

KEYSTONE
NATURAL
RESOURCE
CONSULTING

June 6, 2014

WETLAND BOUNDARIES, SAMPLE & PHOTO POINTS
 WETLAND DELINEATION FOR
 TAX LOT 3600, MAP 39 1E 10DA
 Ashland, Jackson County, Oregon

Scale 1 inch = 60 ft.

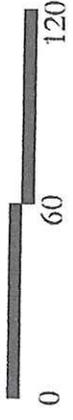


FIGURE 7

SOURCE: Polaris Land Surveying, April 2014, Sub-foot accurate.

WETLAND DELINEATION / DETERMINATION REPORT COVER FORM

This form must be included with any wetland delineation report submitted to the Department of State Lands for review and approval. A wetland delineation report submittal is not "complete" unless the fully completed and signed report cover form and the required fee are submitted. Attach this form to the front of an unbound report and submit to: Oregon Department of State Lands, 775 Summer Street NE, Suite 100, Salem, OR 97301-1279. Make the check payable to the Oregon Department of State Lands. To pay the fee by credit card, call 503-986-5200

<input checked="" type="checkbox"/> Applicant X Owner Name, Firm and Address: Kathieen Livni, 2535 Old Mill Way Ashland, Oregon, 97520	Business phone # 510-913-5110 Mobile phone # (optional) FAX # E-mail: Helmansprings@gmail.com
<input type="checkbox"/> Authorized Legal Agent, Name and Address: Same as above	Business phone # FAX # Mobile phone # E-mail:
I either own the property described below or I have legal authority to allow access to the property. I authorize the Department to access the property for the purpose of confirming the information in the report, after prior notification to the primary contact. Typed/Printed Name: <u>KATHLEEN DALEY LIVNI</u> Signature: <u>Kathleen Daley Livni</u> Date: <u>6.4.14</u> Special instructions regarding site access: <u>N/A</u>	

Project and Site Information (for latitude & longitude, use centroid of site or start & end points of linear project)

Project Name: NONE	Latitude: 42.1907	Longitude: -122.6801
Proposed Use: Home Development	Tax Map # 39S 01E 10DA	
Project Street Address (or other descriptive location): Located west of the west terminus of Creek Drive	Township 39S Range 1E Section 10 QQ nwse	Tax Lot (s) 3600
City: Ashland County: Jackson	Waterway: Cemetery Creek River Mile: N/A NW1 Quad(s): online wetlands mapper	

Wetland Delineation Information

Wetland Consultant Name, Firm and Address: Keystone Natural Resource Consulting, Mike Holscher 12920 SW Moreno Dr. Gaston, OR 97119	Phone # 503-201-9077 Mobile phone # FAX # E-mail: mike@keystonenrc.com
The information and conclusions on this form and in the attached report are true and correct to the best of my knowledge.	
Consultant Signature: <u>[Signature]</u>	Date: June 6, 2014

Primary Contact for report review and site access is Consultant Applicant/Owner Authorized Agent

Wetland/Waters Present? Yes No Study Area size: **2.6** Total Wetland Acreage: **655sf wetland**
478sf stream

Check Box Below if Applicable:

Fees:

<input type="checkbox"/> R-F permit application submitted	<input checked="" type="checkbox"/> Fee payment submitted \$396
<input type="checkbox"/> Mitigation bank site	<input type="checkbox"/> Fee (\$100) for resubmittal of rejected report
<input type="checkbox"/> Wetland restoration/enhancement project (not mitigation)	Name of Payor: _____
<input type="checkbox"/> Industrial Land Certification Program Site	

Other Information:

Has previous delineation/application been made on parcel?	Y N X <input type="checkbox"/>	If known, previous DSL # WD 03-0203
Does LWI, if any, show wetland or waters on parcel?	X <input type="checkbox"/>	Wetland 4

For Office Use Only

DSL Reviewer: _____	Fee Paid Date: ____/____/____	DSL WD # _____
Date Delineation Received: ____/____/____	DSL Project # _____	DSL Site # _____
Scanned: <input type="checkbox"/> Final Scan: <input type="checkbox"/>	DSL WN # _____	DSL App. # _____

**Wetland Delineation for Tax Lot
3600, Tax Map 39 1E 10DA**

Prepared For

**Kathleen Livni
2535 Old Mill Way
Ashland, Oregon 97520**

Prepared By

**Mike Holscher, PWS
Keystone Natural Resource Consulting
12920 SW Moreno Drive
Gaston, Oregon 97119
503-201-9077
*mike@keystonenrc.com***

June 6th, 2014

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LANDSCAPE SETTING AND LAND USE

General Setting and Topography

The study area is located immediately northwest of the terminus of Creek Drive in Ashland Oregon (T39S, R1E, Section 10; Figures 1 & 2 in Appendix A). The landform is the toe slopes of the Klamath Mountains approximately 0.6 mile upslope (south) of Bear Creek. The general landscape in the area is gently sloping to the north with subtle undulations perpendicular to the slope where small drainages flow toward Bear Creek. The lands to the south are increasingly being developed with the newest developments adjacent to the study area. The development is a combination of older and newer residential subdivisions. The lands to the east, west and north are sparsely developed with much of the area as open graze lands and rural farmsteads. The land is mostly composed of grasses and forbs except for riparian zones which support some shrub and tree communities.

