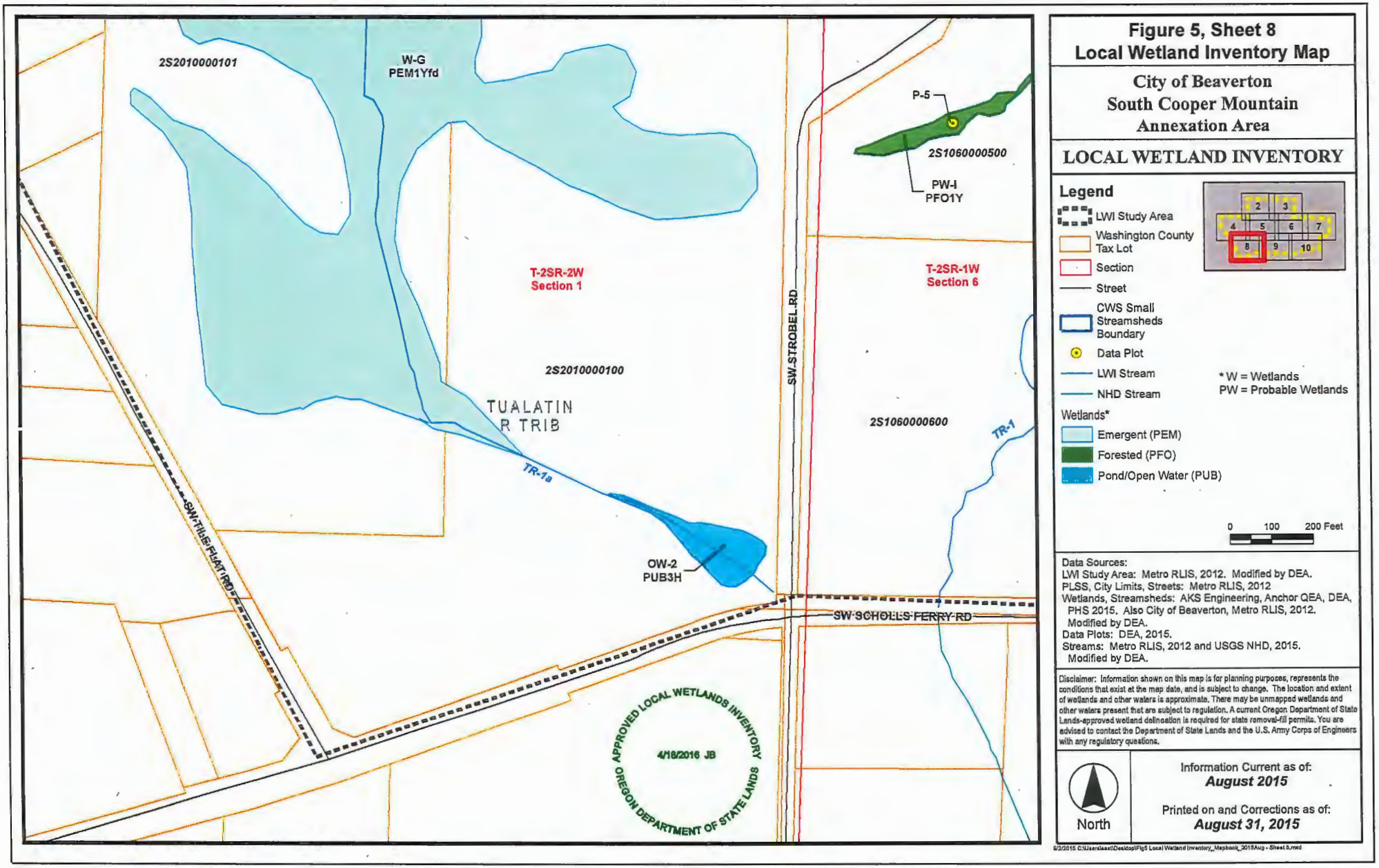

Figure 5, Sheet 8
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*
- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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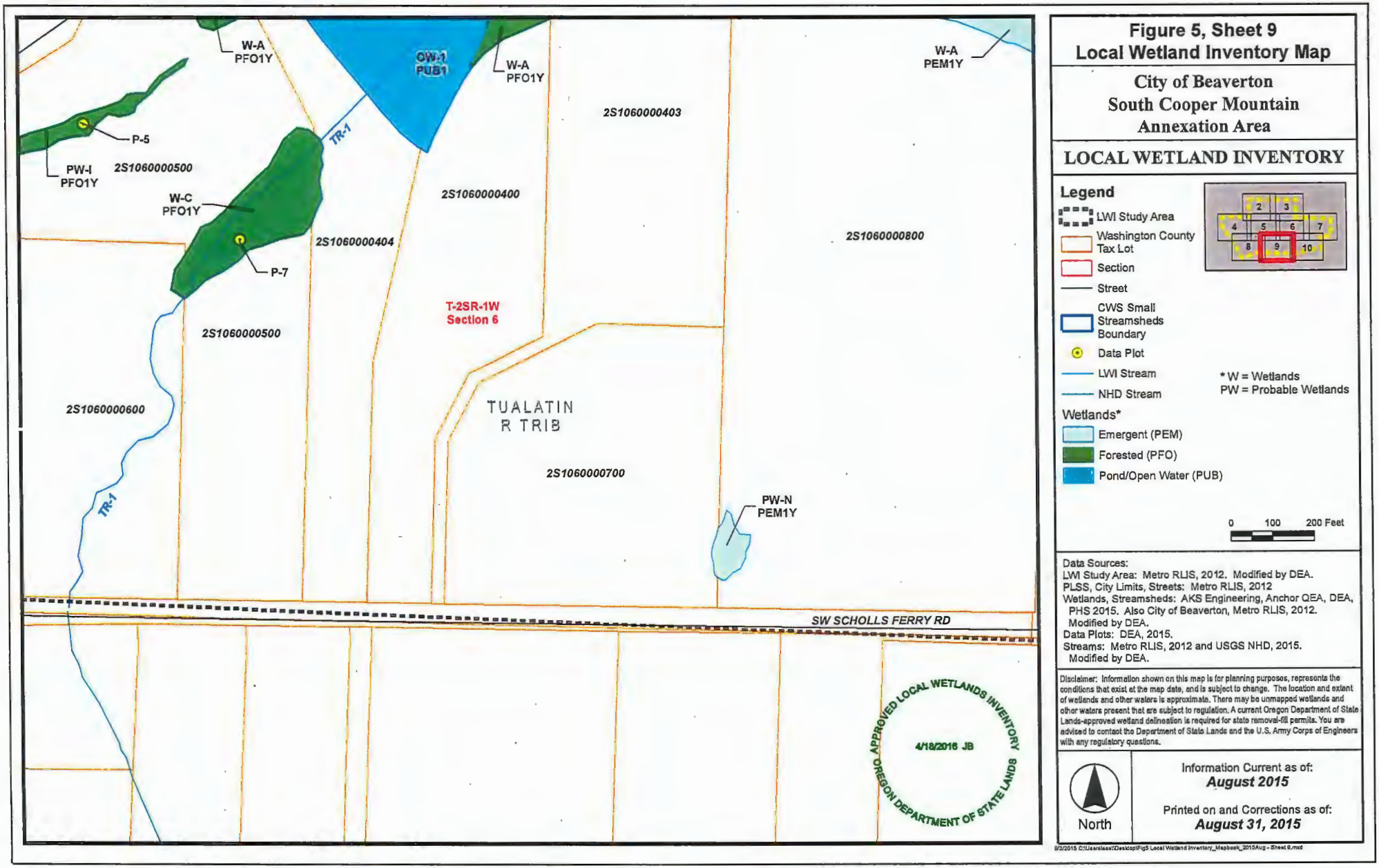

Figure 5, Sheet 9
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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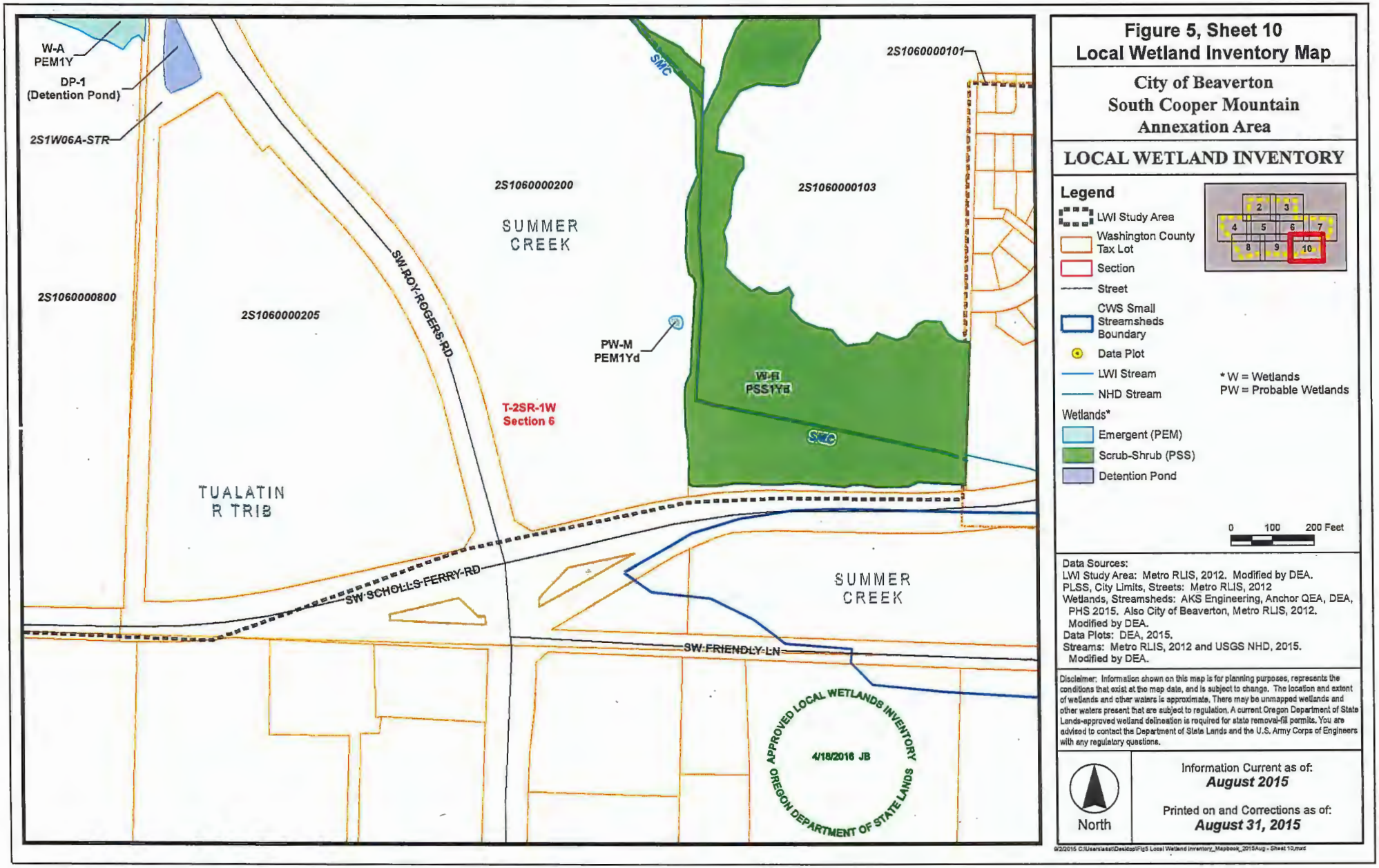

Figure 5, Sheet 10
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Scrub-Shrub (PSS)
- Detention Pond

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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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

April 18, 2016

The Honorable Denny Doyle, Mayor
City of Beaverton
12721 SW Millikan Way
P.O. Box 4755
Beaverton, OR 97076

Re: Approval of the City of Beaverton, Cooper Mountain South Local Wetlands Inventory and Assessment

Dear Mayor Doyle:

I am pleased to notify you that the Department of State Lands (DSL) has approved your Local Wetlands Inventory (LWI) and assessment. We appreciate your planning staff and the wetland consultant, David Evans and Associates, working with our staff to ensure that the inventory meets state LWI requirements (OAR 141-86-0180 through -0240) and the city's needs. The DSL-approved report and maps can be viewed and downloaded from our website at http://www.oregonstatelands.us/DSL/WETLAND/lwi_disclaimer_agreed.shtml?. The DSL-approved GIS datasets are available for download from the Department's dropbox site at https://www.dropbox.com/sh/0jkzo8933hvh257/AADVKB6Km4WAQiPsSbkDFYiga?dl=0.

The final inventory requirement is for the city to notify property owners with wetlands mapped on their property within 120 days of this approval. Please provide us with a copy of the landowner notification, indicating the date when notification was completed.

Approval by DSL means that the LWI becomes part of the Statewide Wetlands Inventory. The LWI must now be used by the city instead of the National Wetlands Inventory for the Wetland Land Use Notification Process (ORS 227.350). Please note that mapped wetlands, "probable wetlands" (PW), and waterways may initiate a Wetland Land Use Notification to DSL.

The LWI and functional assessment also form the foundation for your wetland planning under Statewide Planning Goal 5, and the LWI must be adopted by the city per the Goal 5 requirements. Please note when significant wetlands are designated by the city, "non-significant" wetlands may be coded to distinguish them from "significant wetlands" but must not be removed from the approved LWI maps. These wetlands are still subject to state and federal permit requirements.

While considerable effort has been made to identify accurately most wetlands within the study area, DSL's approval does not guarantee that all regulated wetlands have been mapped. The mapped wetland boundaries are estimated boundaries, they have not been surveyed, and there are inherent limitations in mapping accuracy. DSL advises persons proposing land alteration on

parcels containing mapped wetlands first to contact DSL or to obtain a wetland boundary delineation by a qualified consultant and submit it to DSL for approval prior to the land alteration.

It will be important to keep your LWI updated as new wetland delineations are completed and approved by DSL. One method is to annotate the LWI map with the DSL file number(s) on the affected tax lots. This may also be accomplished by creating a separate "refinement layer" within the digital dataset, per 141-085-0230(5). A few delineations have been approved since the LWI original draft and were incorporated into subsequent drafts. Please contact us if you need copies of these delineation approval documents. Future wetland delineation approval documents will be provided to the planning department for updating the LWI mapping.

We are pleased that the City of Beaverton has conducted a thorough wetlands inventory of the South Cooper Mountain study area, and has made wetland planning a high priority. We look forward to working with you and your staff as you continue on the Goal 5 wetland planning effort. Please feel free to contact Jevra Brown at (503)986-5297 with any questions you may have about the LWI or its use.

