



SCHOTT & ASSOCIATES

Ecologists & Wetlands Specialists

21018 NE Hwy 99E • P.O. Box 589 • Aurora, OR 97002 • (503) 678-6007 • FAX: (503) 678-6011

November 17, 2020

Galpin & Associates, LLC
744 Cardley Avenue., Ste 200
Medford, Oregon 97504
terry@galpinllc.com

cc: Gordon Avery, grdavery@gmail.com

Re: Wetland determination for properties located north and south of NW Troost Street, Roseburg, Douglas County, Oregon (T27S, R6W, Section 15BC, Tax Lot 200, Section 15CB Tax Lots 600-3600, Section 15 Tax Lots 801 and 102)

Dear Mr. Galpin & Mr. Avery,

Schott & Associates (S&A) was contracted to conduct a wetland determination for the properties located north and south of NW Troost Street in Roseburg, Oregon. The study site included approximately 82 acres (see attached map). Wetlands or waters within the project site may be regulated by the Oregon Department of State Lands (DSL) under the Removal-Fill Law, and by the Army Corps of Engineers (Corps) under the Clean Water Act. Work conducted in jurisdictional wetlands or waters may require permits from these agencies as well as compensatory mitigation.

Prior to visiting the site, S&A reviewed available data and information including the USDA Natural Resource Conservation Service (NRCS) soil survey for Douglas County, the National Wetland Inventory (NWI), the Oregon Explorer website for Oregon Rapid Wetland Assessment Protocol (ORWAP) & Stream Function Assessment Method (SFAM), and aerial imagery available from Google Earth.

S&A visited the site on November 3rd-5th, 2020 to assess for the presence and extent of wetlands and/or waters potentially subject to regulation by DSL and the Corps. Sample plots were established within low-lying areas most likely to collect water and support wetland characteristics and/or where wetland signatures were observed on aerial photographs.

Vegetation, soils, and hydrology data were collected according to methods described in the *1987 Manual* and the *Regional Supplement to the Corps of Engineers Delineation Manual: Western Mountains and Valleys (Version 2.0)*. Onsite streams and ditches, 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. Sample plot, ditch locations, OHWM, and wetland boundaries were recorded using a handheld Trimble GPS unit capable of sub-meter accuracy following differential correction with Pathfinder Office desktop software.

Based on soils, vegetation and hydrology data gathered during the site visit six (6) distinct wetlands and one (1) ditch were identified onsite. Onsite wetland area totaled 23.35 acres. No primary hydrological indicators of soil saturation, high water table or surface water were present during the site visit, which was to be expected given the dry season site visit. Due to the dry season delineation as well as problematic soils, it is possible that wetland boundaries could be changed after further field work, as discussed below.

1. Soils:

The southeastern and northern portions of the subject property area are mapped by the Douglas County soils survey as predominantly Bashaw clay or Pengra silt loam, which are poorly to somewhat poorly drained hydric soils with characteristics of vertisols. Vertisols are predominantly (greater than or equal to 30%) clay which expand and shrink in response to moisture change and form deep wide cracks when dry.

Bashaw clay on 0 to 1 percent slopes is a poorly drained soil with very slow permeability and high shrink-swell potential. Typical profile is black clay from 0-14 inches and very dark gray clay from 14-63 inches. Pengra is classified as a silt loam but is a very dark grayish brown silty clay loam from 7-16 inches and a dark grayish brown and olive gray clay from 16 inches. Both soils were observed in the field to be very hard and dry with dark soils and cracks consistent with vertisols. The clay creates a nearly impermeable layer which may result in a hydric soil despite not meeting any of the defined hydric soil criteria. Additionally, soils formed in dark parent materials may not exhibit easily recognizable redoximorphic features. In the absence of an approved indicator other characteristics including likely source of dark parent materials and landscape position, hydrology, vegetation etc... must be considered.

Areas of Wetland 3 and the majority of Wetland 6 are in areas with these mapped soil series. In particular, the northern portion of Wetland 6 and the portion of Wetland 3 south of the ditch were defined by the above described soil characteristics and assumed to be hydric. To determine whether hydric soil criteria are met in some areas additional sampling may be taken using a chemical called alpha-alpha-dipyridyl (AAD). In saturated soils, this reagent will react with reduced iron indicating presence or absence of iron in the soil even without visible indications such as redoximorphic features. The soils must be at least moist or saturated for positive reactions to occur. A site check during the wet season (December-March) would help indicate if these soils meet hydric soil criteria.

