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**JURISDICTIONAL WETLAND
DELINEATION REPORT
FOR**

Pringle Road SE

T8S, R3W, Section 11BC
TLs# 3000 and 3200
Salem, Marion County, Oregon

Prepared for

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Project #: 2851

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(A) Landscape Setting and Land Use

Schott & Associates (S&A) was contracted to conduct a wetland delineation on a 29.59-acre study site located southwest of Pringle Road SE, north of Hilfiker Lane SE, east of 12th Street SE, and west of Hillrose Street SE in Salem, OR (T8S, R3W, Section 11BC, Tax Lots 3000 and 3200). The purpose of this study was to document the presence or absence of existing onsite wetlands and other waters that may be regulated under the Clean Water Act (CWA) by the U.S. Army Corps of Engineers (Corps) and under the Removal-Fill Law by the Oregon Department of State Lands (DSL). This report complies with all standards and requirements set forth in Oregon Administrative Rules (OAR) 141-090-0035 (1-17) for wetland delineation reports and jurisdictional determinations for the purpose of regulating fill and removal within waters of the state. This report will be used to fulfill federal and state regulatory requirements for project permitting.

The study site encompassed the entirety of tax lots 3000 and 3100. The site featured residential development in the south-central portion and the remainder was undeveloped. The site consisted of a patchwork of Douglas-fir (*Pseudotsuga menziesii*)-Oregon oak (*Quercus garryana*)-madrone (*Arbutus menziesii*) forest and pasture which was used for grazing livestock. Site topography sloped generally to the north and northeast and a ravine containing a stream cut across the northwestern site corner, entering the site from a culvert at the northwestern boundary. A manmade ditch drained north near the eastern site boundary, from the approximate center of the site, through a culvert and beyond the northern site boundary.

The site was surrounded by moderate density residential development; 12th Street SE ran along the western site boundary, Hilfiker Lane SE ran along the southern boundary, and Hillrose Street SE ran along the eastern boundary. At the time of delineation, the site was zoned for residential agriculture (Salem zoning designation RA).

(B) Site Alterations

Aerial photographs for the time period between 1994 and 2020, available from Google Earth, were reviewed to assess site history. In the earliest available aerial photograph (1994; Figure 5b), the site appears much as it did during delineation fieldwork.

(C) Precipitation Data and Analysis

Precipitation data for the date of fieldwork and the time period preceding it were reviewed to evaluate observed wetland hydrology conditions relative to actual and statistically normal precipitation. Precipitation that deviates from normal ranges can affect site conditions and impact observed wetland hydrology indicators. Precipitation data was acquired from the Natural Resources Conservation Service (NRCS) Agricultural Applied Climate Information System (AgACIS) for the Salem McNary Field station to provide context for observed hydrological conditions of the study area at the time of the site visit (AgACIS 2020-2021). Table 1 provides the precipitation data, comparison to the normal water year average, as well as normal monthly ranges of precipitation representing 70% probability as reported for the Salem McNary Field NRCS WETS station (NRCS 1981-2010).

Table 1. Precipitation Summary for the Date of Fieldwork and Preceding Water Year (October 1, 2020 – Date of Fieldwork)

Date of Field Visit	Observed Precipitation*				
	Date of Visit (in.)	2 weeks to-Date (in.)	Water Year to-Date (in.)	Normal Water Year to-Date (in.)	% of Normal Water Year-to-Date
March 11, 2021	0.0	1.13	28.48	28.45	100%

*Data provided by NRCS AgACIS data from the Salem McNary Field Station, OR, 2020-2021

Table 2. Precipitation Summary for Three Months Preceding Fieldwork and Comparison to WETS Average and Normal Range

Month	Total Precipitation (inches)*	WETS Average (inches)**	WETS Normal Range (inches)**	% of Normal
February	5.02	4.56	2.67-5.54	110%
January	8.5	5.96	3.64-7.21	143%
December	6.45	6.86	4.92-8.1	94%

*Data provided by NRCS AgACIS data from the Salem McNary Field Station, OR, 2020-2021

**Data provided by NRCS WETS station for the Salem McNary Field, OR, 1981-2010

Fieldwork took place on March 11, 2021 when no precipitation was observed. In the two weeks preceding fieldwork, 1.13 inches of precipitation was observed. Precipitation observed in the month of February was above the WETS average but within normal range. Precipitation observed in January was well above the WETS average and normal range. Precipitation observed in December was slightly below the WETS average but within normal range. Precipitation for the water year (October 1, 2020-March 11, 2021) was observed at 100% of normal (28.48 inches). Based on a normal water year and near-normal February, it is assumed that surface and groundwater levels observed during fieldwork were typical for the late winter rainy season.

