
TICKNER FARMS

CITY OF TUMWATER, WASHINGTON

CRITICAL AREAS REPORT

Prepared By:



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14 March 2020

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1.0 INTRODUCTION

1.1 Purpose

The purpose of this Critical Areas Report is to identify and map Critical Areas on the subject property and within three hundred (300) feet of the subject property.

Potential critical areas and their buffers were evaluated on the subject property and within three hundred (300) feet of the subject property.

This Critical Areas Report has been prepared to satisfy the City of Tumwater reporting requirements.

1.2 Property Location

The 77.77 -acre Study Area Littlerock Road SW, Thurston County, WA in Section 08, Township 17 North, Range 02 West, Willamette Meridian (**Table 1; Figure 1**).

Table 1. Parcels Comprising Study Area

No#	Property Address	Parcel Number	Property Size (Acres)
1	7747 LITTLEROCK RD SW	09070001000	54.43 (Part of Parcel)
2	7927 LITTLEROCK RD SW	12708410100	13.71
3	7831 LITTLEROCK RD SW	12709320100	9.63
3 Parcels	Total Size		77.77

The permitting jurisdiction is the City of Tumwater.

1.3 Site Evaluation

Wetland evaluations were performed on the subject property on 30 January 2020, 5 February 2020, and 11 February 2020.

1.4 Site Summary

The majority of the subject property is maintained for agricultural harvesting of hay, which is a low intensity agricultural activity. Agricultural buildings are located on the eastern and southeastern portions of the subject property. The hay field has been maintained for optimal agricultural use, including periotic tilling and drainage management. A hay crop is harvested annually. The field is

Powerline bisect the property diagonally from the northcentral to the southeastern property boundaries.

Black Hills High School borders the subject property east of the northern portion of the subject property. The majority of the subject property is bordered by both low-intensity and high-intensity single-family land use.

2.0 METHODOLOGY

This report is based on a review of existing information and field investigations. The goal of these efforts is to collect and document existing information that reflects current site conditions for assessing potential impacts.

2.1 Review of Existing Literature

Prior to conducting fieldwork, and throughout the duration of project design, biologists reviewed existing information to identify wetlands, streams, vegetation patterns, topography, soils, wildlife habitats, and other natural resources in the project area. Existing data sources that were reviewed for this report included, but were not limited to, the following:

- Washington. U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) Soil Survey
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI), online wetlands mapper
- Washington Department of Fish and Wildlife (WDFW) Salmonscape Database
- (WDFW) Priority and Habitat Species (PHS) Database
- Washington State Department of Natural Resources (DNR) Natural Heritage Database
- Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM) and Flood Insurance Studies

2.2 Field Investigation

A wetland evaluation was performed on-site as well as off-site of the subject property to determine if wetlands, streams, or their buffers extend onto the subject property. The routine on-site determination method is used to identify potential wetlands using the procedures outlined in the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory, 1987) and the U.S. Army Corps of Engineers Regional Wetland Supplement (USACE, 2010).

Under the City of Tumwater Municipal Code (TMC), wetlands are defined as areas that are inundated or saturated by ground or surface water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. Wetlands do not include those artificial wetlands intentionally created from non-wetland sites, including, but not limited to, irrigation and drainage ditches, grass-lined swales, canals, detention facilities, wastewater treatment facilities, farm ponds, and landscape amenities, or those wetlands created after July 1, 1990, that were unintentionally created as a result of the construction of a road, street, or highway. Wetlands may include those artificial wetlands intentionally created from non-wetland areas created to mitigate conversion of wetlands.

2.3 Wetland Identification

Prior to 2010, biologists delineated wetlands according to the methods specified in the USACE Wetlands Delineation Manual (Environmental Laboratory, 1987). At that time, these methods complied with those in the Washington State Wetland Identification and Delineation Manual (Washington State Department of Ecology [Ecology], 1997).

Following 2010, biologists evaluate wetlands according to the methods specified in the USACE's Wetlands Delineation Manual (Environmental Laboratory 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0) (USACE, 2010). These methods comply with those adopted by Washington State pursuant to Washington Administrative Code (WAC) 173-22-035, Revised Code of Washington (RCW) 90.58.380.

2.3.1 Vegetation

The dominant plants and their wetland indicator status are evaluated to determine whether the vegetation is hydrophytic. Hydrophytic vegetation is generally defined as vegetation adapted to prolonged saturated soil conditions. To meet the hydrophytic vegetation criterion, more than fifty percent (50%) of the dominant plants must be facultative, facultative wetland, or obligate, according to the plant indicator status category assigned to each plant species by the USACE National Wetland Plant List. **Table 2** provides the definitions of the indicator status categories. The scientific and common names for plants follow the currently accepted nomenclature.

Table 2. Key to Plant Indicator Status Categories

Plant Indicator Status Category	Symbol	Description
Obligate Wetland Plants	OBL	Plants that almost always (>99% of the time) occur in wetlands but may rarely (<1% of the time) occur in non-wetlands
Facultative Wetland Plants	FACW	Plants that often (67% to 99% of the time) occur in wetlands but sometimes (1% to 33% of the time) occur in non-wetlands
Facultative Plants	FAC	Plants with a similar likelihood (33% to 66% of the time) of occurring in both wetlands and non-wetlands
Facultative Upland Plants	FACU	Plants that sometimes (1% to 33% of the time) occur in wetlands but occur more often (67% to 99% of the time) in non-wetlands
Upland Plants	UPL	Plants that rarely (<1% of the time) occur in wetlands and almost always (> 99% of the time) occur in non-wetlands

2.3.2 Soils

Soils are excavated to eighteen (18) inches or more below the surface within test pits to evaluate soil characteristics and hydrological conditions throughout the property. Soil chroma (color) is evaluated using the *Munsell Color Chart* (Munsell Color, 1988). Generally, an area must have hydric soils to be considered a wetland. Hydric soil forms when soils are saturated, flooded, or ponded long enough during the growing season to develop anaerobic conditions in the upper portion. Biological activities in saturated soil result in reduced concentrations of oxygen that in turn result in a preponderance of organisms that use anaerobic processes for metabolism. Over time, anaerobic biological processes result in certain soil color patterns, which are used as indicators of hydric soil. Typically, low-chroma colors are formed in the matrix of hydric soil. Bright-colored redoximorphic features form within the matrix under a fluctuating water table. Other important hydric soil indicators include organic matter accumulations in the surface layer, reduced sulfur odors, and organic matter staining in the subsurface.