2. Hydrology:

Delineation fieldwork was conducted between November 3rd and November 5th, 2020. No precipitation had been recorded in November thus far. Total precipitation recorded for the month of October was 1.02 inches at the Roseburg 1.2WNW station. Normal WETS ranges were not available for Roseburg. However, current precipitation data was compared to averages for Winchester, Oregon indicating that precipitation for October was below average and below normal range for the month. Total precipitation for the year (Jan-Nov. 5, 2020) was 18.73 inches. This is 67% of average for the time period. Lack of primary or even secondary indicators due to site visits conducted during a dry time of year can result in the need for additional site visits to determine hydrology criteria, especially where other problematic conditions are present. Saturation of soils is also necessary for use of AAD as indicated above.

Wetland 1 and Wetland 2 are within areas mapped as Evans loam, 0 to 3 percent slopes which is a well-drained soil series with approximately five percent hydric inclusions. No problematic conditions were identified with reference to these wetlands.

NWI mapping indicated a palustrine emergent persistent seasonally saturated (PEM1B) wetland correlating with the location of mapped Wetland 1. Three different drainages were mapped in the southeastern portion of the site. Only the mapped ditch as depicted on the attached map was observed on site. No evidence of distinct drainage channels is evident in the aerial review dating back to 1994, via Google Earth. It is possible these have been modified historically in conjunction with agricultural use. A second PEM1B wetland was mapped in the northern portion of the site, south of Troost Road. S&A did not identify any wetlands in this location. The NWI

did not map any wetlands in the location of Wetland 3, 4, or 5. A third PEM1B wetland was mapped on the NWI correlating with the location of Wetland 6.

Onsite vegetation was characterized by a field of weedy grasses and forbs including tall fescue (*Schedonorus arundinaceus*), bent grass (*Agrostis capillaris*), and velvet grass (*Holcus lanatus*). Low lying topographic swales and depressions mapped as wetlands were dominated by similar vegetation with a high occurrence of pennyroyal mint (*Mentha pulegium*) and lesser poverty rush (*Juncus tenuis*). Soil samples that were not problematic as mentioned above and yielded matrix colors of 7.5YR 3/2 and 2.5/2 or 10YR 3/2 with common yellow-red redoximorphic concentrations occurring as soft masses. Those soil samples met the Redox Dark Surface (F6) hydric soil indicator.

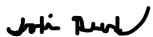
All wetland work is considered preliminary until approved in writing by the appropriate agencies. It is advisable to obtain jurisdictional determinations (concurrence) from the agencies prior to conducting any work to ascertain whether onsite features are subject to DSL and/or Corps regulation. If you wish to proceed, the next task would be the completion of a formal wetland delineation report. It is recommended that an additional site visit be scheduled once the rainy season has commenced and hydrology conditions are within average ranges. This could change the size and boundaries of delineated wetlands.

A formal wetland delineation report can be submitted to both DSL and the Corps for an official jurisdictional determination. It is anticipated that DSL and the Corps will claim jurisdiction on the delineated wetlands and waters.

Please check with local officials before conducting any work.

Please let me know if you have additional questions.