(D) Site Specific Methods

Prior to visiting the site, the following existing data and information was reviewed:

- Marion County tax map (Figure 2)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI), Salem Local Wetland Inventory (LWI; Schott and Associates, 1999), and Oregon Department of Forestry (ODF) stream mapping (Figure 3)
- U.S. Department of Agriculture (USDA) National Resource Conservation Service (NRCS) gridded Soil Survey Geographic (gSSURGO) database for Marion County (Figure 4)
- Recent and historical aerial photographs provided by Google Earth (Figures 5a-5c)

- Department of Oregon Geology and Mineral Industries (DOGAMI) 2009 LiDAR data (Figure 6)
-

Three soil series were mapped within the study site according to the USDA NRCS soil survey for Marion County. Jory silty clay loam (nonhydryc) was mapped over the majority of the site. Santiam silt loam (nonhydryc) was mapped over the northeastern and northwestern portions of the site. Nekia silt loam (nonhydryc) was mapped over a small area of the northwestern site corner.

Schott & Associates visited the site on March 11, 2021. Data were collected according to methods described in the *1987 Manual* and the *Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains, Valleys, and Coast (Version 2.0)*. Ten sample plots were established throughout the site to locate the boundaries of wetlands. For each sample plot, data on vegetation, hydrology, and soils was collected, recorded in the field and later transferred to data forms (Appendix B). Plant indicator status was determined using the *2016 National Wetland Plant List* (Lichvar et al. 2016). Onsite streams, if present, were delineated via the ordinary high-water mark (OHWM) as indicated by top of bank, wrack or scour lines, change in vegetation communities, or gage elevation where applicable.

All identified wetlands and waters are classified according to the USFWS *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al. 1979) and the *Guidebook for Hydrogeomorphic (HGM)-based Assessment of Oregon Wetland and Riparian Sites* (DSL 2001).

Representative ground level photographs were recorded to document site conditions (Appendix C; Figure 6).

(E) Description of All Wetlands and Other Non-Wetland Waters

One small wetland, one stream corridor, and one ditch were identified within the study site. Wetland area totaled 6 sq. ft. and area below OHWM totaled 0.003 acre. Mapped features, sample plots, and photo point locations are shown on Figure 6.

Stream 1: An unnamed stream flowed northeast across the northwestern corner of the site. The stream entered the site from a culvert along the western boundary and extended beyond the northern site boundary into a storm sewer located just offsite. The stream channel was approximately 4-6 feet deep by less than one foot deep and contained a few inches of flowing water at the time of fieldwork. ODF stream mapping classifies this stream as small, seasonal, and nonfish-bearing and based on the small size, shallow channel, relatively low flow observed during normal rainy season fieldwork, and presence of fish-passage barriers, the ODF classification was verified as accurate. Riparian vegetation was dominated by Himalayan blackberry (*Rubus armeniacus*; FAC) with English ivy (*Hedera helix*; NOL) with an overstory of Douglas fir and Oregon oak; no associated riparian wetlands were identified (SP1). The stream was assessed as a riverine flow through HGM class with a Cowardin class of intermittent riverine streambed (R4SB) aquatic habitat.