2.3.3 Hydrology

The project area is examined for evidence of hydrology. The USACE (2005) provides a technical standard for monitoring hydrology on such sites. This standard requires fourteen (14) or more consecutive days of flooding or ponding, or a water table twelve (12) in. (thirty [30] cm) or less below the soil surface, during the growing season at a minimum frequency of five (5) years in 10 (fifty percent [50%] or higher probability). The USACE 2010 Regional Supplement provides a list of hydrology indicators to evaluate whether the hydrology standard is satisfied. If wetland hydrology, including pooling, ponding, and soil saturation, is not clearly evident, hydrological conditions may be observed through surface or soil indicators. Indicators of hydrological conditions include oxidized root channels, drainage patterns, drift lines, sediment deposition, watermarks, historic records, visual observation of saturated soils, and visual observation of inundation.

2.4 Wetland Classification and Rating

Delineated wetlands are classified according to the USFWS Classification of Wetlands and Deepwater Habitats of the United States (USFWS, 1979). Hydrogeomorphic classifications are assigned to wetlands using USACE methods established in A Hydrogeomorphic Classification for Wetlands (USACE, 1993) and are then rated using the revised Washington State Wetland Rating System for Western Washington.

3.0 STUDY RESULTS

3.1 Background Information

3.1.1 Thurston County Geodata Soils

Two (2) non-hydric soil types are mapped on the subject property by the Thurston County Geodata Center database (**Table 3; Appendix B**).

Table 3. Thurston County Geodata Center Soil Summary

Soil Unit	Hydric	Comments
Cagey loamy sand	No	Covers the majority of the property
Nisqually loamy fine sand, 0 to 3% slopes	No	Located in the southeastern portion of the site

3.1.2 Thurston County Geodata Center Wetlands & Streams

Three (3) wetlands are mapped on the subject property by the Thurston County Geodata Center database (**Appendix C; Figures 2**).

No streams are mapped on the subject property.

3.1.3 WDFW Salmonscape Database

No streams or salmonids are mapped on or within three thousand (3,000) feet of the subject property by the WDFW Salmonscape database (**Appendix D**). No salmonids are mapped in Black Lake.

3.1.4 Department of Natural Resources (DNR) Stream Typing Database

No streams are mapped on the subject property or within three hundred (300) feet of the subject property by the Department of Natural Resources (DNR) Stream Typing database (**Appendix E**).

3.1.5 Thurston County Geodata Center Flood Zones

No five hundred (500) year FEMA flood zone is mapped on the southwestern corner of the subject property extending offsite to the west and south by Thurston County Geodata Center database (**Appendix F**).

3.1.6 Thurston County Geodata High Groundwater Hazard Areas

High groundwater hazard areas are mapped on the subject property by Thurston County Geodata Center database (**Appendix G**). No five hundred (500)-year flood plains have been mapped on the subject property by the Federal Emergency Management Agency (FEMA) (**Appendix G**).

3.2 Field Results

No wetlands were identified on the subject property and within three hundred (300) feet of the subject property (**Figure 2**). No streams were identified to occur onsite during the site evaluations.

4.0 REGULATORY CONSIDERATIONS

No wetland or stream regulations apply to this project because all identified wetlands during this study are located further away from the subject property than the largest wetland and stream buffers under the City of Tumwater Code. The largest wetland buffer is three hundred (300) feet with a fifteen (15) foot building setback under TMC 16.28.170---*Wetland buffers*. The largest stream buffer is two hundred fifty (250) feet under TMC 16.32.065---*Riparian habitat areas---Buffers*. Thereby, no impacts to wetlands, streams, or their buffers would be directly impacted as a result of a land use proposal on the subject property. Because no direct wetland, stream, or buffer impacts would occur as a result of proposed land use on the subject property, no further regulatory review is necessary.

5.0 LAND USE ACTION

No land use is proposed at this time.

6.0 CONCLUSION

No wetlands were identified on the subject property or within three hundred (300) feet (Largest wetland buffer) during of the subject property the site evaluation (**Figure 2**). No streams were identified on the subject property or within two hundred fifty (250) feet (Largest stream buffer) of the subject property during of the subject property the site evaluation. The largest wetland buffer is three hundred (300) feet with a fifteen (15) foot building setback under TMC 16.28.170---*Wetland buffers*. The largest stream buffer is two hundred fifty (250) feet under TMC 16.32.065---*Riparian habitat areas---Buffers*. Thereby, no impacts to wetlands, streams, or their buffers would be directly impacted as a result of a land use proposal on the subject property. Thereby, no impacts to wetlands, streams, or their buffers would be directly impacted as a result of a land use proposal on the subject property.