Lot 3600 is a gentle north sloping property. The grade is less than 5 percent at maximum. In the eastern portion of the property the lands drop into a floodplain associated with Cemetery Creek. The land west of the floodplain rises 5 feet to a terrace while the lands east of the creek rise 10 feet to a terrace. The property is mostly vegetated with grasses and forbs. There are a few newly planted trees throughout the eastern part of the site. In the southeast corner of the site near the terminus of Creek Drive, the eastern terrace escarpment is covered with Himalayan blackberry (*Rubus armeniacus*).

Cemetery Creek is a 2-foot wide drainage with a monoculture of reed canary grass dominating the floodplain on either side. A few mature weeping willows (*Salix babylonica*) are scattered throughout the floodplain onsite.

SITE ALTERATIONS

In 2003 wetland fill was noted onsite and Jennifer Goodridge and Bob Lobdell from Oregon Division of State Lands (ODSL) conducted a partial wetland determination of the area east of Cemetery Creek in order to identify areas of wetland that were impacted. It appears that the fill material has been removed and the area is restored. The ODSL delineation is attached to this report in Appendix E. That 2003 wetland boundary was added to Figure 7 based upon the field measurements on the ODSL determination map.

In fall of 2013, the current land owner plugged a stormwater outfall near the terminus of Creek Drive. The outfall was diverting untreated street runoff into the floodplain on his property. Currently, the street runoff is diverted into a ditch that runs along the east property line. The cap for the outfall still leaks a minor amount of water into the floodplain.

PRECIPITATION DATA AND ANALYSIS

The field data was collected on April 10, 2014. Monthly rainfall data was collected from WETS table for Ashland, Oregon. The daily rainfall totals for the 14 days prior to field work was obtained from NOAA National Climatic Data Center from their Medford Station. According to the WETS table the growing season starts on April 10 in 5 out of 10 years.

Month	Observed	Average	Deviation of Avg.	Percent of Avg.
January	0.73 in.	2.49 in.	-1.71 in.	30%
February	4.02 in.	1.92 in.	2.1 in.	209%
March	3.66 in.	2.09 in.	1.23 in.	159%
April	1.48 in.	1.68 in.	-0.2 in.	88%
TOTALS	17.08 in.			121%

According to daily NOAA climate data for Medford, Oregon, the precipitation data for the 14 days prior to field data collection was 1.22 inches. That rainfall accumulation is at or above normal precipitation totals for a 2 week period in March or April.

The water year starting in October 2013 was very dry until the end of January 2014. Since January there have been 2 months of excessive rainfall accumulation and the rainfall in the 14 days prior to field work was at a seasonal norm. Hydrology data collected was considered accurate and under normal circumstances.

METHODS

Offsite Methods

Soil mapping information was obtained from data available on the Web Soil Survey (WSS) for Jackson County. The USFWS wetlands mapper (NWI), tax maps and available air photos were also reviewed prior to site visit. This information provided basic knowledge and preliminary topographic indication of the location of waters, wetlands, and hydric soils to facilitate on-site reconnaissance for efficient and useful data collection. In this case, a previous ODSL 2003 wetland determination was reviewed and this year's data was collected in similar locations to ODSL.

The NWI shows no indication of a wetland within the study area (Figure 4). The City of Ashland local wetland inventory (LWI; Figure 3) does indicate a wetland along the east edge of lot 3600. It is labeled as W4 (wetland 4) and it also noted with the ODSL wetland determination number (WD 03-0203).

The Jackson County Soil Survey notes that the study area is mapped entirely as Kubli loam (Figure 5). The series is not listed as a hydric soil, but has hydric components of Aquolls

and Gregory silty clay loam. The Kubli and Gregory soils are found on stream terraces. All data collected was within the lowlands area associated with a drainage, so the soils documented are not similar to either series description.

The August 22, 2012 air photo indicates a lush green vegetation pattern in the lowlands adjacent to Cemetery Creek (Figure 6).