Sincerely,

Jevra Brown
Aquatic Resource Planner
Aquatic Resource Management Program

ec: Cassera Phipps, Associate Planner, Community Development Department, City of Beaverton
Theresa Cherniak, Principal Planner, Washington County Dept. of Land Use and Trans.
Anne Debbaut, Metro Regional Representative, DLCD
Amanda Punton, Natural Resource Specialist, Planning Services Division, DLCD
Ethan Rosenthal, Project Manager/Ecologist, David Evans and Associates
Yvonne Vallette, EPA
Heidi Firstencel & Michael Ladouceur, US Corps of Engineers
Shauna Ginger, USFWS
Bill Kirchner, NWI, USFWS
Joy Vaughan, ODFW
Sara Christensen, ODEQ
John Christy, Oregon Biodiversity Information Center
Melinda Butterfield, Anita Huffman, & Peter Ryan, ODSL

South Cooper Mountain Annexation Area

Local Wetland Inventory

Prepared for

City of Beaverton

P.O. Box 4755

12725 SW Millikan Way

Beaverton, Oregon 97076

Prepared by

DAVID EVANS AND ASSOCIATES INC.

2100 SW River Parkway

Portland, Oregon 97201

February 2016

TABLE OF CONTENTS

Tables

1. INTRODUCTION

This Local Wetland Inventory (LWI) has been conducted for the South Cooper Mountain Annexation Area (SCMAA), which was brought into the City of Beaverton urban growth boundary in 2011. This LWI was prepared in concert with the South Cooper Mountain Concept Plan. The Concept Plan project covers areas beyond the 2011 annexation area, including areas outside of City of Beaverton (City) jurisdiction. This LWI only covers areas within the SCMAA. The SCMAA LWI study area is shown in Appendix A, Figure 1. Tax lots covered by the LWI are shown in Figure 2, including those tax lots in which site access was available and on-site wetland delineation methods were used.

This LWI should be considered an amendment to the City's existing LWI. It is intended to cover the new SCMAA. No work was performed to revise existing LWI mapping for other areas of the City.

The LWI is intended to support planning level decision making and is not intended to replace more detailed site level wetland delineation work that may be needed for compliance with local, state, or federal regulations governing the protection of wetlands and surface waters. The LWI purpose and applicability, as provided in the Oregon Administrative Rules, are provided verbatim in italics text below.

OAR 141-086-0180 Purpose

Pursuant to Oregon Revised Statute (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).

OAR 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.

2. METHODS

2.1 GENERAL

Methods included a review of project area background materials, and drive-by and on-site field reconnaissance visits. Field work was conducted during the week of March 18, 2013. Wetland delineation was conducted at a reconnaissance level of accuracy suitable for LWI documentation and City planning purposes.

This LWI follows the Oregon Department of State Lands (DSL) rules, specifically Oregon Administrative Rule (OAR) 141-086. All wetlands one-half acre in size or larger were mapped as wetlands, while smaller wetlands were mapped as "probable wetlands." Although DSL only requires that probable wetlands be mapped as point features (meaning that a single point would represent the wetland), for this project, these wetlands were mapped as polygons. This was done to aid the City planning process, as these features will likely need to be avoided or encroachment minimized.

Where site access was available within the SCMAA LWI area, a single sample plot documenting typical conditions for the respective wetland was completed and boundaries mapped using global positioning system (GPS).

Data collection and wetland boundary delineation followed the Level 2 Routine Delineation Method described in the U.S. Army Corps of Engineers (Corps) Wetlands Delineation Manual (Environmental Laboratory 1987) and further supported by the Western Mountains, Valleys, and Coast Region (Corps 2010) regional supplement (Supplement). This method requires the simultaneous presence of hydrophytic vegetation, hydric soils, and positive wetland hydrology in wetland delineations.

2.2 PRELIMINARY RESOURCE REVIEW

Reference materials were reviewed prior to the field investigation to provide information regarding the possible presence of wetlands, water features, hydric soils, wetland hydrology, site topography, and habitat conditions. The materials reviewed included:

- Clean Water Services (CWS) GIS streams layer shapefile (2013).
- Environmental Systems Research Institute (ESRI) National Geographic World Map for ArcGIS (2013)
- ESRI ArcGIS OnlineWorld Imagery aerial photo imagery for ArcGIS (2009)
- Metro Regional Land Information System (RLIS) GIS wetlands layer, hydric soils layer, and GIS streams layer (2013).
- Metro Technical Report for Fish and Wildlife Habitat (April 2005)
- Metro Cooper Mountain Natural Resource Management Plan (November 2005)
- Natural Resources Conservation Service (NRCS) Soil Survey Geographic Database for Washington County, Oregon (2010).

- Oregon Biodiversity Information Center (ORBIC) Oregon Wetlands Cover, version 20091030 (2009)
- Oregon Department of Fish and Wildlife (ODFW) Fish distribution GIS layers (2013)
- Shapiro & Associates, Inc. City of Beaverton Local Wetland Inventory and GIS data (2000)
- U.S. Fish and Wildlife Service. National Wetland Inventory Wetland Mapper (2013)
- U.S. Geological Survey (USGS) National Hydrographic Database National Hydrographic Database (NHD) GIS streams layer (2013)
- City of Beaverton January 2013 LIDAR derived contours (January 2013)
- City of Beaverton January 2013 high resolution aerial photography (January 2013)
- DSL wetland determination/delineation database search results for SCMAA study area (March 2013)

The following materials were provided and reviewed after DEA had completed all field work:

- Fox Hollow Wetland/Goal 5 Natural Resource Determination (18200 SW Horse Tale Drive Washington County, Oregon, Tax Map 1S131000, lot 1602) Technical Memorandum (ESA 2013)
- Oregon Goal 5 and Metro Title 13 Natural Resources Determination –Scholls Ferry Road Properties (Tax Map 2S10600, lots 301, 302, and 700) Technical Memorandum (ESA 2013)
- Pacific Habitat Services, Inc. Wetland Delineation for Beaverton School District in Beaverton, Washington County, Oregon (2014)
- AKS Engineering & Forestry, LLC. Dyches Property Wetland and Waters Delineation Report, Beaverton, Oregon (2014)
- Anchor QEA, LLC. Wetland Delineation Report, West Hills Development: Crescent Grove Property (2015)

2.3 MAPPING PROCEDURES AND ESTIMATED ACCURACY

Mapping of LWI features was supported through use of high resolution color aerial photography and LIDAR contour data provided by the City of Beaverton (2013). Ground truthing occurred on parcels where access was available and from publicly accessible viewing areas (i.e., roadway right of way). In office review of aerial and LIDAR contours was conducted using Geographic Information System (GIS) technology, which allowed for viewing information at various scales. This included the minimum photo scale of 1 inch = 200 feet required by OAR 141-086-0210(2)(g). Metadata for the aerial photography provides the following description:

> *"The dataset encompasses portions of Washington, Multnomah, and Clackamas Counties. These data are LiDAR orthorectified aerial photographs of the West Metro study area. The data are delineated into north and south halves of 1/100th of standard USGS 7.5 minute quadrangles to create manageable file sizes. Each 4 band color image tile has a pixel resolution of 3 in.[Note pixel size measured in data provided by City of Beaverton was measured at 0.25 ft] These data are projected in NAD 83 State Plane, Oregon North, and their units are in feet. WSI collected the LiDAR and created this data set for the Oregon LiDAR Consortium."*

The Metro-RLIS wetlands layer and existing LWI-DSL layer provided by the City were merged and used as a starting point for mapping wetland resources within the SCMAA LWI study area. Obvious wetland boundary adjustments were made based on review of the 2013 aerial photography and roadside reconnaissance. For example, wetland polygons that clearly overlapped with developed areas were reduced in size so that only the undeveloped portion of the polygon remained. All wetlands were assigned a Cowardin class (i.e., vegetation type such as forested, emergent, etc.) and a hydrogeomorphic (HGM) class (i.e., slope, depression, etc.). Assigning of Cowardin and HGM classes was typically based on review of aerial photo and LIDAR contours, or field verification where possible.

For properties in which site access was available (see Appendix A Figure 2), wetland and waterway mapping was supported through use of a Trimble Geo XH resource grade geographic positioning system (GPS) unit with typical accuracy of one meter or better. Representative boundary and sample plot locations were collected, differentially corrected, and then exported to geographic information system (GIS) format (i.e., ESRI shapefile format). Although typical GPS accuracy is considered one meter or better, the mapping accuracy of field verified wetlands should be considered to be five meters (16.4 feet) or better, as sample plots, particularly unrecorded supplementary sampling, were conducted at a reconnaissance level of accuracy. For properties in which other consultants conducted formal wetland delineations submitted to DSL for approval, DEA obtained the electronic wetland boundary linework (CAD and GIS formats) and incorporated them into the LWI mapping. The formal wetland delineation mapping is assumed to have a horizontal accuracy of 3 feet or better.

Streams and other waters were mapped in accordance with OAR 141-086-0210(19), which states that "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." Mapping of streams started with use of the Metro RLIS streams GIS layer. Stream lines were modified based on field observations where access was available. In other areas, stream lines were adjusted to match with topographic contours provided by the City LIDAR data (January 2013) and aerial photo interpretation based on the City's January 2013 high resolution aerial imagery.

GIS data produced by DEA was originally created using the state plane, Oregon north coordinate system, North American Datum of 1983 (NAD83) horizontal datum, international feet to maintain consistency with other South Cooper Mountain Concept Plan mapping efforts. This data was then reprojected into the Lambert system to comply with Oregon statewide wetland mapping standards required by DSL.

2.4 OFWAM FUNCTIONAL ASSESSMENT

Wetland functions were evaluated for wetlands greater than one half acre using the Oregon Freshwater Wetland Assessment Method (OFWAM). OFWAM results were used to determine if any of the SCMAA wetlands qualify as "locally significant wetlands" in accordance with criteria set forth in OAR 141-086-0350. Following DSL guidance, probable wetlands were not included in the evaluation of locally significant wetlands.

2.5 PUBLIC INVOLVEMENT PROCESS

All landowners within the SCMMA LWI study area were contacted by the City to inform them of the LWI project, which would be conducted as part of the greater South Cooper Mountain Planning project. The City requested property access to allow City's consultant, David Evans and Associates, Inc. (DEA), to perform on-site wetland delineation work. As shown on Figure 2 of Appendix A, access was granted to seven tax lots. Two property owners elected to have their own consultants perform wetland delineation reconnaissance work and submit their findings to the City in the form of wetland determination memorandums. An additional three property owners also had their own consultants perform wetland delineation work and submitted their findings to DSL for formal review and concurrence. These are also displayed on Figure 2. All of the above information has been incorporated into this LWI report and mapping.

The LWI was conducted in concert with the South Cooper Mountain Planning project, which had an extensive public involvement process. Public involvement included meetings with a technical advisory committee, citizen's advisory committee, multiple open house and community engagement sessions, and dissemination of information through the creation of a project website. LWI mapping results were presented throughout these various meetings and engagements, and information made available to the public via the project website.

Additional public outreach specific to the LWI was conducted in early 2016. A public review draft of the LWI was posted on the City of Beaverton website between January 8 and January 26, 2016, with notice sent via email to individuals and organizations that had previously expressed an interest in the South Cooper Mountain process. No comments were received during this period. In addition, on January 14, 2016, the City held a meeting with property owners within the South Cooper Mountain project area to discuss the LWI. 7 people (including 5 property owners) attended the meeting. None of the comments received contested the content of the report or the mapping of wetlands. The City of Beaverton Planning Commission held a public hearing to make a recommendation to the City Council on the adoption of the South Cooper Mountain LWI into Volume III of the City's Comprehensive Plan. There was no public comment received at the meeting, and the Commission unanimously recommended approval.

3. RESULTS

LWI results documentation has been prepared in accordance with OAR 141-086-0220 LWI Reports and is provided herein.

3.1 STUDY AREA DESCRIPTION

OAR 141-086-0220(2)(a) A general description of the study area including a description of the landscape setting;

The project study area primarily consists of rural lands that are bordered to the east by suburban development and to the north, south, and west by rural land. Slopes range from gently rolling in the south half to moderately steep in the north half of the study area. The majority of the land drains to the south, with a portion of the area draining to the southeast with all drainage eventually flowing off-site to the Tualatin River and its tributaries (See Figure 1), Table 1 and Figure 5 show Clean Water Services streamsheds and associated drainages that occur within the LWI study area. All drainages in the study area are unnamed, but were assigned an ID as part of the South Cooper Mountain Concept Plan project.

Table 1: Drainage Basins and Streams in LWI Study Area

Clean Water Services Stream Shed[1]	Clean Water Services Basin ID[2]	Water Bodies[3]	Water Body ID[3]
Jackson/Lindow	LW	none	none
Summer Creek	SMC	Unnamed tributary	SMC
	SMC	Unnamed tributary to SMC	SMC-1
Unnamed Tributary to Tualatin River	TR06.5	Unnamed trib to Tualatin River	TR-1
	TR06.5	Unnamed trib to TR-1	TR-1a
	TR06.5	Unnamed trib to TR-1	TR-1b

[1] Data from "CWS_SmallSubBasins" GIS shapefile, "STREAMSHED" data field

[2] Data from "CWS_SmallSubBasins" GIS shapefile, "IDALL" data field

[3] Water body IDs assigned by South Cooper Mountain Concept Plan project

Land use is predominantly agricultural, with a mix of annual crop production, pasture, orchards, and viticulture. Several small remnant patches of native forest habitat occur within the area, including mixed upland fir-deciduous forest, Oregon ash dominated wetland forest, and patches of Oregon oak forest. Several fir dominated lots were being logged or had recently been logged as observed during the March 2013 site visits.

3.2 WETLAND INVENTORY PROCESS

OAR 141-086-0220(2)(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;

See methods discussion above.

3.3 SUMMARY OF INVENTORY RESULTS

OAR 141-086-0220(2)(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;

The SCMAA study area occupies approximately 544 acres. The study area contains an estimated 47.53 acres of wetlands and probable wetlands. Table 2 provides a listing of individual wetlands, their size and HGM and Cowardin classifications. Study area wetlands are displayed in Appendix A Figure 5. Representative sample plots for each wetland are provided in Appendix B and summary sheets describing each wetland are provided in Appendix C.

The following discussion summarizes the range of wetland resources identified in the SCMAA LWI study area. Wetland A was the second largest wetland identified within the SCMAA LWI study area and contained a large portion of intact forested wetland as well as emergent wetland dominated by pasture grasses. Portions of Wetland A were formally delineated by Pacific Habitat Services in October 2014.