Ditch 1: A manmade ditch drained north near the eastern site boundary to beyond the northern site boundary. Near the northern site boundary, the ditch was conducted through a culvert at what is assumed to have been an old access road. The ditch was approximately 2 feet wide by 1 foot deep and vegetated by pasture grasses and weedy forbs upslope of the culvert (SPs 2 and 4) including colonial bentgrass (*Agrostis stolonifera*; FAC), tall fescue (*Schedonorus arundinaceus*; FAC), hairy cat's ear (*Hypochaeris radicata*; FACU), and wild carrot (*Daucus carota*; FACU); Himalayan blackberry dominated the area downslope of the culvert (SP5). No hydric soil or wetland hydrological indicators were met within the ditch except for a very small area at the culvert inlet (Wetland 1). The ditch appears to have been excavated from uplands for the purposes of drainage. It does not appear to feature indicators of ordinary high water or have relatively permanent flow. It is not appear to connect to other wetlands or waters (ditch appears to terminate at Pringle Rd SE northeast of the site). The ditch does not support wetland except for a very small area at the lower end where drainage is inadequate (Wetland 1). It is assumed that this ditch is non-jurisdictional, though a final determination must be made by Corps/DSL.

Wetland 1: Wetland 1 covered 6 sq. ft. at the lower end of Ditch 1 above the culvert inlet. The wetland was underlain by rock at 4 inches of depth and is assumed to have formed due to the collection and perching of precipitation and runoff routed by the ditch at the opening of the culvert which does not adequately drain the area. Approximately 1 inch of surface water was present at the time of fieldwork. Vegetation included colonial bentgrass, field horsetail (*Equisetum arvense*; FAC) and cutleaf Geranium (*Geranium dissectum*; NOL). Soils met the Corps hydric indicator for redox dark surface. Soils were very dark grayish brown with many yellow-red redoximorphic concentrations. The wetland was assessed as slope HGM class with a seasonally inundated palustrine emergent (PEMC) Cowardin class. Due to the very small size of the wetland and its isolated character, it is unlikely to be jurisdictional though a final determination must be made by Corps/DSL.

(F) Deviation from LWI or NWI

NWI and LWI mapping show Stream 1 (Figure 3). The LWI indicates there may be a riparian wetland associated with the stream. This study verified the presence of Stream 1 but did not identify any riparian wetland associated with it. This study also identified a ditch which is likely non-jurisdictional and a small PEMC wetland on the bottom of the ditch at the opening of a culvert.

(G) Mapping Method

Wetland, OHWM, photo point, and sample plot locations were recorded with a handheld Trimble GPS unit capable of sub-meter accuracy following differential correction with Pathfinder Office desktop software. These data were converted to ESRI shapefile and mapped using ArcMap 10.6 desktop software. The study site boundary was obtained from the Marion County GIS Department.

(H) Additional Information

None.