Field Methods

The focus of data collection within lot 3600 was within the lowlands adjacent to Cemetery Creek. Eleven sample points were selected which lie in two rough transects that cross the lowlands perpendicular to the Cemetery Creek alignment. Because the field work was conducted at the beginning of the growing season, documentation of hydrology indicators was expected in areas that ODSL had previously mapped as wetland (T1-P1, T2-P6 and T2-P5 in this report). Positive hydrology indicators were only documented at T2-P5 and marginally at T2-P4. The remaining wetland plots were selected to sufficiently represent all areas of the lowlands. Because this area was previously mapped as wetland, it was imported to see a lot of soil pits at various elevations in the lowlands.

Besides the area mapped as wetland in Figure 7, no other plots met the hydrology or soil criteria. The plots closest to Cemetery Creek had an observed water table but beyond the positive criteria depth. The lowlands are chiefly vegetated with reed canary grass (*Phalaris arundinacea*); a hydrophytic species which is commonly found in floodplains that are not wetlands.

The soil pits were dug and left open for three hours in order to allow the water tables to rise to their current seasonal levels. Based upon soils encountered this was deemed long enough to get accurate hydrology data.

DESCRIPTION OF WETLANDS AND OTHER NON-WETLAND WATERS

There are two features within the study area mapped on Figure 7 as wetlands and “waters.”

Wetlands

One small wetland was flagged in the lowland area of lot 3600 east of Cemetery Creek. The wetland is located near the Creek Drive storm water outfall. The outfall was plugged last year but some water continues to escape. The soils were marginally hydrophytic with distinct mottle present in the upper horizon. The water table was at 11 inches and saturated soils at 10 inches. Reed canary grass is the dominant species but half of the area was barren ground from the machinery used to construct the storm water outfall blockage (Photos 1 & 4).

Waters

Cemetery Creek flows through the middle of the lowlands in the eastern portion of lot 3600. The creek on average is 2 feet wide. It was flowing during the site visit and was only a few inches deep. The stream channel runs in a fairly direct channel with little sinuosity. The banks are well defined and surrounded by reed canary grass (photo 5). The centerline of the creek was surveyed along with the wetland boundary and sample points flags.

DEVIATION FROM NATIONAL AND LOCAL WETLAND INVENTORIES

The (NWI) does not indicate any wetlands within lot 3600. The LWI indicates a wetland and Cemetery Creek within the east part of lot 3600. The wetland areas east of Cemetery Creek on LWI came from a previous wetland determination by ODSL. The wetland area west of Cemetery Creek were mapped by Fishman/SWCA. The feature is labeled as W4 or wetland 4. The informational page for wetland 4 in the LWI report states that no data was collected for this wetland because site access was not granted. Fishman/SWCA likely used the ODSL wetland determination and air photos showing a larger lush green pattern to map this LWI polygon. A logical approach based upon 2003 data.

It has been concluded that the wetland within lot 3600 is smaller than mapped on the LWI map (Figure 3 & Figure 7).

MAPPING METHODS

Sample plot and wetland boundary flags were placed in the field by biologist, Mike Holscher, PWS. These flags and the creek centerline were surveyed by Polaris Land Surveying and have a sub-foot accuracy. Keystone NRC modified the Polaris drawings to create the figures for this report.

ADDITIONAL INFORMATION

The data sheets from the ODSL wetland determination dated April 16, 2003 were reviewed (ODSL WD# 03-0203). While hydrology was observed within criteria depth in area mapped as wetland. None of the 2003 soils documented meet positive criteria depth according to current standards within the western supplement. There is a note that organic material was present at a couple wetland plots (plots 1 & 2). But there is no indication that this organic material is a histic or mucky type soil. Sample plots for this report were located near the 2003 ODSL plots (see T1-P1, T2-P4 & T2-P5). Both the ODSL and KNRC soil profiles are similar in these areas but KNRC did not note organics in the profiles.

At the time of the ODSL delineation the water year from October 2002 through April 2003 was 104 percent of normal. The positive hydrology data noted in 2003 could have been exaggerated by the storm water outfall that is currently blocked.

The vegetation data from 2003 notes only one plot with reed canary grass. That plot (#4) was an upland plot. The other vegetation noted though out the site is no longer present. The reed canary grass appears to have out competed the species noted in 2003. That 2003 upland data plot verifies that reed canary grass has no problem thriving in upland and it does all over the site today.

The City of Ashland's storm water management plan is located in Appendix B. The study area is highlighted in yellow. The plan shows that roughly 45 homes including streets diverted storm water directly onto lot 3600 until last fall. The subdivision was built in 2002 and would likely have been the water source noted in the 2003 ODSL data sheets. The LWI mentions that several storm water outflows feed this wetland area. Water is flashy in the lowlands, but does not linger long enough to create positive hydric soil indicators. The lowlands are sloped north and the water moves through the site; there is nothing holding it there.

