

LAND & WATER SOLUTIONS, LLC



ENVIRONMENTAL PERMITTING CONSULTANTS

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December 29, 2017

Project# TWC17E32

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MDJ Contractors
PO Box 1117
Ellensburg, Wa 98926

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JAN 30 2018

Kittitas County CDS

RE: Wetland Reconnaissance - Kittitas County Parcel #: 18-18-27030-00019

INTRODUCTION

At The request of MDJ Contractors, Land and Water Solutions performed a wetland reconnaissance of the above referenced property located at 910 Dry Creek Road in Ellensburg, Washington. The work has been requested in conjunction with subdivision planning of the ownership. The property occupies 4.47 acres as recorded by the Kittitas County Assessor. Much of the site is identified on the Kittitas County Compass Mapping tool, as “potential wetland”. Although “potential wetland” is not a regulatory definition, it is the most accurate way to address the areas detailed on the mapping tool that insinuate that wetlands may exist on the site. The information used to outline these possible wetland areas is obtained from the National Wetland Inventory (NWI Fig 1) Map. The data presented on the NWI is derived from contour maps, aerial photos, topographical quadrangle maps, soil surveys and a limited amount of field data. However, the NWI map is not field verified and does not represent actual jurisdictional or regulated wetlands. The scope of this report and field work considers these conditions and focuses on the field determination of any wetlands that may be present on site that would require a Wetland Delineation Report.

PREVIOUS SITE EVALUATIONS

Prior to this work a site review was completed on September 19th, 2017 by Washington State Department of Ecology (WSDOE) in which portions of the site were identified as exhibiting potential wetland characteristics. The rationale for the findings as summarized in the November 2nd, 2017 letter to Kittitas County Community Development Services are based primarily, if not entirely, on wetland vegetation being observed. The letter makes no reference to soil conditions. Information relevant to hydrology is limited to noting the presence of topographical features and elevational changes.

Three years prior to the WSDOE site review, a site reconnaissance was conducted by The Wetland Corps (TWC) at the request of the landowner. The findings of the work are summarized in a report dated July 29th, 2014. The conclusion was that no wetlands were present based primarily on insufficient hydric soil and wetland hydrology indicators. At that time hydrophytic wetland vegetation was not observed on the property.

Since the initial reconnaissance was conducted in 2014 both LWS and MDJ staff have made seasonal observations of the site. The purpose of these observations was to establish a general sense of timing, extent, and frequency of any inundation/flooding of the site.

METHODOLOGY

For the purposes of Federal, Washington State, Kittitas County, and City of Ellensburg jurisdictional oversight, this review focused on determining if any areas within the site meet jurisdictional wetland criteria according to the 2008 Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0). The sections below provide: (1) an introduction to the site; (2) a description of methods used in the field; and, (3) results.

Review of Existing Information

Preliminary information of the site was gathered prior to the field review. General information sources included: United States Geological Service (USGS) topographic maps, United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) maps, the Natural Resource Conservation Service (NRCS) Soil Survey, local critical areas regulations, and anecdotal information regarding the historical use and condition of the land.

Wetland Reconnaissance

This reconnaissance was conducted to determine if any areas meeting the wetland criteria outlined in the 2008 Arid West Final Regional Supplement to the 1987 are present. This document is the wetland delineation manual that is used in determining wetland areas when applying state and local government regulations under the Shoreline Management Act and the Growth Management Act in arid portions of Washington State.

Land and Water Solutions, LLC has developed and implemented a wetland reconnaissance protocol for common situations in which converted agriculture land has its primary source of system hydrology (surface/rill irrigation) eliminated or substantially reduced due to land use changes. This is an efficient and cost-effective approach to obtaining the information necessary to verify the absence or presence of wetlands as defined in the most recent version of the Wetland Delineation Manual. LWS has employed specific techniques and proprietary protocols, such as the establishment of Priority Evaluation Sites (PES). This approach concentrates on identifying and investigating areas within the property most likely to support wetland conditions, while excluding obvious uplands or areas lacking indicators.