(I) Summary and Conclusions

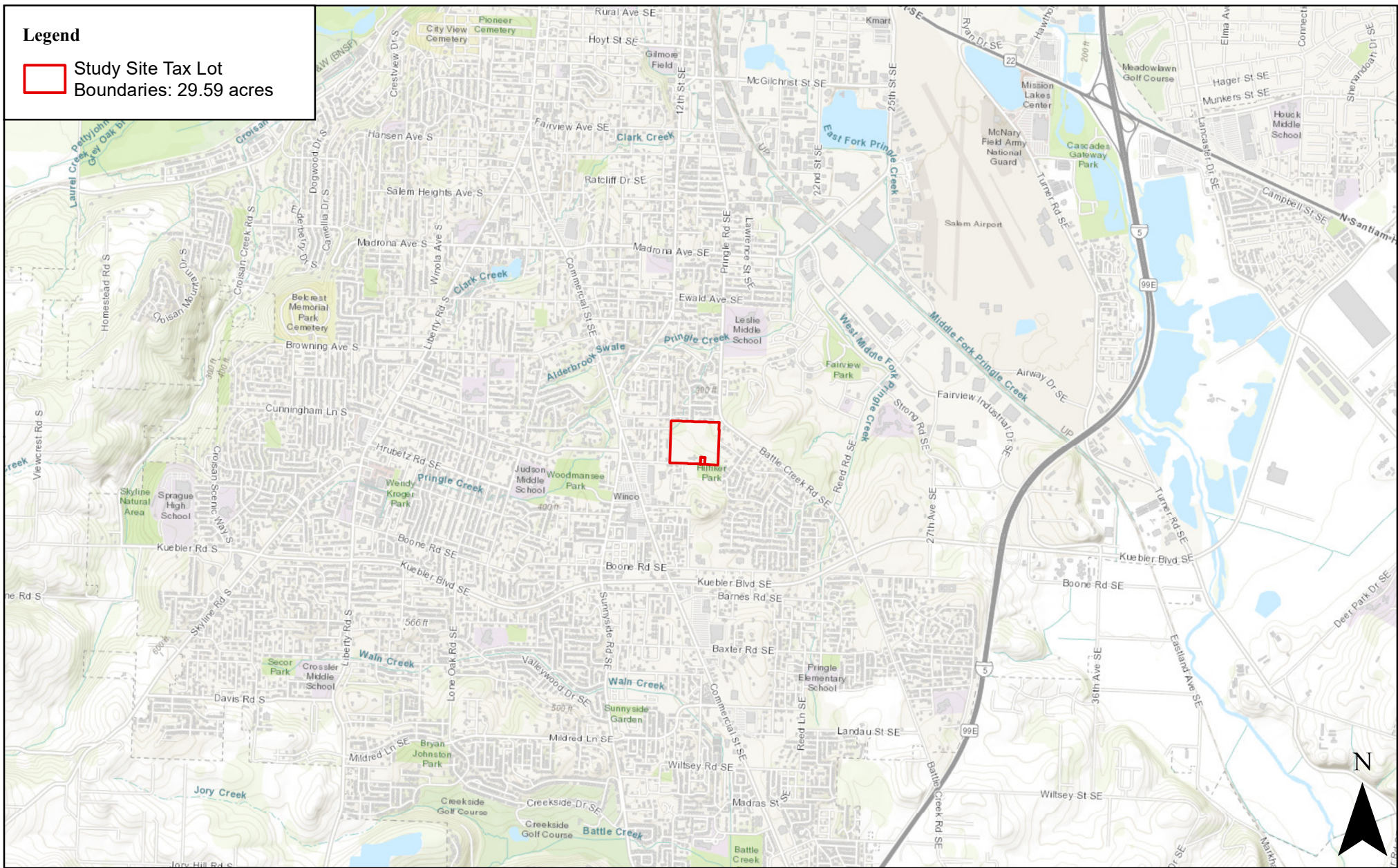
Based on vegetation, soils, hydrology, and OHWM data, one stream, one ditch, and one small wetland were identified onsite. The stream flowed across the northwestern site corner, entering the site from a culvert and draining northeast beyond the study site boundary into a storm sewer; area below OHWM totaled 0.003 acre. Ditch 1 was a manmade feature which drained north near the eastern site boundary. This ditch does not generally feature wetland or water characteristics and is not connected to other waterbodies and is likely non-jurisdictional. Wetland 1 covered 6 sq. ft. of the ditch bottom just above a culvert opening. It was assessed as a slope PEMC wetland. Due to its small size and isolated character, it is also likely non-jurisdictional.

(J) Disclaimer

This report documents the investigation, best professional judgment, and conclusions of the investigators. It is correct and complete to the best of our 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 A: FIGURES