Wetland G is situated in an agricultural field growing annual crops; it appears to be plowed annually. This feature was mapped based on offsite wetland determination procedures, including aerial photo reconnaissance and soil survey mapping that shows hydric soils in the field. Aerial photography signatures show potential wetland hydrology conditions over a broad area; however, actual wetland extent could vary considerably. All wetlands were considered to be slope wetlands as the dominant source of hydrology is likely to be hillside seepage or shallow subsurface flow.

Table 2: LWI Wetland Summary Results

Wetland ID[1]	Acres	Cowardin Class [2, 3]	HGM Class
W-A	11.80	PFO1Y, PEM1Y	Slope
PW-B	0.12	PEM1Yd	Slope
W-C	1.42	PFO1Y	Slope
PW-D	0.39	PEM1Y	Slope
PW-E	0.22	PEM1Y	Slope
PW-F	0.18	PEM1Yfd	Slope
W-G	21.29	PEM1Yf	Slope
W-H	10.79	PSS1Y	Slope
PW-I	0.40	PFO1Y	Slope
PW-J	0.26	PEM1Y	Slope
PW-K	0.09	PEM1Y	Slope
PW-L	0.09	PEM1Y	Slope
PW-M	0.02	PEM1Y	Slope
PW-N	0.21	PEM1Y	Slope
PW-O	0.01	PEM1Y	Slope
DP-1	0.25	PUB	Depression
Total	**47.53**		

[1] "W" = wetland, "PW" = probable wetland, "DP" = constructed detention pond (not a jurisdictional wetland)

[2] PFO = palustrine forested, PSS = palustrine scrub-shrub, PEM = palustrine emergent, PUB = palustrine unconsolidated bottom

[3] Cowardin modifiers "1" = broad-leaved deciduous for PFO and PSS, and persistent for PEM wetlands. "Y" = saturated/semipermanent/seasonal. "f" = farmed. "d" = partially drained/ditched.

3.4 OFWAM PROCESS AND RESULTS

OAR 141-086-0220(2)(d) A discussion of the OFWAM assessment process (e.g. how assessment units were defined) and the results;

Table 3 provides a summary of wetland functional assessment results for wetlands that are one-half acre or greater in size. Of the four wetlands evaluated, three met locally significant wetland criteria – Wetlands W-A, W-C, and W-H. This means at least one of the four functions evaluated rated highly. The remaining wetland did not meet locally significant wetland criteria due to its highly degraded conditions (i.e., plowed field).

Table 3: Wetland Functional Assessment Results

Wetland ID	Wildlife Habitat	Fish Habitat	Water Quality	Hydrologic Control	Meets Locally Significant Criteria
W-A	**Diverse**	**Intact**	Degraded	**Intact**	**Yes**
W-C	**Diverse**	**Intact**	Degraded	Degraded	**Yes**
W-G	Some Habitat	Degraded	Degraded	Degraded	No
W-H	**Diverse**	**Intact**	Degraded	Degraded	**Yes**

3.5 SUMMARY OF LOCALLY SIGNIFICANT WETLANDS

OAR 141-086-0220(2)(e) A summary of Locally Significant Wetlands, if identified (may be in table format);

Wetlands W-A, W-C, and W-H were determined to meet locally significant wetlands criteria. Wetland functions for these wetlands are summarized in Table 3. Wetland characteristics for these wetlands are summarized in the individual wetland summary sheets provided in Appendix C.

4. PREPARERS AND CONTRIBUTORS

Ethan Rosenthal, DEA Ecologist, authored this report. Phil Rickus, DEA Ecologist, provided the quality review. Dawn Afman, DEA Project Assistant, prepared the report drafts. Sara Gilbert, DEA GIS Specialist, conducted GIS analysis and prepared report figures.

5. BIBLIOGRAPHY

AKS Engineering & Forestry, LLC. 2014. Dyches Property Wetland and Waters Delineation Report, Beaverton, Oregon. Prepared for Ron Dyches. November 26, 2014. DSL WD#2015-0063.

Anchor QEA, LLC. 2015. Wetland Delineation Report, West Hills Development: Crescent Grove Property. Prepared for West Hills Development. March 2015. DSL WD#2015-0105.

City of Beaverton. 2013. LIDAR derived contours (flown January 2013)

City of Beaverton. 2013. High resolution digital aerial photography (flown January 2013)

Clean Water Services (CWS). 2013. GIS streams layer shapefile.

David Evans and Associates, Inc. (DEA). 2013. Project Memorandum to South Cooper Mountain Technical Advisory Committee from Ethan Rosenthal and Phil Rickus. Subject: Natural Resource Memorandum, South Cooper Mountain Concept and Community Plans, City of Beaverton #2752-13B. June 3, 2013.

Environmental Science & Assessment, LLC (ESA). 2013a. Memorandum to Matt Wellner, Metropolitan Land Group, LLC from Jack Dalton, RE: Fox Hollow Wetland/Goal 5 Natural Resource Determination (18200 SW Horse Tale Drive Washington County, Oregon). April 2, 2013.

Environmental Science & Assessment, LLC (ESA). 2013b. Memorandum to Valerie Sutton, City of Beaverton from Jack Dalton, RE: Oregon Goal 5 and Metro Title 13 Natural Resources Determination –Scholls Ferry Road Properties. September 30, 2013.

Environmental Systems Research Institute (ESRI). 2013. National Geographic World Map for ArcGIS.

Environmental Systems Research Institute (ESRI). 2009. ArcGIS OnlineWorld Imagery aerial photo imagery for ArcGIS.

Metro. 2005. Technical Report for Fish and Wildlife Habitat. April 2005

Metro. 2005. Cooper Mountain Natural Resource Management Plan. November 2005

Metro Regional Land Information System (RLIS). 2013. GIS wetlands layer, hydric soils layer, and streams layer.

Natural Resources Conservation Service (NRCS). 2010. Soil Survey Geographic Database for Washington County, Oregon.

Oregon Biodiversity Information Center (ORBIC). 2009. Oregon Wetlands Cover, version 20091030.

Oregon Department of Fish and Wildlife (ODFW). 2013. Fish distribution GIS layers.

Oregon Department of State Lands (DSL). 2013. Wetland determination/delineation database search results for SCMAA study area. March 2013.

Pacific Habitat Services, Inc. 2014. Wetland Delineation for Beaverton School District in Beaverton, Washington County, Oregon. October 13, 2014. DSL WD#2014-0497.

Shapiro & Associates, Inc. 2000. City of Beaverton Local Wetland Inventory and GIS data.

U.S. Fish and Wildlife Service. 2013. National Wetland Inventory Wetland Mapper GIS data.

U.S. Geological Survey (USGS). 2013. National Hydrographic Database National Hydrographic Database (NHD) GIS streams layer.

Date printed 3/14/16

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6. APPENDICES

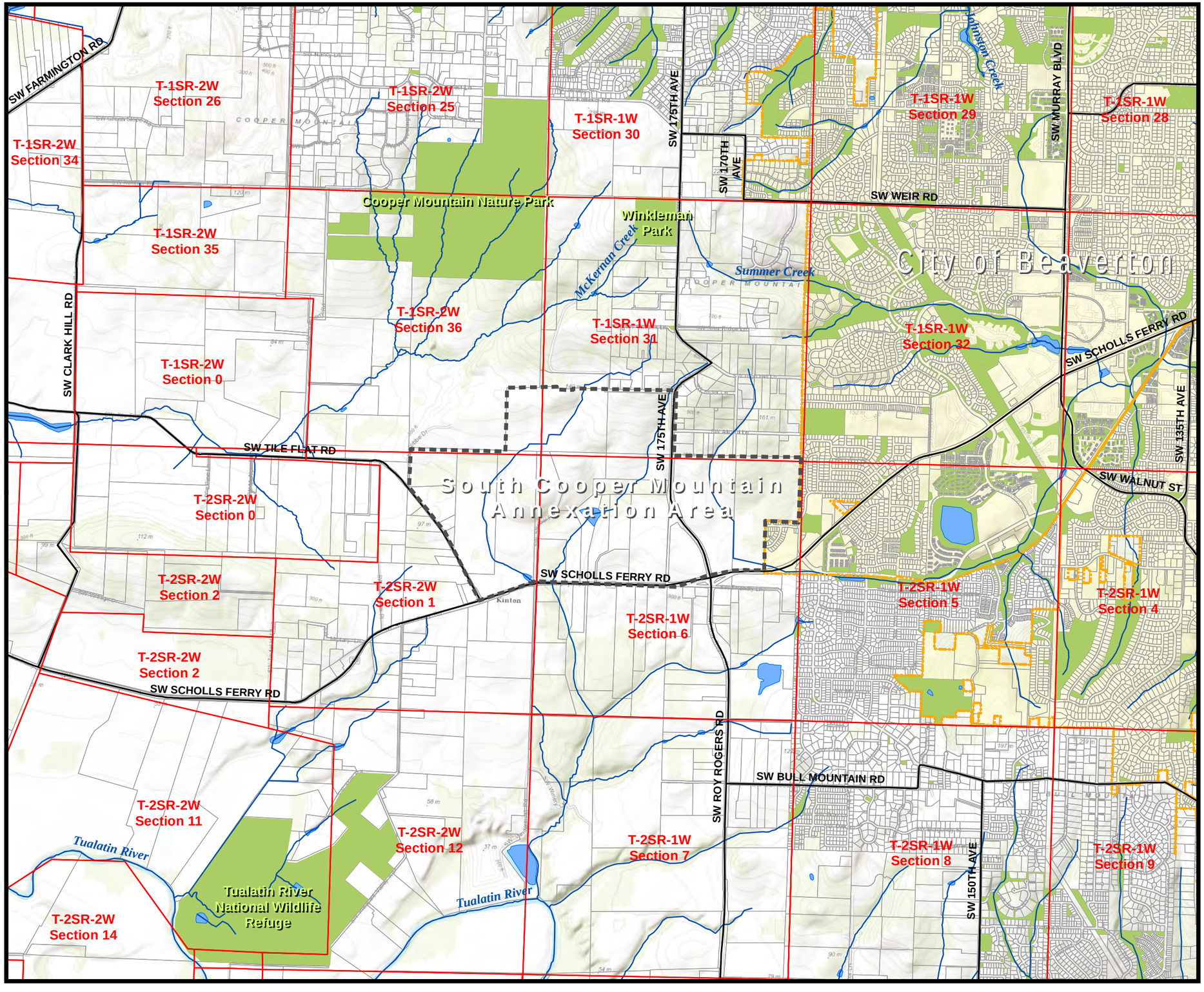
Appendix A: Figures

OAR 141-086-0220(2)(f) All figures, with the study area clearly outlined.

Figure 1
Vicinity Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

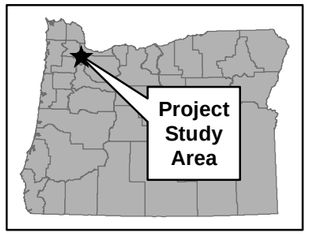


Legend

- LWI Study Area
- Section
- Beaverton City Limits
- Washington County Tax Lot
- Park/Greenspace
- Stream/River
- Waterbody
- Arterial

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Tax Lots, Parks/Greenspaces, Arterials: Metro RLIS, 2012
Hydrology: USGS NHD
Service Layer: ESRI World Topo Map

Disclaimer: Information shown on this map is for planning purposes, represents the conditions that exist at the map date, and is subject to change.



0 750 1,500 Feet

North

Information Current as of:
August 2015

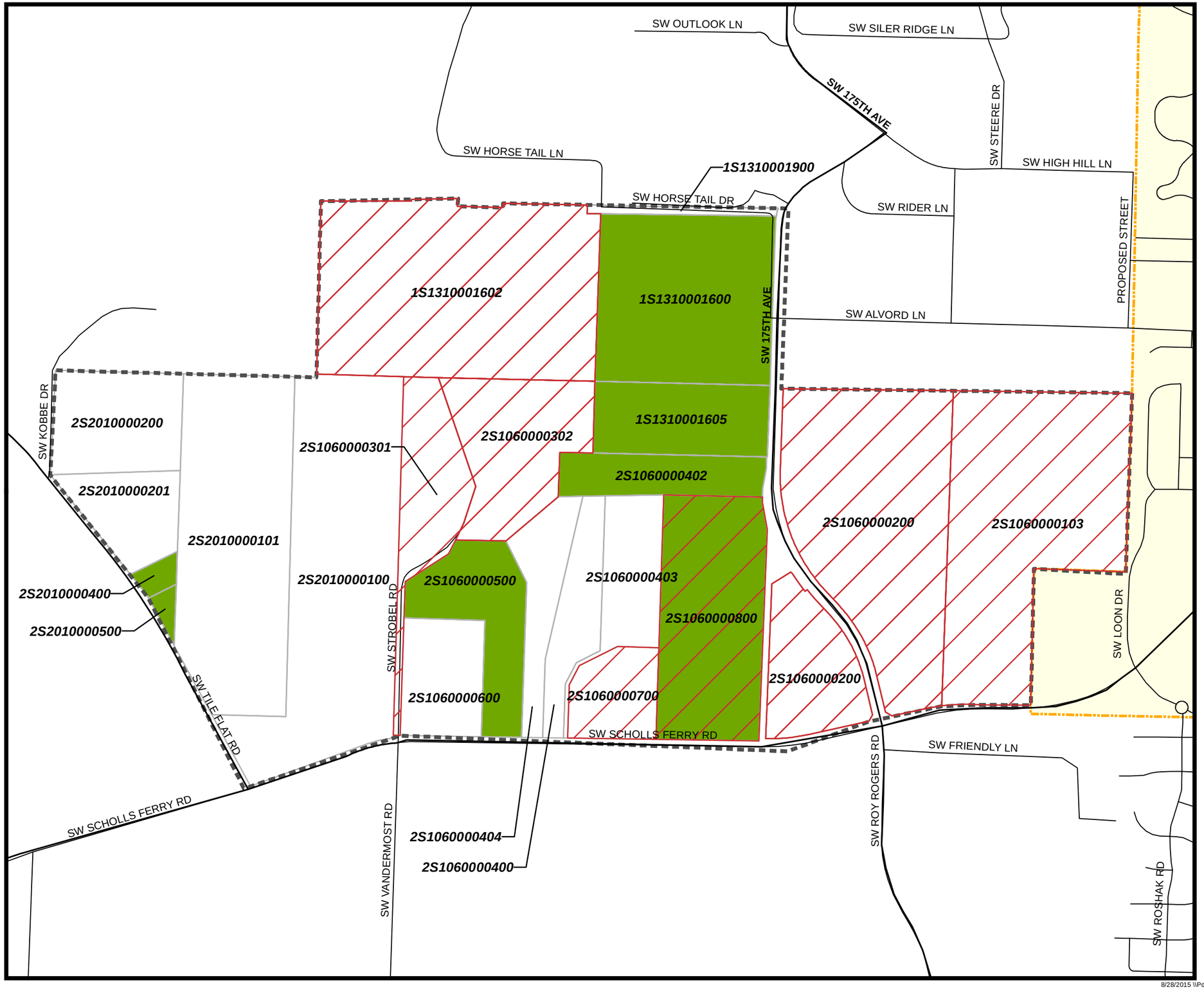
Printed on and Corrections as of:
August 31, 2015

8/21/2015 \\Pdxfs1\project\A\APG\00000004\0600INFO\GS\Maps\Fig1 Vicinity Map.mxd

Figure 2
Tax Lots and Property Access Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

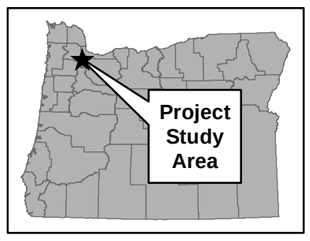


Legend

- LWI Study Area
- Beaverton City Limits
- Washington County Tax Lot
- LWI Data Provided by Landowner
- Property with Site Access
- Arterial
- Street

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Tax Lots, Arterials, Streets: Metro RLIS, 2012

Disclaimer: Information shown on this map is for planning purposes, represents the conditions that exist at the map date, and is subject to change.