7.0 REFERENCES

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FIGURES

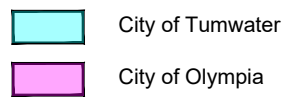
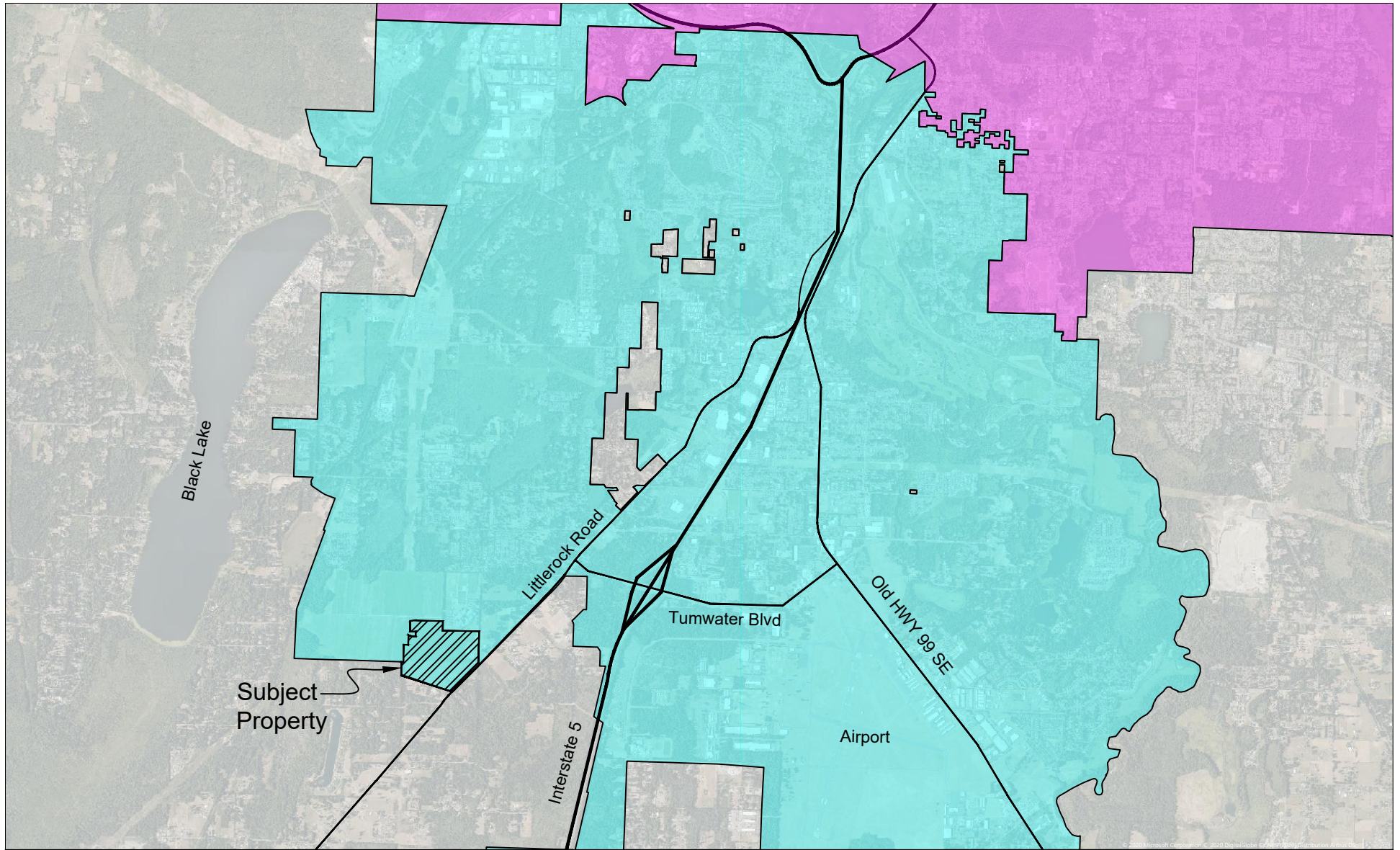