FIGURE 1: LOCATION MAP

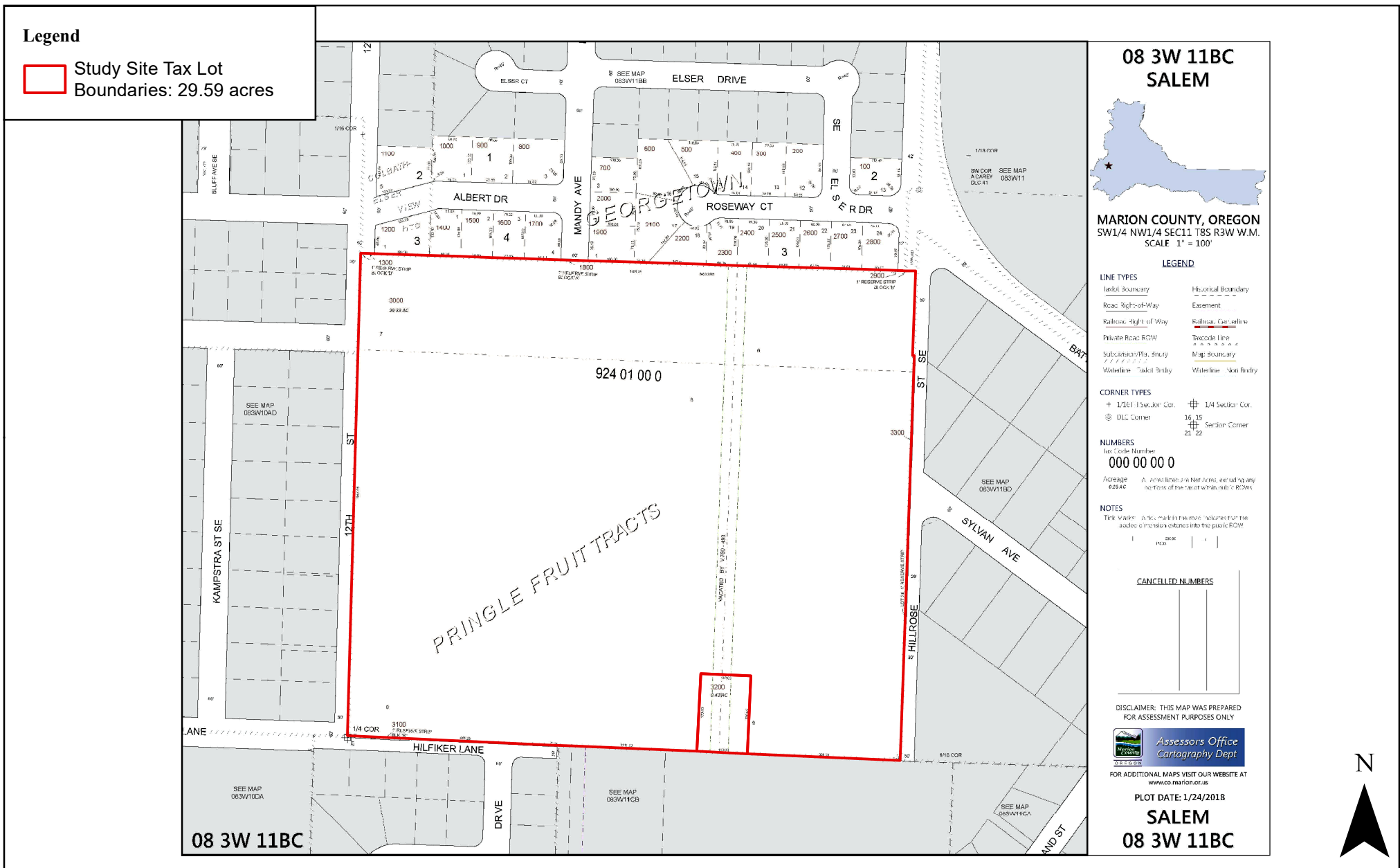


Date: 5/5/2021

Data Source: ESRI, 2021; Marion County GIS Dept., 2021

Figure 1. Location Map

FIGURE 2: TAX MAP



Date: 5/5/2021

Data Source: ESRI, 2021; Marion
County GIS Dept., 2021

Figure 2. Marion County Tax Map -
083W11BC

Pringle Road SE Project Site: S&A# 2851

FIGURE 3: WETLAND INVENTORY MAP