0 250 500 Feet

North

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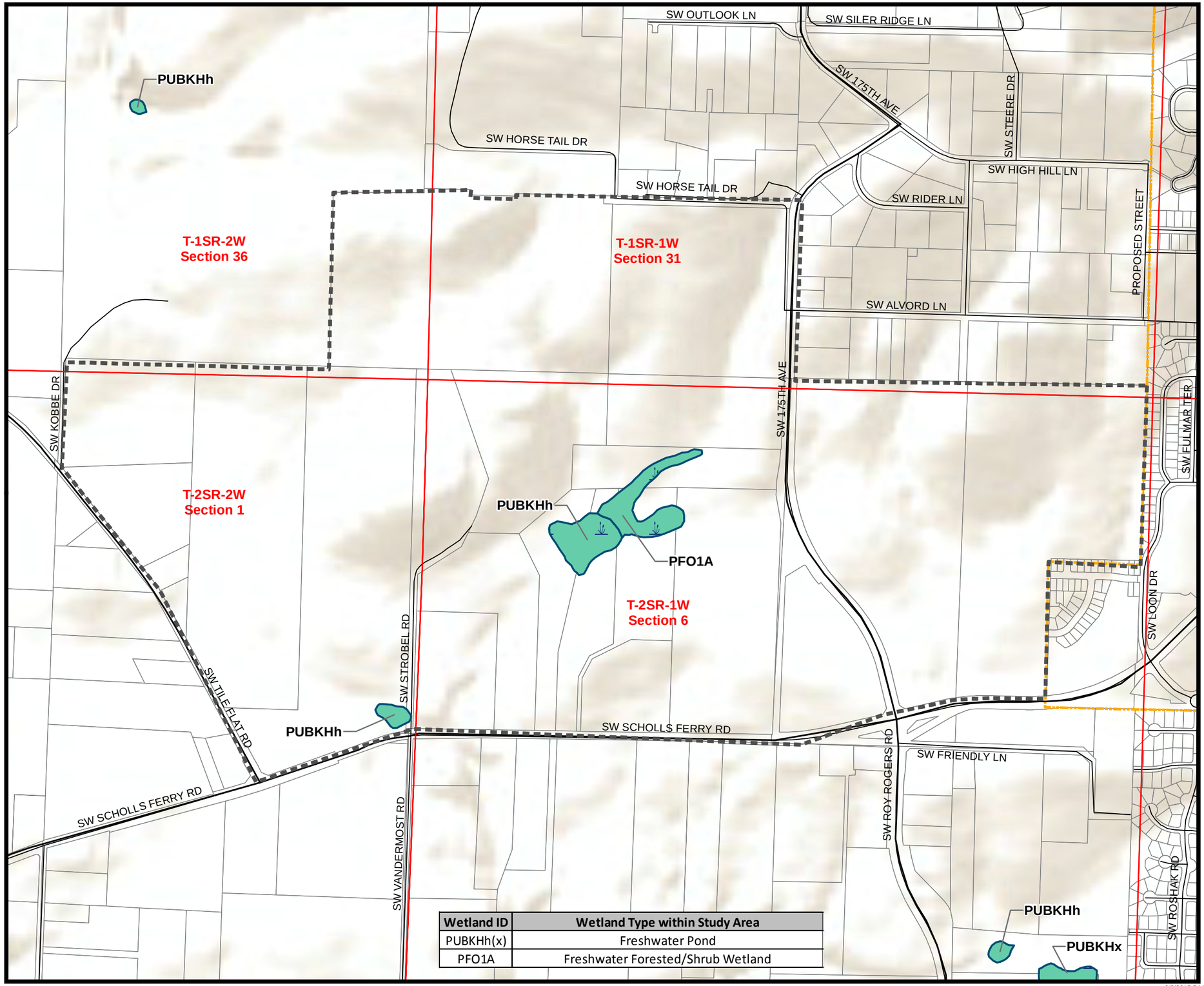
Figure 3
National Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY



Wetland ID	Wetland Type within Study Area
PUBKHh(x)	Freshwater Pond
PFO1A	Freshwater Forested/Shrub Wetland

Legend

- LWI Study Area
- NWI Wetland
- Section
- Washington County Tax Lot
- Arterial
- Street

0 250 500 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Arterials, Streets: Metro RLIS, 2012
Wetlands: USFWS NWI
Sample Points: DEA.
Streams: Metro RLIS, 2012. Modified by DEA.
Service Layers: ESRI

Disclaimer: 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.

North

Information Current as of:
August 2015

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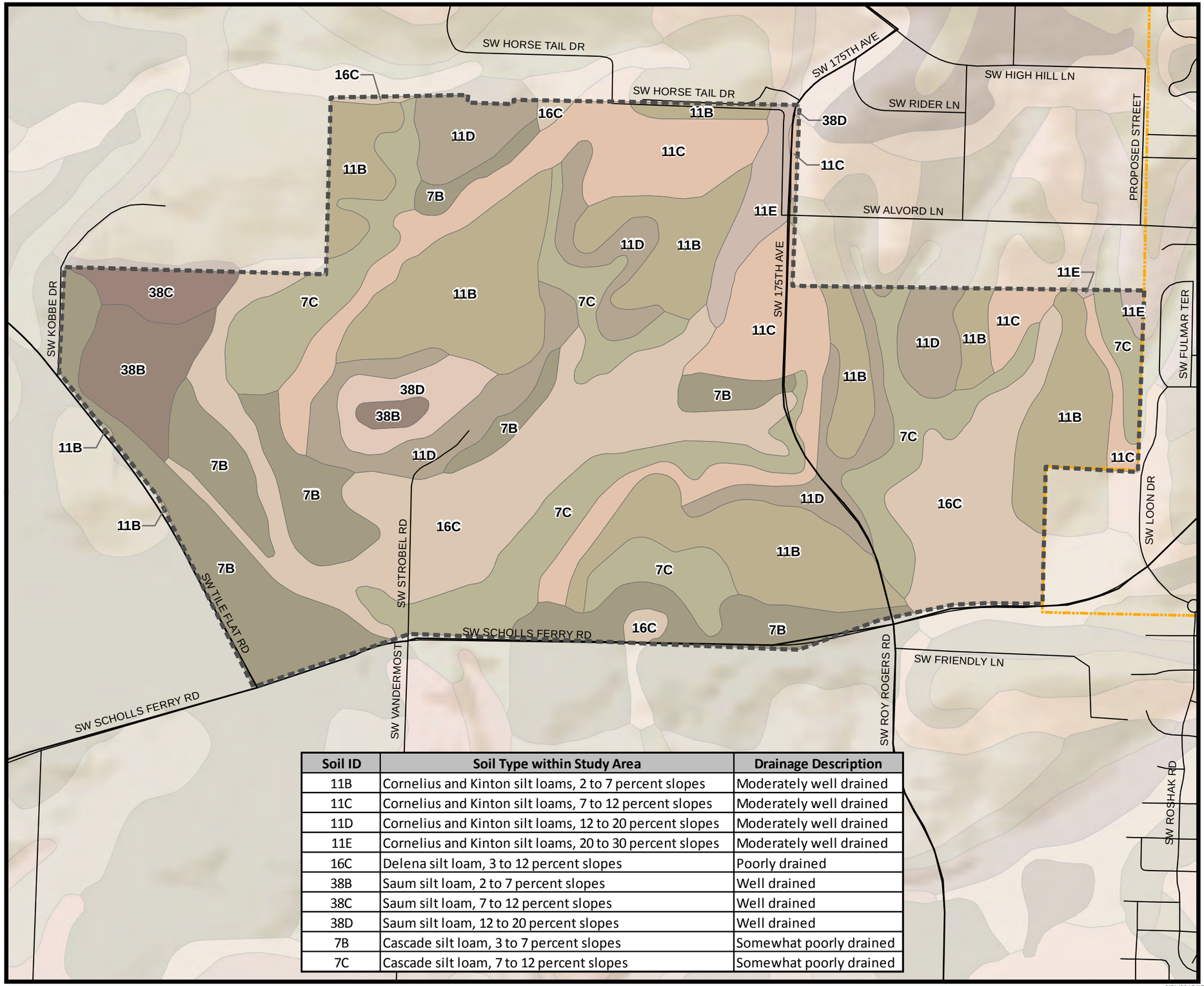
9/3/2015 P:\A\APGI00000004\0600INFO\GS\Maps\Fig3 USFWS NWI Wetlands.mxd

Figure 4
NRCS Soils Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY



Soil ID	Soil Type within Study Area	Drainage Description
11B	Cornelius and Kinton silt loams, 2 to 7 percent slopes	Moderately well drained
11C	Cornelius and Kinton silt loams, 7 to 12 percent slopes	Moderately well drained
11D	Cornelius and Kinton silt loams, 12 to 20 percent slopes	Moderately well drained
11E	Cornelius and Kinton silt loams, 20 to 30 percent slopes	Moderately well drained
16C	Delena silt loam, 3 to 12 percent slopes	Poorly drained
38B	Saum silt loam, 2 to 7 percent slopes	Well drained
38C	Saum silt loam, 7 to 12 percent slopes	Well drained
38D	Saum silt loam, 12 to 20 percent slopes	Well drained
7B	Cascade silt loam, 3 to 7 percent slopes	Somewhat poorly drained
7C	Cascade silt loam, 7 to 12 percent slopes	Somewhat poorly drained

Legend

- LWI Study Area
- NRCS Soil Type
- Arterial
- Street
- Beaverton City Limits

0 250 500 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
City Limits, Arterials, Streets: Metro RLIS, 2012
Wetlands: City of Beaverton, Metro RLIS, 2012.
Modified by DEA. Sample Points: DEA.
Streams: Metro RLIS, 2012. Modified by DEA.
Soils: USDA NRCS
Service Layers: ESRI

Disclaimer: 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.

North

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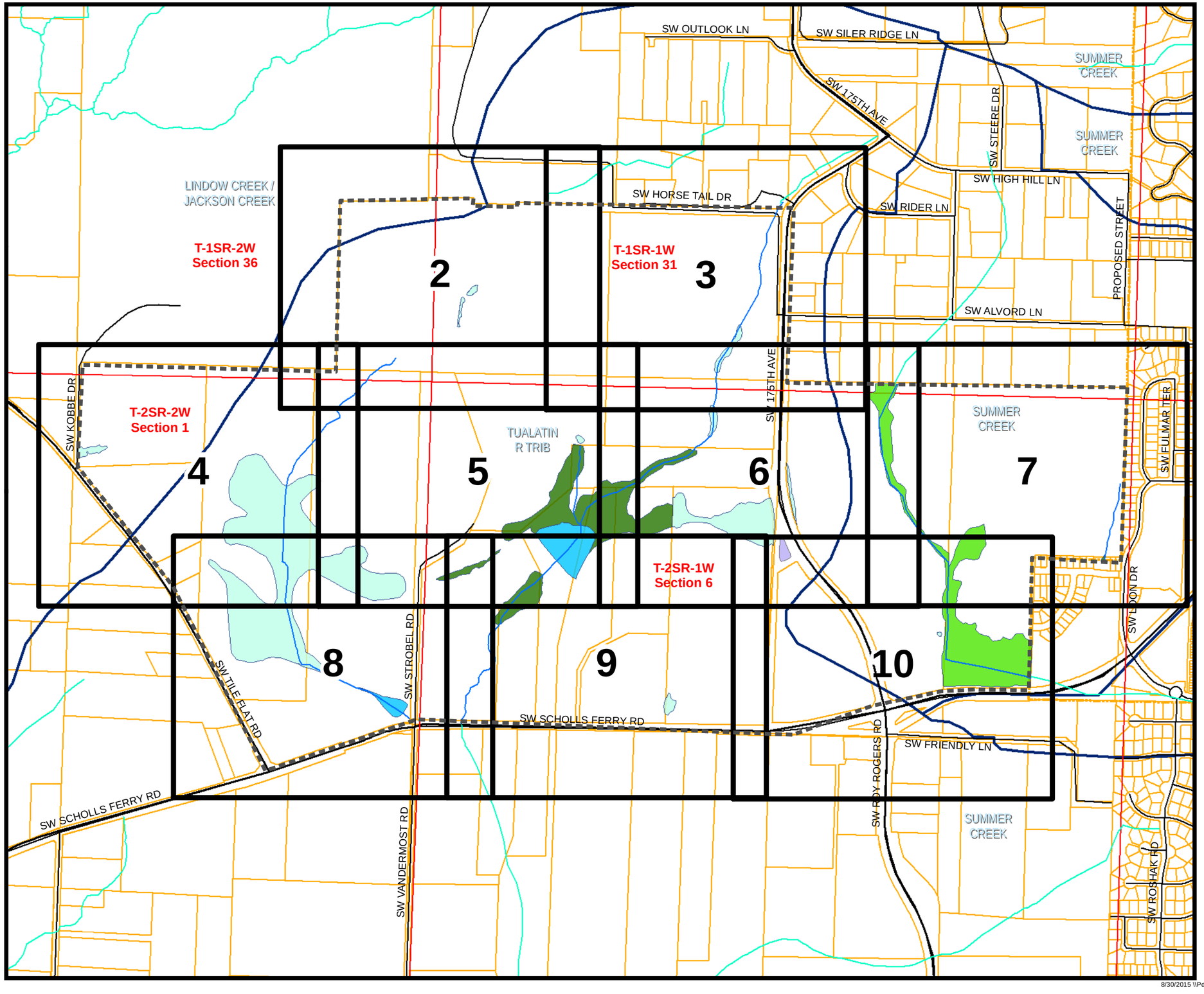
Figure 5, Sheet 1 of 10
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY



Legend

- Sheet Extent
- LWI Study Area
- Arterial
- Street
- LWI Stream
- NHD Stream
- Section
- Beaverton City Limits
- Washington County Tax Lot
- CWS Small Streamsheds Boundary

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)
- Scrub/Shrub (PSS)
- Detention Pond

0 250 500 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
Tax Lots, PLSS, City Limits, Arterials, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: Anchor QEA, DKS Engineering, PHS, DEA, 2015; City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Streams: Metro RLIS, 2012; Modified by DEA. USGS NHD, 2015.