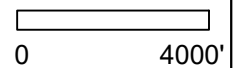
Figure 1

Tickner Farm

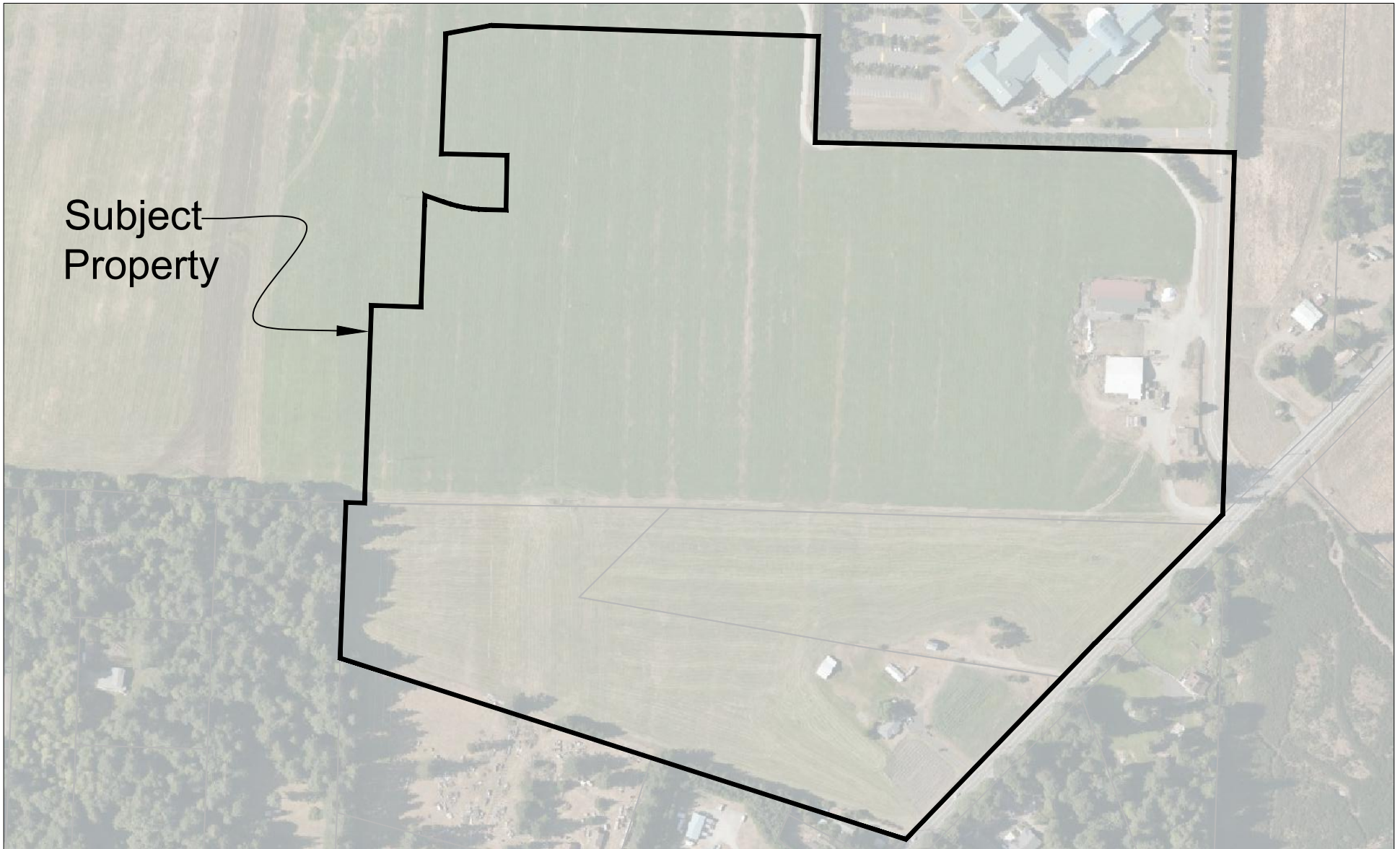
Vicinity Map



Scale: 1" = 4000'



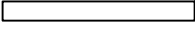
14 March 2020



Subject
Property

Figure 2
Tickner Farms
Existing Conditions
Onsite



Scale: 1" = 350'

0 350'