The map produced for the 2003 report shows 4 measurements from the east property line. That line was transferred to Figure 7 using those field measurements. Based on those numbers the wetland boundary lies between halfway and just below the top of terrace. There is no indication of side hill seepage/wetland on any part of that terrace slope.

RESULTS AND CONCLUSION

It is the conclusion of KNRC that two potentially regulated features within Lot 3600; one is Cemetery Creek, a tributary of Bear Creek. The second feature is a small wetland associated with leakage from a storm water outfall.

Cemetery Creek – 478 square feet

Wetland – 655 square feet

Total Potentially Jurisdictional Lands – 1,133 square feet - 0.03 acre

DISCLAIMER

“This report documents the investigation, best professional judgment and conclusions of the investigator. It is correct and complete to the best of my knowledge. It should be considered a Preliminary Jurisdictional Determination of wetlands and other waters and used at your own risk unless it has been reviewed and approved in writing by the Oregon Department of State Lands in accordance with OAR 141-090-0005 through 141-090-0055.” (Appendix E)

Report drafted by:

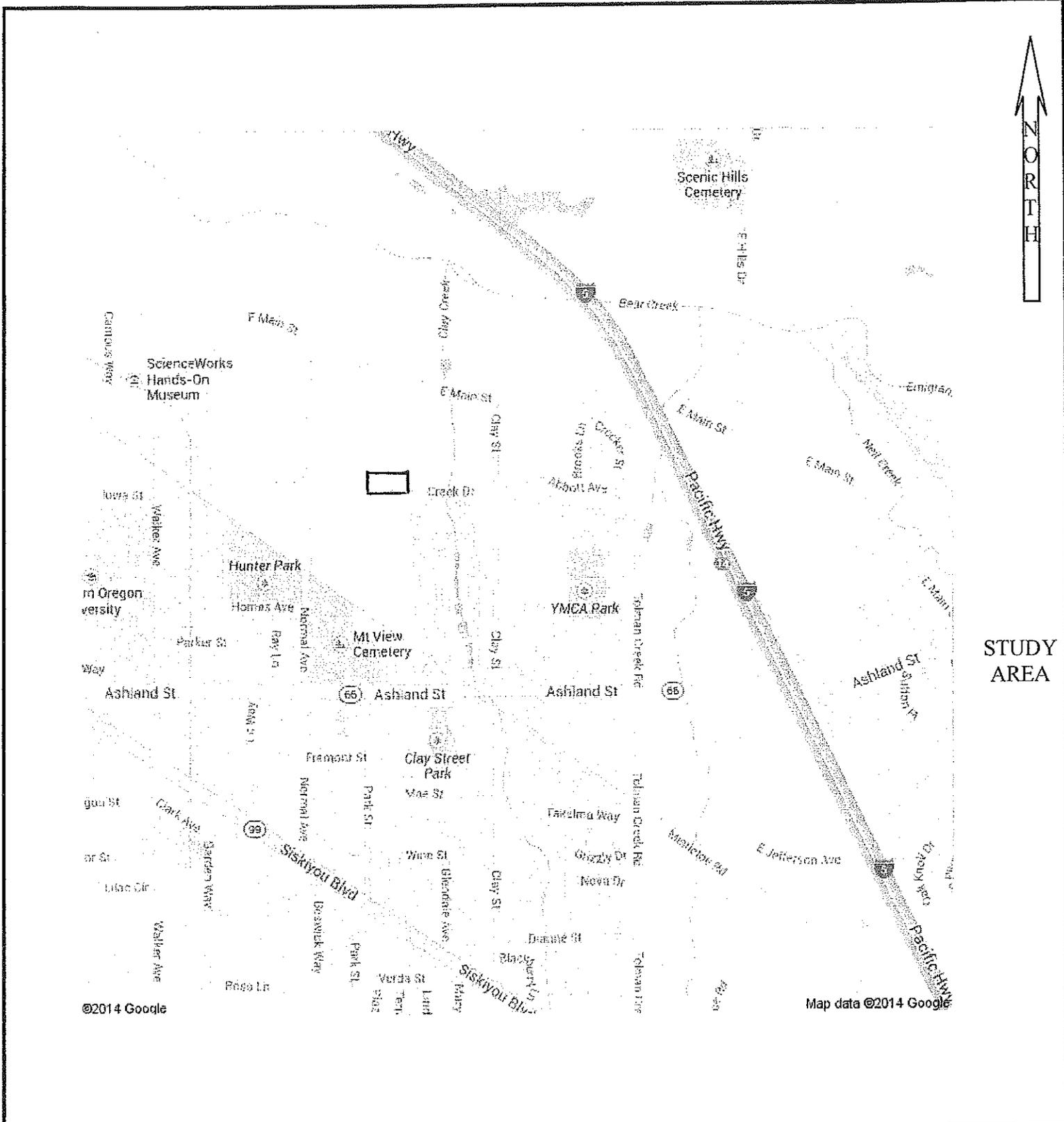


Mike Holscher, PWS
Keystone Natural Resource Consulting



APPENDIX A

- Maps



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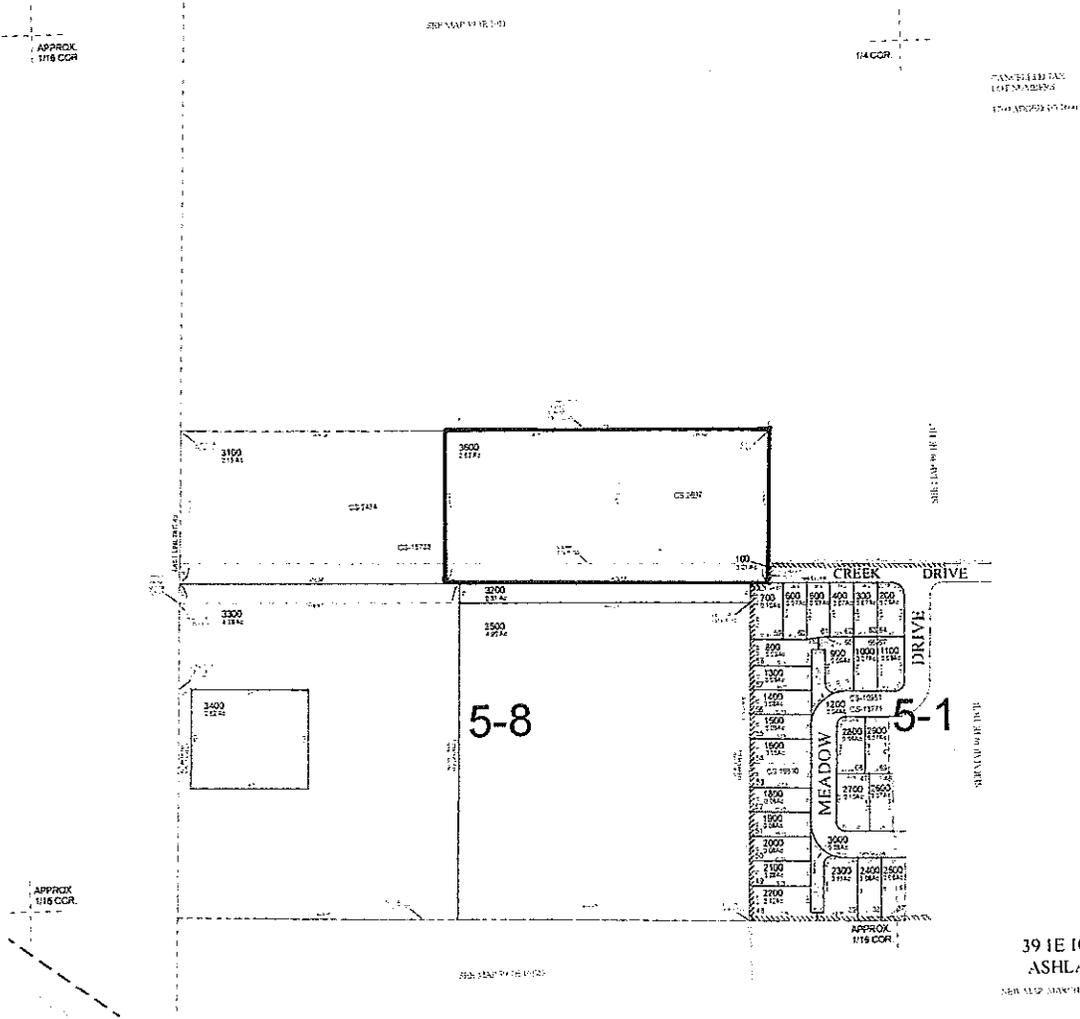
VICINITY
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA
Ashland, Jackson County, Oregon

FIGURE 1



N.E. 1/4, S.E. 1/4, SEC. 10, T.39S., R. 1E., W.M.
JACKSON COUNTY
1" = 100'