Disclaimer: 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.

North

Information Current as of:
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8/30/2015 \\Pdxfs1\project\A\APG\0000004\0600INFO\GS\Maps\Fig5 Local Wetland Inventory_Mapbook_INDEX_2015Aug_1.mxd

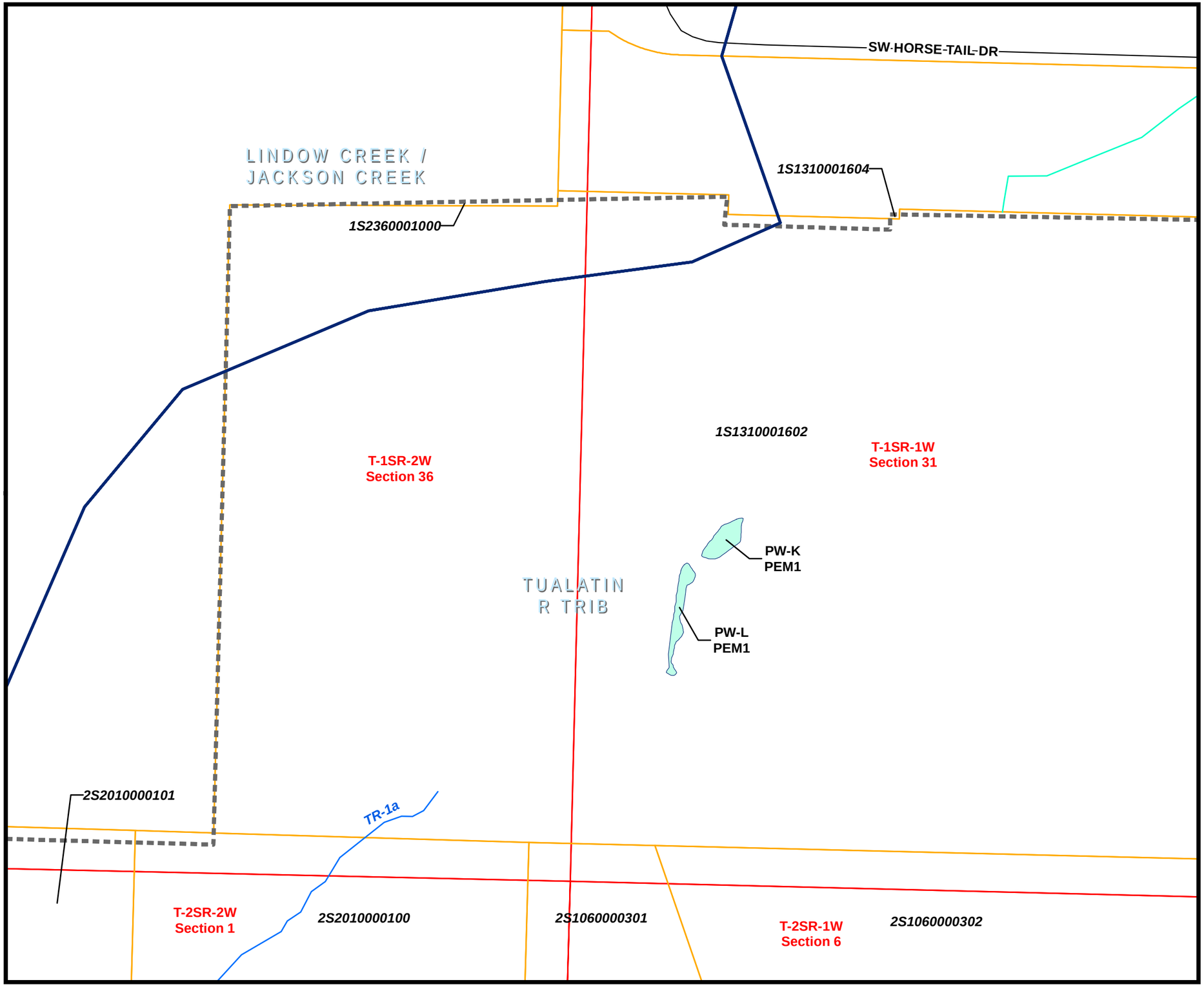


Figure 5, Sheet 2
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

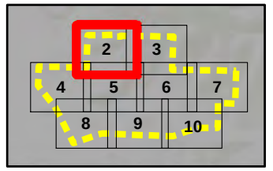
LOCAL WETLAND INVENTORY

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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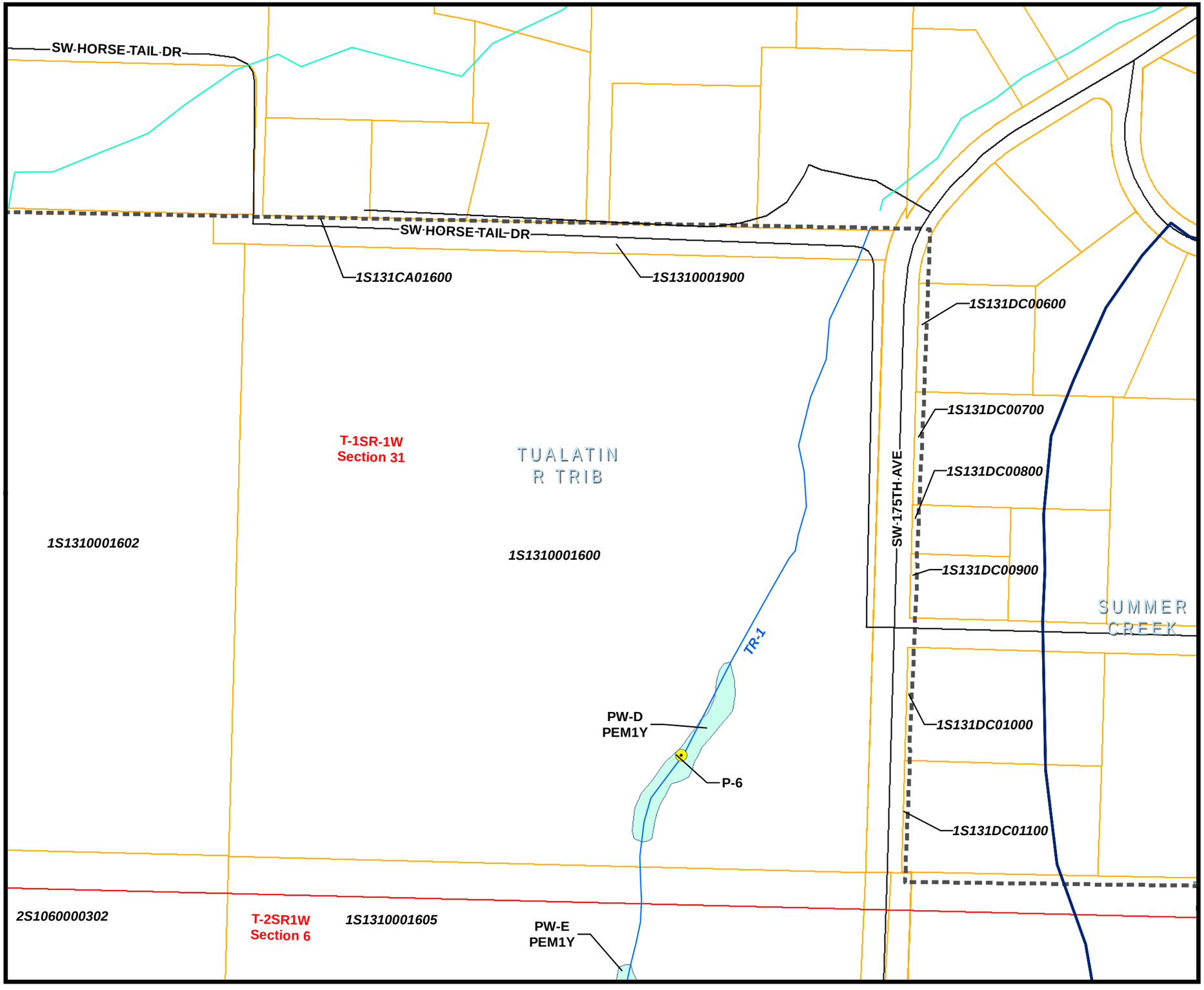
8/24/2015 C:\Users\sast\Desktop\Fig5 Local Wetland Inventory_Mapbook_2015Aug.mxd

Figure 5, Sheet 3
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

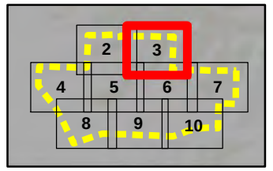


Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Scrub-Shrub (PSS)



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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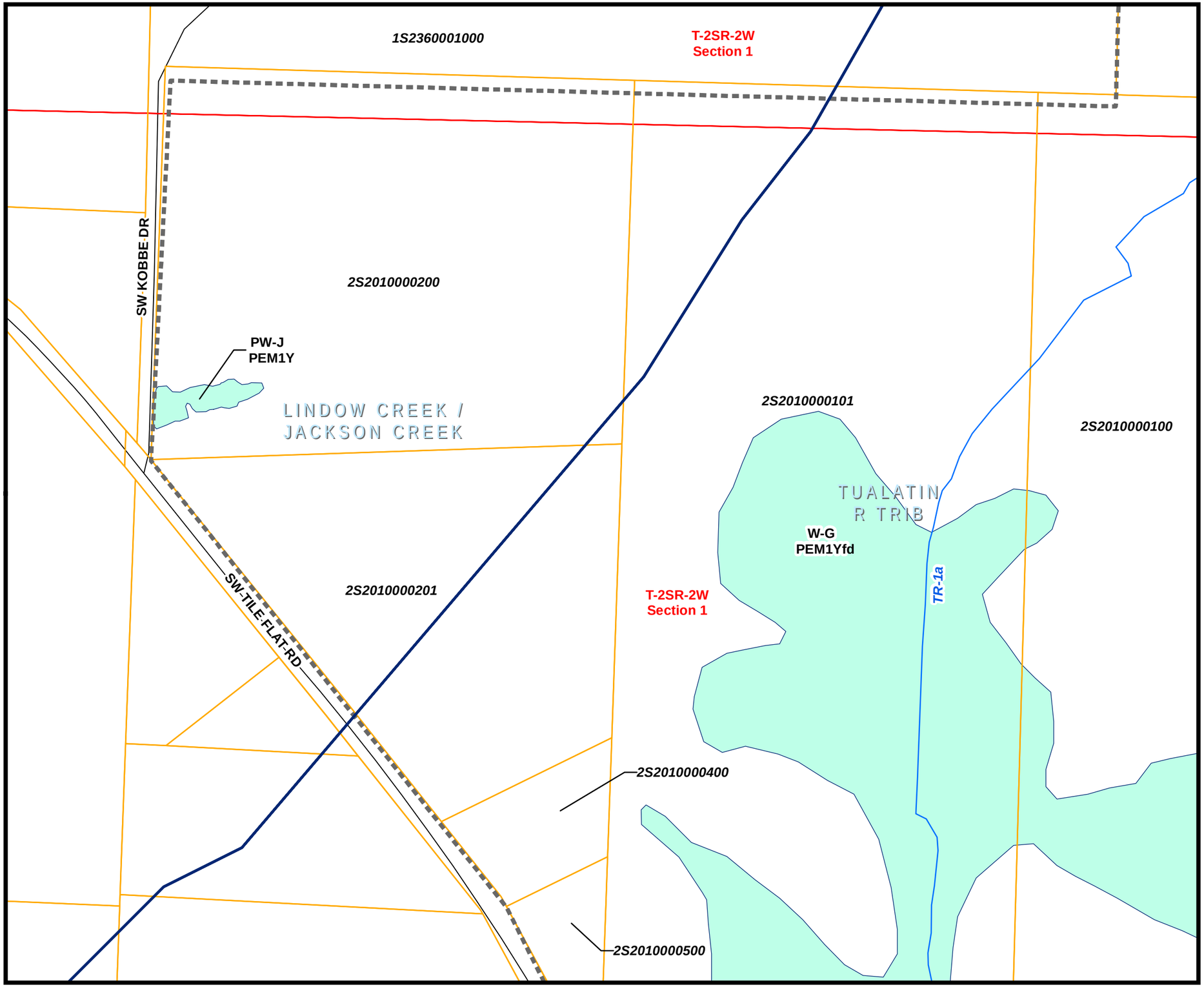
Figure 5, Sheet 4
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

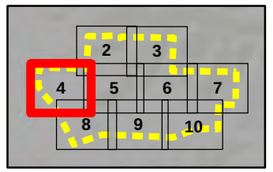


Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- Stream

Wetlands*

- Emergent (PEM)



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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Figure 5, Sheet 5
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

T-1SR2W
Section 36

1S1310001602

T-1SR1W
Section 31

T-2SR2W
Section 1

T-2SR-1W
Section 6

2S1060000302

TR-1a

PW-B
PEM1Yd

2S1060000402

P-4

P-3

TUALATIN
R TRIB

2S1060000302

2S2010000100

2S1060000301

TR-1b

TR-1

W-A
PFO1Y

OW-1
PUB1

P-5

PW-I
PFO1Y

2S1060000403

W-C
PFO1Y

W-G
PEM1Yfd

2S1060000500

1S1310001605

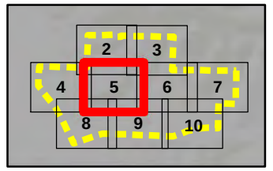
2S1060000400

Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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August 2015