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APPENDIX A

PHOTOGRAPHS

Subject Property and Nearby



Photo 1. Hay field on the subject property



Photo 2. Dirt access road used by agricultural vehicles



Photo 3. Agricultural buildings onsite



Photo 4. Active agricultural activities



Photo 5. Agricultural activities



Photo 6. Hay field



Photo 7. Southern portion of hay field and powerlines

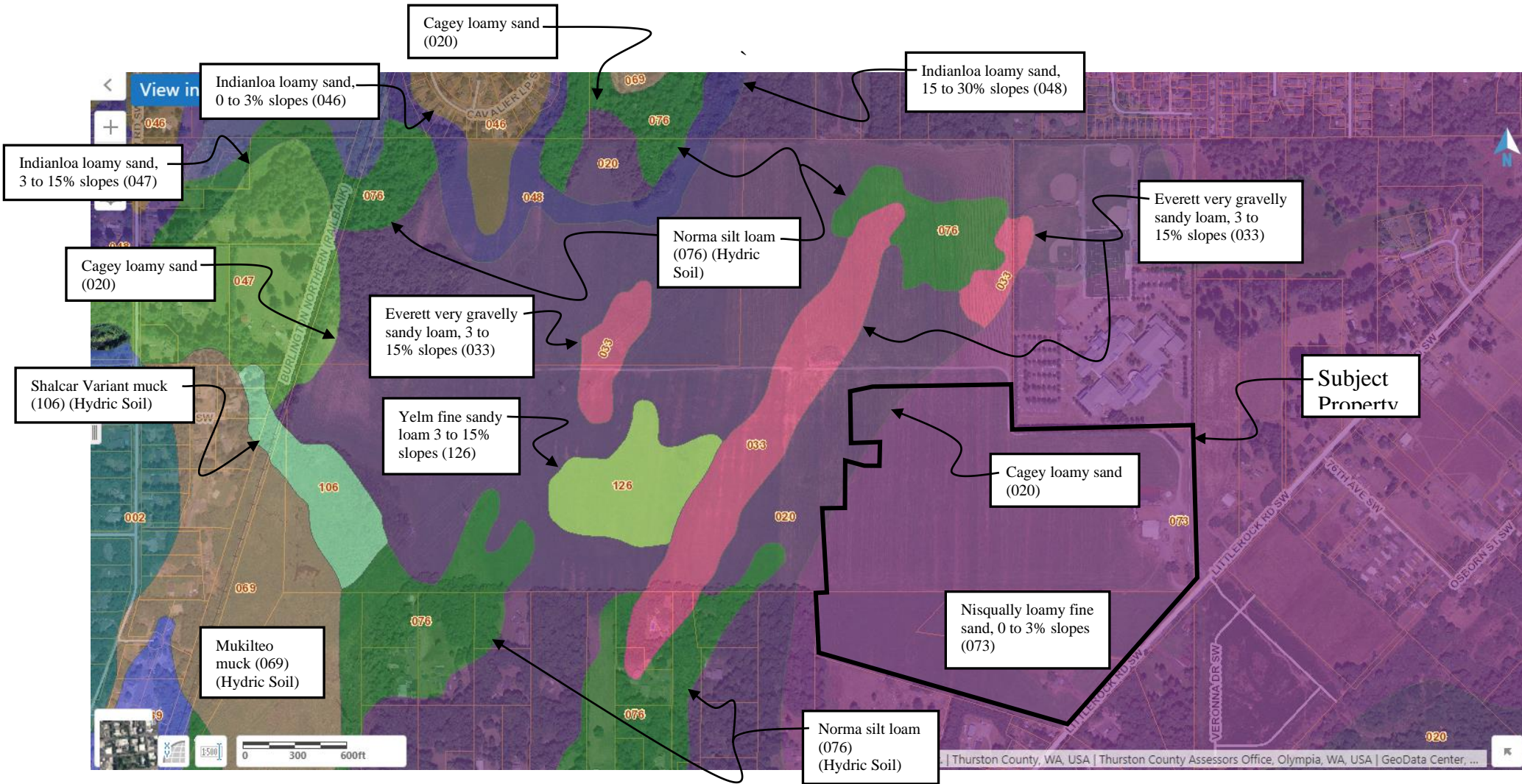
Photo 8. Powerlines and forested edge

Appendix B

Thurston County Geodata

Soils