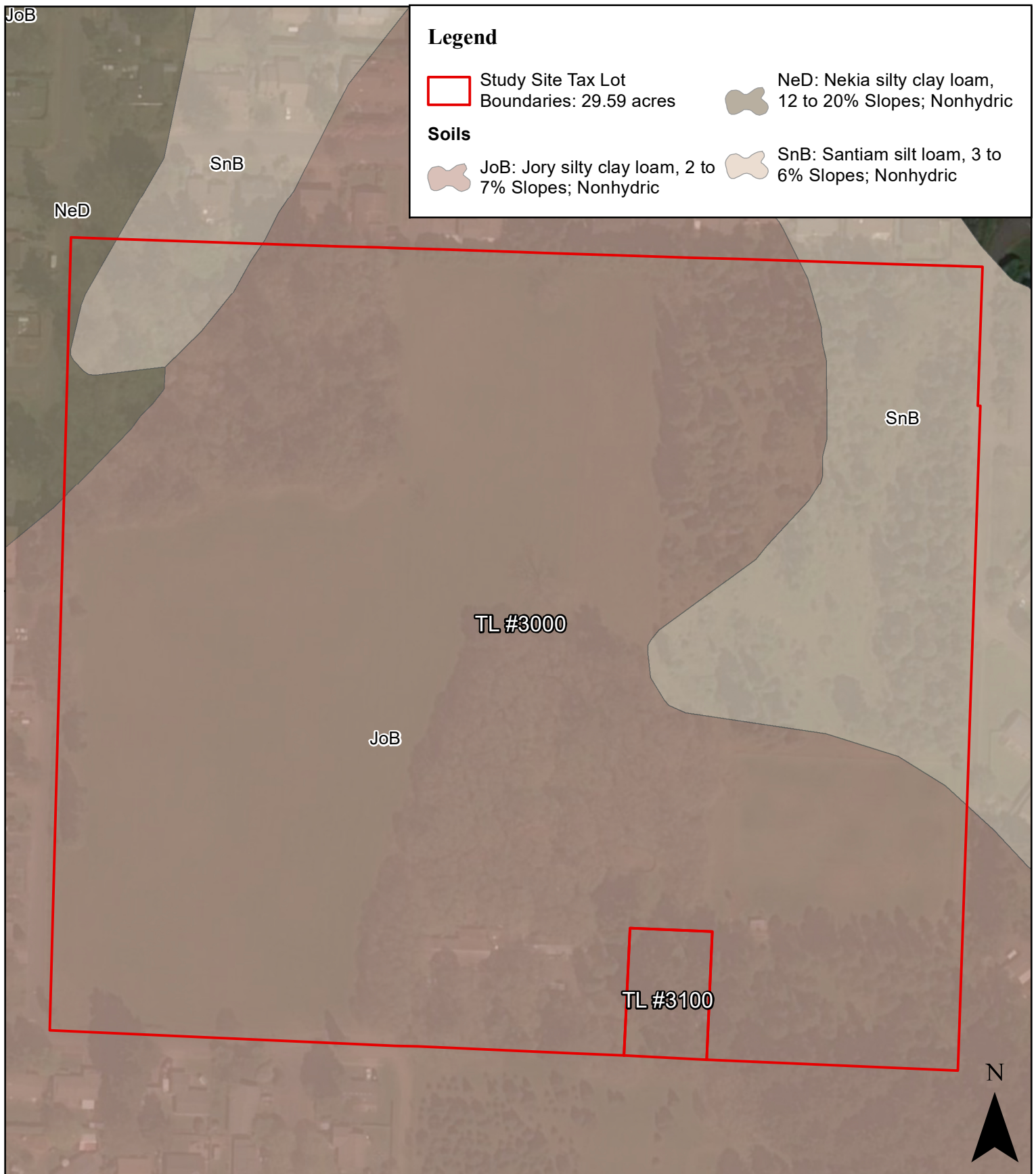
Date: 5/5/2021

Data Source: ESRI, 2021; Marion County GIS Dept, 2021;
USFWS, NWI, 2021; Schott & Associates, 1999; ODF, 2021

Figure 3. Wetland Inventory Map

Pringle Road SE Project Site: S&A # 2851

FIGURE 4: USDA/NRCS SOIL SURVEY MAP



Date: 5/5/2021

Data Source: ESRI, 2021; Marion County GIS Dept, 2021;
Soil Survey Staff, USDA, NRCS, 4/22/2021