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August 31, 2015

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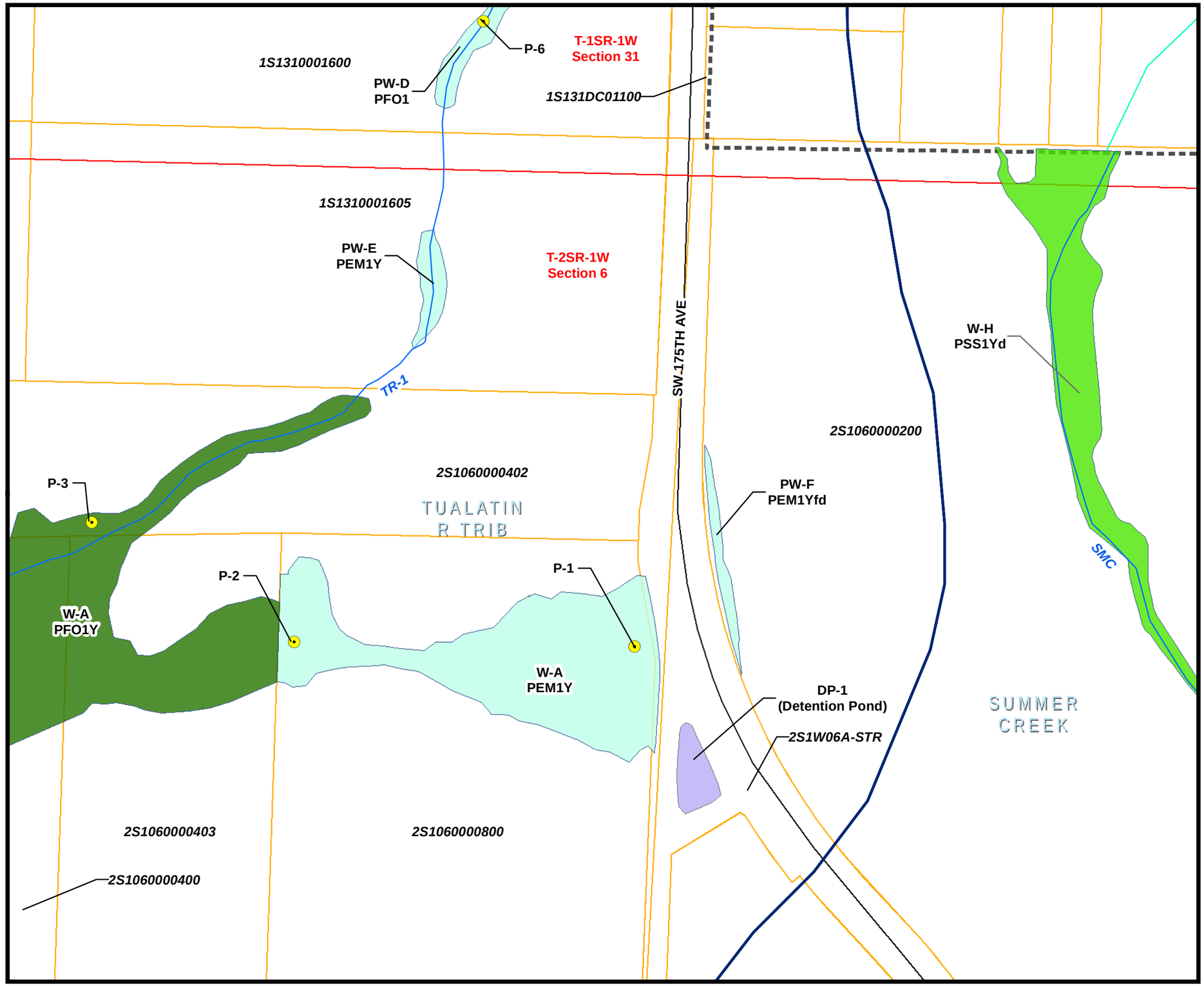
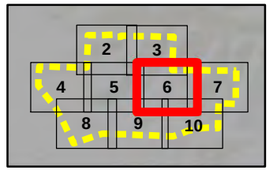
Figure 5, Sheet 6
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY



Legend



- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Scrub-Shrub (PSS)
- Detention Pond

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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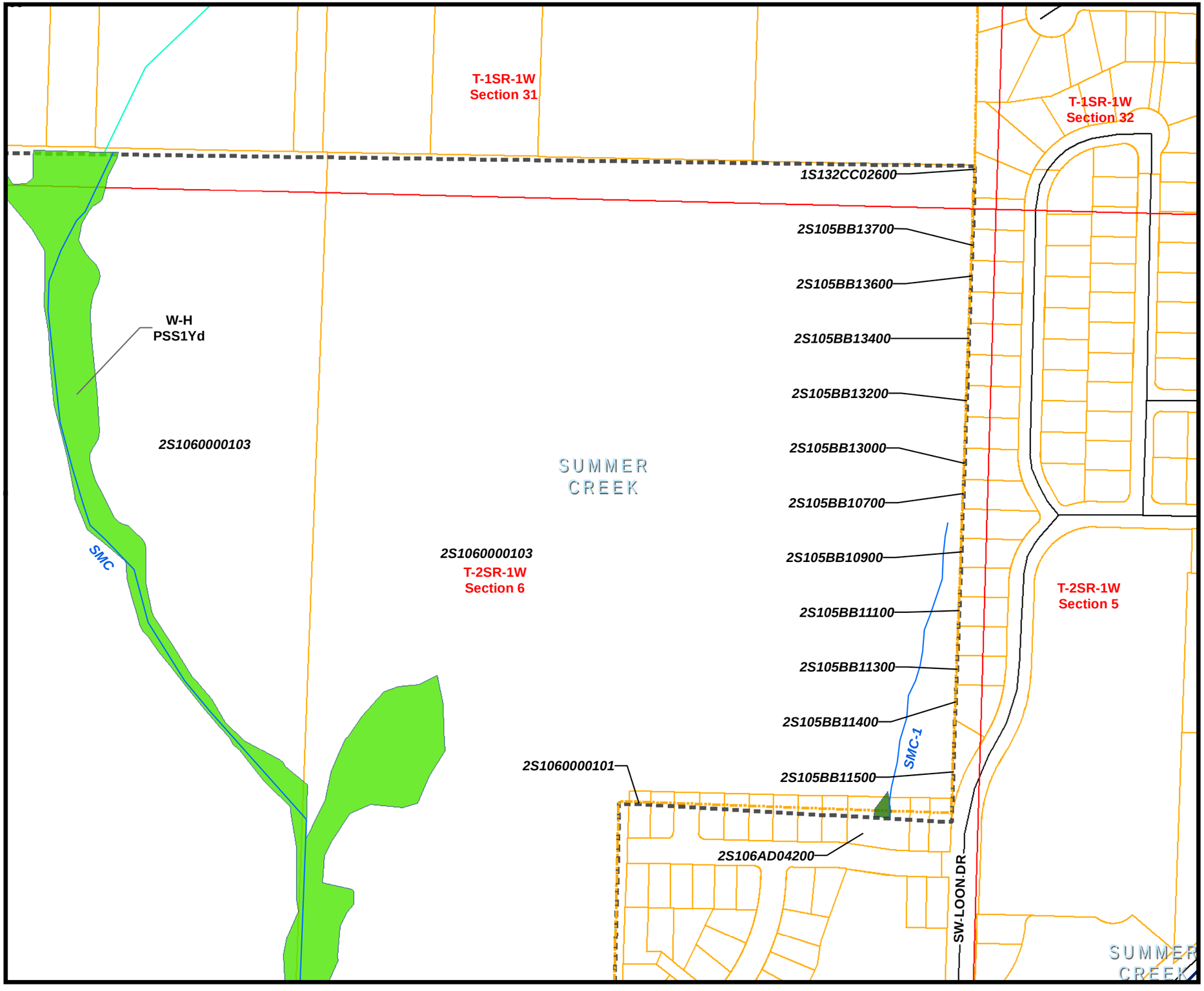
Figure 5, Sheet 7
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

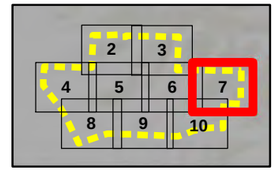


Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Forested (PFO)
- Scrub-Shrub (PSS)



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

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Information Current as of:
August 2015

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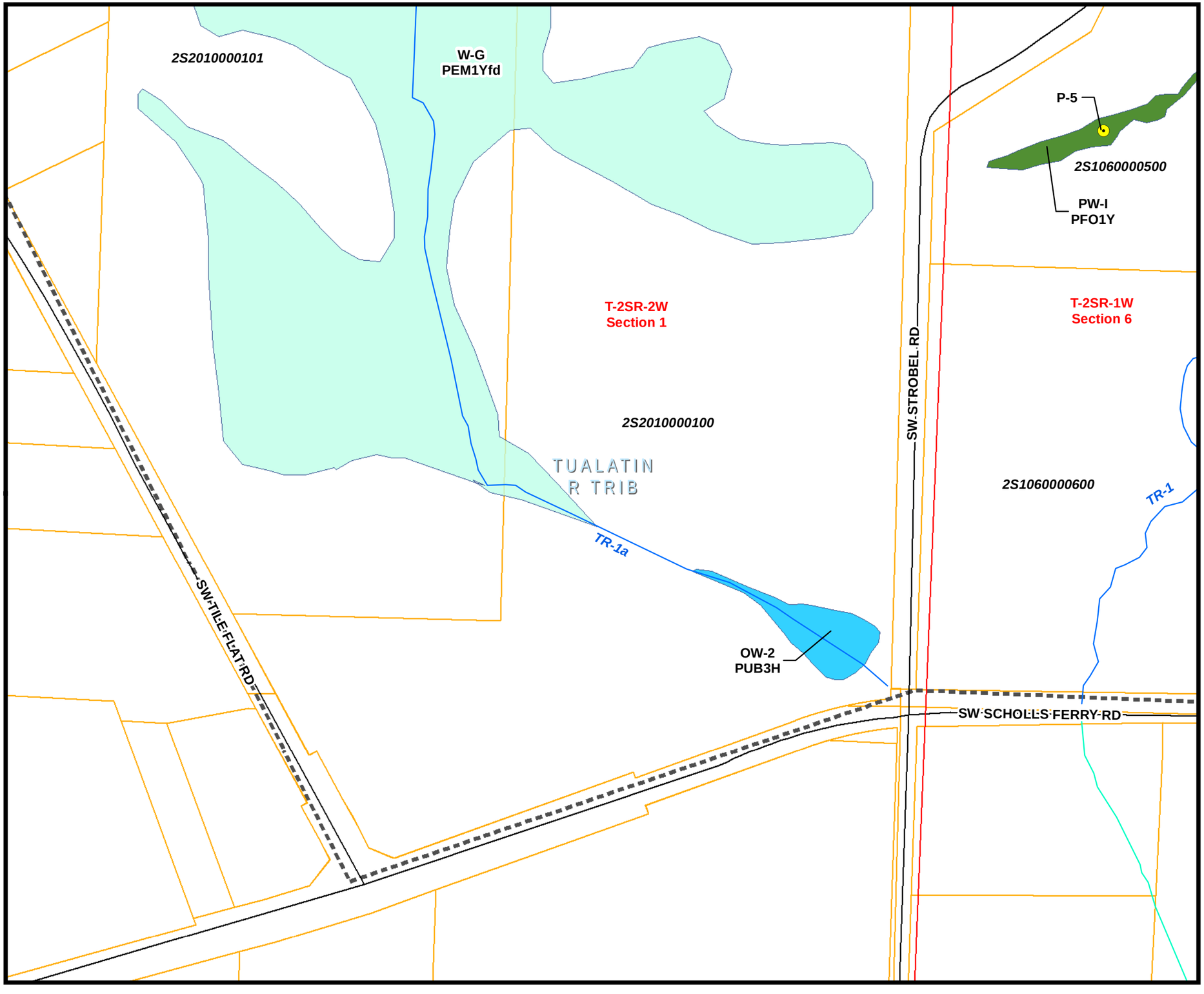
Figure 5, Sheet 8
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY



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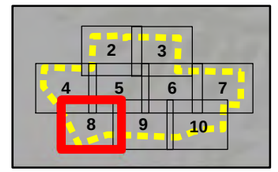

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

Information Current as of:
August 2015

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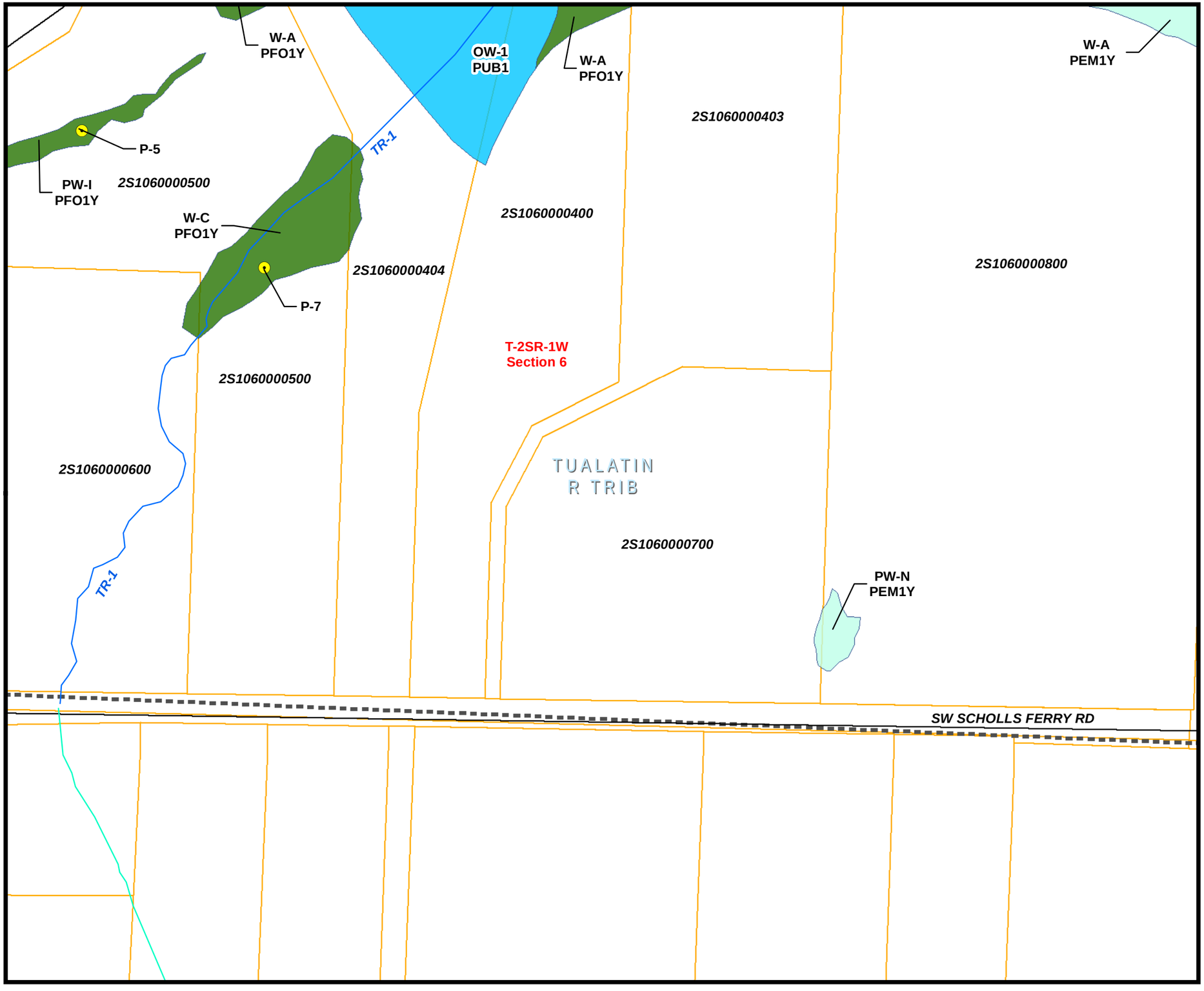
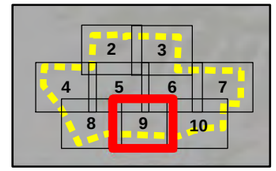