Sincerely,






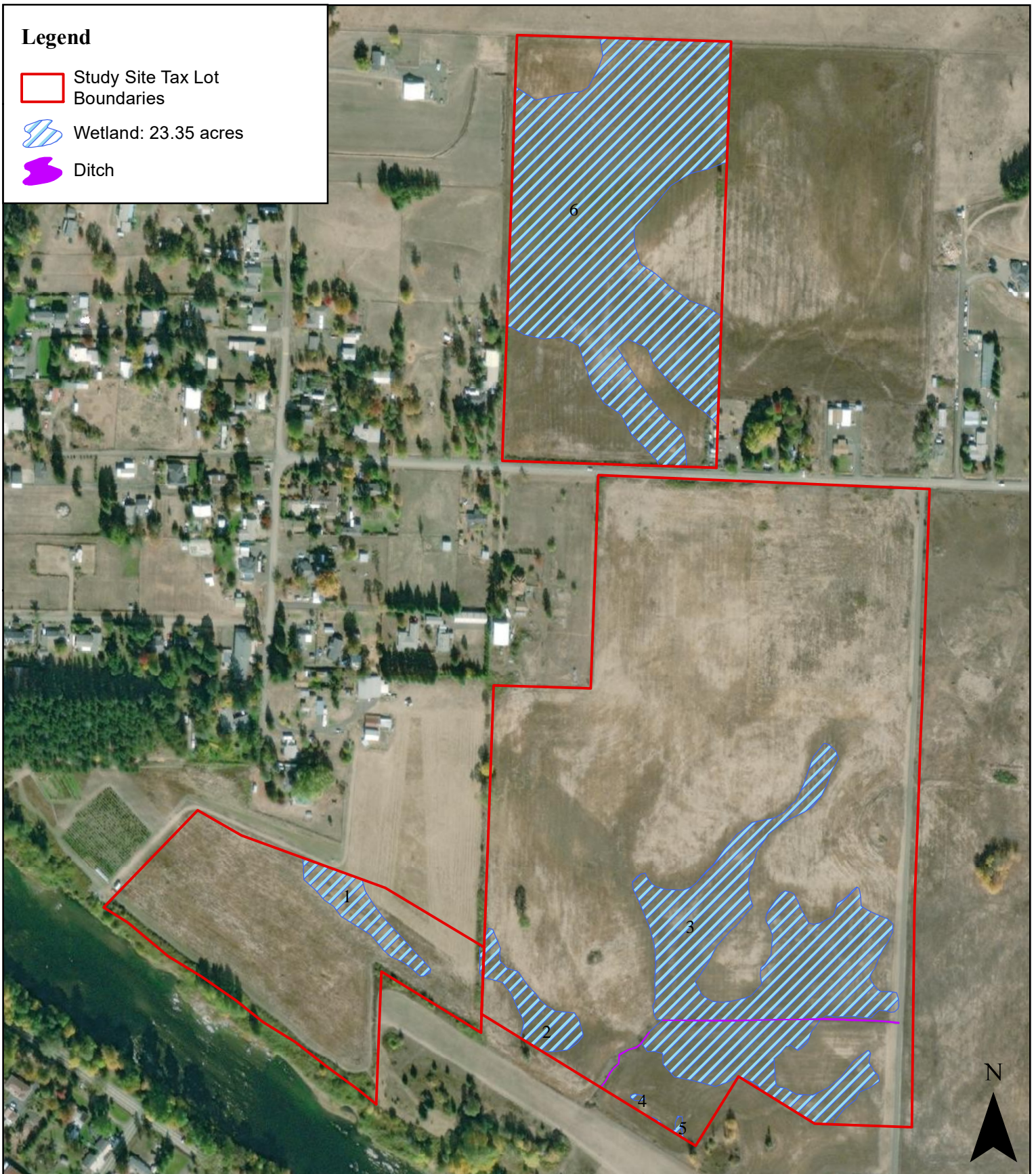
Jodi Reed
Wetland Ecologist & Wildlife Biologist
Jodi@schottandassociates.com
503-678-6007

Attachments:

- Preliminary Wetland Determination Map
- USDA/NRCS Soil Survey Map
- NWI Wetland Inventory Map