Figure 4. USDA/NRCS Soil Survey Map
of Marion County

Pringle Road SE Project Site: S&A # 2851

FIGURE 5A: RECENT AERIAL IMAGE – APRIL 12, 2020



Date: 5/5/2021

Data Source: ESRI, 2021; Marion
County GIS Dept, 2021

Figure 5a. Recent Aerial Imagery -
April 12, 2020

Pringle Road SE Project Site: S&A # 2851

FIGURE 5B: HISTORICAL AERIAL IMAGE – MAY 22, 1994



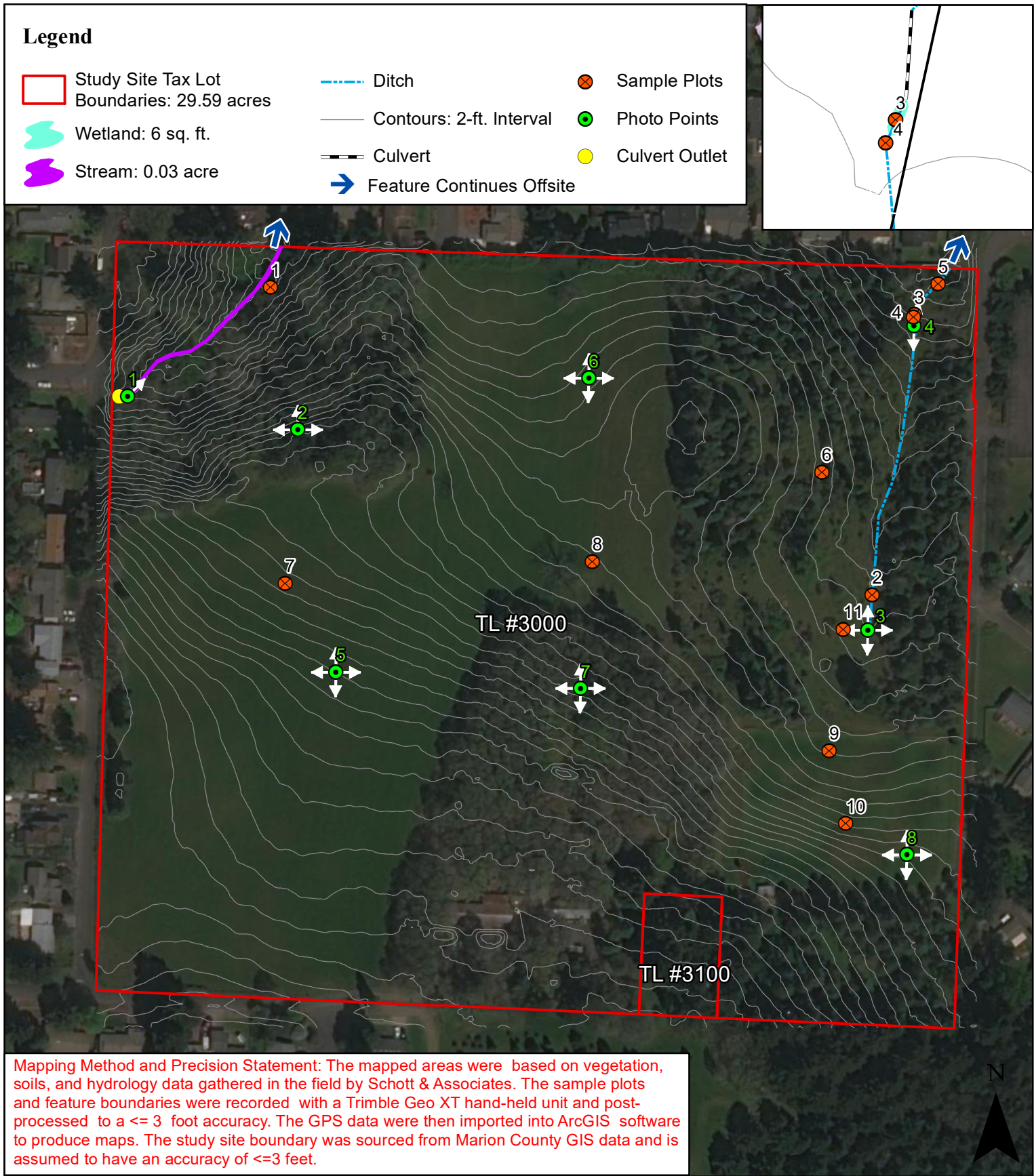
Date: 5/5/2021

Data Source: Google Earth, 2021; Marion
County GIS Dept, 2021

Figure 5b. Historical Aerial Imagery -
May 22, 1994

Pringle Road SE Project Site: S&A # 2851

FIGURE 6: WETLAND DELINEATION MAP



Date: 5/13/2021

Data Source: ESRI, 2021; Marion County GIS Dept, 2021; DOGAMI, 2009

Figure 6. Wetland Delineation Map

APPENDIX B: DATA FORMS

APPENDIX C: GROUND LEVEL PHOTOGRAPHS

APPENDIX D: LITERATURE CITATIONS

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