39 1E 10DA
ASHLAND



STUDY
AREA

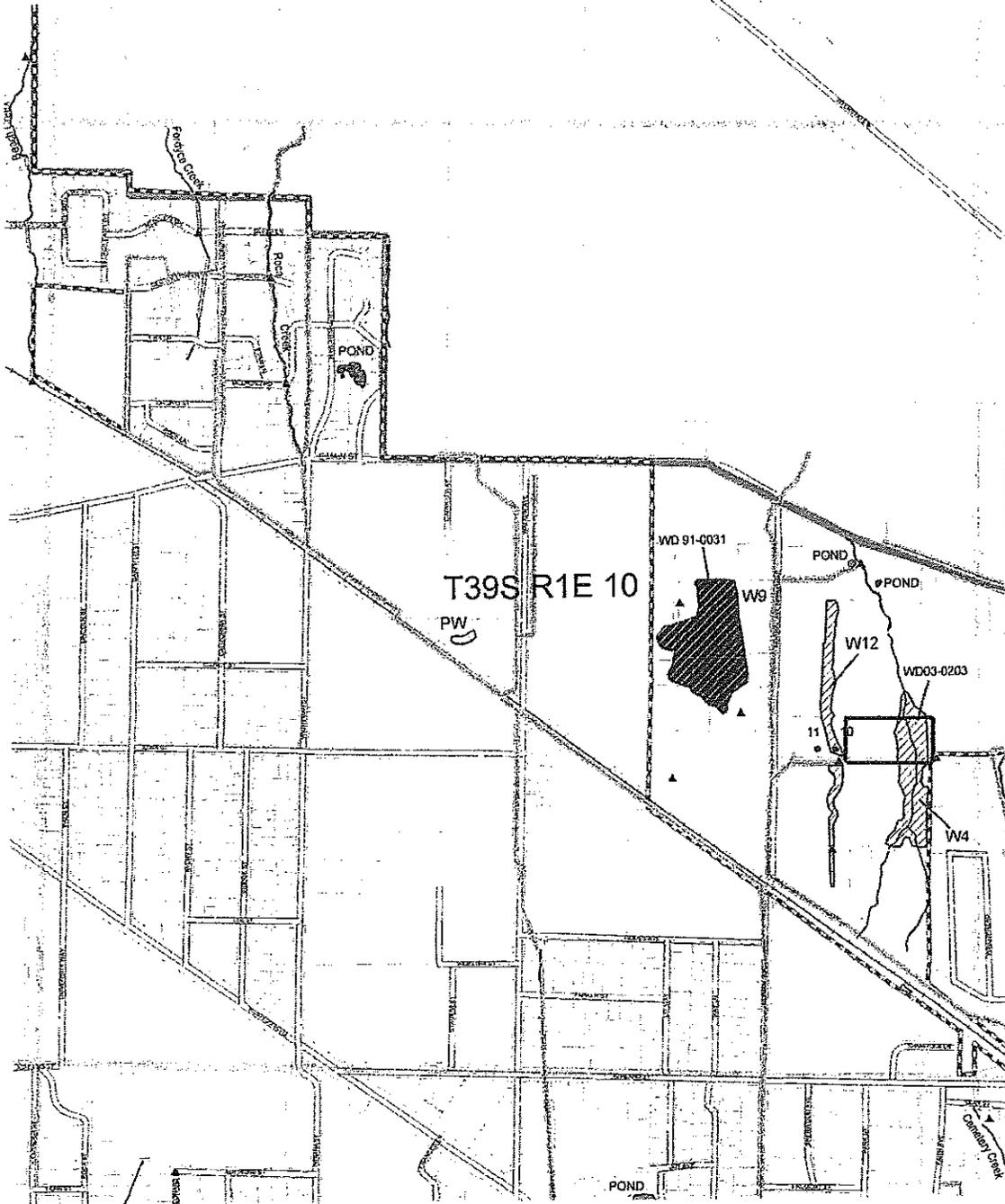
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TAX MAP
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA
Ashland, Jackson County, Oregon

FIGURE 2

No Scale





STUDY
AREA

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LOCAL WETLAND INVENTORY
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA
Ashland, Jackson County, Oregon

FIGURE 3

Approximate Scale 1 inch = 1000 ft.