This field work was conducted on December 20, 2017 as a follow up and re-verification of a previous field study performed by The Wetland Corps in September 2006. At that time, development of this area was in its inception and had recently succeeded in its land use evolving from historically irrigated pasture and crop land to fallow, dry, and developable real estate. The time of year and recent precipitation history were considered in assessing the potential for wetlands to exist on site. For the purpose of this reconnaissance the following field methodologies were followed:

- As part of the initial project site reconnaissance, the entire site is walked to determine the potential for wetland areas and note any areas beyond the property lines that may have an impact on the ownership in terms of wetland or other critical area buffer requirements.

- Areas exhibiting indication of seasonal or year-round surface water, landscape depressions, or areas containing facultative wetland vegetation are located. These areas are identified as Priority Evaluation Sites (PES).
- PES soil evaluation is conducted via test holes dug manually to 24 inches. If further exploration is warranted, holes are completed to 48 inches utilizing properly sized, low impact, machinery such as a rubber tracked excavator.
- Sites determined to be wetlands are clearly marked in the field using flagging and/or staking. The appropriate data is collected for each site and recorded onto a Routine Wetland Determination Data Form.
- The approximate locations of all identified wetlands are recorded on a site map provided in the appendix.

*****If it is determined that wetlands are present, governing authorities may, and likely will, require a Wetland Delineation Report to satisfy any development permitting requirements. Such reports must meet the requirements outlined in the most recent version of the previously referenced Wetland Delineation Manual. This would involve additional site analysis, flagging/staking of wetland boundaries, and preparation of the report.**

GENERAL SITE CONDITIONS

The ownership is comprised of upland pasture areas with a low gradient (2-4%), with minimal variation in topographic features. This property has been historically used in the past as pasture, influenced by flood irrigation ditches and diversion dams. It has been managed in recent years as vacant pasture. No irrigation water was flowing at the time of field review.

Periodic runoff onto the property originates from nearby residential development to the south and east along with ditch overflow associated with East Dry Creek Road.

The plant communities are dominated by a variety of native and non-native pasture grasses with many interspersed patches of common weeds. Parts of the ownership, however, have some small patches dominated by vegetation that is commonly indicative of wetland areas. These areas were identified as PES for this reconnaissance. No inundation or saturated soils were observed at the time of field review. The soils exhibit no indicators of a seasonally high water table or that the area may be seasonally inundated to the extent that would impact soil characteristics. There is no dominant upland overstory.

Currier Creek is located on the adjacent property to the west. This waterbody is regulated as Type 2 Waters and requires a buffer measured horizontally from the Ordinary High Water Mark (OHWM) of the stream channel. The riparian corridor in the vicinity of the property is forested and ranges from 40 to 160 feet in width. As LWS could not obtain permission from the adjacent landowner, this area was not accessed for further evaluation (observations made from property line). Prior to additional development permitting of the subject property, permitting agencies will most likely require that the stream channel and riparian area on the adjacent property be further evaluated.

BACKGROUND INFORMATION

National Wetlands Inventory

The USFWS NWI map shows a Palustrine Emergent Seasonally Flooded (PEMC) within the site.



Figure 1. National Wetlands Inventory Map

Natural Resources Conservation Service (NRCS) Soil Survey

The following soil series are identified within the subject property according to the NRCS Online Soil Survey.

480—Nanum ashy loam, 0 to 2 percent slopes

621—Mitta ashy silt loam, flooded, 0 to 2 percent slopes



Figure 2. NRCS SOIL MAP

The drainage classes of these soils are referenced by the NRCS to range from somewhat poorly drained to moderately well drained. Mita Ashy Silt Loam (621) is listed by the NRCS as having an occasional frequency of flooding.

RESULTS

Six PES locations were identified and evaluated; three on the northern half of the site and three on the southern half. These locations were selected based on wetland potential associated with observed vegetation and topography. Topographical indicators in most PES locations were associated with gentle topographical depressions.

- **Soils**

Soils inspected were identified as ranging from 10YR 3/3 to 10YR5/4 and texture characteristics included silt loam, silt clay loam, and sandy loam texture down to 18-24 inches. No test pits revealed saturated soils or standing water. No redoxomorphic features or oxidized root channels were observed. No mottling or gleyed soils were observed that would indicate a water table is elevated for the amount of time necessary to meet wetland criteria (12.5% of the growing season).