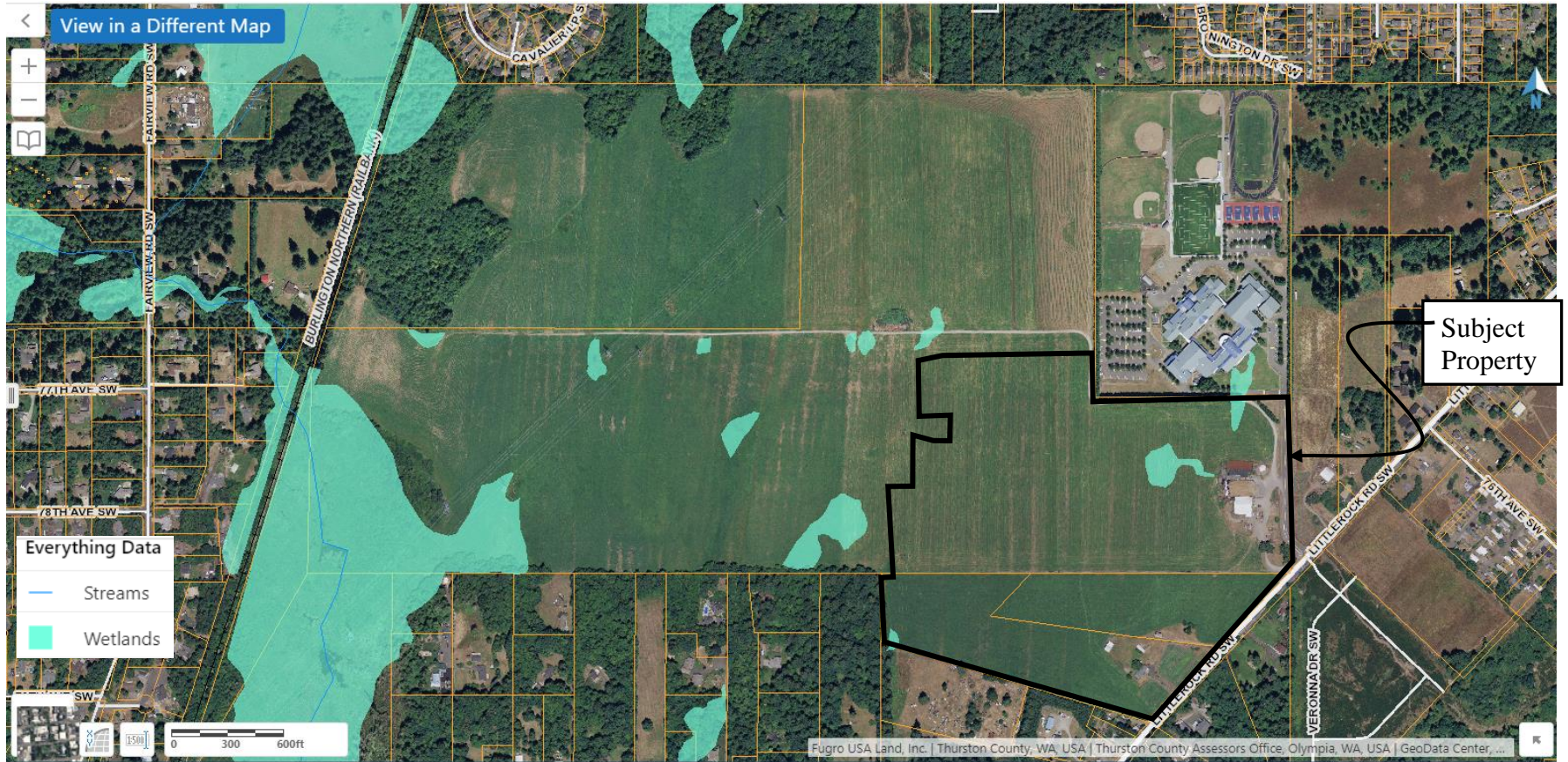
Thurston County Soil Survey



Appendix C

Thurston County Geodata

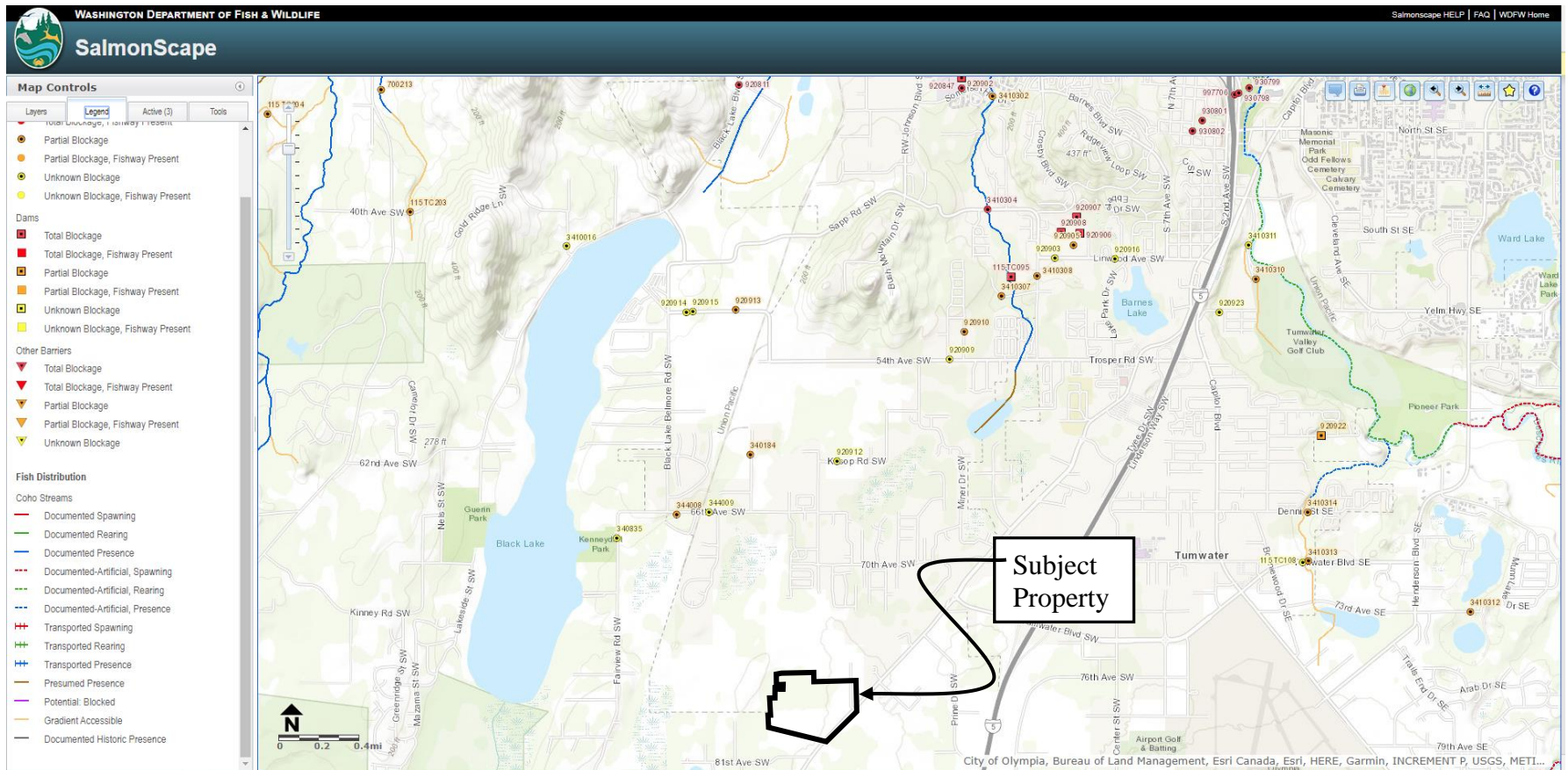
Wetlands & Streams

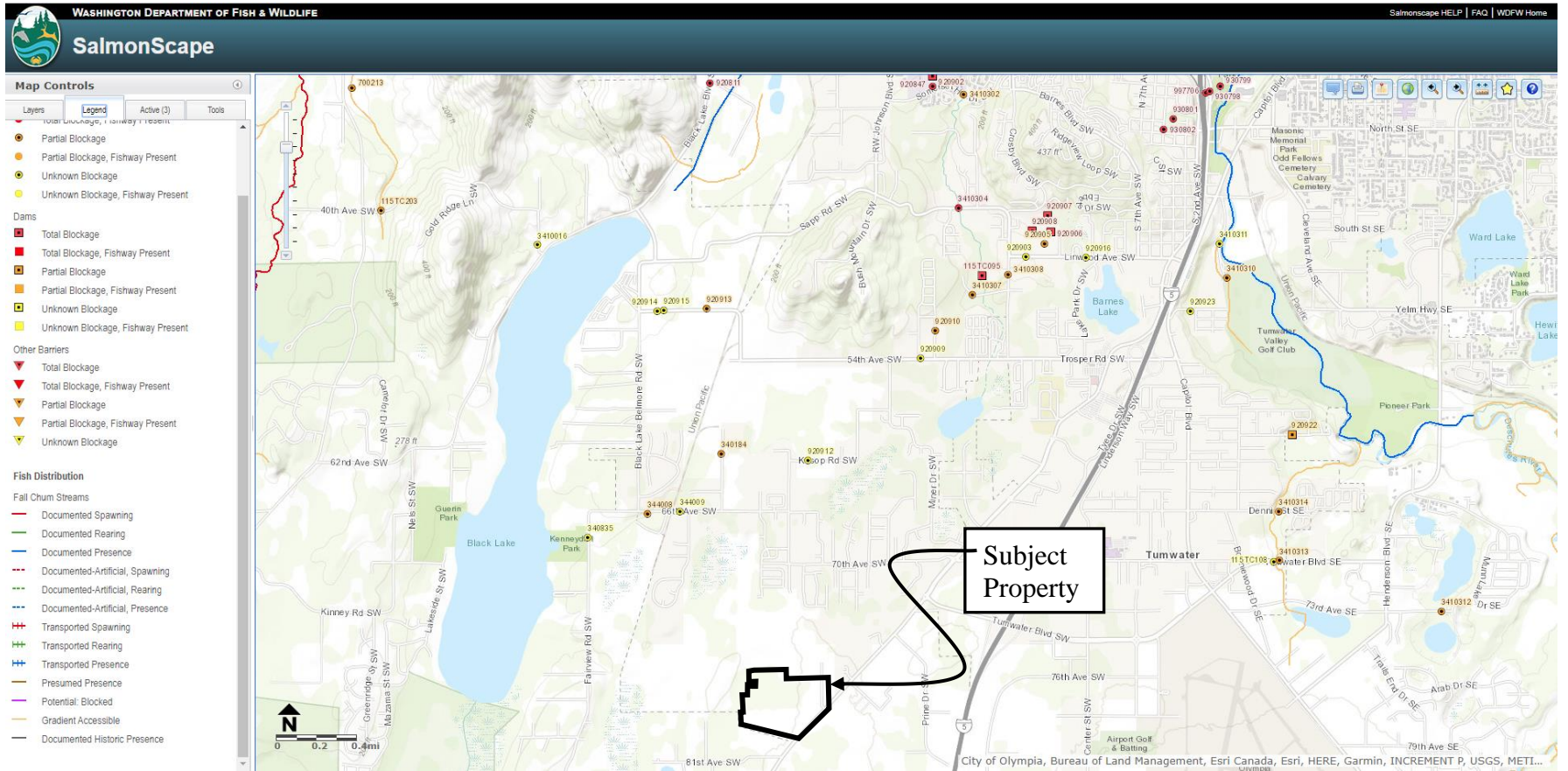


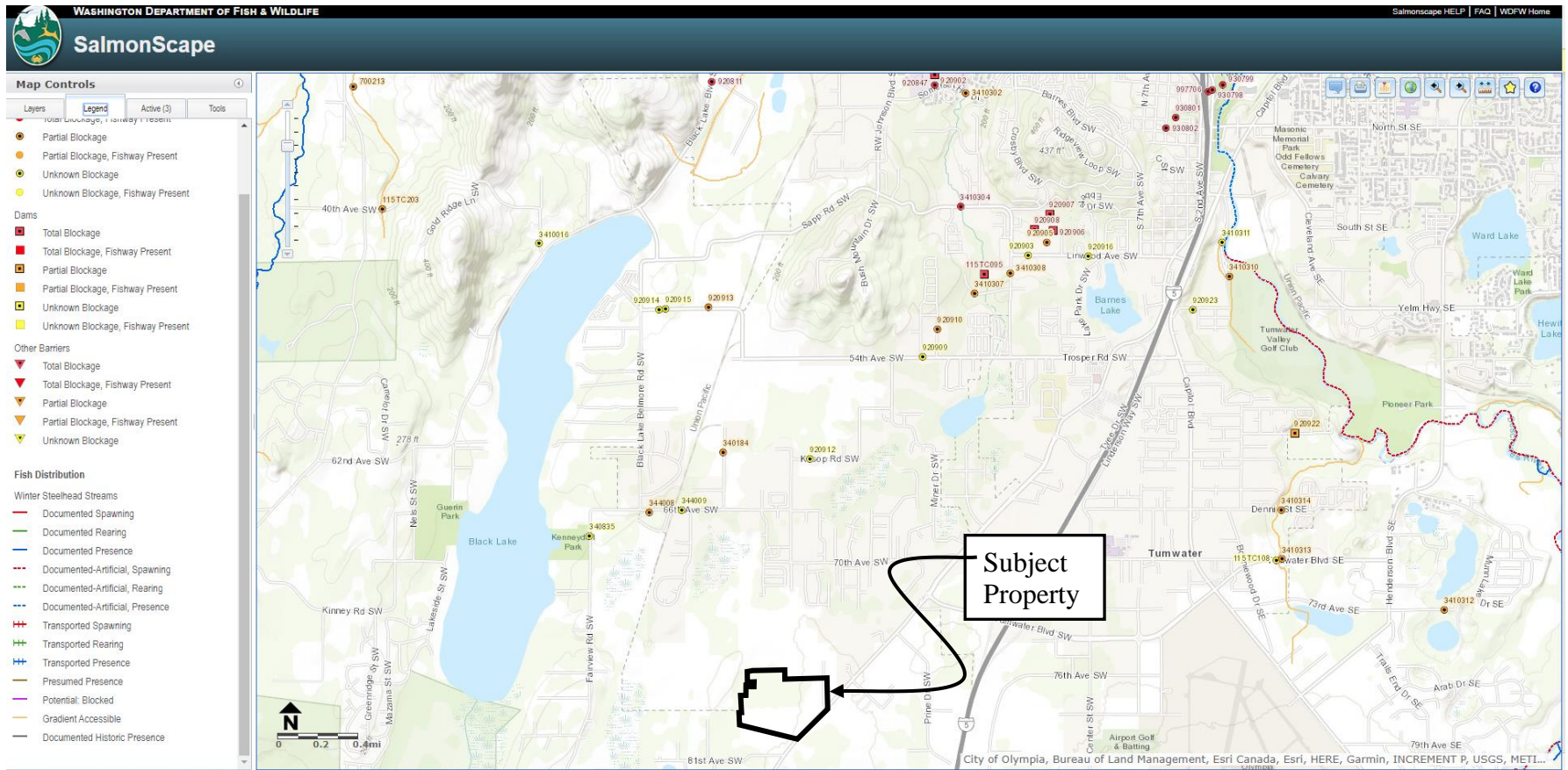
Appendix D

**Washington Department of
Fish and Wildlife (WDFW)**