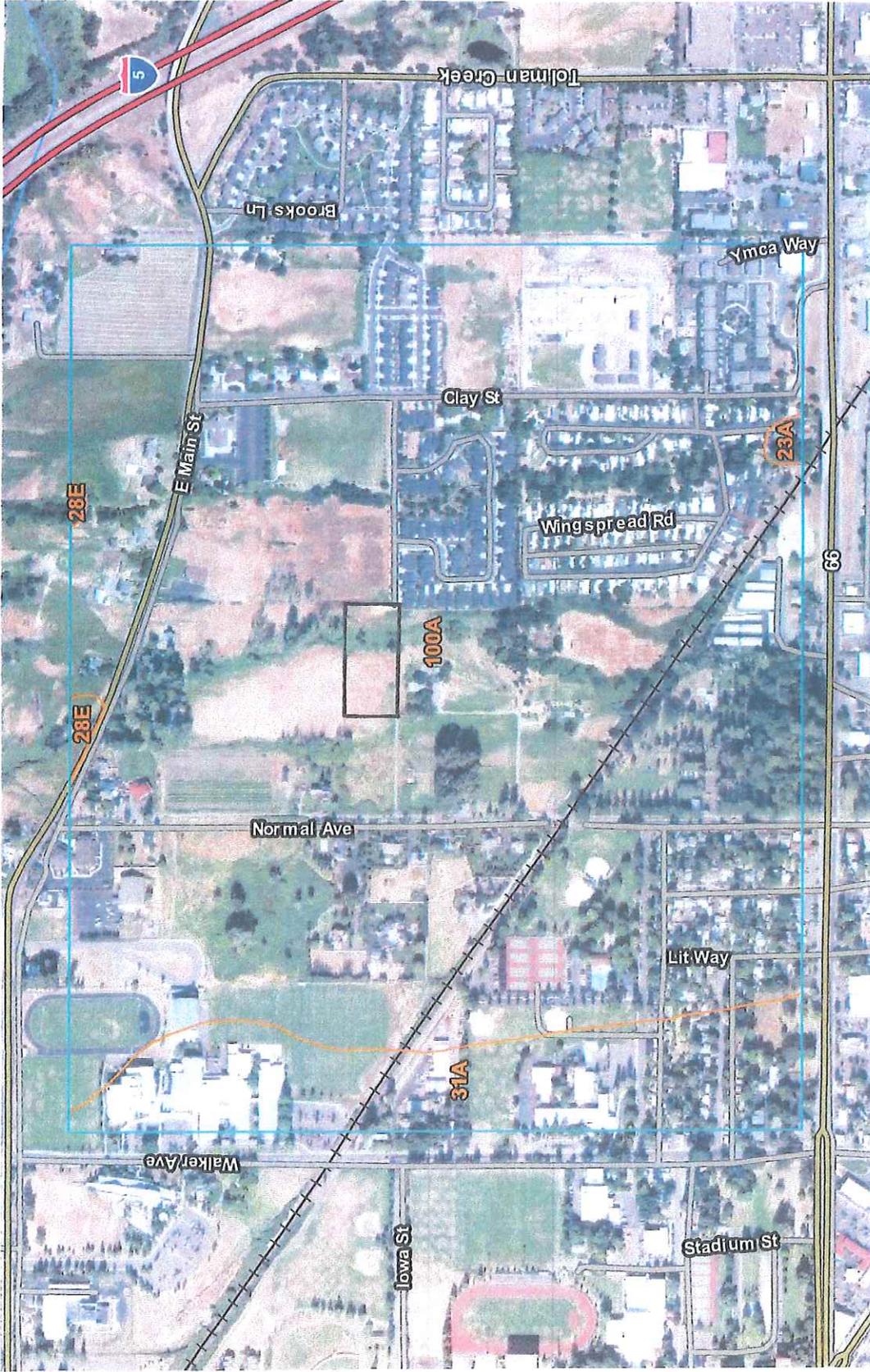
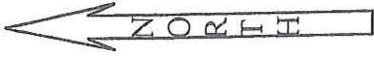
STUDY
AREA

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AIR PHOTO - AUGUST 22, 2012
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA
Ashland, Jackson County, Oregon

FIGURE 6





100A - Kubli loam

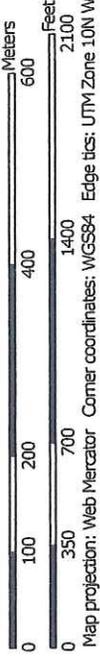
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June 6, 2014

**SOILS
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA**
Ashland, Jackson County, Oregon

FIGURE 5

Map Scale: 1:7,990 if printed on A landscape (11" x 8.5") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

SOURCE: NRCS Web Soil Survey, 6/2/14.