Legend

-  Study Site Tax Lot Boundaries
-  Wetland: 23.35 acres
-  Ditch




Date: 11/6/2020

Data Source: ESRI, 2020;
Douglas County GIS Dept, 2018









**DRAFT MAP: Not an official wetland map;
for planning purposes only**

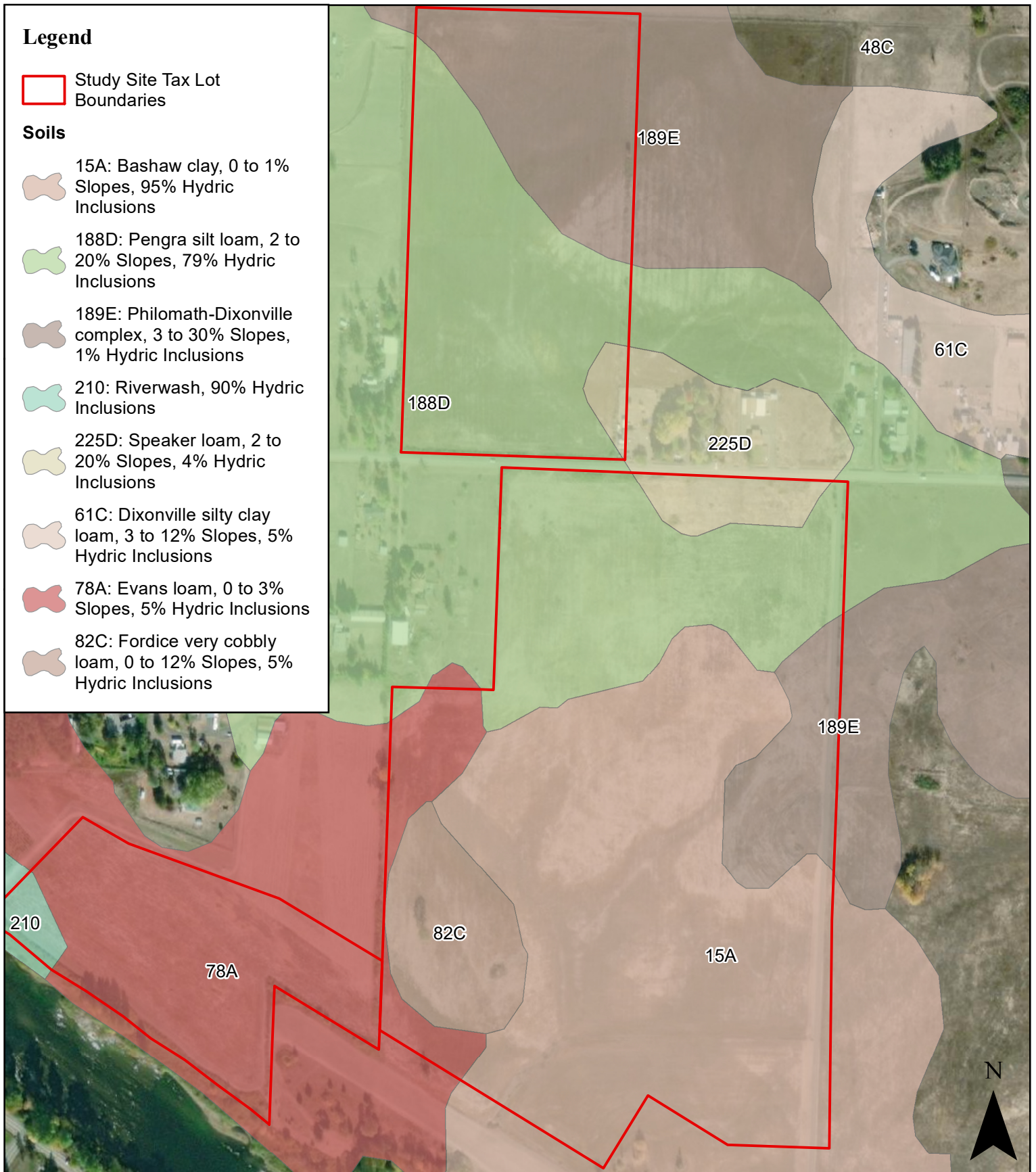
Wetland
Determination Map

Legend

 Study Site Tax Lot Boundaries

Soils

-  15A: Bashaw clay, 0 to 1% Slopes, 95% Hydric Inclusions
-  188D: Pengra silt loam, 2 to 20% Slopes, 79% Hydric Inclusions
-  189E: Philomath-Dixonville complex, 3 to 30% Slopes, 1% Hydric Inclusions
-  210: Riverwash, 90% Hydric Inclusions
-  225D: Speaker loam, 2 to 20% Slopes, 4% Hydric Inclusions
-  61C: Dixonville silty clay loam, 3 to 12% Slopes, 5% Hydric Inclusions
-  78A: Evans loam, 0 to 3% Slopes, 5% Hydric Inclusions
-  82C: Fordice very cobbly loam, 0 to 12% Slopes, 5% Hydric Inclusions