Salmonscape

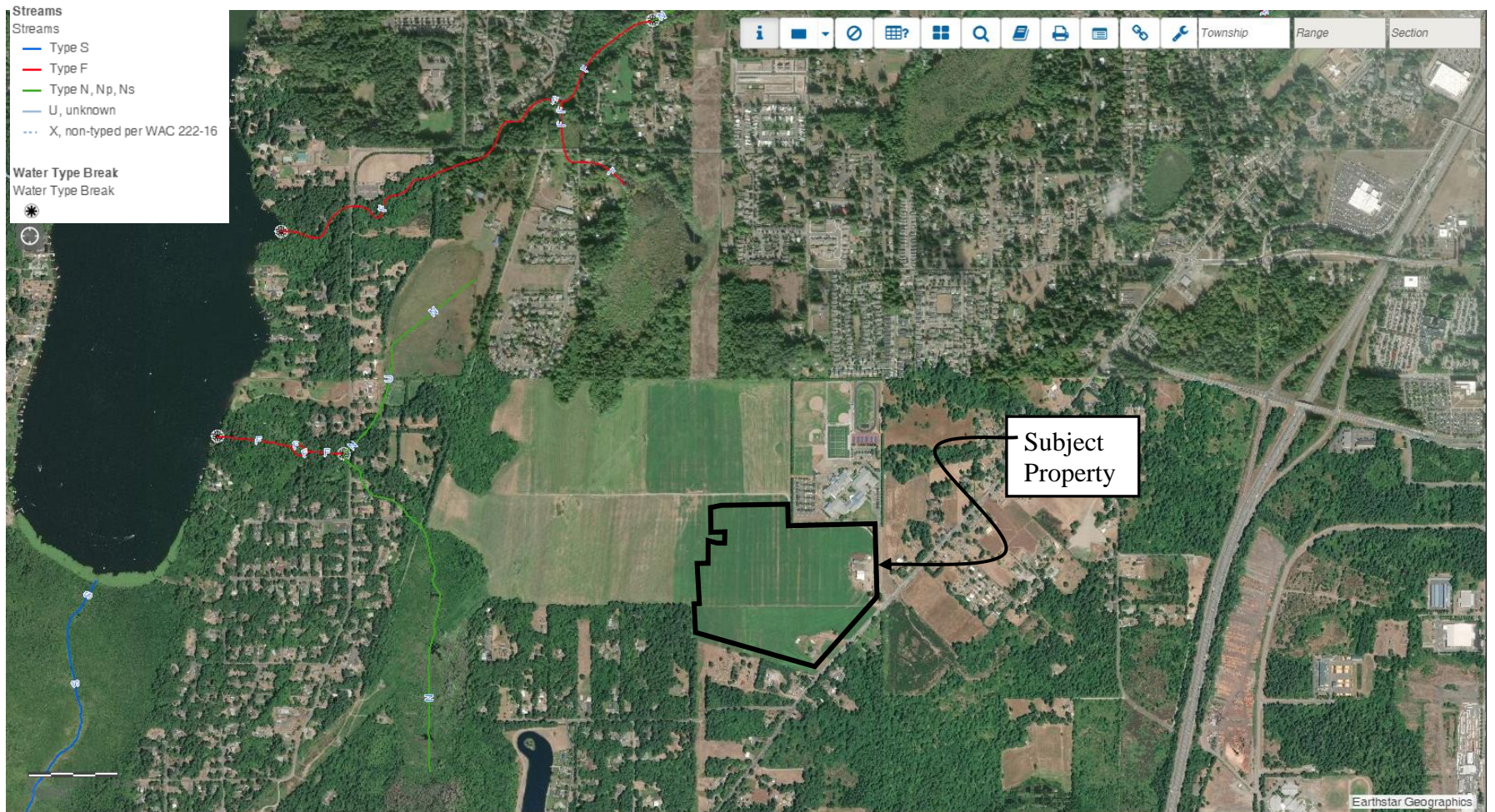






Appendix E

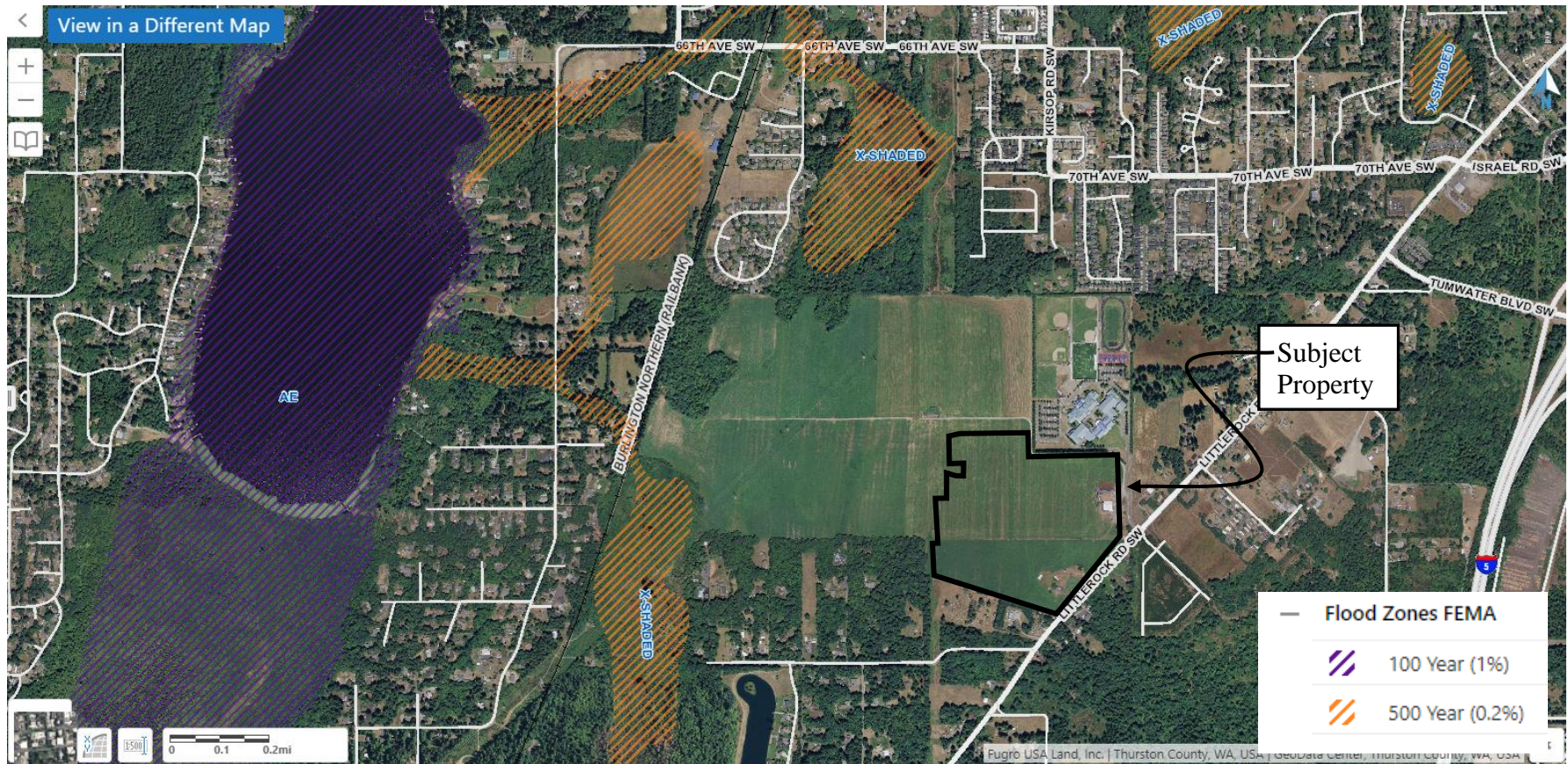
DNR Water Typing



Appendix F

Thurston County Geodata

Flood Zones



Appendix G

Thurston County Geodata

High Groundwater Hazard Areas