STUDY
AREA

Wetlands

-  Freshwater Emergent
-  Freshwater Forested/Shrub
-  Estuarine and Marine Deepwater
-  Estuarine and Marina
-  Freshwater Pond
-  Lake
-  Riverrine
-  Other

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NATIONAL WETLAND INVENTORY
WETLAND DELINEATION FOR
TAX LOT 3600, MAP 39 1E 10DA
Ashland, Jackson County, Oregon

FIGURE 4

Approximate Scale 1 inch = 200m



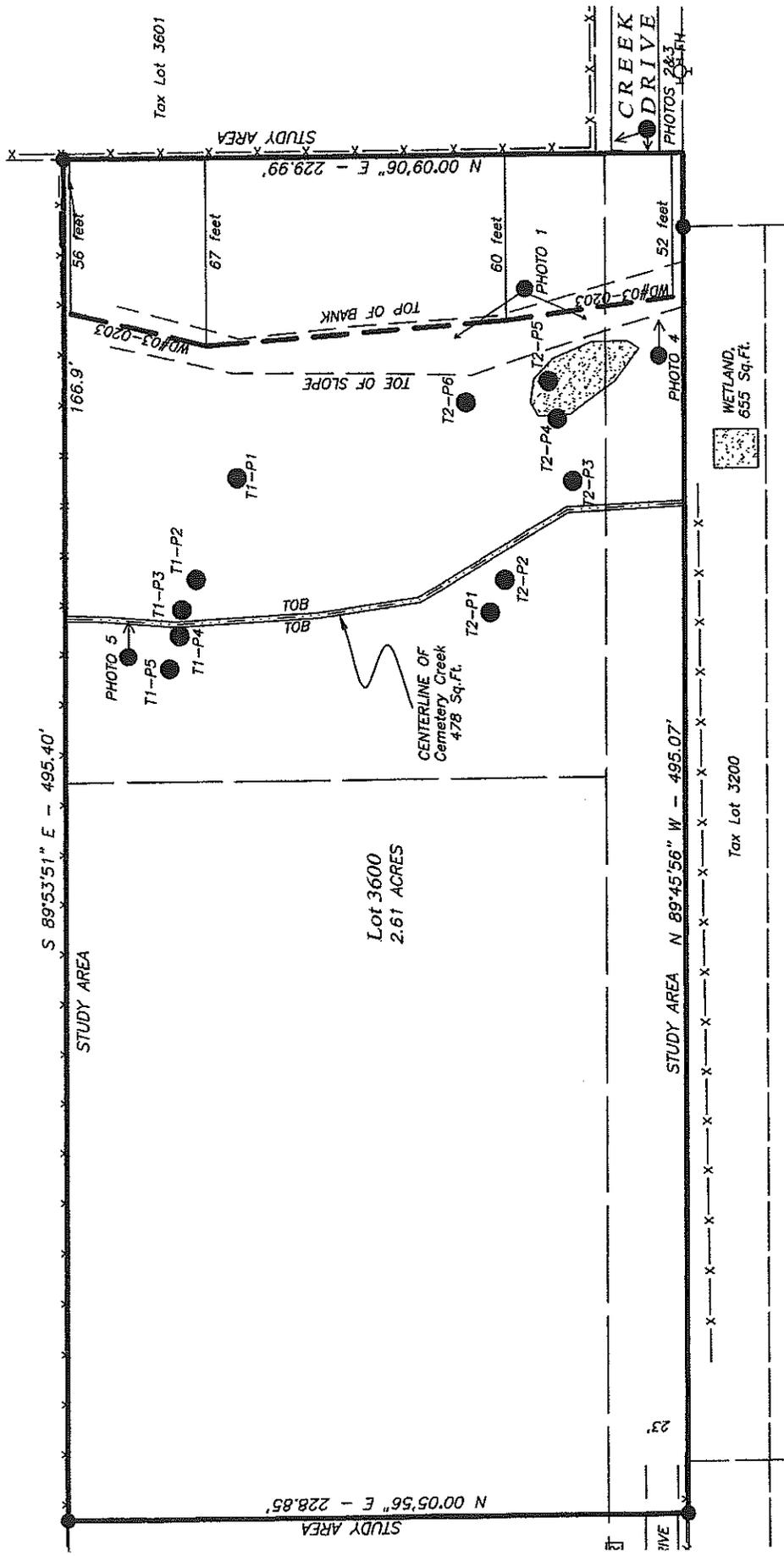
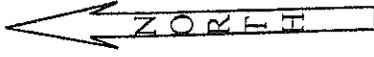
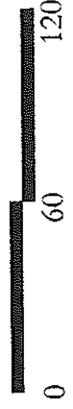


FIGURE 7

WETLAND BOUNDARIES, SAMPLE & PHOTO POINTS
 WETLAND DELINEATION FOR
 TAX LOT 3600, MAP 39 1E 10DA

Ashland, Jackson County, Oregon

Scale 1 inch = 60 ft.



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SOURCE: Polaris Land Surveying, April 2014. Sub-foot accurate.