- Hydrology

No portion of the site meets criteria for wetland hydrology. Seepage and other sub-surface flows related to the creek are not present. No cobble or gravel lens (often the source of sub-surface water) was identified down to 24 inches in the soil. Surrounding ownerships also appear to have no indication of hydrology other than runoff associated with occasional ditch overflow from Dry Creek Road and runoff from the residential development to the south. Without these sources, this property would not likely support wetland vegetation at the abundance and diversity currently present. Observed soil conditions do not suggest that the hydrological input to this property is of a sufficient duration or magnitude to impact soil conditions.

Periods of surface inundation were observed over the past four years. Most of these events occurred sporadically, during winter dormancy. The timing and frequency of these events does not meet criteria for wetland hydrology.

- Vegetation

All PES locations exhibit wetland vegetation interspersed with common upland vegetation. These zones are comprised of Sedge (*Carex sp.*) and areas of Rush (*Juncus sp.*). Native grasses growing along the peripheral and adjacent areas consist of Blue Grasses (*Poa Sp.*), Quack Grass, annual and perennial Rye Grasses (*Secale sp.*), and Fescue's (*Festuca sp.*). This parcel has no overstory trees growing within its boundaries, but has interspersed weed species including: Canada thistle (*Cirsium arvense*), Mustard species (*Brassica sp.*), and Prickly Lettuce (*Lactuca serriola*). The majority of facultative wetland vegetation on this site is located in the depressional areas where historical irrigation overflow settled. Present day sources result in a substantially reduced level of surface water input than what historically characterized the site. Without the observed human induced sources of seasonal hydrology, the observed wetland vegetation would not likely be supported at the levels they are now.

As this reconnaissance was conducted during the non-growing season, species types and dominance levels observed may be a limited representation of what the site actually supports. Additional evaluation during the growing season would be necessary to more accurately verify the absence or presence of the vegetation parameter. However, since additional findings in the field have concluded that two of the three wetland parameters are absent, there is sufficient information to make an overall determination that wetlands are not present.

SUMMARY

Based on the data extrapolated from this field reconnaissance and general observations over the course of 4 years, no wetlands are present. No portion of this property meets the wetland criteria outlined in the 2008 Arid West Final Regional Supplement to the 1987 Wetland Delineation Manual. Although the site supports a moderate level of hydrophytic vegetation, these plant communities most likely persist as remnant patches resulting from a previously irrigated environment. This trend is consistent with several local properties which are no longer irrigated and transitioning from agricultural land use to high density residential suburbs.

We trust this information is sufficient for your needs at this time. Thank you for choosing Land and Water Solutions as your environmental consultant. If you have any questions feel free to call.



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REFERENCES

- Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe, 1979. *Classification of Wetlands and Deepwater Habitats of the United States*. U.S. Fish and Wildlife Service document FWS/OBS-79/31. 84 pp. Washington, D.C.
- Hruby, T. (2014). Washington State Wetland Rating System for Eastern Washington: 2014 Update. (Publication #14-06-030). Olympia, WA: Washington Department of Ecology.
- U.S. Army Corps of Engineers. 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J. S. Wakeley, R. W. Lichvar, and C. V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. Munsell Soil Color Charts, 1998. GretagMacbeth. New Windsor, New York.
- Environmental Laboratory. (1987). "*Corps of Engineers Wetlands Delineation Manual*," Technical Report Y-87-1, U.S. Army Engineer Waterways Experiment Station, Vicksburg, MS.,
- Hitchcock, L.C. and A. Cronquist, 1973. *Flora of the Pacific Northwest*. University of Washington Press. 730 pp.
- Soil Survey Staff, Natural Resources Conservation Service, United States Department of Agriculture. *Web Soil Survey*. Available online at <https://websoilsurvey.sc.egov.usda.gov/>. Accessed 5/1/16. US Department of Agriculture, Soil Conservation Service.
- NWI Staff, US Fish and Wildlife Service. Ecological Services. *National Wetlands Inventory Mapper*. <https://www.fws.gov/wetlands/Data/Mapper.html>. Accessed 5/1/16.
- Washington State Department of Ecology, 1999. *Methods for Assessing Wetland Functions for Riverine and Depressional Wetlands in the Lowlands of Western Washington*. Ecology Publication #99-115. Olympia, Washington.
- United States Fish and Wildlife Service, 1993. *National List of Plant Species that Occur in Wetlands Region 9 – Northwest. Resource Management Group*
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