Figure 5, Sheet 9
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

Legend



- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Forested (PFO)
- Pond/Open Water (PUB)

* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

Information Current as of:
August 2015

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August 31, 2015

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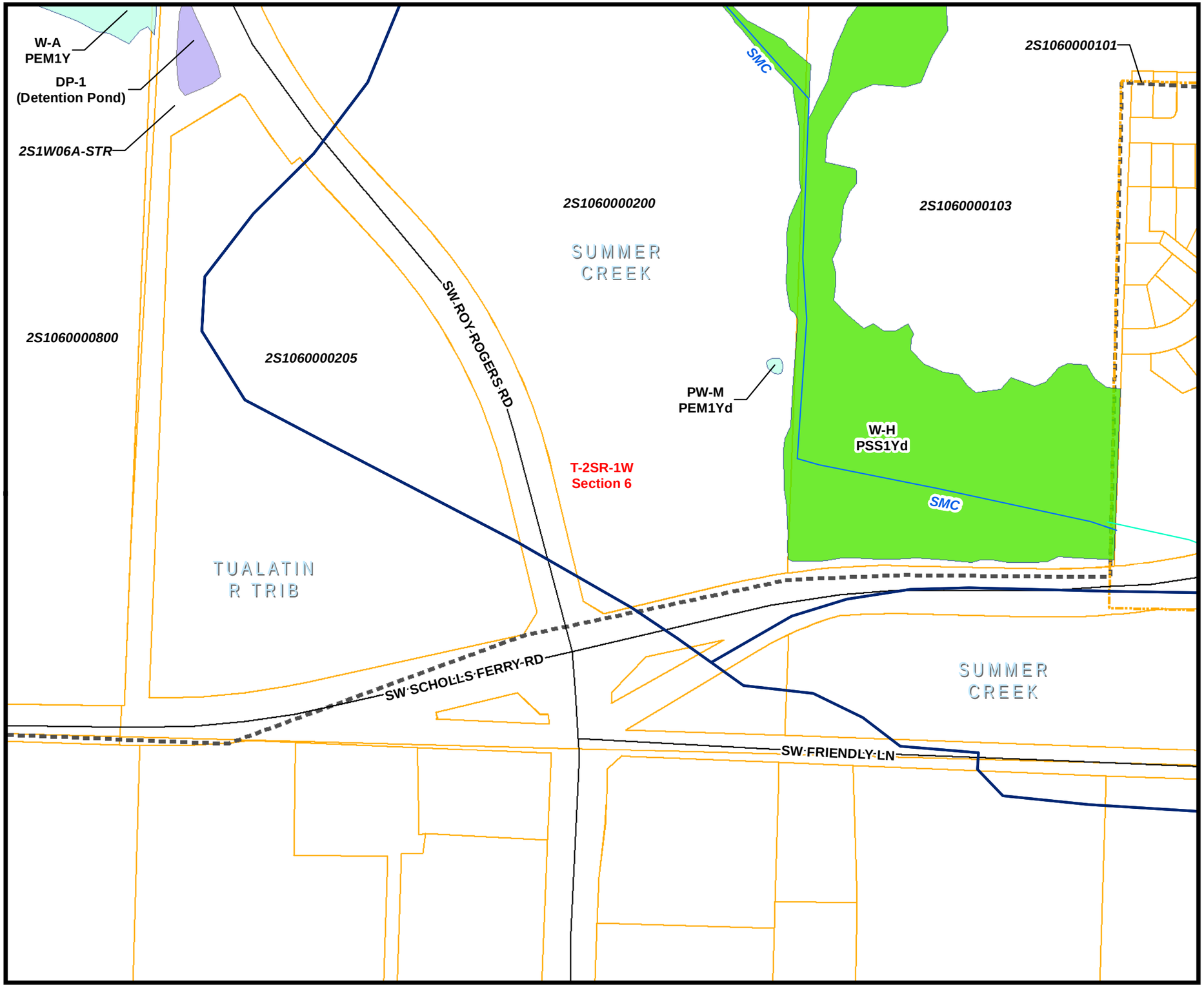
Figure 5, Sheet 10
Local Wetland Inventory Map

City of Beaverton
South Cooper Mountain
Annexation Area

LOCAL WETLAND INVENTORY

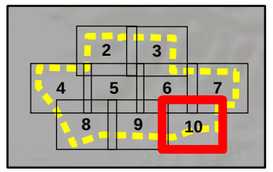


Legend

- LWI Study Area
- Washington County Tax Lot
- Section
- Street
- CWS Small Streamsheds Boundary
- Data Plot
- LWI Stream
- NHD Stream

Wetlands*

- Emergent (PEM)
- Scrub-Shrub (PSS)
- Detention Pond



* W = Wetlands
PW = Probable Wetlands

0 100 200 Feet

Data Sources:
LWI Study Area: Metro RLIS, 2012. Modified by DEA.
PLSS, City Limits, Streets: Metro RLIS, 2012
Wetlands, Streamsheds: AKS Engineering, Anchor QEA, DEA, PHS 2015. Also City of Beaverton, Metro RLIS, 2012. Modified by DEA.
Data Plots: DEA, 2015.
Streams: Metro RLIS, 2012 and USGS NHD, 2015. Modified by DEA.

North

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August 2015

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Appendix B: Data Sheets

OAR 141-086-0220(3)(a) Sample plot data on standard field data forms per OAR 141-090 et seq.

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 1

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: 45.430359 Long: -122.85713 Datum: _____

Soil Map Unit Name: Delena silt loam, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a swale draining west. Wetland extends east and west out of study area.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	5	n	FACW
2. Schedonorus phoenix	70	y	FAC
3. Alepocurus pratensis	40	y	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/1	90	5YR 4/4	10	C	M	silty clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 9"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 2"

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 2

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): A Lat: 45.430327 Long: -122.859846 Datum: _____

Soil Map Unit Name: Delena silt loam, 3 to 12 percent slopes NWI classification: PFO1A

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a pasture swale draining west toward forested Oregon ash wetland on adjacent property.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	60	y	FACW
2. Agrostis capillaris	40	y	FAC
3. Ranunculus repens	5	n	FACW
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	105 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum _____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	90	7.5YR 3/4	10	C	M	silty clay loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes _____ No X Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 9

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 3

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): A Lat: 45.430964 Long: -122.861488 Datum: _____

Soil Map Unit Name: Delena silt loam, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a swale draining southwest fed by small creek, which lies approx 15' to the east, and is approx 1'wide.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	90	y	FACW
2.			
3.			
4.			
	90	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rosa pisocarpa	10	n	FAC
2. Oemleria cerasiformis	35	y	FACU
3. Holodiscus discolor	5	n	UPL
4. Symphoricarpos albus	5	n	FACU
5.			
	55	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Veratrum californicum	10	n	FACW
2. Tolmeia menziesii	5	n	FAC
3. Carex obnupta	80	y	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	95	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/1	90	5YR 4/4	10	C	M	silty clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 2"

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 4

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 5

Subregion (LRR): A Lat: 45.43121 Long: -122.862747 Datum: _____

Soil Map Unit Name: Cascade silt loam, 7 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a swale draining southwest fed by small creek, which is approx 8" wide.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	80	y	FACW
2.			
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rosa pisocarpa	20	y	FAC
2. Oemleria cerasiformis	40	y	FACU
3. Physocarpus capitatus	20	y	FACW
4. Rubus armeniacus	5	n	FACU
5.			
	85	= Total Cover	
Herb Stratum (Plot size: 5' radius)			
1. Equisetum telmateia	10	n	FACW
2. Tolmeia menziesii	T	n	FAC
3. Carex obnupta	65	y	OBL
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	75	= Total Cover	
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____	= Total Cover	

% Bare Ground in Herb Stratum 25

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 80 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/1	90	5YR 4/4	10	C	M	silty clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 6"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 2"

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 5

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): none Slope (%): 3

Subregion (LRR): A Lat: 45.429057 Long: -122.866015 Datum: _____

Soil Map Unit Name: Delena silt loam, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies near the base of slope in a wetland which extends into a wheat field to the southeast. Drain tiles present in field.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	= Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Phalaris arundinacea	5	n	FACW
2. Schedonorus phoenix	15	y	FAC
3. Alepocurus pratensis	10	y	FACW
4. Triticum aestivum	15	y	UPL
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	115 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 5

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 67 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/1	40	5YR 4/4	10	C	M	silty clay	
0-20	10YR 3/2	40	5YR 4/4	10	C	M	Silty clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

Soil matrix was comprised of a mix of 10YR 3/1 and 3/2 colors, together covering 80% of the soil profile. Redox features comprised the remaining 20 percent of the soil profile and were evenly distributed between the two matrix colors.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 9"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 2"

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 6

Investigator(s): PRR, EJRO Section, Township, Range: T1SR1WS31

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 4

Subregion (LRR): A Lat: 45.433845 Long: -122.858479 Datum: _____

Soil Map Unit Name: Cornelius and Kinton silt loams, 20 to 30 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a swale draining south that was fenced off, contained aggressive goats, and was impassible, so vegetation was assessed from 20' visually, and hydrology assumed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	5	y	FACW
2.			
3.			
4.			
	5 = Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)			
1.			
2.			
3.			
4.			
5.			
	= Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	90	y	FAC
2. Juncus effusus	20	n	FACW
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	110 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	= Total Cover		

% Bare Ground in Herb Stratum 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

Grazing by goats.

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ✓ Other (Explain in Remarks)

[3]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** X **No** ___

Remarks:

No access due to fencing. Soil assumed hydric based on similar soil in similar swale environments along the same drainage.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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): ___

Saturation Present? (includes capillary fringe) Yes ___ No ___ Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

No access due to fencing. Hydrology assumed based on hydrology in similar swale environments on the same property

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

Project/Site: South Cooper Mountain LWI City/County: Washington Sampling Date: March 19, 2013

Applicant/Owner: City of Beaverton State: Oregon Sampling Point: 7

Investigator(s): PRR, EJRO Section, Township, Range: T2SR1WS6

Landform (hillslope, terrace, etc.): swale Local relief (concave, convex, none): concave Slope (%): 3

Subregion (LRR): A Lat: 45.42832 Long: -122.864528 Datum: _____

Soil Map Unit Name: Delena silt loam, 3 to 12 percent slopes NWI classification: none

Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No X (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 X No _____	**Is the Sampled Area within a Wetland?** Yes X No _____
Hydric Soil Present?	Yes X No _____	
Wetland Hydrology Present?	Yes X No _____	

Remarks:

Plot lies in a riparian wetland adjacent to a 1.5' wide drainage. The area has been recently mowed to remove Himalayan blackberry.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30' radius)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus latifolia	85	y	FACW
2.			
3.			
4.			
	85 = Total Cover		
Sapling/Shrub Stratum (Plot size: 30' radius)			
1. Rosa pisocarpa	10	y	FAC
2. Cornus sericea	15	y	FACW
3. Rubus armeniacus	5	n	FACU
4.			
5.			
	30 = Total Cover		
Herb Stratum (Plot size: 5' radius)			
1. Poa pratensis	40	y	FAC
2. Tolmeia menziesii	10	n	FAC
3. Carex obnupta	10	n	OBL
4. moss	40		
5.			
6.			
7.			
8.			
9.			
10.			
11.			
	60 = Total Cover		
Woody Vine Stratum (Plot size: 30' radius)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 10

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 100 (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species _____	x 5 = _____
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = _____

Hydrophytic Vegetation Indicators:

- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤3.0[1]
- ☐ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
- ☐ Wetland Non-Vascular Plants[1]
- ☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? Yes X No _____

Remarks:

SOIL

Sampling Point: 7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0 - 20	10YR 3/1	90	5YR 4/4	10	C	M	silty clay	

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

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

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

Indicators for Problematic Hydric Soils[3]:

- ___ 2 cm Muck (A10)
- ___ Red Parent Material (TF2)
- ___ Other (Explain in Remarks)

[3]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** X **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

- ___ 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 X Depth (inches): _____

Water Table Present? Yes X No _____ Depth (inches): 8"

Saturation Present? (includes capillary fringe) Yes X No _____ Depth (inches): 4"

Wetland Hydrology Present? **Yes** X **No** _____

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

Remarks:

Appendix C: Wetland Summary Sheets (Wetlands less than 0.5 acres Not Included)

OAR 141-086-0220*(3)(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).

LOCAL WETLAND INVENTORY
Wetland Characterization Sheet

DAVID EVANS AND ASSOCIATES INC.

GENERAL INFORMATION			
Wetland Code:	W-A (Locally Significant)	Method:	Onsite and Offsite
Wetland Size:	11.80 acres (+2.64 acres of open water)	Field Date(s):	March 19, 2013
Cowardin Class:	PFO1Y, PEM1Y (PUB)	Data Plot #s:	1, 2, 3, 4
HGM Class:	Slope, RFT	Investigators:	PRR, EJRO

LOCATION	
Street/landmark	North of Scholls Ferry Road, west of SW 175th Ave
Legal/tax map:	2S1W06000 TL0400, 0402, 0403, 0404, 0800
Sub-basin code:	CWS Streamshed –TR06.5 (Tualatin River Trib.)

WETLAND CHARACTERISTICS

Note that portions of this wetland were formally delineated by Pacific Habitat Services (October 13, 2014), which occurred after DEA's site visit. The delineation was approved by DSL and assigned DSL WD #2014-0497.