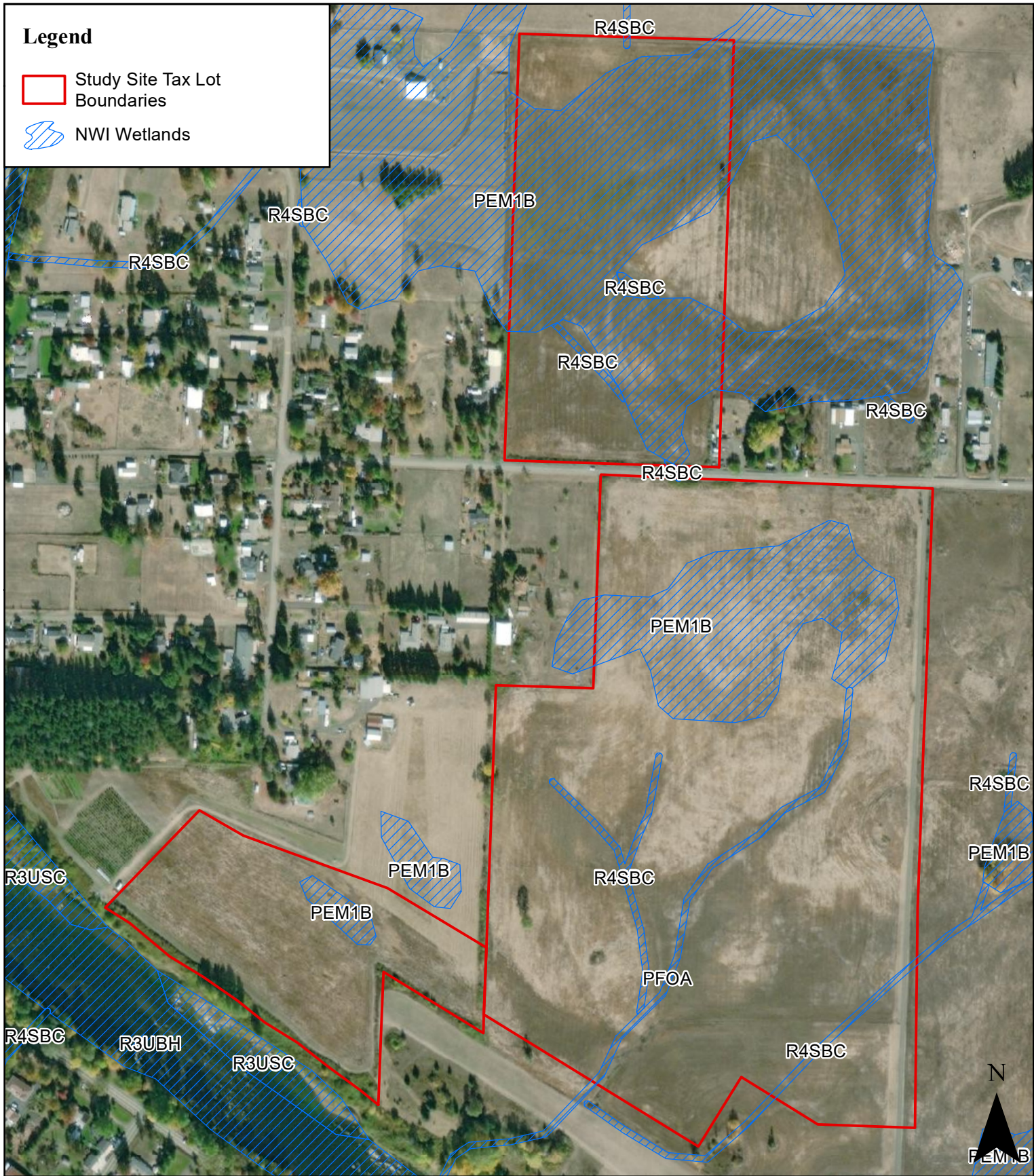


Date: 11/12/2020

Data Source: ESRI, 2020;
Douglas County GIS Dept, 2018

USDA/NRCS Soil Survey Map of Douglas County

Troost Rd Project Site: S&A # 2822



Date: 11/12/2020

Data Source: ESRI, 2020;
Douglas County GIS Dept, 2018

Wetland Inventory Map