Description: This rather large wetland is fed by groundwater and two small, unnamed tributaries to the Tualatin River (TR-1, TR-1b). The eastern portion has been converted to pasture, and is dominated by non-native grasses Tall fescue (*Schedonorus phoenix*) and Meadow foxtail (*Alopecurus pratensis*), while the remainder consists of forested wetland. Site access was granted for only TL0402 and 0800 and representative plots were taken on those lots. The rest was viewed from adjacent lots and appeared to be similar in nature. Forested wetland dominant species are provided below. Vegetative diversity and wildlife use in the wetland was fairly high.

Soils: 16C – Delena silt loam, 3 to 12 percent slopes

Hydrologic Source: Groundwater/subsurface flow

Dominant Vegetation

Trees		Shrubs		Vines/Herbs	
Oregon ash	*Fraxinus latifolia*	Pacific ninebark	*Physocarpus capitatus*	slough sedge	*Carex obnupta*
		cluster rose	*Rosa pisocarpa*	Reed canarygrass	*Phalaris arundinacea*
		Douglas' hawthorn	*Crataegus douglasii*		
		Indian plum	*Oemleria cerasiformis*		

Potential Enhancement Opportunities:
-Weed removal and native plantings, especially in the pasture area.
-Drain tile removal in pasture area.
-Limiting herbicide/fertilizer application on adjacent farm fields to protect water quality
-Potential to remove dam for fish passage, but this should be weighed against providing open water habitat for wildlife and other opportunities and constraints.

LOCAL WETLAND INVENTORY
Wetland Characterization Sheet

DAVID EVANS AND ASSOCIATES INC.

GENERAL INFORMATION			
Wetland Code:	W-C (Locally Significant)	Method:	Onsite and Offsite
Wetland Size:	1.42 acres	Field Date(s):	March 19, 2013
Cowardin Class:	PFO1Y	Data Plot #s:	7
HGM Class:	Slope, RFT	Investigators:	PRR, EJRO

LOCATION	
Street/landmark	North of Scholls Ferry Road, west of SW 175th Ave
Legal/tax map:	2S1W06000 TL0404, 0500, and 0600
Sub-basin code:	CWS Streamshed –TR06.5 (Tualatin River Trib.)

WETLAND CHARACTERISTICS

Description: This wetland is fed by groundwater and an unnamed tributary to the Tualatin River (TR-1), and lies downslope of a small dam. The dam may have reduced historic extent of the wetland based on hydric soils mapping, and the fact that Himalayan blackberry (*Rubus armeniacus*) was present in the wetland, indicating drying during the summer months. Blackberry in the wetland was recently cut as a part of the adjacent residential construction. Dominant wetland species are provided below.

Soils: 16C – Delena silt loam, 3 to 12 percent slopes

Hydrologic Source: Unnamed tributary to the Tualatin River; groundwater discharge

Dominant Vegetation

Trees		Shrubs		Vines/Herbs	
Oregon ash	*Fraxinus latifolia*	Red-osier dogwood	*Cornus sericea*	Kentucky bluegrass	*Poa pratensis*
		cluster rose	*Rosa pisocarpa*		

Potential Enhancement Opportunities:
-Weed removal and native plantings, especially in the pasture area.
-Limiting herbicide/fertilizer application on adjacent farm fields to protect water quality

LOCAL WETLAND INVENTORY
Wetland Characterization Sheet

DAVID EVANS AND ASSOCIATES INC.

GENERAL INFORMATION			
Wetland Code:	W-G	Method:	Offsite
Wetland Size:	21.29 acres	Field Date(s):	March 19, 2013
Cowardin Class:	PEM1Yf	Data Plot #s:	N/A
HGM Class:	Slope	Investigators:	PRR, EJRO

LOCATION	
Street/landmark	North of Scholls Ferry Road, east of SW Tile Flat Road
Legal/tax map:	2S2W01000 TL0101
Sub-basin code:	CWS Streamshed –TR06.5 (Tualatin River Trib.)

WETLAND CHARACTERISTICS

Description: This wetland lies in a swale and what is likely a broad and shallow depressional area within a recently plowed field. Aerial photo signatures show potential wetland hydrology conditions over a broad area; however, actual wetland extent could vary considerably. It is unknown if the site has tile drains. The wetland contained no vegetation at the time of the site visit (viewed from Tile Flat Road) and based on aerial photography it appears to plowed annually. It is connected to tributary TR-1a, which is impounded somewhat by a dam near Scholls Ferry Road.

Soils: 7B – Cascade silt loam, 3 to 7 percent slopes
16C – Delena silt loam, 3 to 12 percent slopes

Hydrologic Source: groundwater/subsurface flow

Dominant Vegetation

Trees	Shrubs	Vines/Herbs
None –plowed field	None – plowed field	None – plowed field

Potential Enhancement Opportunities:
-Weed removal and native plantings.
-Limiting herbicide/fertilizer application on adjacent orchards to protect water quality

LOCAL WETLAND INVENTORY
Wetland Characterization Sheet

DAVID EVANS AND ASSOCIATES INC.

GENERAL INFORMATION

Wetland Code:	W-H (Locally Significant)	Method:	Offsite (delin by others)
Wetland Size:	10.79 acres	Field Date(s):	March 19, 2013
Cowardin Class:	PSS1Y	Data Plot #s:	N/A
HGM Class:	Slope, RFT	Investigators:	PRR, EJRO

LOCATION

Street/landmark	Just north of Scholls Ferry Road, east of SW 175th Ave
Legal/tax map:	2S1W06000 TL0103 and 0200
Sub-basin code:	CWS Streamshed --SMC (Summer Creek)

WETLAND CHARACTERISTICS

Wetland areas in tax lot 0103 were formally delineated by AKS Engineering & Forestry, LLC (November 26, 2014) and areas in tax lot 0200 were delineated by Anchor QEA, LLC (2015). Both delineations were concurred with and assigned DSL WD#2015-0063 and #2015-0105, respectively. Both delineations occurred after DEA's off-site reconnaissance visit. The wetland continues off-site to the east, which was previously delineated and assigned DSL WD#2006-0732.

Description: This wetland is fed by both groundwater and a small, unnamed tributary to Summer Creek. Although the wetland was only visible from Scholls Ferry Road, it appeared to be a mixture of pasture grasses and shrubs, with scattered Oregon ash in the overstory (approximately 50%). The wetland follows along unnamed tributary (SMC) up the hillslope where recent logging activities had removed much of the vegetation but is likely to quickly grown back into a scrub-shrub community and eventually forested wetland if there is no future disturbance.

Soils: 16C – Delena silt loam, 3 to 12 percent slopes

Hydrologic Source: Tributary to Summer Creek; groundwater/subsurface flow discharge

Dominant Vegetation

Trees		Shrubs		Vines/Herbs	
Oregon ash	*Fraxinus latifolia*	Willow	*Salix sp.*	Tall fescue	*Schedonorus phoenix*
				Velvetgrass	*Holcus lanatus*
				Colonial bentgrass	*Agrostis capillaris*
				Meadow foxtail	*Alopecurus pratensis*

Potential Enhancement Opportunities:
It appears that riparian vegetation could be increased and enhanced by weed removal and native plantings, especially in the herbaceous layer.
The wetland extends upslope to the west a short distance into plowed pasture, where the tributary has been channelized along the eastern boundary of the field. Riparian restoration would be especially valuable in this area. Other opportunities:
- Limiting herbicide/fertilizer application on adjacent farm fields to protect water quality

Appendix D: Wetland Functional Assessment Results

OAR 141-086-0220*(3)(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.

Watershed summary sheet for the Oregon Method

Watershed or community identification: Lower Willamette Drainage Basin

Characteristic	Description
Physical characteristics of the watershed	Gentle to fairly steep slope south facing watershed. Drains to Tualatin River or tributaries of the Tualatin River. Drainages are typically headwater drainages, with much of the stream length likely only flowing intermittently, drying out in the late summer. Small irrigation dams/water control stuctures occur on two of the drainages. The watershed drainaging to the LWI study area covers an area of approximately 770 acres. The average slope of the watershed is approximately 7 percent, with lower gradient slopes occuring in the southern/lower portion and steeper slopes occuring in the northern/upper portion. All streams in the watershed have been modified to varying degrees. For the most part, water is not being taken out of the streams through diking, drainage or irrigation districts in the watershed upstream of the assessment area.
Land uses within the watershed	The dominant land use in the watershed upstream from the assessment area is agriculture; however, forested areas and rural residential dwellings are also prevalent. The area within the assessment area is clearly dominated by agricultural land uses, including a mix of annual crops, pasture, orchards, and viticulture.
Water quality	No streams within the study area are listed as water quality limited according to DEQ 303(d) databases. A recent Oregon Statewide Assessment of Nonpoint Sources of Water Pollution was not available. It is assumed that project stream reaches would be classified as "no data available" since they are intermittent headwater streams. However, riparian areas are lacking substantial native vegetation, especially trees and shrubs, along most streams reaches. This results in a lack of stream shading and affective water quality buffers to capture sediment from agricultural fields. These factors likely lead to reduced water quality.
Biological characteristics of the watershed	Assessment area streams are intermittent streams and contain fish passage barriers at the downstream end of the assessment area. They drain to stream reaches that support an anadromous fishery. Native plant communities have largely been replaced by agricultural lands. Therefore sensitive wildlife species are presumed absent. Wildlife that persist or thrive in agricultural settings, such as deer, coyote, raccoon, etc. are present within the watershed. High quality native habitat exists to the north of the watershed within Cooper Mountain Nature Park and are generally accessable to wildlife that may occur within the LWI study area.

Narrative summary of watershed description
The project study area primarily consists of rural lands that are bordered to the east by suburban development and to the north, south, and west by rural land. Slopes range from gently rolling in the south half to moderately steep in the north half of the study area. The majority of the land drains to the south, with a portion of the area draining to the southeast. Land use is predominantly agricultural, with a mix of annual crop production, pasture, orchards, and viticulture. Several small remnant patches of native forest habitat occur within the area, including mixed upland fir-deciduous forest, Oregon ash dominated wetland forest, and patches of Oregon oak forest. Several fir dominated lots were being logged or had recently been logged as observed during the March 2013 site visits.

Wetland Characterization Questions: Answer Sheet				
Wetland Identifier	W-A (11.80 acres)	W-C (1.42 acres)	W-G (21.29 acres)	W-H (10.79 acres)
Question #				
1	Lower Willamette	Lower Willamette	Lower Willamette	Lower Willamette
2	0.35 sq miles	0.43 sq miles	0.16 sq miles	0.22 sq miles
3	8 percent	8 percent	4 percent	7 percent
4	A	A,B	A,B	A,B
5	B	B	B	B
6	B	B	B	B
7	B	B	B	B
8	A (no data)	A (no data)	A (no data)	A (no data)
9	F	F	F	F
10	B	B	B	B
11	C	C	--	C
12	B	B	B	B
13	A	A	A	A
14	B	B	B	B
15	(1-b),(2-c),(4-a)	(1-b),(2-c),(4-a)	(1-b),(2-c),(4-a)	(1-b),(2-b),(4-a)
16	(1-b),(2-c),(4-a)	(1-b),(2-c),(4-a)	(1-b),(2-c),(4-a)	(1-b),(2-a),(4-b)
17	A	B	A	A
18	A	A	A	A
19	B	B	B	B
20	(4) developed at 100%	(4) developed at 100%	(4) developed at 100%	(4) developed at 100%
21	d, c, --, b	--, --, --, a	--, c, --, --	--, c, --, --
22	NA, currently rural	NA, currently rural	NA, currently rural	NA, currently rural
23	A	A	C	A
24	B	C	C	C
25	B	C	C	B
26	NA, currently rural	NA, currently rural	NA, currently rural	NA, currently rural
27	A	A	A	A
28	B	D	D	D
29	C	B	C	C
30	NA, connection impedded	B	C	C
31	NA, connection impedded	A	D	D
32	NA, connection impedded	C	C	C
33	A	NA, no lake	C	NA, no lake
34	A	NA, no lake	C	NA, no lake
35	C	NA, no lake	C	NA, no lake
36	C	A	C	C
37	C	A, sediment deposits	C	C
38	A	C	C	C
39	A	B	A	A
40	A	A	A	A
41	C	C	C	C
42	B, busy road/no sidewalk	A	B, busy road/no sidewalk	B, busy road/no sidewalk
43	A	A	A	A
44	B	B	B	B
45	B	B	B	B
46	C	C	C	C
47	C	C	C	C

Wetland Assessment Questions: Answer Sheet			
Wetland Identifier	W-A (11.80 acres)	W-C (1.42 acres)	W-G (21.29 acres)
Wildlife habitat			
Question 1	A	B	C
Question 2	A	A	C
Question 3	B	C	C
Question 4	A	-	-
Question 5	A	A	A
Question 6	A	A	A
Question 7	A	A	A
Question 8	B	B	B
Question 9	A	A	C
Assessment Descriptor	Diverse	Diverse	Some habitat
Fish habitat			
Streams and rivers			
Question 1	A	A	C
Question 2	A	A	B
Question 3	B	C	C
Question 4	A	A	A
Question 5	B	B	B
Question 6	B	B	C
Lakes and ponds			
Question 1	B	-	-
Question 2	C	-	-
Question 3	B	-	-
Question 4	A	-	-
Question 5	B	-	-
Question 6	B	-	-
Assessment Descriptor	Intact	Intact	Degraded
Water quality			
Question 1	C	C	C
Question 2	C	A	C
Question 3	A	A	A
Question 4	A	B	A
Question 5	B	B	B
Question 6	C	C	C
Assessment Descriptor	Degraded	Degraded	Degraded
Hydrologic control			
Question 1	B	B	B
Question 2	C	C	C
Question 3	A	B	A
Question 4	A	B	A
Question 5	A	C	C
Question 6	B	B	B
Question 7	A	A	A
Assessment Descriptor	Intact	Degraded	Degraded

Wetlands of Special Interest for Protection Questions: Answer Sheet				
Wetland Identifier	W-A (11.80 acres)	W-C (1.42 acres)	W-G (21.29 acres)	W-H (10.79 acres)
Question 1	b	b	b	b
Question 2	b	b	b	b
Question 3	b	b	b	b
Question 4	b	b	b	b
Question 5	a (portion of wetland)	a	b	a (portion of wetland)
Question 6	b	b	b	b
Question 7	b	b	b	b
Question 8	b	b	b	b
Question 9	b	b	b	b
Question 10	b	b	b	b
*Meets WISP criteria**	yes (portion of wetland)	yes	no	yes (portion of wetland)

*Only one question out of the ten needs to be answered as "a" in order to meet WISP criteria.